SMFI - 4

I-BOX 4 Program

JB AX4

April 5, 1961

1. Programs becoming obsolete: None

2. Used to provide a test of the Central Processor I-Box.

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1. PURPOSE

The I-Box 4 Program provides the maintenance engineer with a test of the direct index arithmetic instructions and the transmit and swap operations.

2. PROGRAM INTRODUCTION

2.1. This program has been designed for use after the I-Box 1, I-Box 2, and I-Box 3 programs have been run successfully.

2.2. The program operates under the control of the Sense Switch Interrogation Program (SSIP).

3. OPERATING PROCEDURE

3.1. The Sense Switch Interrogation Program must be in the machine.

3.2. Loading Procedures (PUNFUL Cards)

3.2.1. At the maintenance console:

1) Depress Master Reset

2) Depress Start Clock

3) Depress IPL

4) Disable Interrupt and Time Clock

5) Enable Maintenance Mode

3.2.2. Place binary deck in card reader.

3.2.3. Depress Start on card reader, the program will start itself.

3.3. Error Indications

The program operates under Sense Switch Interrogation Program (SSIP) control, all error indication options of the SSIP program apply to this program. Refer to the SSIP Program write-up.

3.4. Success Indications

All success indication options of the SSIP Program apply to this program. Refer to the SSIP Program write-up.

3.5. Operation Options

Refer to the SSIP Program write-up for all operation options.

4. PROGRAM PHILOSOPHY

This program is designed to test I-Box instructions and associated hardware. The entire program is under control of SSIP. Below are listed all of the routines that are part of this program, and a brief description of what each tests:

1232 Checks KVNI.

1234 Checks V + from three memories (Internal, External, and Index Memories), V+I, V-I, and the index adder for all eight possibilities for each bit position.

1236 Checks C+I and C-I.

1238 Checks R and RCZ from all three memories where legal.

1240 Checks V+C, V+IC, and V-IC. All three memories are used where applicable.

1242 Checks V+CR, V+ICR, and V-ICR, using all three memories where applicable.

1244 Checks RNX.

1246 Checks Transmit and Swap using all nine memory combinations and testing all modifier bits.

1248 Checks index modification for all classes of instructions.

1250 Checks CB, CB+ CB-, and CBR.

1256 Checks LVE and LVS.

PROGRAM WRITEUP ADDENDUM

I-Box 4B

JB AX4B

1	2	7	6	7	0

Pre-Loading Manual Intervention Required ? Yes _____ No x

Pre-Loading Procedure (If Any)

SLC,64.0			000100.00
PUNID, SMFI-4B		SMFI-4B	
END,64.0		100.00	000100.00

```
        PUNID, RENKER SMFI-4B                                                   RENKER

                              -APRIL 6, 1961

                              -FILE NUMBER JB AX4B

        SLC,%8¤2777.0                                                                                   002777.00

        PUNFUL
        PRNS
        SEM,6,C,G
                      -START SMFI-4B, MAKE DUMMY PASS TO
                      -SSIP FOR HOUSEKEEPING PURPOSES.
        XW,%8¤3000.0,BIT63+1.00-START,0,2                       3000.00 20 203300.00 00     002777.00
START   B,$+1.0                                                 3001.10 00                  003000.00
        BD,$+1.32                                               3002.04 00                  003000.40
        SIC,SENO+.32                                            1311.40 80                  003001.00
        B,SSW                                                   1301.10 00                  003001.40
                      -----1232---TEST COMPARE VALUE NEGATIVE IMMED.
                                                                        -
                              -TEST KVNI CHECKING FOR EQUAL
                              -LOW AND HIGH COMPARES
132     LX,$X0,132ID                                            3054.00 10                  003002.00
        SX,$X0,DPET13         -UPDATE IDENTIFICATION            1437.01 10                  003002.40
        SIC,RET                                                 1306.40 80                  003003.00
              B,IDF1          -PRINT ID.                        1443.10 00                  003003.40
        Z,IC232                                                 3050.22 00                  003004.00
                                                                        -
                              -TST ZERO FIELDS WITH DIFFERENT SIGN
                                                                        -
1321    LV,$X1,132K0                                              3052.02 30                003004.40
        SV,$X1,$IND+0.32      -PLACE 1 AT XL AND XH               13.43 30                  003005.00
        LVI,$X2,%8¤000000.                                        0.05 01                   003005.40
        KVNI,$X2,%8¤000000.                                       0.05 0C                   003006.00
        SIC,SEN               -EQUAL IND DID NOT TURN ON          1310.00 80                003006.40
        BZXEZ,SERS            -WHEN CMP +0 TO -0                  1304.32 C4                003007.00
                                                                        -
        SIC,SEN               -LOW IND TURNED ON                  1310.00 80                003007.40
        BXL,SERS              -WHEN CMP +0 AND -0                 1304.32 42                003010.00
                                                                        -
        SIC,SEN               -HIGH IND TURNED ON                 1310.00 80                003010.40
        BXH,SERS              -WHEN CMP +0 TO -0                  1304.33 42                003011.00
                                                                        -
        SV,$X1,$IND+0.32      -PLACE 1 AT XL AND XH               13.43 30                  003011.40
        LVNI,$X2,%8¤000000.                                       0.05 09                   003012.00
        KVNI,$X2,%8¤000000.   -CMP -0 TO -0                       0.05 0C                   003012.40
        SIC,SEN                                                   1310.00 80                003013.00
        BZXEZ,SERS            -EQUAL IND DID NOT TURN ON          1304.32 C4                003013.40
                                                                        -
        SIC,SEN                                                   1310.00 80                003014.00
        BXL,SERS              -XL SHOULD BE 0                     1304.32 42                003014.40
                                                                        -
        SIC,SEN                                                   1310.00 80                003015.00
        BXH,SERS              -XH SHOULD BE 0                     1304.33 42                003015.40
                                                                        -
        SV,$X1,$IND+0.32      -PLACE 1 AT XL AND XH               13.43 30                  003016.00
        LVNI,$X2,%8¤777777.40                                   777777.45 09                003016.40
        KVNI,$X2,%8¤777777.40                                   777777.45 0C                003017.00
        SIC,SEN                                                   1310.00 80                003017.40
        BZXEZ,SERS            -ALL ONES-DID NOT CMP EQUAL         1304.32 C4                003020.00
                                                                        -
```

```
                SIC,SEN                                          1310.00 80      003020.40
                BXL,SERS            -XL SHOULD BE 0              1304.32 42      003021.00
                -
                SIC,SEN                                          1310.00 80      003021.40
                BXH,SERS            -XH SHOULD BE 0              1304.33 42      003022.00
                -
                LV,$X1,132K1                                     3052.42 30      003022.40
                SV,$X1,$IND+0.32    -PLACE 1 AT XE AND XH          13.43 30      003023.00
                LVNI,$X2,%8¤000002.0                                2.05 09      003023.40
                KVNI,$X2,%8¤000001.0-CMP -1 TO -2                   1.05 0C      003024.00
                SIC,SEN                                          1310.00 80      003024.40
                BZXLZ,SERS          -XL IND DID NOT TURN ON      1304.32 44      003025.00
                SIC,SEN                                          1310.00 80      003025.40
                BXE,SERS            -XE SHOULD BE 0              1304.32 C2      003026.00
                -
                SIC,SEN                                          1310.00 80      003026.40
                BXH,SERS            -XH SHOULD BE 0              1304.33 42      003027.00
```

```
                LV,$X1,I32K2
                SV,$X1,$IND+0.32     -PLACE 1 AT XE AND XL
                LVNI,$X2,%8¤000001.0
                KVNI,$X2,%8¤000002.0-CMP -2 TO -1
                SIC,SEN
                BZXHZ,SERS           -XH DID NOT TURN ON

                SIC,SEN
                BXE,SERS             -XE SHOULD BE 0

                SIC,SEN
                BXL,SERS             -XL SHOULD BE 0

                SV,$X1,$IND+0.32     -PLACE 1 AT XE AND XL
                LVI,$X2,%8¤000002.0
                KVNI,$X2,%8¤000001.0-CM +2 TO -1
                SIC,SEN
                BZXHZ,SERS           -XH DID NOT TURN ON

                SIC,SEN
                BXE,SERS             -XE SHOULD BE 0

                SIC,SEN
                BXL,SERS             -XL SHOULD BE 0

                B,$+1.0
                BD,I321
                SIC,SEN0+0.32
                B,SSW
                BD,$+.32

                LX,$X13,IC232        -UPDATE CONTINUITY CHECK.
                V+,$X13,BIT0
                SX,$X13,IC232

                LX,$X13,IC232        -UPDATE CONTINUITY CHECK.
                KV,$X13,ICK232
                SIC,SEN
                BZXE,SERS            -CONTINUITY ERROR.
                B,I34

IC232           XW,0,0,0             -CONTINUITY REG I232.
ICK232          XW,%8¤400000.00,0,0

I32K0           VF,%8¤000000.24
I32K1           VF,%8¤000000.14
I32K2           VF,%8¤0.30
                CNOP
I321D           %IQSZ¤DD%BU,64,8¤,I232    Z
```

```
3053.02 30
  13.43 30
   1.05 09
   2.05 0C
1310.00 80
1304.33 44
-
1310.00 80
1304.32 C2
-
1310.00 80
1304.32 42
-
  13.43 30
   2.05 01
   1.05 0C
1310.00 80
1304.33 44
-
1310.00 80
1304.32 C2
-
1310.00 80
1304.32 42
-
3042.10 00
3004.44 00
1311.40 80
1301.10 00
3043.44 00
-
 3050.32 10
13054.32 B0
 3050.33 10
-
 3050.32 10
 3051.32 90
 1310.00 80
 1304.32 C0
 3055.10 00
-
    0.00 00 000000.00 00
400000.00 00 000000.00 00
-
  0.24+
  0.14+
  0.30+
  0.30 00
```

```
003027.40
003030.00
003030.40
003031.00
003031.40
003032.00

003032.40
003033.00

003033.40
003034.00

003034.40
003035.00
003035.40
003036.00
003036.40

003037.00
003037.40

003040.00
003040.40

003041.00
003041.40
003042.00
003042.40
003043.00

003043.40
003044.00
003044.40

003045.00
003045.40
003046.00
003046.40
003047.00

003050.00
003051.00

003052.00
003052.40
003053.00
003053.40
003054.00
```

```
               ----1234- -- TEST V+ AND V+1.
         -
         -
               -TEST 1 CHECKS THAT INPUTS TO EACH POSITION
                    -OF THE ADDER BUS B ARE CORRECT.
         -
               -TEST 2 CHECKS THAT INPUTS TO EACH POSITION
                    -OF THE ADDER BUS A ARE CORRECT.
         -
               -TEST 3 CHECKS THE FOLLOWING 8 CONDITIONS
                    -FOR EACH POSITION OF THE ADDER.
         -
                    -AUGEND,IX REG       00001111
                    -ADDEND,MEM          00110011
                    -CARRY IN            01010101
                    -RESULT,IX REG       01101001
         -
               -TEST 4 CHECKS END AROUND CARRY.
         -
                                                                     -
134      LX,$X1,1341D       -UPDATE IDENT.                         3060.02 10          003055.00
         SX,$X1,DPET13                                             1437.03 10          003055.40
         SIC,RET                                                   1306.40 80          003056.00
                B,IDF1      -PRINT ID.                             1443.10 00          003056.40
         Z,1C234                                                   4700.22 00          003057.00
         BD,1340                                                   3061.04 00          003057.40
         CNOP
1341D    %1QSZ¤DD%BU,64,8¤,1234    Z                                                   003060.00
```

```
                                -TEST 1.
                                -
1340    LX,$X0,100Z             -TEST INPUT TO ADDER BUS A,BIT 23.      13034.00 10                    003061.00
        LX,$X1,100Z                                                     13034.02 10                    003061.40
        LX,$X2,100Z                                                     13034.04 10                    003062.00
        LX,$X4,BIT24                                                    13104.10 10                    003062.40
        LX,$X5,BIT24                                                    13104.12 10                    003063.00
        LX,$X6,BIT24                                                    13104.14 10                    003063.40
        LX,$X8,BIT23                                                    13103.20 10                    003064.00
        LX,$X9,FZB23                                                     4752.22 10                    003064.40
        L%BU¤,BIT23                                                     13103.00 80 000000.20 50       003065.00
        V+,$X0,BIT23                                                    13103.00 B0                    003066.00
        V+,$X1,$R                                                          11.02 B0                    003066.40
        V+,$X2,$X8                                                         30.04 B0                    003067.00
        KV,$X0,$R                                                          11.00 90                    003067.40
        BXE,$+1.32                                                      3071.72 C2                     003070.00
        SIC,SEN                                                         1310.00 80                     003070.40
        B,SERS                  -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                     003071.00
        KV,$X1,$R                                                          11.02 90                    003071.40
-
        BXE,$+1.32                                                      3073.72 C2                     003072.00
        SIC,SEN                                                         1310.00 80                     003072.40
        B,SERS                  -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                     003073.00
        KV,$X2,$R                                                          11.04 90                    003073.40
        BXE,$+1.32                                                      3075.72 C2                     003074.00
        SIC,SEN                                                         1310.00 80                     003074.40
        B,SERS                  -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                     003075.00
        L%BU¤,FZB23                                                      4752.00 80 000000.20 50       003075.40
        V+,$X4,FZB23                                                     4752.10 B0                    003076.40
        V+,$X5,$R                                                          11.12 B0                    003077.00
        V+,$X6,$X9                                                         31.14 B0                    003077.40
        NOP                                                                 0.30 00                    003100.00
        KV,$X4,$R                                                          11.10 90                    003100.40
        BXE,$+1.32                                                      3102.72 C2                     003101.00
        SIC,SEN                 -ABOVE BIT COMPLIMENT INPUT             1310.00 80                     003101.40
        B,SERS                  -TO ABA FROM EXT MEM FAILS.             1304.10 00                     003102.00
        KV,$X5,$R                                                          11.12 90                    003102.40
        BXE,$+1.32                                                      3104.72 C2                     003103.00
        SIC,SEN                 -ABOVE BIT COMPLIMENT INPUT             1310.00 80                     003103.40
        B,SERS                  -TO ABA FROM INT MEM FAILS.             1304.10 00                     003104.00
        KV,$X6,$R                                                          11.14 90                    003104.40
        BXE,$+1.32                                                      3106.72 C2                     003105.00
        SIC,SEN                 -ABOVE BIT COMPLIMENT INPUT             1310.00 80                     003105.40
        B,SERS                  -TO ABA FROM IX STG FAILS.              1304.10 00                     003106.00
        B,$+1.0                                                         3107.50 00                     003106.40
        BD,1340                                                         3061.04 00                     003107.00
        SIC,SEN0+.32                                                    1311.40 80                     003107.40
        B,SSW                   -TO SSIP.                               1301.10 00                     003110.00
        BD,$+.32                                                        3111.04 00                     003110.40
                                                                                -
        LX,$X13,IC234           -UPDATE CONTINUITY CHECK.               4700.32 10                     003111.00
        V+,$X13,BIT0                                                    13054.32 B0                    003111.40
        SX,$X13,IC234                                                    4700.33 10                    003112.00
```

```
1341    LX,$X0,I00Z          -TEST INPUT TO ADDER BUS A,BIT 22.    13034.00 10                    003112.40
        LX,$X1,I00Z                                                13034.02 10                    003113.00
        LX,$X2,I00Z                                                13034.04 10                    003113.40
        LX,$X4,BIT24                                               13104.10 10                    003114.00
        LX,$X5,BIT24                                               13104.12 10                    003114.40
        LX,$X6,BIT24                                               13104.14 10                    003115.00
        LX,$X8,BIT22                                               13102.20 10                    003115.40
        LX,$X9,FZB22                                                4751.22 10                    003116.00
        L%BU¤,BIT22                                                13102.00 80 000000.20 50       003116.40
        V+,$X0,BIT22                                               13102.00 B0                    003117.40
        V+,$X1,$R                                                     11.02 B0                    003120.00
        V+,$X2,$X8                                                    30.04 B0                    003120.40
        KV,$X0,$R                                                     11.00 90                    003121.00
        BXE,$+1.32                                                 3123.32 C2                     003121.40
        SIC,SEN                                                    1310.00 80                     003122.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS   1304.10 00                     003122.40
        KV,$X1,$R                                                     11.02 90                    003123.00
        BXE,$+1.32                                                 3125.32 C2                     003123.40
        SIC,SEN                                                    1310.00 80                     003124.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.  1304.10 00                     003124.40
        KV,$X2,$R                                                     11.04 90                    003125.00
        BXE,$+1.32                                                 3127.32 C2                     003125.40
        SIC,SEN                                                    1310.00 80                     003126.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.   1304.10 00                     003126.40
        L%BU¤,FZB22                                                4751.00 80 000000.20 50        003127.00
        V+,$X4,FZB22                                               4751.10 B0                     003130.00
        V+,$X5,$R                                                     11.12 B0                    003130.40
        V+,$X6,$X9                                                    31.14 B0                    003131.00
        NOP                                                            0.30 00                    003131.40
        KV,$X4,$R                                                     11.10 90                    003132.00
        BXE,$+1.32                                                 3134.32 C2                     003132.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                     003133.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.           1304.10 00                     003133.40
        KV,$X5,$R                                                     11.12 90                    003134.00
        BXE,$+1.32                                                 3136.32 C2                     003134.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                     003135.00
        B,SERS               -TO ABA FROM INT MEM FAILS.           1304.10 00                     003135.40
        KV,$X6,$R                                                     11.14 90                    003136.00
        BXE,$+1.32                                                 3140.32 C2                     003136.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                     003137.00
        B,SERS               -TO ABA FROM IX STG FAILS.            1304.10 00                     003137.40
        B,$+1.0                                                    3141.10 00                     003140.00
        BD,1341                                                    3112.44 00                     003140.40
        SIC,SEN0+.32                                               1311.40 80                     003141.00
        B,SSW                -TO SSIP.                             1301.10 00                     003141.40
        BD,$+.32                                                   3142.44 00                     003142.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.             4700.32 10                     003142.40
        V+,$X13,BIT1                                               13055.32 B0                    003143.00
        SX,$X13,IC234                                              4700.33 10                     003143.40
```

```
1342    LX,$X0,I00Z          -TEST  INPUT TO ADDER BUS A,BIT 21.    13034.00 10                  003144.00
        LX,$X1,I00Z                                                 13034.02 10                  003144.40
        LX,$X2,I00Z                                                 13034.04 10                  003145.00
        LX,$X4,BIT24                                                13104.10 10                  003145.40
        LX,$X5,BIT24                                                13104.12 10                  003146.00
        LX,$X6,BIT24                                                13104.14 10                  003146.40
        LX,$X8,BIT21                                                13101.20 10                  003147.00
        LX,$X9,FZB21                                                 4750.22 10                  003147.40
        L%BU¤,BIT21                                                 13101.00 80 000000.20 50     003150.00
        V+,$X0,BIT21                                                13101.00 B0                  003151.00
        V+,$X1,$R                                                      11.02 B0                  003151.40
        V+,$X2,$X8                                                     30.04 B0                  003152.00
        KV,$X0,$R                                                      11.00 90                  003152.40
        BXE,$+1.32                                                   3154.72 C2                  003153.00
        SIC,SEN                                                      1310.00 80                  003153.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                  003154.00
        KV,$X1,$R                                                      11.02 90                  003154.40
        BXE,$+1.32                                                   3156.72 C2                  003155.00
        SIC,SEN                                                      1310.00 80                  003155.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                  003156.00
        KV,$X2,$R                                                      11.04 90                  003156.40
        BXE,$+1.32                                                   3160.72 C2                  003157.00
        SIC,SEN                                                      1310.00 80                  003157.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                  003160.00
        L%BU¤,FZB21                                                 4750.00 80 000000.20 50     003160.40
        V+,$X4,FZB21                                                4750.10 B0                  003161.40
        V+,$X5,$R                                                      11.12 B0                  003162.00
        V+,$X6,$X9                                                     31.14 B0                  003162.40
        NOP                                                             0.30 00                  003163.00
        KV,$X4,$R                                                      11.10 90                  003163.40
        BXE,$+1.32                                                   3165.72 C2                  003164.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003164.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                  003165.00
        KV,$X5,$R                                                      11.12 90                  003165.40
        BXE,$+1.32                                                   3167.72 C2                  003166.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003166.40
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                  003167.00
        KV,$X6,$R                                                      11.14 90                  003167.40
        BXE,$+1.32                                                   3171.72 C2                  003170.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003170.40
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                  003171.00
        B,$+1.0                                                      3172.50 00                  003171.40
        BD,1342                                                      3144.04 00                  003172.00
        SIC,SEN0+.32                                                 1311.40 80                  003172.40
        B,SSW                -TO SSIP.                               1301.10 00                  003173.00
        BD,$+.32                                                     3174.04 00                  003173.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10                  003174.00
        V+,$X13,BIT2                                                13056.32 B0                  003174.40
        SX,$X13,IC234                                                4700.33 10                  003175.00
```

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1343    LX,$X0,100Z         -TEST INPUT TO ADDER BUS A,BIT 20.   13034.00 10                  003175.40
        LX,$X1,100Z                                              13034.02 10                  003176.00
        LX,$X2,100Z                                              13034.04 10                  003176.40
        LX,$X4,BIT24                                             13104.10 10                  003177.00
        LX,$X5,BIT24                                             13104.12 10                  003177.40
        LX,$X6,BIT24                                             13104.14 10                  003200.00
        LX,$X8,BIT20                                             13100.20 10                  003200.40
        LX,$X9,FZB20                                              4747.22 10                  003201.00
        L%BU¤,BIT20                                              13100.00 80 000000.20 50     003201.40
        V+,$X0,BIT20                                             13100.00 B0                  003202.40
        V+,$X1,$R                                                   11.02 B0                  003203.00
        V+,$X2,$X8                                                  30.04 B0                  003203.40
        KV,$X0,$R                                                   11.00 90                  003204.00
        BXE,$+1.32                                                3206.32 C2                  003204.40
        SIC,SEN                                                   1310.00 80                  003205.00
        B,SERS              -ABOVE BIT FRM EXT MEM TO ABA FAILS   1304.10 00                  003205.40
        KV,$X1,$R                                                   11.02 90                  003206.00
        BXE,$+1.32                                                3210.32 C2                  003206.40
        SIC,SEN                                                   1310.00 80                  003207.00
        B,SERS              -ABOVE BIT FRM INT MEM TO ABA FAILS.  1304.10 00                  003207.40
        KV,$X2,$R                                                   11.04 90                  003210.00
        BXE,$+1.32                                                3212.32 C2                  003210.40
        SIC,SEN                                                   1310.00 80                  003211.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABA FAILS.   1304.10 00                  003211.40
        L%BU¤,FZB20                                               4747.00 80 000000.20 50     003212.00
        V+,$X4,FZB20                                              4747.10 B0                  003213.00
        V+,$X5,$R                                                   11.12 B0                  003213.40
        V+,$X6,$X9                                                  31.14 B0                  003214.00
        NOP                                                          0.30 00                  003214.40
        KV,$X4,$R                                                   11.10 90                  003215.00
        BXE,$+1.32                                                3217.32 C2                  003215.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003216.00
        B,SERS              -TO ABA FROM EXT MEM FAILS.           1304.10 00                  003216.40
        KV,$X5,$R                                                   11.12 90                  003217.00
        BXE,$+1.32                                                3221.32 C2                  003217.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003220.00
        B,SERS              -TO ABA FROM INT MEM FAILS.           1304.10 00                  003220.40
        KV,$X6,$R                                                   11.14 90                  003221.00
        BXE,$+1.32                                                3223.32 C2                  003221.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003222.00
        B,SERS              -TO ABA FROM IX STG FAILS.            1304.10 00                  003222.40
        B,$+1.0                                                   3224.10 00                  003223.00
        BD,1343                                                   3175.44 00                  003223.40
        SIC,SEN0+.32                                              1311.40 80                  003224.00
        B,SSW               -TO SSIP.                             1301.10 00                  003224.40
        BD,$+.32                                                  3225.44 00                  003225.00

        LX,$X13,IC234       -UPDATE CONTINUITY CHECK.             4700.32 10                  003225.40
        V+,$X13,BIT3                                             13057.32 B0                  003226.00
        SX,$X13,IC234                                             4700.33 10                  003226.40
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1344    LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 19.    13034.00 10                  003227.00
        LX,$X1,100Z                                                13034.02 10                  003227.40
        LX,$X2,100Z                                                13034.04 10                  003230.00
        LX,$X4,BIT24                                               13104.10 10                  003230.40
        LX,$X5,BIT24                                               13104.12 10                  003231.00
        LX,$X6,BIT24                                               13104.14 10                  003231.40
        LX,$X8,BIT19                                               13077.20 10                  003232.00
        LX,$X9,FZB19                                                4746.22 10                  003232.40
        L%BU¤,BIT19                                                13077.00 80 000000.20 50     003233.00
        V+,$X0,BIT19                                               13077.00 B0                  003234.00
        V+,$X1,$R                                                     11.02 B0                  003234.40
        V+,$X2,$X8                                                    30.04 B0                  003235.00
        KV,$X0,$R                                                     11.00 90                  003235.40
        BXE,$+1.32                                                  3237.72 C2                  003236.00
        SIC,SEN                                                     1310.00 80                  003236.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                  003237.00
        KV,$X1,$R                                                     11.02 90                  003237.40
        BXE,$+1.32                                                  3241.72 C2                  003240.00
        SIC,SEN                                                     1310.00 80                  003240.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                  003241.00
        KV,$X2,$R                                                     11.04 90                  003241.40
        BXE,$+1.32                                                  3243.72 C2                  003242.00
        SIC,SEN                                                     1310.00 80                  003242.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                  003243.00
        L%BU¤,FZB19                                                 4746.00 80 000000.20 50     003243.40
        V+,$X4,FZB19                                                4746.10 B0                  003244.40
        V+,$X5,$R                                                     11.12 B0                  003245.00
        V+,$X6,$X9                                                    31.14 B0                  003245.40
        NOP                                                            0.30 00                  003246.00
        KV,$X4,$R                                                     11.10 90                  003246.40
        BXE,$+1.32                                                  3250.72 C2                  003247.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003247.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.            1304.10 00                  003250.00
        KV,$X5,$R                                                     11.12 90                  003250.40
        BXE,$+1.32                                                  3252.72 C2                  003251.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003251.40
        B,SERS               -TO ABA FROM INT MEM FAILS.            1304.10 00                  003252.00
        KV,$X6,$R                                                     11.14 90                  003252.40
        BXE,$+1.32                                                  3254.72 C2                  003253.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003253.40
        B,SERS               -TO ABA FROM IX STG FAILS.             1304.10 00                  003254.00
        B,$+1.0                                                     3255.50 00                  003254.40
        BD,1344                                                     3227.04 00                  003255.00
        SIC,SEN0+.32                                                1311.40 80                  003255.40
        B,SSW                -TO SSIP.                              1301.10 00                  003256.00
        BD,$+.32                                                    3257.04 00                  003256.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                  003257.00
        V+,$X13,BIT4                                               13060.32 B0                  003257.40
        SX,$X13,IC234                                               4700.33 10                  003260.00
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1345    LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 18.    13034.00 10                    003260.40
        LX,$X1,100Z                                                13034.02 10                    003261.00
        LX,$X2,100Z                                                13034.04 10                    003261.40
        LX,$X3,100Z                                                13034.06 10                    003262.00
        LX,$X4,BIT24                                               13104.10 10                    003262.40
        LX,$X5,BIT24                                               13104.12 10                    003263.00
        LX,$X6,BIT24                                               13104.14 10                    003263.40
        LX,$X7,BIT24                                               13104.16 10                    003264.00
        LX,$X8,BIT18                                               13076.20 10                    003264.40
        LX,$X9,FZB18                                                4745.22 10                    003265.00
        L%BU¤,BIT18                                                13076.00 80 000000.20 50       003265.40
        V+,$X0,BIT18                                               13076.00 B0                    003266.40
        V+,$X1,$R                                                     11.02 B0                    003267.00
        V+,$X2,$X8                                                    30.04 B0                    003267.40
        V+I,$X3,0.32                                                   0.47 05                    003270.00
        KV,$X0,$R                                                     11.00 90                    003270.40
        BXE,$+1.32                                                  3272.72 C2                    003271.00
        SIC,SEN                                                     1310.00 80                    003271.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                    003272.00
        KV,$X1,$R                                                     11.02 90                    003272.40
        BXE,$+1.32                                                  3274.72 C2                    003273.00
        SIC,SEN                                                     1310.00 80                    003273.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                    003274.00
        KV,$X2,$R                                                     11.04 90                    003274.40
        BXE,$+1.32                                                  3276.72 C2                    003275.00
        SIC,SEN                                                     1310.00 80                    003275.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                    003276.00
        KV,$X3,$R                                                     11.06 90                    003276.40
        BXE,$+1.32                                                  3300.72 C2                    003277.00
        SIC,SEN                                                     1310.00 80                    003277.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                    003300.00
        L%BU¤,FZB18                                                 4745.00 80 000000.20 50       003300.40
        V+,$X4,FZB18                                                4745.10 B0                    003301.40
        V+,$X5,$R                                                     11.12 B0                    003302.00
        V+,$X6,$X9                                                    31.14 B0                    003302.40
        V-I,$X7,%8¤777777.0                                        777777.17 0D                   003303.00
        NOP                                                           0.30 00                     003303.40
        KV,$X4,$R                                                     11.10 90                    003304.00
        BXE,$+1.32                                                  3306.32 C2                    003304.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    003305.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.            1304.10 00                    003305.40
        KV,$X5,$R                                                     11.12 90                    003306.00
        BXE,$+1.32                                                  3310.32 C2                    003306.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    003307.00
        B,SERS               -TO ABA FROM INT MEM FAILS.            1304.10 00                    003307.40
        KV,$X6,$R                                                     11.14 90                    003310.00
        BXE,$+1.32                                                  3312.32 C2                    003310.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    003311.00
        B,SERS               -TO ABA FROM IX STG FAILS.             1304.10 00                    003311.40
        KVNI,$X7,%8¤777777.00                                      777777.17 0C                   003312.00
        BXE,$+1.32                                                  3314.32 C2                    003312.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    003313.00
        B,SERS               -TO ABA FAILS.                         1304.10 00                    003313.40
        B,$+1.0                                                     3315.10 00                    003314.00
        BD,1345                                                     3260.44 00                    003314.40
        SIC,SEN0+.32                                                1311.40 80                    003315.00
        B,SSW                -TO SSIP.                              1301.10 00                    003315.40
        BD,$+.32                                                    3316.44 00                    003316.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                    003316.40
        V+,$X13,BIT5                                               13061.32 B0                    003317.00
        SX,$X13,IC234                                               4700.33 10                    003317.40
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1346    LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 17.     13034.00 10                    003320.00
        LX,$X1,100Z                                                 13034.02 10                    003320.40
        LX,$X2,100Z                                                 13034.04 10                    003321.00
        LX,$X3,100Z                                                 13034.06 10                    003321.40
        LX,$X4,BIT24                                                13104.10 10                    003322.00
        LX,$X5,BIT24                                                13104.12 10                    003322.40
        LX,$X6,BIT24                                                13104.14 10                    003323.00
        LX,$X7,BIT24                                                13104.16 10                    003323.40
        LX,$X8,BIT17                                                13075.20 10                    003324.00
        LX,$X9,FZB17                                                 4744.22 10                    003324.40
        L%BU¤,BIT17                                                 13075.00 80 000000.20 50       003325.00
        V+,$X0,BIT17                                                13075.00 B0                    003326.00
        V+,$X1,$R                                                      11.02 B0                    003326.40
        V+,$X2,$X8                                                     30.04 B0                    003327.00
        V+I,$X3,1.0                                                     1.07 05                    003327.40
        KV,$X0,$R                                                      11.00 90                    003330.00
        BXE,$+1.32                                                   3332.32 C2                    003330.40
        SIC,SEN                                                      1310.00 80                    003331.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                    003331.40
        KV,$X1,$R                                                      11.02 90                    003332.00
        BXE,$+1.32                                                   3334.32 C2                    003332.40
        SIC,SEN                                                      1310.00 80                    003333.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                    003333.40
        KV,$X2,$R                                                      11.04 90                    003334.00
        BXE,$+1.32                                                   3336.32 C2                    003334.40
        SIC,SEN                                                      1310.00 80                    003335.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                    003335.40
        KV,$X3,$R                                                      11.06 90                    003336.00
        BXE,$+1.32                                                   3340.32 C2                    003336.40
        SIC,SEN                                                      1310.00 80                    003337.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.     1304.10 00                    003337.40
        L%BU¤,FZB17                                                  4744.00 80 000000.20 50       003340.00
        V+,$X4,FZB17                                                 4744.10 B0                    003341.00
        V+,$X5,$R                                                      11.12 B0                    003341.40
        V+,$X6,$X9                                                     31.14 B0                    003342.00
        V-I,$X7,%8¤777776.40                                      777776.57 0D                    003342.40
        NOP                                                            0.30 00                    003343.00
        KV,$X4,$R                                                      11.10 90                    003343.40
        BXE,$+1.32                                                   3345.72 C2                    003344.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    003344.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                    003345.00
        KV,$X5,$R                                                      11.12 90                    003345.40
        BXE,$+1.32                                                   3347.72 C2                    003346.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    003346.40
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                    003347.00
        KV,$X6,$R                                                      11.14 90                    003347.40
        BXE,$+1.32                                                   3351.72 C2                    003350.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    003350.40
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                    003351.00
        KVNI,$X7,%8¤777776.40                                     777776.57 0C                    003351.40
        BXE,$+1.32                                                   3353.72 C2                    003352.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    003352.40
        B,SERS               -TO ABA FAILS.                          1304.10 00                    003353.00
        B,$+1.0                                                      3354.50 00                    003353.40
        BD,1346                                                      3320.04 00                    003354.00
        SIC,SEN0+.32                                                 1311.40 80                    003354.40
        B,SSW                -TO SSIP.                               1301.10 00                    003355.00
        BD,$+.32                                                     3356.04 00                    003355.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10                    003356.00
        V+,$X13,BIT6                                                13062.32 B0                    003356.40
        SX,$X13,IC234                                                4700.33 10                    003357.00
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1347    LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 16.    13034.00 10                  003357.40
        LX,$X1,100Z                                                13034.02 10                  003360.00
        LX,$X2,100Z                                                13034.04 10                  003360.40
        LX,$X3,100Z                                                13034.06 10                  003361.00
        LX,$X4,BIT24                                               13104.10 10                  003361.40
        LX,$X5,BIT24                                               13104.12 10                  003362.00
        LX,$X6,BIT24                                               13104.14 10                  003362.40
        LX,$X7,BIT24                                               13104.16 10                  003363.00
        LX,$X8,BIT16                                               13074.20 10                  003363.40
        LX,$X9,FZB16                                                4743.22 10                  003364.00
        L%BU¤,BIT16                                                13074.00 80 000000.20 50     003364.40
        V+,$X0,BIT16                                               13074.00 B0                  003365.40
        V+,$X1,$R                                                     11.02 B0                  003366.00
        V+,$X2,$X8                                                    30.04 B0                  003366.40
        V+I,$X3,2.0                                                    2.07 05                  003367.00
        KV,$X0,$R                                                     11.00 90                  003367.40
        BXE,$+1.32                                                 3371.72 C2                  003370.00
        SIC,SEN                                                    1310.00 80                  003370.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS   1304.10 00                  003371.00
        KV,$X1,$R                                                     11.02 90                  003371.40
        BXE,$+1.32                                                 3373.72 C2                  003372.00
        SIC,SEN                                                    1310.00 80                  003372.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.  1304.10 00                  003373.00
        KV,$X2,$R                                                     11.04 90                  003373.40
        BXE,$+1.32                                                 3375.72 C2                  003374.00
        SIC,SEN                                                    1310.00 80                  003374.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.   1304.10 00                  003375.00
        KV,$X3,$R                                                     11.06 90                  003375.40
        BXE,$+1.32                                                 3377.72 C2                  003376.00
        SIC,SEN                                                    1310.00 80                  003376.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.   1304.10 00                  003377.00
        L%BU¤,FZB16                                                4743.00 80 000000.20 50     003377.40
        V+,$X4,FZB16                                               4743.10 B0                  003400.40
        V+,$X5,$R                                                     11.12 B0                  003401.00
        V+,$X6,$X9                                                    31.14 B0                  003401.40
        V-I,$X7,%8¤777775.40                                     777775.57 0D                  003402.00
        NOP                                                           0.30 00                  003402.40
        KV,$X4,$R                                                     11.10 90                  003403.00
        BXE,$+1.32                                                 3405.32 C2                  003403.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003404.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.           1304.10 00                  003404.40
        KV,$X5,$R                                                     11.12 90                  003405.00
        BXE,$+1.32                                                 3407.32 C2                  003405.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003406.00
        B,SERS               -TO ABA FROM INT MEM FAILS.           1304.10 00                  003406.40
        KV,$X6,$R                                                     11.14 90                  003407.00
        BXE,$+1.32                                                 3411.32 C2                  003407.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003410.00
        B,SERS               -TO ABA FROM IX STG FAILS.            1304.10 00                  003410.40
        KVNI,$X7,%8¤777775.40                                    777775.57 0C                  003411.00
        BXE,$+1.32                                                 3413.32 C2                  003411.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003412.00
        B,SERS               -TO ABA FAILS.                        1304.10 00                  003412.40
        B,$+1.0                                                    3414.10 00                  003413.00
        BD,1347                                                    3357.44 00                  003413.40
        SIC,SEN0+.32                                               1311.40 80                  003414.00
        B,SSW                -TO SSIP.                             1301.10 00                  003414.40
        BD,$+.32                                                   3415.44 00                  003415.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.             4700.32 10                  003415.40
        V+,$X13,BIT7                                               13063.32 B0                  003416.00
        SX,$X13,IC234                                              4700.33 10                  003416.40
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1348    LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 15.    13034.00 10                  003417.00
        LX,$X1,100Z                                                13034.02 10                  003417.40
        LX,$X2,100Z                                                13034.04 10                  003420.00
        LX,$X3,100Z                                                13034.06 10                  003420.40
        LX,$X4,BIT24                                               13104.10 10                  003421.00
        LX,$X5,BIT24                                               13104.12 10                  003421.40
        LX,$X6,BIT24                                               13104.14 10                  003422.00
        LX,$X7,BIT24                                               13104.16 10                  003422.40
        LX,$X8,BIT15                                               13073.20 10                  003423.00
        LX,$X9,FZB15                                                4742.22 10                  003423.40
        L%BU¤,BIT15                                                13073.00 80 000000.20 50     003424.00
        V+,$X0,BIT15                                               13073.00 B0                  003425.00
        V+,$X1,$R                                                     11.02 B0                  003425.40
        V+,$X2,$X8                                                    30.04 B0                  003426.00
        V+I,$X3,4.0                                                    4.07 05                  003426.40
        KV,$X0,$R                                                     11.00 90                  003427.00
        BXE,$+1.32                                                  3431.32 C2                  003427.40
        SIC,SEN                                                     1310.00 80                  003430.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                  003430.40
        KV,$X1,$R                                                     11.02 90                  003431.00
        BXE,$+1.32                                                  3433.32 C2                  003431.40
        SIC,SEN                                                     1310.00 80                  003432.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                  003432.40
        KV,$X2,$R                                                     11.04 90                  003433.00
        BXE,$+1.32                                                  3435.32 C2                  003433.40
        SIC,SEN                                                     1310.00 80                  003434.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                  003434.40
        KV,$X3,$R                                                     11.06 90                  003435.00
        BXE,$+1.32                                                  3437.32 C2                  003435.40
        SIC,SEN                                                     1310.00 80                  003436.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                  003436.40
        L%BU¤,FZB15                                                 4742.00 80 000000.20 50     003437.00
        V+,$X4,FZB15                                                4742.10 B0                  003440.00
        V+,$X5,$R                                                     11.12 B0                  003440.40
        V+,$X6,$X9                                                    31.14 B0                  003441.00
        V-I,$X7,%8¤777773.40                                       777773.57 0D                 003441.40
        NOP                                                            0.30 00                  003442.00
        KV,$X4,$R                                                     11.10 90                  003442.40
        BXE,$+1.32                                                  3444.72 C2                  003443.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003443.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.           1304.10 00                  003444.00
        KV,$X5,$R                                                     11.12 90                  003444.40
        BXE,$+1.32                                                  3446.72 C2                  003445.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003445.40
        B,SERS               -TO ABA FROM INT MEM FAILS.           1304.10 00                  003446.00
        KV,$X6,$R                                                     11.14 90                  003446.40
        BXE,$+1.32                                                  3450.72 C2                  003447.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003447.40
        B,SERS               -TO ABA FROM IX STG FAILS.            1304.10 00                  003450.00
        KVNI,$X7,%8¤777773.40                                      777773.57 0C                 003450.40
        BXE,$+1.32                                                  3452.72 C2                  003451.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003451.40
        B,SERS               -TO ABA FAILS.                        1304.10 00                  003452.00
        B,$+1.0                                                     3453.50 00                  003452.40
        BD,1348                                                     3417.04 00                  003453.00
        SIC,SEN0+.32                                                1311.40 80                  003453.40
        B,SSW                -TO SSIP.                             1301.10 00                  003454.00
        BD,$+.32                                                    3455.04 00                  003454.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                  003455.00
        V+,$X13,BIT8                                               13064.32 B0                  003455.40
        SX,$X13,IC234                                               4700.33 10                  003456.00
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1349    LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 14.   13034.00 10                  003456.40
        LX,$X1,100Z                                               13034.02 10                  003457.00
        LX,$X2,100Z                                               13034.04 10                  003457.40
        LX,$X3,100Z                                               13034.06 10                  003460.00
        LX,$X4,BIT24                                              13104.10 10                  003460.40
        LX,$X5,BIT24                                              13104.12 10                  003461.00
        LX,$X6,BIT24                                              13104.14 10                  003461.40
        LX,$X7,BIT24                                              13104.16 10                  003462.00
        LX,$X8,BIT14                                              13072.20 10                  003462.40
        LX,$X9,FZB14                                               4741.22 10                  003463.00
        L%BU¤,BIT14                                               13072.00 80 000000.20 50     003463.40
        V+,$X0,BIT14                                              13072.00 B0                  003464.40
        V+,$X1,$R                                                    11.02 B0                  003465.00
        V+,$X2,$X8                                                   30.04 B0                  003465.40
        V+I,$X3,8.0                                                  10.07 05                  003466.00
        KV,$X0,$R                                                    11.00 90                  003466.40
        BXE,$+1.32                                                 3470.72 C2                  003467.00
        SIC,SEN                                                    1310.00 80                  003467.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS   1304.10 00                  003470.00
        KV,$X1,$R                                                    11.02 90                  003470.40
        BXE,$+1.32                                                 3472.72 C2                  003471.00
        SIC,SEN                                                    1310.00 80                  003471.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.  1304.10 00                  003472.00
        KV,$X2,$R                                                    11.04 90                  003472.40
        BXE,$+1.32                                                 3474.72 C2                  003473.00
        SIC,SEN                                                    1310.00 80                  003473.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.   1304.10 00                  003474.00
        KV,$X3,$R                                                    11.06 90                  003474.40
        BXE,$+1.32                                                 3476.72 C2                  003475.00
        SIC,SEN                                                    1310.00 80                  003475.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.   1304.10 00                  003476.00
        L%BU¤,FZB14                                                4741.00 80 000000.20 50     003476.40
        V+,$X4,FZB14                                               4741.10 B0                  003477.40
        V+,$X5,$R                                                    11.12 B0                  003500.00
        V+,$X6,$X9                                                   31.14 B0                  003500.40
        V-I,$X7,%8¤777767.40                                      777767.57 0D                 003501.00
        NOP                                                          0.30 00                  003501.40
        KV,$X4,$R                                                    11.10 90                  003502.00
        BXE,$+1.32                                                 3504.32 C2                  003502.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003503.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.           1304.10 00                  003503.40
        KV,$X5,$R                                                    11.12 90                  003504.00
        BXE,$+1.32                                                 3506.32 C2                  003504.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003505.00
        B,SERS               -TO ABA FROM INT MEM FAILS.           1304.10 00                  003505.40
        KV,$X6,$R                                                    11.14 90                  003506.00
        BXE,$+1.32                                                 3510.32 C2                  003506.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003507.00
        B,SERS               -TO ABA FROM IX STG FAILS.            1304.10 00                  003507.40
        KVNI,$X7,%8¤777767.40                                     777767.57 0C                 003510.00
        BXE,$+1.32                                                 3512.32 C2                  003510.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003511.00
        B,SERS               -TO ABA FAILS.                        1304.10 00                  003511.40
        B,$+1.0                                                    3513.10 00                  003512.00
        BD,1349                                                    3456.44 00                  003512.40
        SIC,SEN0+.32                                               1311.40 80                  003513.00
        B,SSW                -TO SSIP.                             1301.10 00                  003513.40
        BD,$+.32                                                   3514.44 00                  003514.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.             4700.32 10                  003514.40
        V+,$X13,BIT9                                              13065.32 B0                  003515.00
        SX,$X13,IC234                                              4700.33 10                  003515.40
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13410   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 13.    13034.00 10                  003516.00
        LX,$X1,100Z                                                13034.02 10                  003516.40
        LX,$X2,100Z                                                13034.04 10                  003517.00
        LX,$X3,100Z                                                13034.06 10                  003517.40
        LX,$X4,BIT24                                               13104.10 10                  003520.00
        LX,$X5,BIT24                                               13104.12 10                  003520.40
        LX,$X6,BIT24                                               13104.14 10                  003521.00
        LX,$X7,BIT24                                               13104.16 10                  003521.40
        LX,$X8,BIT13                                               13071.20 10                  003522.00
        LX,$X9,FZB13                                                4740.22 10                  003522.40
        L%BU□,BIT13                                                13071.00 80 000000.20 50     003523.00
        V+,$X0,BIT13                                               13071.00 B0                  003524.00
        V+,$X1,$R                                                     11.02 B0                  003524.40
        V+,$X2,$X8                                                    30.04 B0                  003525.00
        V+I,$X3,16.0                                                  20.07 05                  003525.40
        KV,$X0,$R                                                     11.00 90                  003526.00
        BXE,$+1.32                                                  3530.32 C2                  003526.40
        SIC,SEN                                                     1310.00 80                  003527.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                  003527.40
        KV,$X1,$R                                                     11.02 90                  003530.00
        BXE,$+1.32                                                  3532.32 C2                  003530.40
        SIC,SEN                                                     1310.00 80                  003531.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                  003531.40
        KV,$X2,$R                                                     11.04 90                  003532.00
        BXE,$+1.32                                                  3534.32 C2                  003532.40
        SIC,SEN                                                     1310.00 80                  003533.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                  003533.40
        KV,$X3,$R                                                     11.06 90                  003534.00
        BXE,$+1.32                                                  3536.32 C2                  003534.40
        SIC,SEN                                                     1310.00 80                  003535.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                  003535.40
        L%BU□,FZB13                                                 4740.00 80 000000.20 50     003536.00
        V+,$X4,FZB13                                                4740.10 B0                  003537.00
        V+,$X5,$R                                                     11.12 B0                  003537.40
        V+,$X6,$X9                                                    31.14 B0                  003540.00
        V-I,$X7,%8□777757.40                                       777757.57 0D                 003540.40
        NOP                                                           0.30 00                   003541.00
        KV,$X4,$R                                                     11.10 90                  003541.40
        BXE,$+1.32                                                  3543.72 C2                  003542.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003542.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.            1304.10 00                  003543.00
        KV,$X5,$R                                                     11.12 90                  003543.40
        BXE,$+1.32                                                  3545.72 C2                  003544.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003544.40
        B,SERS               -TO ABA FROM INT MEM FAILS.            1304.10 00                  003545.00
        KV,$X6,$R                                                     11.14 90                  003545.40
        BXE,$+1.32                                                  3547.72 C2                  003546.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003546.40
        B,SERS               -TO ABA FROM IX STG FAILS.             1304.10 00                  003547.00
        KVNI,$X7,%8□777757.40                                      777757.57 0C                 003547.40
        BXE,$+1.32                                                  3551.72 C2                  003550.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                  003550.40
        B,SERS               -TO ABA FAILS.                         1304.10 00                  003551.00
        B,$+1.0                                                     3552.50 00                  003551.40
        BD,13410                                                    3516.04 00                  003552.00
        SIC,SEN0+.32                                                1311.40 80                  003552.40
        B,SSW                -TO SSIP.                              1301.10 00                  003553.00
        BD,$+.32                                                    3554.04 00                  003553.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                  003554.00
        V+,$X13,BIT10                                              13066.32 B0                  003554.40
        SX,$X13,IC234                                               4700.33 10                  003555.00
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13411   LX,$X0,100Z         -TEST INPUT TO ADDER BUS A,BIT 12.   13034.00 10                  003555.40
        LX,$X1,100Z                                              13034.02 10                  003556.00
        LX,$X2,100Z                                              13034.04 10                  003556.40
        LX,$X3,100Z                                              13034.06 10                  003557.00
        LX,$X4,BIT24                                             13104.10 10                  003557.40
        LX,$X5,BIT24                                             13104.12 10                  003560.00
        LX,$X6,BIT24                                             13104.14 10                  003560.40
        LX,$X7,BIT24                                             13104.16 10                  003561.00
        LX,$X8,BIT12                                             13070.20 10                  003561.40
        LX,$X9,FZB12                                              4737.22 10                  003562.00
        L%BU¤,BIT12                                              13070.00 80 000000.20 50     003562.40
        V+,$X0,BIT12                                             13070.00 B0                  003563.40
        V+,$X1,$R                                                   11.02 B0                  003564.00
        V+,$X2,$X8                                                  30.04 B0                  003564.40
        V+I,$X3,32.0                                                40.07 05                  003565.00
        KV,$X0,$R                                                   11.00 90                  003565.40
        BXE,$+1.32                                                3567.72 C2                  003566.00
        SIC,SEN                                                   1310.00 80                  003566.40
        B,SERS              -ABOVE BIT FRM EXT MEM TO ABA FAILS   1304.10 00                  003567.00
        KV,$X1,$R                                                   11.02 90                  003567.40
        BXE,$+1.32                                                3571.72 C2                  003570.00
        SIC,SEN                                                   1310.00 80                  003570.40
        B,SERS              -ABOVE BIT FRM INT MEM TO ABA FAILS.  1304.10 00                  003571.00
        KV,$X2,$R                                                   11.04 90                  003571.40
        BXE,$+1.32                                                3573.72 C2                  003572.00
        SIC,SEN                                                   1310.00 80                  003572.40
        B,SERS              -ABOVE BIT FRM IX STG TO ABA FAILS.   1304.10 00                  003573.00
        KV,$X3,$R                                                   11.06 90                  003573.40
        BXE,$+1.32                                                3575.72 C2                  003574.00
        SIC,SEN                                                   1310.00 80                  003574.40
        B,SERS              -ABOVE BIT FROM Z REG TO ABB FAILS.   1304.10 00                  003575.00
        L%BU¤,FZB12                                               4737.00 80 000000.20 50     003575.40
        V+,$X4,FZB12                                              4737.10 B0                  003576.40
        V+,$X5,$R                                                   11.12 B0                  003577.00
        V+,$X6,$X9                                                  31.14 B0                  003577.40
        V-I,$X7,%8¤777737.40                                     777737.57 0D                 003600.00
        NOP                                                          0.30 00                  003600.40
        KV,$X4,$R                                                   11.10 90                  003601.00
        BXE,$+1.32                                                3603.32 C2                  003601.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003602.00
        B,SERS              -TO ABA FROM EXT MEM FAILS.           1304.10 00                  003602.40
        KV,$X5,$R                                                   11.12 90                  003603.00
        BXE,$+1.32                                                3605.32 C2                  003603.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003604.00
        B,SERS              -TO ABA FROM INT MEM FAILS.           1304.10 00                  003604.40
        KV,$X6,$R                                                   11.14 90                  003605.00
        BXE,$+1.32                                                3607.32 C2                  003605.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003606.00
        B,SERS              -TO ABA FROM IX STG FAILS.            1304.10 00                  003606.40
        KVNI,$X7,%8¤777737.40                                    777737.57 0C                 003607.00
        BXE,$+1.32                                                3611.32 C2                  003607.40
        SIC,SEN             -ABOVE BIT COMPLIMENT INPUT           1310.00 80                  003610.00
        B,SERS              -TO ABA FAILS.                        1304.10 00                  003610.40
        B,$+1.0                                                   3612.10 00                  003611.00
        BD,13411                                                  3555.44 00                  003611.40
        SIC,SEN0+.32                                              1311.40 80                  003612.00
        B,SSW               -TO SSIP.                             1301.10 00                  003612.40
        BD,$+.32                                                  3613.44 00                  003613.00

        LX,$X13,IC234       -UPDATE CONTINUITY CHECK.             4700.32 10                  003613.40
        V+,$X13,BIT11                                            13067.32 B0                  003614.00
        SX,$X13,IC234                                             4700.33 10                  003614.40
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13412   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 11.
        LX,$X1,100Z
        LX,$X2,100Z
        LX,$X3,100Z
        LX,$X4,BIT24
        LX,$X5,BIT24
        LX,$X6,BIT24
        LX,$X7,BIT24
        LX,$X8,BIT11
        LX,$X9,FZB11
        L%BU¤,BIT11
        V+,$X0,BIT11
        V+,$X1,$R
        V+,$X2,$X8
        V+I,$X3,64.0
        KV,$X0,$R
        BXE,$+1.32
        SIC,SEN
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS
        KV,$X1,$R
        BXE,$+1.32
        SIC,SEN
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.
        KV,$X2,$R
        BXE,$+1.32
        SIC,SEN
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.
        KV,$X3,$R
        BXE,$+1.32
        SIC,SEN
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.
        L%BU¤,FZB11
        V+,$X4,FZB11
        V+,$X5,$R
        V+,$X6,$X9
        V-I,$X7,%8¤777677.40
        NOP
        KV,$X4,$R
        BXE,$+1.32
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT
        B,SERS               -TO ABA FROM EXT MEM FAILS.
        KV,$X5,$R
        BXE,$+1.32
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT
        B,SERS               -TO ABA FROM INT MEM FAILS.
        KV,$X6,$R
        BXE,$+1.32
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT
        B,SERS               -TO ABA FROM IX STG FAILS.
        KVNI,$X7,%8¤777677.40
        BXE,$+1.32
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT
        B,SERS               -TO ABA FAILS.
        B,$+1.0
        BD,13412
        SIC,SEN0+.32
        B,SSW                -TO SSIP.
        BD,$+.32

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.
        V+,$X13,BIT12
        SX,$X13,IC234
```

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13034.00 10                          003615.00
13034.02 10                          003615.40
13034.04 10                          003616.00
13034.06 10                          003616.40
13104.10 10                          003617.00
13104.12 10                          003617.40
13104.14 10                          003620.00
13104.16 10                          003620.40
13067.20 10                          003621.00
 4736.22 10                          003621.40
13067.00 80 000000.20 50             003622.00
13067.00 B0                          003623.00
   11.02 B0                          003623.40
   30.04 B0                          003624.00
  100.07 05                          003624.40
   11.00 90                          003625.00
 3627.32 C2                          003625.40
 1310.00 80                          003626.00
 1304.10 00                          003626.40
   11.02 90                          003627.00
 3631.32 C2                          003627.40
 1310.00 80                          003630.00
 1304.10 00                          003630.40
   11.04 90                          003631.00
 3633.32 C2                          003631.40
 1310.00 80                          003632.00
 1304.10 00                          003632.40
   11.06 90                          003633.00
 3635.32 C2                          003633.40
 1310.00 80                          003634.00
 1304.10 00                          003634.40
 4736.00 80 000000.20 50             003635.00
 4736.10 B0                          003636.00
   11.12 B0                          003636.40
   31.14 B0                          003637.00
777677.57 0D                         003637.40
    0.30 00                          003640.00
   11.10 90                          003640.40
 3642.72 C2                          003641.00
 1310.00 80                          003641.40
 1304.10 00                          003642.00
   11.12 90                          003642.40
 3644.72 C2                          003643.00
 1310.00 80                          003643.40
 1304.10 00                          003644.00
   11.14 90                          003644.40
 3646.72 C2                          003645.00
 1310.00 80                          003645.40
 1304.10 00                          003646.00
777677.57 0C                         003646.40
 3650.72 C2                          003647.00
 1310.00 80                          003647.40
 1304.10 00                          003650.00
 3651.50 00                          003650.40
 3615.04 00                          003651.00
 1311.40 80                          003651.40
 1301.10 00                          003652.00
 3653.04 00                          003652.40

 4700.32 10                          003653.00
13070.32 B0                          003653.40
 4700.33 10                          003654.00
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13413   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A, BIT 10.     13034.00 10                  003654.40
        LX,$X1,100Z                                                  13034.02 10                  003655.00
        LX,$X2,100Z                                                  13034.04 10                  003655.40
        LX,$X3,100Z                                                  13034.06 10                  003656.00
        LX,$X4,BIT24                                                 13104.10 10                  003656.40
        LX,$X5,BIT24                                                 13104.12 10                  003657.00
        LX,$X6,BIT24                                                 13104.14 10                  003657.40
        LX,$X7,BIT24                                                 13104.16 10                  003660.00
        LX,$X8,BIT10                                                 13066.20 10                  003660.40
        LX,$X9,FZB10                                                  4735.22 10                  003661.00
        L%BU¤,BIT10                                                  13066.00 80 000000.20 50     003661.40
        V+,$X0,BIT10                                                 13066.00 B0                  003662.40
        V+,$X1,$R                                                       11.02 B0                  003663.00
        V+,$X2,$X8                                                      30.04 B0                  003663.40
        V+I,$X3,128.0                                                  200.07 05                  003664.00
        KV,$X0,$R                                                       11.00 90                  003664.40
        BXE,$+1.32                                                    3666.72 C2                  003665.00
        SIC,SEN                                                       1310.00 80                  003665.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS      1304.10 00                  003666.00
        KV,$X1,$R                                                       11.02 90                  003666.40
        BXE,$+1.32                                                    3670.72 C2                  003667.00
        SIC,SEN                                                       1310.00 80                  003667.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.     1304.10 00                  003670.00
        KV,$X2,$R                                                       11.04 90                  003670.40
        BXE,$+1.32                                                    3672.72 C2                  003671.00
        SIC,SEN                                                       1310.00 80                  003671.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.      1304.10 00                  003672.00
        KV,$X3,$R                                                       11.06 90                  003672.40
        BXE,$+1.32                                                    3674.72 C2                  003673.00
        SIC,SEN                                                       1310.00 80                  003673.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.      1304.10 00                  003674.00
        L%BU¤,FZB10                                                   4735.00 80 000000.20 50     003674.40
        V+,$X4,FZB10                                                  4735.10 B0                  003675.40
        V+,$X5,$R                                                       11.12 B0                  003676.00
        V+,$X6,$X9                                                      31.14 B0                  003676.40
        V-I,$X7,%8¤777577.40                                         777577.57 0D                 003677.00
        NOP                                                              0.30 00                  003677.40
        KV,$X4,$R                                                       11.10 90                  003700.00
        BXE,$+1.32                                                    3702.32 C2                  003700.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT              1310.00 80                  003701.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.              1304.10 00                  003701.40
        KV,$X5,$R                                                       11.12 90                  003702.00
        BXE,$+1.32                                                    3704.32 C2                  003702.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT              1310.00 80                  003703.00
        B,SERS               -TO ABA FROM INT MEM FAILS.              1304.10 00                  003703.40
        KV,$X6,$R                                                       11.14 90                  003704.00
        BXE,$+1.32                                                    3706.32 C2                  003704.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT              1310.00 80                  003705.00
        B,SERS               -TO ABA FROM IX STG FAILS.               1304.10 00                  003705.40
        KVNI,$X7,%8¤777577.40                                        777577.57 0C                 003706.00
        BXE,$+1.32                                                    3710.32 C2                  003706.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT              1310.00 80                  003707.00
        B,SERS               -TO ABA FAILS.                           1304.10 00                  003707.40
        B,$+1.0                                                       3711.10 00                  003710.00
        BD,13413                                                      3654.44 00                  003710.40
        SIC,SEN0+.32                                                  1311.40 80                  003711.00
        B,SSW                -TO SSIP.                                1301.10 00                  003711.40
        BD,$+.32                                                      3712.44 00                  003712.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.                4700.32 10                  003712.40
        V+,$X13,BIT13                                                13071.32 B0                  003713.00
        SX,$X13,IC234                                                 4700.33 10                  003713.40
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13414   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 9.      13034.00 10                  003714.00
        LX,$X1,100Z                                                 13034.02 10                  003714.40
        LX,$X2,100Z                                                 13034.04 10                  003715.00
        LX,$X3,100Z                                                 13034.06 10                  003715.40
        LX,$X4,BIT24                                                13104.10 10                  003716.00
        LX,$X5,BIT24                                                13104.12 10                  003716.40
        LX,$X6,BIT24                                                13104.14 10                  003717.00
        LX,$X7,BIT24                                                13104.16 10                  003717.40
        LX,$X8,BIT9                                                 13065.20 10                  003720.00
        LX,$X9,FZB9                                                  4734.22 10                  003720.40
        L%BU¤,BIT9                                                  13065.00 80 000000.20 50     003721.00
        V+,$X0,BIT9                                                 13065.00 B0                  003722.00
        V+,$X1,$R                                                      11.02 B0                  003722.40
        V+,$X2,$X8                                                     30.04 B0                  003723.00
        V+I,$X3,256.0                                                 400.07 05                  003723.40
        KV,$X0,$R                                                      11.00 90                  003724.00
        BXE,$+1.32                                                   3726.32 C2                  003724.40
        SIC,SEN                                                      1310.00 80                  003725.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                  003725.40
        KV,$X1,$R                                                      11.02 90                  003726.00
        BXE,$+1.32                                                   3730.32 C2                  003726.40
        SIC,SEN                                                      1310.00 80                  003727.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                  003727.40
        KV,$X2,$R                                                      11.04 90                  003730.00
        BXE,$+1.32                                                   3732.32 C2                  003730.40
        SIC,SEN                                                      1310.00 80                  003731.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                  003731.40
        KV,$X3,$R                                                      11.06 90                  003732.00
        BXE,$+1.32                                                   3734.32 C2                  003732.40
        SIC,SEN                                                      1310.00 80                  003733.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.     1304.10 00                  003733.40
        L%BU¤,FZB9                                                   4734.00 80 000000.20 50     003734.00
        V+,$X4,FZB9                                                  4734.10 B0                  003735.00
        V+,$X5,$R                                                      11.12 B0                  003735.40
        V+,$X6,$X9                                                     31.14 B0                  003736.00
        V-I,$X7,%8¤777377.40                                      777377.57 0D                  003736.40
        NOP                                                            0.30 00                  003737.00
        KV,$X4,$R                                                      11.10 90                  003737.40
        BXE,$+1.32                                                   3741.72 C2                  003740.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003740.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                  003741.00
        KV,$X5,$R                                                      11.12 90                  003741.40
        BXE,$+1.32                                                   3743.72 C2                  003742.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003742.40
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                  003743.00
        KV,$X6,$R                                                      11.14 90                  003743.40
        BXE,$+1.32                                                   3745.72 C2                  003744.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003744.40
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                  003745.00
        KVNI,$X7,%8¤777377.40                                     777377.57 0C                  003745.40
        BXE,$+1.32                                                   3747.72 C2                  003746.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  003746.40
        B,SERS               -TO ABA FAILS.                          1304.10 00                  003747.00
        B,$+1.0                                                      3750.50 00                  003747.40
        BD,13414                                                     3714.04 00                  003750.00
        SIC,SEN0+.32                                                 1311.40 80                  003750.40
        B,SSW                -TO SSIP.                               1301.10 00                  003751.00
        BD,$+.32                                                     3752.04 00                  003751.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10                  003752.00
        V+,$X13,BIT14                                               13072.32 B0                  003752.40
        SX,$X13,IC234                                                4700.33 10                  003753.00
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13415   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 8.     13034.00 10                    003753.40
        LX,$X1,100Z                                                13034.02 10                    003754.00
        LX,$X2,100Z                                                13034.04 10                    003754.40
        LX,$X3,100Z                                                13034.06 10                    003755.00
        LX,$X4,BIT24                                               13104.10 10                    003755.40
        LX,$X5,BIT24                                               13104.12 10                    003756.00
        LX,$X6,BIT24                                               13104.14 10                    003756.40
        LX,$X7,BIT24                                               13104.16 10                    003757.00
        LX,$X8,BIT8                                                13064.20 10                    003757.40
        LX,$X9,FZB8                                                 4733.22 10                    003760.00
        L%BU□,BIT8                                                 13064.00 80 000000.20 50       003760.40
        V+,$X0,BIT8                                                13064.00 B0                    003761.40
        V+,$X1,$R                                                     11.02 B0                    003762.00
        V+,$X2,$X8                                                    30.04 B0                    003762.40
        V+I,$X3,512.0                                               1000.07 05                    003763.00
        KV,$X0,$R                                                     11.00 90                    003763.40
        BXE,$+1.32                                                  3765.72 C2                    003764.00
        SIC,SEN                                                     1310.00 80                    003764.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                    003765.00
        KV,$X1,$R                                                     11.02 90                    003765.40
        BXE,$+1.32                                                  3767.72 C2                    003766.00
        SIC,SEN                                                     1310.00 80                    003766.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                    003767.00
        KV,$X2,$R                                                     11.04 90                    003767.40
        BXE,$+1.32                                                  3771.72 C2                    003770.00
        SIC,SEN                                                     1310.00 80                    003770.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                    003771.00
        KV,$X3,$R                                                     11.06 90                    003771.40
        BXE,$+1.32                                                  3773.72 C2                    003772.00
        SIC,SEN                                                     1310.00 80                    003772.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                    003773.00
        L%BU□,FZB8                                                 4733.00 80 000000.20 50       003773.40
        V+,$X4,FZB8                                                4733.10 B0                    003774.40
        V+,$X5,$R                                                     11.12 B0                    003775.00
        V+,$X6,$X9                                                    31.14 B0                    003775.40
        V-I,$X7,%8□776777.40                                      776777.57 0D                    003776.00
        NOP                                                           0.30 00                     003776.40
        KV,$X4,$R                                                     11.10 90                    003777.00
        BXE,$+1.32                                                  4001.32 C2                    003777.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004000.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.            1304.10 00                    004000.40
        KV,$X5,$R                                                     11.12 90                    004001.00
        BXE,$+1.32                                                  4003.32 C2                    004001.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004002.00
        B,SERS               -TO ABA FROM INT MEM FAILS.            1304.10 00                    004002.40
        KV,$X6,$R                                                     11.14 90                    004003.00
        BXE,$+1.32                                                  4005.32 C2                    004003.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004004.00
        B,SERS               -TO ABA FROM IX STG FAILS.             1304.10 00                    004004.40
        KVNI,$X7,%8□776777.40                                     776777.57 0C                    004005.00
        BXE,$+1.32                                                  4007.32 C2                    004005.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004006.00
        B,SERS               -TO ABA FAILS.                         1304.10 00                    004006.40
        B,$+1.0                                                     4010.10 00                    004007.00
        BD,13415                                                    3753.44 00                    004007.40
        SIC,SEN0+.32                                                1311.40 80                    004010.00
        B,SSW                -TO SSIP.                              1301.10 00                    004010.40
        BD,$+.32                                                    4011.44 00                    004011.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                    004011.40
        V+,$X13,BIT15                                              13073.32 B0                    004012.00
        SX,$X13,IC234                                               4700.33 10                    004012.40
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13416   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 7.      13034.00 10                    004013.00
        LX,$X1,100Z                                                 13034.02 10                    004013.40
        LX,$X2,100Z                                                 13034.04 10                    004014.00
        LX,$X3,100Z                                                 13034.06 10                    004014.40
        LX,$X4,BIT24                                                13104.10 10                    004015.00
        LX,$X5,BIT24                                                13104.12 10                    004015.40
        LX,$X6,BIT24                                                13104.14 10                    004016.00
        LX,$X7,BIT24                                                13104.16 10                    004016.40
        LX,$X8,BIT7                                                 13063.20 10                    004017.00
        LX,$X9,FZB7                                                  4732.22 10                    004017.40
        L%BU¤,BIT7                                                  13063.00 80 000000.20 50       004020.00
        V+,$X0,BIT7                                                 13063.00 B0                    004021.00
        V+,$X1,$R                                                      11.02 B0                    004021.40
        V+,$X2,$X8                                                     30.04 B0                    004022.00
        V+1,$X3,1024.0                                               2000.07 05                    004022.40
        KV,$X0,$R                                                      11.00 90                    004023.00
        BXE,$+1.32                                                   4025.32 C2                    004023.40
        SIC,SEN                                                      1310.00 80                    004024.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                    004024.40
        KV,$X1,$R                                                      11.02 90                    004025.00
        BXE,$+1.32                                                   4027.32 C2                    004025.40
        SIC,SEN                                                      1310.00 80                    004026.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                    004026.40
        KV,$X2,$R                                                      11.04 90                    004027.00
        BXE,$+1.32                                                   4031.32 C2                    004027.40
        SIC,SEN                                                      1310.00 80                    004030.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                    004030.40
        KV,$X3,$R                                                      11.06 90                    004031.00
        BXE,$+1.32                                                   4033.32 C2                    004031.40
        SIC,SEN                                                      1310.00 80                    004032.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.     1304.10 00                    004032.40
        L%BU¤,FZB7                                                   4732.00 80 000000.20 50       004033.00
        V+,$X4,FZB7                                                  4732.10 B0                    004034.00
        V+,$X5,$R                                                      11.12 B0                    004034.40
        V+,$X6,$X9                                                     31.14 B0                    004035.00
        V-1,$X7,%8¤775777.40                                        775777.57 0D                   004035.40
        NOP                                                            0.30 00                     004036.00
        KV,$X4,$R                                                      11.10 90                    004036.40
        BXE,$+1.32                                                   4040.72 C2                    004037.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004037.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                    004040.00
        KV,$X5,$R                                                      11.12 90                    004040.40
        BXE,$+1.32                                                   4042.72 C2                    004041.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004041.40
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                    004042.00
        KV,$X6,$R                                                      11.14 90                    004042.40
        BXE,$+1.32                                                   4044.72 C2                    004043.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004043.40
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                    004044.00
        KVNI,$X7,%8¤775777.40                                       775777.57 0C                   004044.40
        BXE,$+1.32                                                   4046.72 C2                    004045.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004045.40
        B,SERS               -TO ABA FAILS.                          1304.10 00                    004046.00
        B,$+1.0                                                      4047.50 00                    004046.40
        BD,13416                                                     4013.04 00                    004047.00
        SIC,SEN0+.32                                                 1311.40 80                    004047.40
        B,SSW                -TO SSIP.                               1301.10 00                    004050.00
        BD,$+.32                                                     4051.04 00                    004050.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10                    004051.00
        V+,$X13,BIT16                                               13074.32 B0                    004051.40
        SX,$X13,IC234                                                4700.33 10                    004052.00
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13417   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 6.      13034.00 10                    004052.40
        LX,$X1,100Z                                                 13034.02 10                    004053.00
        LX,$X2,100Z                                                 13034.04 10                    004053.40
        LX,$X3,100Z                                                 13034.06 10                    004054.00
        LX,$X4,BIT24                                                13104.10 10                    004054.40
        LX,$X5,BIT24                                                13104.12 10                    004055.00
        LX,$X6,BIT24                                                13104.14 10                    004055.40
        LX,$X7,BIT24                                                13104.16 10                    004056.00
        LX,$X8,BIT6                                                 13062.20 10                    004056.40
        LX,$X9,FZB6                                                  4731.22 10                    004057.00
        L%BU¤,BIT6                                                  13062.00 80 000000.20 50       004057.40
        V+,$X0,BIT6                                                 13062.00 B0                    004060.40
        V+,$X1,$R                                                      11.02 B0                    004061.00
        V+,$X2,$X8                                                     30.04 B0                    004061.40
        V+I,$X3,2048.0                                               4000.07 05                    004062.00
        KV,$X0,$R                                                      11.00 90                    004062.40
        BXE,$+1.32                                                  4064.72 C2                     004063.00
        SIC,SEN                                                     1310.00 80                     004063.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                     004064.00
        KV,$X1,$R                                                      11.02 90                    004064.40
        BXE,$+1.32                                                  4066.72 C2                     004065.00
        SIC,SEN                                                     1310.00 80                     004065.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                     004066.00
        KV,$X2,$R                                                      11.04 90                    004066.40
        BXE,$+1.32                                                  4070.72 C2                     004067.00
        SIC,SEN                                                     1310.00 80                     004067.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                     004070.00
        KV,$X3,$R                                                      11.06 90                    004070.40
        BXE,$+1.32                                                  4072.72 C2                     004071.00
        SIC,SEN                                                     1310.00 80                     004071.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                     004072.00
        L%BU¤,FZB6                                                   4731.00 80 000000.20 50       004072.40
        V+,$X4,FZB6                                                  4731.10 B0                    004073.40
        V+,$X5,$R                                                      11.12 B0                    004074.00
        V+,$X6,$X9                                                     31.14 B0                    004074.40
        V-I,$X7,%8¤773777.40                                        773777.57 0D                   004075.00
        NOP                                                            0.30 00                     004075.40
        KV,$X4,$R                                                      11.10 90                    004076.00
        BXE,$+1.32                                                  4100.32 C2                     004076.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                     004077.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.            1304.10 00                     004077.40
        KV,$X5,$R                                                      11.12 90                    004100.00
        BXE,$+1.32                                                  4102.32 C2                     004100.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                     004101.00
        B,SERS               -TO ABA FROM INT MEM FAILS.            1304.10 00                     004101.40
        KV,$X6,$R                                                      11.14 90                    004102.00
        BXE,$+1.32                                                  4104.32 C2                     004102.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                     004103.00
        B,SERS               -TO ABA FROM IX STG FAILS.             1304.10 00                     004103.40
        KVNI,$X7,%8¤773777.40                                       773777.57 0C                   004104.00
        BXE,$+1.32                                                  4106.32 C2                     004104.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                     004105.00
        B,SERS               -TO ABA FAILS.                         1304.10 00                     004105.40
        B,$+1.0                                                     4107.10 00                     004106.00
        BD,13417                                                    4052.44 00                     004106.40
        SIC,SEN0+.32                                                1311.40 80                     004107.00
        B,SSW                -TO SSIP.                              1301.10 00                     004107.40
        BD,$+.32                                                    4110.44 00                     004110.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                     004110.40
        V+,$X13,BIT17                                               13075.32 B0                    004111.00
        SX,$X13,IC234                                                4700.33 10                    004111.40
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13418   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 5.     13034.00 10                    004112.00
        LX,$X1,100Z                                                13034.02 10                    004112.40
        LX,$X2,100Z                                                13034.04 10                    004113.00
        LX,$X3,100Z                                                13034.06 10                    004113.40
        LX,$X4,BIT24                                               13104.10 10                    004114.00
        LX,$X5,BIT24                                               13104.12 10                    004114.40
        LX,$X6,BIT24                                               13104.14 10                    004115.00
        LX,$X7,BIT24                                               13104.16 10                    004115.40
        LX,$X8,BIT5                                                13061.20 10                    004116.00
        LX,$X9,FZB5                                                 4730.22 10                    004116.40
        L%BU¤,BIT5                                                 13061.00 80 000000.20 50       004117.00
        V+,$X0,BIT5                                                13061.00 B0                    004120.00
        V+,$X1,$R                                                     11.02 B0                    004120.40
        V+,$X2,$X8                                                    30.04 B0                    004121.00
        V+I,$X3,4096.0                                             10000.07 05                    004121.40
        KV,$X0,$R                                                     11.00 90                    004122.00
        BXE,$+1.32                                                  4124.32 C2                    004122.40
        SIC,SEN                                                     1310.00 80                    004123.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                    004123.40
        KV,$X1,$R                                                     11.02 90                    004124.00
        BXE,$+1.32                                                  4126.32 C2                    004124.40
        SIC,SEN                                                     1310.00 80                    004125.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                    004125.40
        KV,$X2,$R                                                     11.04 90                    004126.00
        BXE,$+1.32                                                  4130.32 C2                    004126.40
        SIC,SEN                                                     1310.00 80                    004127.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                    004127.40
        KV,$X3,$R                                                     11.06 90                    004130.00
        BXE,$+1.32                                                  4132.32 C2                    004130.40
        SIC,SEN                                                     1310.00 80                    004131.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                    004131.40
        L%BU¤,FZB5                                                  4730.00 80 000000.20 50       004132.00
        V+,$X4,FZB5                                                 4730.10 B0                    004133.00
        V+,$X5,$R                                                     11.12 B0                    004133.40
        V+,$X6,$X9                                                    31.14 B0                    004134.00
        V-I,$X7,%8¤767777.40                                       767777.57 0D                   004134.40
        NOP                                                           0.30 00                     004135.00
        KV,$X4,$R                                                     11.10 90                    004135.40
        BXE,$+1.32                                                  4137.72 C2                    004136.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004136.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.            1304.10 00                    004137.00
        KV,$X5,$R                                                     11.12 90                    004137.40
        BXE,$+1.32                                                  4141.72 C2                    004140.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004140.40
        B,SERS               -TO ABA FROM INT MEM FAILS.            1304.10 00                    004141.00
        KV,$X6,$R                                                     11.14 90                    004141.40
        BXE,$+1.32                                                  4143.72 C2                    004142.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004142.40
        B,SERS               -TO ABA FROM IX STG FAILS.             1304.10 00                    004143.00
        KVNI,$X7,%8¤767777.40                                      767777.57 0C                   004143.40
        BXE,$+1.32                                                  4145.72 C2                    004144.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT            1310.00 80                    004144.40
        B,SERS               -TO ABA FAILS.                         1304.10 00                    004145.00
        B,$+1.0                                                     4146.50 00                    004145.40
        BD,13418                                                    4112.04 00                    004146.00
        SIC,SEN0+.32                                                1311.40 80                    004146.40
        B,SSW                -TO SSIP.                              1301.10 00                    004147.00
        BD,$+.32                                                    4150.04 00                    004147.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                    004150.00
        V+,$X13,BIT18                                              13076.32 B0                    004150.40
        SX,$X13,IC234                                               4700.33 10                    004151.00
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LX,$X13,IC234        -UPDATE CONTINUITY CHECK.      4700.32 10          004151.40
V+,$X13,BIT21                                       13101.32 B0          004152.00
SX,$X13,IC234                                        4700.33 10          004152.40
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13419   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 4.      13034.00 10                  004153.00
        LX,$X1,100Z                                                 13034.02 10                  004153.40
        LX,$X2,100Z                                                 13034.04 10                  004154.00
        LX,$X3,100Z                                                 13034.06 10                  004154.40
        LX,$X4,BIT24                                                13104.10 10                  004155.00
        LX,$X5,BIT24                                                13104.12 10                  004155.40
        LX,$X6,BIT24                                                13104.14 10                  004156.00
        LX,$X7,BIT24                                                13104.16 10                  004156.40
        LX,$X8,BIT4                                                 13060.20 10                  004157.00
        LX,$X9,FZB4                                                  4727.22 10                  004157.40
        L%BU¤,BIT4                                                  13060.00 80 000000.20 50     004160.00
        V+,$X0,BIT4                                                 13060.00 B0                  004161.00
        V+,$X1,$R                                                      11.02 B0                  004161.40
        V+,$X2,$X8                                                     30.04 B0                  004162.00
        V+I,$X3,8192.0                                              20000.07 05                  004162.40
        KV,$X0,$R                                                      11.00 90                  004163.00
        BXE,$+1.32                                                   4165.32 C2                  004163.40
        SIC,SEN                                                      1310.00 80                  004164.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                  004164.40
        KV,$X1,$R                                                      11.02 90                  004165.00
        BXE,$+1.32                                                   4167.32 C2                  004165.40
        SIC,SEN                                                      1310.00 80                  004166.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                  004166.40
        KV,$X2,$R                                                      11.04 90                  004167.00
        BXE,$+1.32                                                   4171.32 C2                  004167.40
        SIC,SEN                                                      1310.00 80                  004170.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                  004170.40
        KV,$X3,$R                                                      11.06 90                  004171.00
        BXE,$+1.32                                                   4173.32 C2                  004171.40
        SIC,SEN                                                      1310.00 80                  004172.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.     1304.10 00                  004172.40
        L%BU¤,FZB4                                                   4727.00 80 000000.20 50     004173.00
        V+,$X4,FZB4                                                  4727.10 B0                  004174.00
        V+,$X5,$R                                                      11.12 B0                  004174.40
        V+,$X6,$X9                                                     31.14 B0                  004175.00
        V-I,$X7,%8¤757777.40                                        757777.57 0D                 004175.40
        NOP                                                            0.30 00                   004176.00
        KV,$X4,$R                                                      11.10 90                  004176.40
        BXE,$+1.32                                                   4200.72 C2                  004177.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  004177.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                  004200.00
        KV,$X5,$R                                                      11.12 90                  004200.40
        BXE,$+1.32                                                   4202.72 C2                  004201.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  004201.40
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                  004202.00
        KV,$X6,$R                                                      11.14 90                  004202.40
        BXE,$+1.32                                                   4204.72 C2                  004203.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  004203.40
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                  004204.00
        KVNI,$X7,%8¤757777.40                                       757777.57 0C                 004204.40
        BXE,$+1.32                                                   4206.72 C2                  004205.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                  004205.40
        B,SERS               -TO ABA FAILS.                          1304.10 00                  004206.00
        B,$+1.0                                                      4207.50 00                  004206.40
        BD,13419                                                     4153.04 00                  004207.00
        SIC,SEN0+.32                                                 1311.40 80                  004207.40
        B,SSW                -TO SSIP.                               1301.10 00                  004210.00
        BD,$+.32                                                     4211.04 00                  004210.40

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10                  004211.00
        V+,$X13,BIT19                                               13077.32 B0                  004211.40
        SX,$X13,IC234                                                4700.33 10                  004212.00
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13420   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 3.      13034.00 10                    004212.40
        LX,$X1,100Z                                                 13034.02 10                    004213.00
        LX,$X2,100Z                                                 13034.04 10                    004213.40
        LX,$X3,100Z                                                 13034.06 10                    004214.00
        LX,$X4,BIT24                                                13104.10 10                    004214.40
        LX,$X5,BIT24                                                13104.12 10                    004215.00
        LX,$X6,BIT24                                                13104.14 10                    004215.40
        LX,$X7,BIT24                                                13104.16 10                    004216.00
        LX,$X8,BIT3                                                 13057.20 10                    004216.40
        LX,$X9,FZB3                                                  4726.22 10                    004217.00
        L%BU¤,BIT3                                                  13057.00 80 000000.20 50       004217.40
        V+,$X0,BIT3                                                 13057.00 B0                    004220.40
        V+,$X1,$R                                                      11.02 B0                    004221.00
        V+,$X2,$X8                                                     30.04 B0                    004221.40
        V+1,$X3,16384.0                                             40000.07 05                    004222.00
        KV,$X0,$R                                                      11.00 90                    004222.40
        BXE,$+1.32                                                  4224.72 C2                    004223.00
        SIC,SEN                                                     1310.00 80                    004223.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS    1304.10 00                    004224.00
        KV,$X1,$R                                                      11.02 90                    004224.40
        BXE,$+1.32                                                  4226.72 C2                    004225.00
        SIC,SEN                                                     1310.00 80                    004225.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.   1304.10 00                    004226.00
        KV,$X2,$R                                                      11.04 90                    004226.40
        BXE,$+1.32                                                  4230.72 C2                    004227.00
        SIC,SEN                                                     1310.00 80                    004227.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.    1304.10 00                    004230.00
        KV,$X3,$R                                                      11.06 90                    004230.40
        BXE,$+1.32                                                  4232.72 C2                    004231.00
        SIC,SEN                                                     1310.00 80                    004231.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.    1304.10 00                    004232.00
        L%BU¤,FZB3                                                  4726.00 80 000000.20 50       004232.40
        V+,$X4,FZB3                                                 4726.10 B0                    004233.40
        V+,$X5,$R                                                      11.12 B0                    004234.00
        V+,$X6,$X9                                                     31.14 B0                    004234.40
        V-1,$X7,%8¤737777.40                                        737777.57 0D                   004235.00
        NOP                                                            0.30 00                     004235.40
        KV,$X4,$R                                                      11.10 90                    004236.00
        BXE,$+1.32                                                  4240.32 C2                    004236.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.           1304.10 00                    004237.00
        B,SERS               -TO ABB FROM EXT MEM FAILS.           1304.10 00                    004237.40
        KV,$X5,$R                                                      11.12 90                    004240.00
        BXE,$+1.32                                                  4242.32 C2                    004240.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                    004241.00
        B,SERS               -TO ABA FROM INT MEM FAILS.           1304.10 00                    004241.40
        KV,$X6,$R                                                      11.14 90                    004242.00
        BXE,$+1.32                                                  4244.32 C2                    004242.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                    004243.00
        B,SERS               -TO ABA FROM IX STG FAILS.            1304.10 00                    004243.40
        KVNI,$X7,%8¤737777.40                                       737777.57 0C                   004244.00
        BXE,$+1.32                                                  4246.32 C2                    004244.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT           1310.00 80                    004245.00
        B,SERS               -TO ABA FAILS.                        1304.10 00                    004245.40
        B,$+1.0                                                     4247.10 00                    004246.00
        BD,13420                                                    4212.44 00                    004246.40
        SIC,SEN0+.32                                                1311.40 80                    004247.00
        B,SSW                -TO SSIP.                             1301.10 00                    004247.40
        BD,$+.32                                                    4250.44 00                    004250.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.              4700.32 10                    004250.40
        V+,$X13,BIT20                                               13100.32 B0                    004251.00
        SX,$X13,IC234                                               4700.33 10                    004251.40
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13421   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 2.      13034.00 10                    004252.00
        LX,$X1,100Z                                                 13034.02 10                    004252.40
        LX,$X2,100Z                                                 13034.04 10                    004253.00
        LX,$X3,100Z                                                 13034.06 10                    004253.40
        LX,$X4,BIT24                                                13104.10 10                    004254.00
        LX,$X5,BIT24                                                13104.12 10                    004254.40
        LX,$X6,BIT24                                                13104.14 10                    004255.00
        LX,$X7,BIT24                                                13104.16 10                    004255.40
        LX,$X8,BIT2                                                 13056.20 10                    004256.00
        LX,$X9,FZB2                                                  4725.22 10                    004256.40
        L%BU¤,BIT2                                                  13056.00 80 000000.20 50       004257.00
        V+,$X0,BIT2                                                 13056.00 B0                    004260.00
        V+,$X1,$R                                                      11.02 B0                    004260.40
        V+,$X2,$X8                                                     30.04 B0                    004261.00
        V+I,$X3,32768.0                                            100000.07 05                    004261.40
        KV,$X0,$R                                                      11.00 90                    004262.00
        BXE,$+1.32                                                   4264.32 C2                    004262.40
        SIC,SEN                                                      1310.00 80                    004263.00
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                    004263.40
        KV,$X1,$R                                                      11.02 90                    004264.00
        BXE,$+1.32                                                   4266.32 C2                    004264.40
        SIC,SEN                                                      1310.00 80                    004265.00
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                    004265.40
        KV,$X2,$R                                                      11.04 90                    004266.00
        BXE,$+1.32                                                   4270.32 C2                    004266.40
        SIC,SEN                                                      1310.00 80                    004267.00
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                    004267.40
        KV,$X3,$R                                                      11.06 90                    004270.00
        BXE,$+1.32                                                   4272.32 C2                    004270.40
        SIC,SEN                                                      1310.00 80                    004271.00
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.     1304.10 00                    004271.40
        L%BU¤,FZB2                                                   4725.00 80 000000.20 50       004272.00
        V+,$X4,FZB2                                                  4725.10 B0                    004273.00
        V+,$X5,$R                                                      11.12 B0                    004273.40
        V+,$X6,$X9                                                     31.14 B0                    004274.00
        V-I,$X7,%8¤677777.40                                       677777.57 0D                    004274.40
        NOP                                                            0.30 00                     004275.00
        KV,$X4,$R                                                      11.10 90                    004275.40
        BXE,$+1.32                                                   4277.72 C2                    004276.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004276.40
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                    004277.00
        KV,$X5,$R                                                      11.12 90                    004277.40
        BXE,$+1.32                                                   4301.72 C2                    004300.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004300.40
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                    004301.00
        KV,$X6,$R                                                      11.14 90                    004301.40
        BXE,$+1.32                                                   4303.72 C2                    004302.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004302.40
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                    004303.00
        KVNI,$X7,%8¤677777.40                                      677777.57 0C                    004303.40
        BXE,$+1.32                                                   4305.72 C2                    004304.00
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004304.40
        B,SERS               -TO ABA FAILS.                          1304.10 00                    004305.00
        B,$+1.0                                                      4306.50 00                    004305.40
        BD,13421                                                     4252.04 00                    004306.00
        SIC,SEN0+.32                                                 1311.40 80                    004306.40
        B,SSW                -TO SSIP.                               1301.10 00                    004307.00
        BD,$+.32                                                     4310.04 00                    004307.40
13422   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 1.       13034.00 10                    004310.00
        LX,$X1,100Z                                                 13034.02 10                    004310.40
        LX,$X2,100Z                                                 13034.04 10                    004311.00
        LX,$X3,100Z                                                 13034.06 10                    004311.40
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LX,$X4,BIT24                                    13104.10 10                    004312.00
LX,$X5,BIT24                                    13104.12 10                    004312.40
LX,$X6,BIT24                                    13104.14 10                    004313.00
LX,$X7,BIT24                                    13104.16 10                    004313.40
LX,$X8,BIT1                                     13055.20 10                    004314.00
LX,$X9,FZB1                                      4724.22 10                    004314.40
L%BU¤,BIT1                                      13055.00 80 000000.20 50       004315.00
V+,$X0,BIT1                                     13055.00 B0                    004316.00
V+,$X1,$R                                          11.02 B0                    004316.40
V+,$X2,$X8                                         30.04 B0                    004317.00
V+I,$X3,65536.0                                200000.07 05                    004317.40
KV,$X0,$R                                          11.00 90                    004320.00
BXE,$+1.32                                       4322.32 C2                    004320.40
SIC,SEN                                          1310.00 80                    004321.00
B,SERS          -ABOVE BIT FRM EXT MEM TO ABA FAILS  1304.10 00                 004321.40
KV,$X1,$R                                          11.02 90                    004322.00
BXE,$+1.32                                       4324.32 C2                    004322.40
SIC,SEN                                          1310.00 80                    004323.00
B,SERS          -ABOVE BIT FRM INT MEM TO ABA FAILS. 1304.10 00                 004323.40
KV,$X2,$R                                          11.04 90                    004324.00
BXE,$+1.32                                       4326.32 C2                    004324.40
SIC,SEN                                          1310.00 80                    004325.00
B,SERS          -ABOVE BIT FRM IX STG TO ABA FAILS.  1304.10 00                 004325.40
KV,$X3,$R                                          11.06 90                    004326.00
BXE,$+1.32                                       4330.32 C2                    004326.40
SIC,SEN                                          1310.00 80                    004327.00
B,SERS          -ABOVE BIT FROM Z REG TO ABB FAILS.  1304.10 00                 004327.40
L%BU¤,FZB1                                       4724.00 80 000000.20 50       004330.00
V+,$X4,FZB1                                      4724.10 B0                    004331.00
V+,$X5,$R                                          11.12 B0                    004331.40
V+,$X6,$X9                                         31.14 B0                    004332.00
V-I,$X7,%8¤577777.40                           577777.57 0D                    004332.40
NOP                                                 0.30 00                    004333.00
KV,$X4,$R                                          11.10 90                    004333.40
BXE,$+1.32                                       4335.72 C2                    004334.00
SIC,SEN         -ABOVE BIT COMPLIMENT INPUT      1310.00 80                    004334.40
B,SERS          -TO ABA FROM EXT MEM FAILS.      1304.10 00                    004335.00
KV,$X5,$R                                          11.12 90                    004335.40
BXE,$+1.32                                       4337.72 C2                    004336.00
SIC,SEN         -ABOVE BIT COMPLIMENT INPUT      1310.00 80                    004336.40
B,SERS          -TO ABA FROM INT MEM FAILS.      1304.10 00                    004337.00
KV,$X6,$R                                          11.14 90                    004337.40
BXE,$+1.32                                       4341.72 C2                    004340.00
SIC,SEN         -ABOVE BIT COMPLIMENT INPUT      1310.00 80                    004340.40
B,SERS          -TO ABA FROM IX STG FAILS.       1304.10 00                    004341.00
KVNI,$X7,%8¤577777.40                          577777.57 0C                    004341.40
BXE,$+1.32                                       4343.72 C2                    004342.00
SIC,SEN         -ABOVE BIT COMPLIMENT INPUT      1310.00 80                    004342.40
B,SERS          -TO ABA FAILS.                   1304.10 00                    004343.00
B,$+1.0                                          4344.50 00                    004343.40
BD,I3422                                         4310.04 00                    004344.00
SIC,SEN0+.32                                     1311.40 80                    004344.40
B,SSW           -TO SSIP.                        1301.10 00                    004345.00
BD,$+.32                                         4346.04 00                    004345.40

LX,$X13,IC234   -UPDATE CONTINUITY CHECK.         4700.32 10                    004346.00
V+,$X13,BIT22                                   13102.32 B0                    004346.40
SX,$X13,IC234                                    4700.33 10                    004347.00
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13423   LX,$X0,100Z          -TEST INPUT TO ADDER BUS A,BIT 0.      13034.00 10                    004347.40
        LX,$X1,100Z                                                 13034.02 10                    004350.00
        LX,$X2,100Z                                                 13034.04 10                    004350.40
        LX,$X3,100Z                                                 13034.06 10                    004351.00
        LX,$X4,BIT24                                                13104.10 10                    004351.40
        LX,$X5,BIT24                                                13104.12 10                    004352.00
        LX,$X6,BIT24                                                13104.14 10                    004352.40
        LX,$X7,BIT24                                                13104.16 10                    004353.00
        LX,$X8,BIT0                                                 13054.20 10                    004353.40
        LX,$X9,FZB0                                                  4723.22 10                    004354.00
        L%BU□,BIT0                                                  13054.00 80 000000.20 50       004354.40
        V+,$X0,BIT0                                                 13054.00 B0                    004355.40
        V+,$X1,$R                                                      11.02 B0                    004356.00
        V+,$X2,$X8                                                     30.04 B0                    004356.40
        V+I,$X3,131072.0                                           400000.07 05                    004357.00
        KV,$X0,$R                                                      11.00 90                    004357.40
        BXE,$+1.32                                                   4361.72 C2                    004360.00
        SIC,SEN                                                      1310.00 80                    004360.40
        B,SERS               -ABOVE BIT FRM EXT MEM TO ABA FAILS     1304.10 00                    004361.00
        KV,$X1,$R                                                      11.02 90                    004361.40
        BXE,$+1.32                                                   4363.72 C2                    004362.00
        SIC,SEN                                                      1310.00 80                    004362.40
        B,SERS               -ABOVE BIT FRM INT MEM TO ABA FAILS.    1304.10 00                    004363.00
        KV,$X2,$R                                                      11.04 90                    004363.40
        BXE,$+1.32                                                   4365.72 C2                    004364.00
        SIC,SEN                                                      1310.00 80                    004364.40
        B,SERS               -ABOVE BIT FRM IX STG TO ABA FAILS.     1304.10 00                    004365.00
        KV,$X3,$R                                                      11.06 90                    004365.40
        BXE,$+1.32                                                   4367.72 C2                    004366.00
        SIC,SEN                                                      1310.00 80                    004366.40
        B,SERS               -ABOVE BIT FROM Z REG TO ABB FAILS.     1304.10 00                    004367.00
        L%BU□,FZB0                                                   4723.00 80 000000.20 50       004367.40
        V+,$X4,FZB0                                                  4723.10 B0                    004370.40
        V+,$X5,$R                                                      11.12 B0                    004371.00
        V+,$X6,$X9                                                     31.14 B0                    004371.40
        V-I,$X7,%8□377777.40                                       377777.57 0D                    004372.00
        NOP                                                            0.30 00                     004372.40
        KV,$X4,$R                                                      11.10 90                    004373.00
        BXE,$+1.32                                                   4375.32 C2                    004373.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004374.00
        B,SERS               -TO ABA FROM EXT MEM FAILS.             1304.10 00                    004374.40
        KV,$X5,$R                                                      11.12 90                    004375.00
        BXE,$+1.32                                                   4377.32 C2                    004375.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004376.00
        B,SERS               -TO ABA FROM INT MEM FAILS.             1304.10 00                    004376.40
        KV,$X6,$R                                                      11.14 90                    004377.00
        BXE,$+1.32                                                   4401.32 C2                    004377.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004400.00
        B,SERS               -TO ABA FROM IX STG FAILS.              1304.10 00                    004400.40
        KVNI,$X7,%8□377777.40                                      377777.57 0C                    004401.00
        BXE,$+1.32                                                   4403.32 C2                    004401.40
        SIC,SEN              -ABOVE BIT COMPLIMENT INPUT             1310.00 80                    004402.00
        B,SERS               -TO ABA FAILS.                          1304.10 00                    004402.40
        B,$+1.0                                                      4404.10 00                    004403.00
        BD,13423                                                     4347.44 00                    004403.40
        SIC,SEN0+.32                                                 1311.40 80                    004404.00
        B,SSW                -TO SSIP.                               1301.10 00                    004404.40
        BD,$+.32                                                     4405.44 00                    004405.00

        LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10                    004405.40
        V+,$X13,BIT23                                              13103.32 B0                     004406.00
        SX,$X13,IC234                                                4700.33 10                    004406.40
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13424   LX,$X0,BIT23        -TEST INPUT TO ADDER BUS B,BIT 23.    13103.00 10    004407.00
        V+,$X0,100Z                                               13034.00 B0    004407.40
        KV,$X0,BIT23                                              13103.00 90    004410.00
        BXE,$+1.32                                                 4412.32 C2    004410.40
        SIC,SEN                                                    1310.00 80    004411.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004411.40
        -
        LX,$X0,BIT22        -TEST INPUT TO ADDER BUS B,BIT 22.    13102.00 10    004412.00
        V+,$X0,100Z                                               13034.00 B0    004412.40
        KV,$X0,BIT22                                              13102.00 90    004413.00
        BXE,$+1.32                                                 4415.32 C2    004413.40
        SIC,SEN                                                    1310.00 80    004414.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004414.40
        -
        LX,$X0,BIT21        -TEST INPUT TO ADDER BUS B,BIT 21.    13101.00 10    004415.00
        V+,$X0,100Z                                               13034.00 B0    004415.40
        KV,$X0,BIT21                                              13101.00 90    004416.00
        BXE,$+1.32                                                 4420.32 C2    004416.40
        SIC,SEN                                                    1310.00 80    004417.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004417.40
        -
        LX,$X0,BIT20        -TEST INPUT TO ADDER BUS B,BIT 20.    13100.00 10    004420.00
        V+,$X0,100Z                                               13034.00 B0    004420.40
        KV,$X0,BIT20                                              13100.00 90    004421.00
        BXE,$+1.32                                                 4423.32 C2    004421.40
        SIC,SEN                                                    1310.00 80    004422.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004422.40
        -
        LX,$X0,BIT19        -TEST INPUT TO ADDER BUS B,BIT 19.    13077.00 10    004423.00
        V+,$X0,100Z                                               13034.00 B0    004423.40
        KV,$X0,BIT19                                              13077.00 90    004424.00
        BXE,$+1.32                                                 4426.32 C2    004424.40
        SIC,SEN                                                    1310.00 80    004425.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004425.40
        -
        LX,$X0,BIT18        -TEST INPUT TO ADDER BUS B,BIT 18.    13076.00 10    004426.00
        V+,$X0,100Z                                               13034.00 B0    004426.40
        KV,$X0,BIT18                                              13076.00 90    004427.00
        BXE,$+1.32                                                 4431.32 C2    004427.40
        SIC,SEN                                                    1310.00 80    004430.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004430.40
        -
        LX,$X0,BIT17        -TEST INPUT TO ADDER BUS B,BIT 17.    13075.00 10    004431.00
        V+,$X0,100Z                                               13034.00 B0    004431.40
        KV,$X0,BIT17                                              13075.00 90    004432.00
        BXE,$+1.32                                                 4434.32 C2    004432.40
        SIC,SEN                                                    1310.00 80    004433.00
        B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.    1304.10 00    004433.40
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LX,$X0,BIT16        -TEST INPUT TO ADDER BUS B,BIT 16.      13074.00 10      004434.00
V+,$X0,100Z                                                 13034.00 B0      004434.40
KV,$X0,BIT16                                                13074.00 90      004435.00
BXE,$+1.32                                                   4437.32 C2      004435.40
SIC,SEN                                                      1310.00 80      004436.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004436.40
-
LX,$X0,BIT15        -TEST INPUT TO ADDER BUS B,BIT 15.      13073.00 10      004437.00
V+,$X0,100Z                                                 13034.00 B0      004437.40
KV,$X0,BIT15                                                13073.00 90      004440.00
BXE,$+1.32                                                   4442.32 C2      004440.40
SIC,SEN                                                      1310.00 80      004441.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004441.40
-
LX,$X0,BIT14        -TEST INPUT TO ADDER BUS B,BIT 14.      13072.00 10      004442.00
V+,$X0,100Z                                                 13034.00 B0      004442.40
KV,$X0,BIT14                                                13072.00 90      004443.00
BXE,$+1.32                                                   4445.32 C2      004443.40
SIC,SEN                                                      1310.00 80      004444.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004444.40
-
LX,$X0,BIT13        -TEST INPUT TO ADDER BUS B,BIT 13.      13071.00 10      004445.00
V+,$X0,100Z                                                 13034.00 B0      004445.40
KV,$X0,BIT13                                                13071.00 90      004446.00
BXE,$+1.32                                                   4450.32 C2      004446.40
SIC,SEN                                                      1310.00 80      004447.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004447.40
-
LX,$X0,BIT12        -TEST INPUT TO ADDER BUS B,BIT 12.      13070.00 10      004450.00
V+,$X0,100Z                                                 13034.00 B0      004450.40
KV,$X0,BIT12                                                13070.00 90      004451.00
BXE,$+1.32                                                   4453.32 C2      004451.40
SIC,SEN                                                      1310.00 80      004452.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004452.40
-
LX,$X0,BIT11        -TEST INPUT TO ADDER BUS B,BIT 11.      13067.00 10      004453.00
V+,$X0,100Z                                                 13034.00 B0      004453.40
KV,$X0,BIT11                                                13067.00 90      004454.00
BXE,$+1.32                                                   4456.32 C2      004454.40
SIC,SEN                                                      1310.00 80      004455.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004455.40
-
LX,$X0,BIT10        -TEST INPUT TO ADDER BUS B, BIT 10.      13066.00 10      004456.00
V+,$X0,100Z                                                 13034.00 B0      004456.40
KV,$X0,BIT10                                                13066.00 90      004457.00
BXE,$+1.32                                                   4461.32 C2      004457.40
SIC,SEN                                                      1310.00 80      004460.00
B,SERS              -ABOVE BIT FRM IX STG TO ABB FAILS.      1304.10 00      004460.40
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LX,$X0,BIT9          -TEST INPUT TO ADDER BUS B,BIT 9.      13065.00 10      004461.00
V+,$X0,100Z                                                 13034.00 B0      004461.40
KV,$X0,BIT9                                                 13065.00 90      004462.00
BXE,$+1.32                                                   4464.32 C2      004462.40
SIC,SEN                                                      1310.00 80      004463.00
B,SERS               -TO ABA FAILS.                          1304.10 00      004463.40
-
LX,$X0,BIT8          -TEST INPUT TO ADDER BUS B,BIT 8.      13064.00 10      004464.00
V+,$X0,100Z                                                 13034.00 B0      004464.40
KV,$X0,BIT8                                                 13064.00 90      004465.00
BXE,$+1.32                                                   4467.32 C2      004465.40
SIC,SEN                                                      1310.00 80      004466.00
B,SERS               -TO ABA FAILS.                          1304.10 00      004466.40
-
LX,$X0,BIT7          -TEST INPUT TO ADDER BUS B,BIT 7.      13063.00 10      004467.00
V+,$X0,100Z                                                 13034.00 B0      004467.40
KV,$X0,BIT7                                                 13063.00 90      004470.00
BXE,$+1.32                                                   4472.32 C2      004470.40
SIC,SEN                                                      1310.00 80      004471.00
B,SERS               -TO ABA FAILS.                          1304.10 00      004471.40
-
LX,$X0,BIT6          -TEST INPUT TO ADDER BUS B,BIT 6.      13062.00 10      004472.00
V+,$X0,100Z                                                 13034.00 B0      004472.40
KV,$X0,BIT6                                                 13062.00 90      004473.00
BXE,$+1.32                                                   4475.32 C2      004473.40
SIC,SEN                                                      1310.00 80      004474.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004474.40
-
LX,$X0,BIT5          -TEST INPUT TO ADDER BUS B,BIT 5.      13061.00 10      004475.00
V+,$X0,100Z                                                 13034.00 B0      004475.40
KV,$X0,BIT5                                                 13061.00 90      004476.00
BXE,$+1.32                                                   4500.32 C2      004476.40
SIC,SEN                                                      1310.00 80      004477.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004477.40
-
LX,$X0,BIT4          -TEST INPUT TO ADDER BUS B,BIT 4.      13060.00 10      004500.00
V+,$X0,100Z                                                 13034.00 B0      004500.40
KV,$X0,BIT4                                                 13060.00 90      004501.00
BXE,$+1.32                                                   4503.32 C2      004501.40
SIC,SEN                                                      1310.00 80      004502.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004502.40
-
LX,$X0,BIT3          -TEST INPUT TO ADDER BUS B,BIT 3.      13057.00 10      004503.00
V+,$X0,100Z                                                 13034.00 B0      004503.40
KV,$X0,BIT3                                                 13057.00 90      004504.00
BXE,$+1.32                                                   4506.32 C2      004504.40
SIC,SEN                                                      1310.00 80      004505.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004505.40
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LX,$X0,BIT2          -TEST INPUT TO ADDER BUS B,BIT 2.      13056.00 10      004506.00
V+,$X0,100Z                                                 13034.00 B0      004506.40
KV,$X0,BIT2                                                 13056.00 90      004507.00
BXE,$+1.32                                                   4511.32 C2      004507.40
SIC,SEN                                                      1310.00 80      004510.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004510.40
-
LX,$X0,BIT1          -TEST INPUT TO ADDER BUS B,BIT 1.      13055.00 10      004511.00
V+,$X0,100Z                                                 13034.00 B0      004511.40
KV,$X0,BIT1                                                 13055.00 90      004512.00
BXE,$+1.32                                                   4514.32 C2      004512.40
SIC,SEN                                                      1310.00 80      004513.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004513.40
-
LX,$X0,BIT0          -TEST INPUT TO ADDER BUS B,BIT 0.      13054.00 10      004514.00
V+,$X0,100Z                                                 13034.00 B0      004514.40
KV,$X0,BIT0                                                 13054.00 90      004515.00
BXE,$+1.32                                                   4517.32 C2      004515.40
SIC,SEN                                                      1310.00 80      004516.00
B,SERS               -ABOVE BIT FRM IX STG TO ABB FAILS.     1304.10 00      004516.40
-
B,$+1.0                                                      4520.10 00      004517.00
BD,13424                                                     4407.04 00      004517.40
SIC,SEN0+.32                                                 1311.40 80      004520.00
B,SSW                -TO SSIP.                               1301.10 00      004520.40
BD,$+.32                                                     4521.44 00      004521.00
                                                        -
LX,$X13,IC234        -UPDATE CONTINUITY CHECK.               4700.32 10      004521.40
SC,$X13,$X12                                                   34.33 50      004522.00
V+,$X12,BIT0                                                13054.30 B0      004522.40
LC,$X13,$X12                                                   34.32 50      004523.00
SX,$X13,IC234                                               4700.33 10      004523.40
                                                        -
                                                        -
     -TEST 3 CHECKS THE REMAINDER OF THE 8 POSSIBLE
     -CONDITIONS FOR EACH POSITION OF AN ADDER
     -AS FOLLOWS.
                                                        -
          -TEST 3A CHKS ADDEND 0, AUGEND 0,
               -CARRY 0, AND RESULT 0.
                                                        -
          -TEST 3B CHKS ADDEND 1, AUGEND 1,
               -CARRY 0, AND RESULT 0. ALSO,
               -ADDEND 0, AUGEND 0, CARRY 1,
               -AND RESULT 1.
                                                        -
          -TEST 3C CHKS ADDEND 0, AUGEND 1,
               -CARRY 1, RESULT 0.
                                                        -
          -TEST 3D CHKS ADDEND 1, AUGEND 0,
               -CARRY 1, RESULT 0.
                                                        -
          -TEST 3E CHKS ADDEND 1, AUGEND 1,
               -CARRY 1, RESULT 1.
                                                        -
          -TEST 3F CHKS THREE POSSIBLE COMBIN-
               -ATIONS OF ADDEND AND AUGEND
               -SIGNS.
                                                        -
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                 -TEST 3A, ADDEND, AUGEND, CARRY, AND RESULT 0.
                                                              -
13450  LX,$X0,100Z                                                 13034.00 10        004524.00
       V+,$X0,100Z                                                 13034.00 B0        004524.40
       KV,$X0,100Z                                                 13034.00 90        004525.00
       BXE,$+1.32                                                   4527.32 C2        004525.40
       SIC,SEN                                                      1310.00 80        004526.00
       B,SERS              -ZERO PLUS ZERO IS NOT ZERO.             1304.10 00        004526.40
                                                              -
       SIC,SEN                                                      1310.00 80        004527.00
       BXH,SERS                                                     1304.33 42        004527.40
                                                              -
       SIC,SEN                                                      1310.00 80        004530.00
       BXL,SERS            -SPURIOUS SIGN IN RESULT.                1304.32 42        004530.40
                                                              -
                 -TEST 3B1 TESTS ADDEND 1, AUGEND 1, RESULT 0 FOR
                 -THE FOLLOWING BITS, 2, 5, 8, 11, 14, 17, 20, 23.
                 -TESTS ADDEND 0, AUGEND 0, CARRY 1, RESULT 1
                 -FOR FOLLOWING BITS, 1, 4, 7, 10, 13, 16, 19, 22.
                                                              -
       LX,$X0,134K1                                                 4702.00 10        004531.00
       V+,$X0,134K1                                                 4702.00 B0        004531.40
       KV,$X0,134K2                                                 4703.00 90        004532.00
       BXE,$+1.32                                                   4534.32 C2        004532.40
       SIC,SEN             -FAILURE TO ADD 01 PLUS 01 AND HAVE      1310.00 80        004533.00
       B,SERS              -RESULT 10 IN SOME OF ABOVE BITS.        1304.10 00        004533.40
                                                              -
                 -TEST 3B2 TESTS ADDEND 1, AUGEND 1, RESULT 0 FOR
                 -THE FOLLOWING BITS, 1, 4, 7, 10, 13, 16, 19, 22.
                 -TESTS ADDEND 0, AUGEND 0, CARRY 1, RESULT 1
                 -FOR FOLLOWING BITS 0, 3, 6, 9, 12, 15, 18, 21.
                                                              -
       LX,$X0,134K2                                                 4703.00 10        004534.00
       V+,$X0,134K2                                                 4703.00 B0        004534.40
       KV,$X0,134K3                                                 4704.00 90        004535.00
       BXE,$+1.32                                                   4537.32 C2        004535.40
       SIC,SEN             -FAILURE TO ADD 01 PLUS 01 AND HAVE      1310.00 80        004536.00
       B,SERS              -RESULT 10 IN SOME OF ABOVE BITS.        1304.10 00        004536.40
                                                              -
                 -TEST 3B3 TESTS ADDEND 1, AUGEND 1, RESULT 0 FOR
                 -THE FOLLOWING BITS, 0, 3, 6, 9, 12, 15, 18, 21.
                 -TESTS ADDEND 0, AUGEND 0, CARRY 1, RESULT 1
                 -FOR FOLLOWING BITS 2, 5, 8, 11, 14, 17, 20.
                                                              -
       LX,$X0,134K3                                                 4704.00 10        004537.00
       V+,$X0,134K3                                                 4704.00 B0        004537.40
       KV,$X0,134K4                                                 4705.00 90        004540.00
       BXE,$+1.32                                                   4542.32 C2        004540.40
       SIC,SEN             -FAILURE TO ADD 01 PLUS 01 AND HAVE      1310.00 80        004541.00
       B,SERS              -RESULT 10 IN SOME OF ABOVE BITS.        1304.10 00        004541.40
```

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                  -TEST 3B4 TESTS ADDEND 1, AUGEND 1, RESULT 0 FOR
                  -BIT 0 AND TESTS ADDEND 0, AUGEND 0, CARRY
                  -1, RESULT 1 FOR BIT 23.
                                                                -
        LX,$X0,BIT0                                        13054.00 10         004542.00
        V+,$X0,I34K5A                                       4707.00 B0         004542.40
        KV,$X0,BIT23                                       13103.00 90         004543.00
        BXE,$+1.32                                          4545.32 C2         004543.40
        SIC,SEN                                             1310.00 80         004544.00
        B,SERS            -EAC TO BIT 23 FAILURE.           1304.10 00         004544.40
                                                                -
        B,$+1.0                                             4546.10 00         004545.00
        BD,I3450                                            4524.04 00         004545.40
        SIC,SEN0+.32                                        1311.40 80         004546.00
        B,SSW             -TO SSIP                          1301.10 00         004546.40
        BD,$+.32                                            4547.44 00         004547.00
                                                                -
        LX,$X13,IC234     -UPDATE CONTINUITY CHECK.         4700.32 10         004547.40
        SC,$X13,$X12                                          34.33 50         004550.00
        V+,$X12,BIT1                                       13055.30 B0         004550.40
        LC,$X13,$X12                                          34.32 50         004551.00
        SX,$X13,IC234                                       4700.33 10         004551.40
                                                                -
                  -TEST 3C1 TESTS AUGEND 1, ADDEND 0, CARRY 1,
                  -RESULT 0 FOR BITS 1, 4, 7, 10, 13, 16, 19, 22.
                                                                -
I3451   LX,$X0,I34K6                                        4710.00 10         004552.00
        V+,$X0,I34K1                                        4702.00 B0         004552.40
        KV,$X0,I34K3                                        4704.00 90         004553.00
        BXE,$+1.32                                          4555.32 C2         004553.40
        SIC,SEN           -333333.33 PLUS 111111.11 FAILS TO 1310.00 80        004554.00
        B,SERS            -YIELD 444444.44.                 1304.10 00         004554.40
                                                                -
                  -TEST 3C2 TESTS AUGEND 1, ADDEND 0, CARRY 1,
                  -RESULT 0 FOR BITS 0, 3, 6, 9, 12, 15, 18, 21.
                                                                -
        LX,$X0,I34K7                                        4711.00 10         004555.00
        V+,$X0,I34K2                                        4703.00 B0         004555.40
        KV,$X0,I34K4                                        4705.00 90         004556.00
        BXE,$+1.32                                          4560.32 C2         004556.40
        SIC,SEN           -666666.66 PLUS 222222.22 FAILS TO 1310.00 80        004557.00
        B,SERS            -YIELD 111111.10.                 1304.10 00         004557.40
                                                                -
                  -TEST 3C3 TESTS AUGEND 1, ADDEND 0, CARRY 1,
                  -RESULT 0 FOR BITS 2, 5, 8, 11, 14, 17, 20.
                                                                -
        LX,$X0,I34K8                                        4712.00 10         004560.00
        V+,$X0,I34K3                                        4704.00 B0         004560.40
        KV,$X0,I34K9                                        4713.00 90         004561.00
        BXE,$+1.32                                          4563.32 C2         004561.40
        SIC,SEN           -555555.55 PLUS 444444.44 FAILS TO 1310.00 80        004562.00
        B,SERS            -YIELD 222222.21                  1304.10 00         004562.40
```

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               -TEST 3C4 TESTS AUGEND 1, ADDEND 0, CARRY 1,
               -RESULT 0, FOR BIT 23.
       LX,$X0,I34K10                                    4714.00 10     004563.00
       V+,$X0,I34K5A                                    4707.00 B0     004563.40
       KV,$X0,BIT22                                    13102.00 90     004564.00
       BXE,$+1.32                                       4566.32 C2     004564.40
       SIC,SEN          -400000.01 MINUS 377777.77 FAILS TO   1310.00 80     004565.00
       B,SERS           -YIELD 000000.02                1304.10 00     004565.40
                                                   -
       B,$+1.0                                          4567.10 00     004566.00
       BD,I3451                                         4552.04 00     004566.40
       SIC,SEN0+.32                                     1311.40 80     004567.00
       B,SSW            -TO SSIP                        1301.10 00     004567.40
       BD,$+.32                                         4570.44 00     004570.00
                                                   -
       LX,$X13,IC234    -UPDATE CONTINUITY CHECK.       4700.32 10     004570.40
       SC,$X13,$X12                                       34.33 50     004571.00
       V+,$X12,BIT2                                    13056.30 B0     004571.40
       LC,$X13,$X12                                       34.32 50     004572.00
       SX,$X13,IC234                                    4700.33 10     004572.40
                                                   -
               -TEST 3D1 TESTS AUGEND 0, ADDEND 1, CARRY 1,
               -RESULT 0 FOR BITS 1, 4, 7, 10, 13, 16, 19, 22.
                                                   -
13452  LX,$X0,I34K1                                     4702.00 10     004573.00
       V+,$X0,I34K6                                     4710.00 B0     004573.40
       KV,$X0,I34K3                                     4704.00 90     004574.00
       BXE,$+1.32                                       4576.32 C2     004574.40
       SIC,SEN          -111111.11 PLUS 333333.33 FAILS TO   1310.00 80     004575.00
       B,SERS           -YIELD 444444.44.               1304.10 00     004575.40
                                                   -
               -TEST 3D2 TESTS AUGEND 0, ADDEND 1, CARRY 1,
               -RESULT 0 FOR BITS 0, 3, 6, 9, 12, 15, 18, 21.
                                                   -
       LX,$X0,I34K2                                     4703.00 10     004576.00
       V+,$X0,I34K7                                     4711.00 B0     004576.40
       KV,$X0,I34K4                                     4705.00 90     004577.00
       BXE,$+1.32                                       4601.32 C2     004577.40
       SIC,SEN          -222222.22 PLUS 666666.66 FAILS TO   1310.00 80     004600.00
       B,SERS           -YIELD 111111.10.               1304.10 00     004600.40
                                                   -
               -TEST 3D3 TESTS AUGEND 0, ADDEND 1, CARRY 1,
               -RESULT 0,FOR BITS 2, 5, 8, 11, 14, 17, 20.
                                                   -
       LX,$X0,I34K3                                     4704.00 10     004601.00
       V+,$X0,I34K8                                     4712.00 B0     004601.40
       KV,$X0,I34K9                                     4713.00 90     004602.00
       BXE,$+1.32                                       4604.32 C2     004602.40
       SIC,SEN          -444444.44 PLUS 555555.55 FAILS TO   1310.00 80     004603.00
       B,SERS           -YIELD 222222.21                1304.10 00     004603.40
                                                   -
               -TEST 3D4 TESTS AUGEND 0, ADDEND 1, CARRY 1,
               -RESULT 0,FOR BIT 23.
                                                   -
       LX,$X0,I34K12                                    4716.00 10     004604.00
       V+,$X0,I34K16                                    4722.00 B0     004604.40
       KV,$X0,BIT22                                    13102.00 90     004605.00
       BXE,$+1.32                                       4607.32 C2     004605.40
       SIC,SEN          -400000.00 MINUS 377777.76 FAILS TO   1310.00 80     004606.00
       B,SERS           -YIELD 000000.02.               1304.10 00     004606.40
```

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                B,$+1.0                                                 4610.10 00      004607.00
                BD,13452                                                4573.04 00      004607.40
                SIC,SEN0+.32                                            1311.40 80      004610.00
                B,SSW           -TO SSIP.                               1301.10 00      004610.40
                BD,$+.32                                                4611.44 00      004611.00
                                                                                -
                LX,$X13,IC234   -UPDATE CONTINUITY CHECK.                4700.32 10      004611.40
                SC,$X13,$X12                                               34.33 50      004612.00
                V+,$X12,BIT3                                            13057.30 B0      004612.40
                LC,$X13,$X12                                               34.32 50      004613.00
                SX,$X13,IC234                                           4700.33 10      004613.40
                                                                                -
                        -TEST 3E1 CHECKS ADDEND 1, AUGEND 1, CARRY 1,
                        -RESULT 1,FOR BITS 1, 4, 7, 10, 13, 16, 19, 22.
                                                                                -
13453           LX,$X0,134K6                                            4710.00 10      004614.00
                V+,$X0,134K6                                            4710.00 B0      004614.40
                KV,$X0,134K7                                            4711.00 90      004615.00
                BXE,$+1.32                                              4617.32 C2      004615.40
                SIC,SEN         -333333.33 PLUS 333333.33 FAILS TO      1310.00 80      004616.00
                B,SERS          -YIELD 666666.66.                       1304.10 00      004616.40
                                                                                -
                        -TEST 3E2 CHECKS ADDEND 1, AUGEND 1, CARRY 1,
                        -RESULT 1,FOR BITS 0, 3, 6, 9, 12, 15, 18, 21.
                                                                                -
                LX,$X0,134K7                                            4711.00 10      004617.00
                V+,$X0,134K7                                            4711.00 B0      004617.40
                KV,$X0,134K13                                           4717.00 90      004620.00
                BXE,$+1.32                                              4622.32 C2      004620.40
                SIC,SEN         -666666.66 PLUS 666666.66 FAILS TO      1310.00 80      004621.00
                B,SERS          -YIELD 555555.54.                       1304.10 00      004621.40
                                                                                -
                        -TEST 3E3 CHECKS ADDEND 1, AUGEND 1, CARRY 1,
                        -RESULT 1,FOR BITS 2, 5, 8, 11, 14, 17, 20.
                                                                                -
                LX,$X0,134K8                                            4712.00 10      004622.00
                V+,$X0,134K8                                            4712.00 B0      004622.40
                KV,$X0,134K14                                           4720.00 90      004623.00
                BXE,$+1.32                                              4625.32 C2      004623.40
                SIC,SEN         -555555.55 PLUS 555555.55 FAILS TO      1310.00 80      004624.00
                B,SERS          -YIELD 333333.32                        1304.10 00      004624.40
                                                                                -
                        -TEST 3E4 CHECKS ADDEND 1, AUGEND 1, CARRY 1
                        -RESULT 1,FOR BIT 23.
                                                                                -
                LX,$X0,134K10                                           4714.00 10      004625.00
                V+,$X0,134K16                                           4722.00 B0      004625.40
                KV,$X0,134K15                                           4721.00 90      004626.00
                BXE,$+1.32                                              4630.32 C2      004626.40
                SIC,SEN         -400000.01 MINUS 377777.76 FAILS TO     1310.00 80      004627.00
                B,SERS          -YIELD 000000.03.                       1304.10 00      004627.40
                                                                                -
                B,$+1.0                                                 4631.10 00      004630.00
                BD,13453                                                4614.04 00      004630.40
                SIC,SEN0+.32                                            1311.40 80      004631.00
                B,SSW           -TO SSIP                                1301.10 00      004631.40
                BD,$+.32                                                4632.44 00      004632.00
                                                                                -
                LX,$X13,IC234   -UPDATE CONTINUITY CHECK.                4700.32 10      004632.40
                SC,$X13,$X12                                               34.33 50      004633.00
                V+,$X12,BIT4                                            13060.30 B0      004633.40
                LC,$X13,$X12                                               34.32 50      004634.00
```

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        SX,$X13,IC234                                                4700.33 10             004634.40

                   -TEST 3F1 CHECKS THAT MINUS ZERO PLUS
                   -PLUS ZEROYIELDS MINUS ZERO.
                                                                    -
13454   LX,$X0,BIT24                                                13104.00 10             004635.00
        V+,$X0,I00Z                                                 13034.00 B0             004635.40
        KV,$X0,BIT24                                                13104.00 90             004636.00
        BXE,$+1.32                                                   4640.32 C2             004636.40
        SIC,SEN             -MINUS ZERO PLUS PLUS ZERO FAILS TO      1310.00 80             004637.00
        B,SERS              -YIELD MINUS ZERO.                       1304.10 00             004637.40
                                                                    -
        KV,$X0,BIT24                                                13104.00 90             004640.00
        SIC,SEN                                                      1310.00 80             004640.40
        BXL,SERS            -ODDBALL GOOF.                           1304.32 42             004641.00
                                                                    -
        KV,$X0,BIT24                                                13104.00 90             004641.40
        SIC,SEN                                                      1310.00 80             004642.00
        BXH,SERS            -LOST SIGN BIT.                          1304.33 42             004642.40
                                                                    -
                   -TEST 3F2 CHECKS THAT PLUS ZERO PLUS MINUS
                   -ZERO YIELDS MINUS ZERO.
                                                                    -
        LX,$X0,I00Z                                                 13034.00 10             004643.00
        V+,$X0,BIT24                                                13104.00 B0             004643.40
        KV,$X0,BIT24                                                13104.00 90             004644.00
        BXE,$+1.32                                                   4646.32 C2             004644.40
        SIC,SEN             -PLUS ZERO PLUS MINUS ZERO FAILS         1310.00 80             004645.00
        B,SERS              -TO YIELD MINUS ZERO.                    1304.10 00             004645.40
                                                                    -
        KV,$X0,BIT24                                                13104.00 90             004646.00
        SIC,SEN                                                      1310.00 80             004646.40
        BXL,SERS            -ODDBALL GOOF.                           1304.32 42             004647.00
                                                                    -
        KV,$X0,BIT24                                                13104.00 90             004647.40
        BZXH,$+1.32                                                  4651.73 40             004650.00
        SIC,SEN                                                      1310.00 80             004650.40
        B,SERS              -SPURIOUS SIGN BIT.                      1304.10 00             004651.00
                                                                    -
                   -TEST 3F3 CHECKS THAT MINUS ZERO PLUS MINUS
                   -ZERO YIELDS MINUS ZERO.
                                                                    -
        LX,$X0,BIT24                                                13104.00 10             004651.40
        V+,$X0,BIT24                                                13104.00 B0             004652.00
        KV,$X0,I00Z                                                 13034.00 90             004652.40
        BZXL,$+1.32                                                  4654.72 40             004653.00
        SIC,SEN                                                      1310.00 80             004653.40
        B,SERS              -RESULT NOT THAN PLUS ZERO.              1304.10 00             004654.00
                                                                    -
        KV,$X0,BIT24                                                13104.00 90             004654.40
        BXE,$+1.32                                                   4656.72 C2             004655.00
        SIC,SEN                                                      1310.00 80             004655.40
        B,SERS              -RESULT NOT MINUS ZERO.                  1304.10 00             004656.00
```

```
                -TEST 3G1 CHECKS THAT GATING FROM IAOB TO
                -X IS CORRECT.
LX,$X0,100Z                                                  13034.00 10          004656.40
V+,$X0,1000                                                  13035.00 B0          004657.00
KC,$X0,100Z                                                  13034.01 90          004657.40
BXE,$+1.32                                                    4661.72 C2          004660.00
SIC,SEN                                                       1310.00 80          004660.40
B,SERS          -ADD TO VALUE CORRUPTS COUNT FIELD.           1304.10 00          004661.00
                                                                                  -
SR,$X0,$X0                                                      20.01 70          004661.40
KVI,$X0,0.0                                                      0.01 04          004662.00
BXE,$+1.32                                                    4664.32 C2          004662.40
SIC,SEN                                                       1310.00 80          004663.00
B,SERS          -ADD TO VALUE CORRUPTS REFILL FIELD.          1304.10 00          004663.40
                                                                                  -
LX,$X0,$X0                                                      20.00 10          004664.00
SIC,SEN                                                       1310.00 80          004664.40
BXF,SERS        -ADD TO VALUE CORRUPTS BIT 25.                1304.23 42          004665.00
                                                                                  -
B,$+1.0                                                       4666.50 00          004665.40
BD,13454                                                      4635.04 00          004666.00
SIC,SEN0+.32                                                  1311.40 80          004666.40
B,SSW           -TO SSIP.                                     1301.10 00          004667.00
BD,$+.32                                                      4670.04 00          004667.40
                                                                                  -
LX,$X13,IC234   -UPDATE CONTINUITY CHECK.                     4700.32 10          004670.00
SC,$X13,$X12                                                    34.33 50          004670.40
V+,$X12,BIT5                                                13061.30 B0          004671.00
LC,$X13,$X12                                                    34.32 50          004671.40
SX,$X13,IC234                                                 4700.33 10          004672.00
                                                                                  -
LX,$X13,IC234   -UPDATE CONTINUITY CHECK.                     4700.32 10          004672.40
KV,$X13,ICK234                                                4701.32 90          004673.00
SIC,SEN                                                       1310.00 80          004673.40
BZXE,SERS       -CONTINUITY ERROR.                            1304.32 C0          004674.00
SC,$X13,$X13                                                    35.33 50          004674.40
LX,$X12,ICK234                                                4701.30 10          004675.00
SC,$X12,$X12                                                    34.31 50          004675.40
KV,$X13,$X12                                                    34.32 90          004676.00
SIC,SEN                                                       1310.00 80          004676.40
BZXE,SERS       -CONTINUITY ERROR.                            1304.32 C0          004677.00
B,136                                                         4753.10 00          004677.40
IC234   XW,0,0,0            -CONTINUITY REG 1234.               0.00 00 000000.00 00 004700.00
ICK234  XW,%8¤777777.77,%8¤770000,0                       777777.77 0F 600000.00 00 004701.00
134K1   XW,%8¤111111.11,0,0                               111111.11 00 000000.00 00 004702.00
134K2   XW,%8¤222222.22,0,0                               222222.22 00 000000.00 00 004703.00
134K3   XW,%8¤444444.44,0,0                               444444.44 00 000000.00 00 004704.00
134K4   XW,%8¤111111.10,0,0                               111111.10 00 000000.00 00 004705.00
134K5   XW,%8¤377777.77,0,0                               377777.77 00 000000.00 00 004706.00
134K5A  XW,%8¤-377777.77,0,0                              377777.77 80 000000.00 00 004707.00
134K6   XW,%8¤333333.33,0,0                               333333.33 00 000000.00 00 004710.00
134K7   XW,%8¤666666.66,0,0                               666666.66 00 000000.00 00 004711.00
134K8   XW,%8¤555555.55,0,0                               555555.55 00 000000.00 00 004712.00
134K9   XW,%8¤222222.21,0,0                               222222.21 00 000000.00 00 004713.00
134K10  XW,%8¤400000.01,0,0                               400000.01 00 000000.00 00 004714.00
134K11  XW,%8¤377777.76,0,0                               377777.76 00 000000.00 00 004715.00
134K12  XW,%8¤400000.00,0,0                               400000.00 00 000000.00 00 004716.00
134K13  XW,%8¤555555.54,0,0                               555555.54 00 000000.00 00 004717.00
134K14  XW,%8¤333333.32,0,0                               333333.32 00 000000.00 00 004720.00
134K15  XW,%8¤0.03,0,0                                        0.03 00 000000.00 00 004721.00
134K16  XW,%8¤-377777.76,0,0                              377777.76 80 000000.00 00 004722.00
FZB0    XW,%8¤377777.77,0,0                               377777.77 00 000000.00 00 004723.00
```

```
FZB1    XW,%8¤577777.77,0,0
FZB2    XW,%8¤677777.77
FZB3    XW,%8¤737777.77
FZB4    XW,%8¤757777.77
FZB5    XW,%8¤767777.77
FZB6    XW,%8¤773777.77
FZB7    XW,%8¤775777.77
FZB8    XW,%8¤776777.77
FZB9    XW,%8¤777377.77
FZB10   XW,%8¤777577.77
FZB11   XW,%8¤777677.77
FZB12   XW,%8¤777737.77
FZB13   XW,%8¤777757.77
FZB14   XW,%8¤777767.77
FZB15   XW,%8¤777773.77
FZB16   XW,%8¤777775.77
FZB17   XW,%8¤777776.77
FZB18   XW,%8¤777777.37
FZB19   XW,%8¤777777.57
FZB20   XW,%8¤777777.67
FZB21   XW,%8¤777777.73
FZB22   XW,%8¤777777.75
FZB23   XW,%8¤777777.76
```

```
577777.77 00 000000.00 00      004724.00
677777.77 00 000000.00 00      004725.00
737777.77 00 000000.00 00      004726.00
757777.77 00 000000.00 00      004727.00
767777.77 00 000000.00 00      004730.00
773777.77 00 000000.00 00      004731.00
775777.77 00 000000.00 00      004732.00
776777.77 00 000000.00 00      004733.00
777377.77 00 000000.00 00      004734.00
777577.77 00 000000.00 00      004735.00
777677.77 00 000000.00 00      004736.00
777737.77 00 000000.00 00      004737.00
777757.77 00 000000.00 00      004740.00
777767.77 00 000000.00 00      004741.00
777773.77 00 000000.00 00      004742.00
777775.77 00 000000.00 00      004743.00
777776.77 00 000000.00 00      004744.00
777777.37 00 000000.00 00      004745.00
777777.57 00 000000.00 00      004746.00
777777.67 00 000000.00 00      004747.00
777777.73 00 000000.00 00      004750.00
777777.75 00 000000.00 00      004751.00
777777.76 00 000000.00 00      004752.00
```

```
                    ----1236---TEST C+1 AND C-1.
                    -
                    -
                    -TEST 1 CHECKS GATING FROM X TO ABA.
                    -
                    -TEST 2 CHECKS GATING FROM Z TO ABB.
                    -
                    -TEST 3 CHECKS ADDER FUNCTIONS UNIQUE TO
                              -COUNT ADDITION AND CORRUPTION.
                    -
1136      LX,$X0,1361D          -UPDATE IDENT                  4756.00 10      004753.00
          SX,$X0,DPET13                                        1437.01 10      004753.40
          SIC,RET                                              1306.40 80      004754.00
                 B,IDF1         -PRINT ID.                     1443.10 00      004754.40
          Z,IC236                                              5275.22 00      004755.00
          BD,1361                                              4757.04 00      004755.40
          CNOP
1361D     %IQSZ¤DD%BU,8,8¤,1236     Z                                          004756.00
```

```
                                -TEST ONE.
                                -
1361    LX,$X0,BIT28            -TEST XFER TO ABA, BIT 28.      13110.00 10     004757.00
        C+1,$X0,0                                                 0.01 00     004757.40
        KC,$X0,BIT0                                           13054.01 90     004760.00
        BXE,$+1.32                                             4762.32 C2     004760.40
        SIC,SEN                                                1310.00 80     004761.00
        B,SERS                  -ABOVE BIT TO ABA FAILS.        1304.10 00     004761.40
        -
        LCI,$X0,%8¤377777                                     377777.01 02     004762.00
        C-1,$X0,0                                                 0.01 08     004762.40
        KCI,$X0,%8¤377777                                     377777.01 0A     004763.00
        BXE,$+1.32                                             4765.32 C2     004763.40
        SIC,SEN                 -COMP RESULTING IN ABOVE       1310.00 80     004764.00
        B,SERS                  -BIT TO ABA FAILS.             1304.10 00     004764.40
        -
        LX,$X0,BIT29            -TEST XFER TO ABA, BIT29.      13111.00 10     004765.00
        C+1,$X0,0                                                 0.01 00     004765.40
        KC,$X0,BIT1                                           13055.01 90     004766.00
        BXE,$+1.32                                             4770.32 C2     004766.40
        SIC,SEN                                                1310.00 80     004767.00
        B,SERS                  -ABOVE BIT TO ABA FAILS.        1304.10 00     004767.40
        -
        LCI,$X0,%8¤577777                                     577777.01 02     004770.00
        C-1,$X0,0                                                 0.01 08     004770.40
        KCI,$X0,%8¤577777                                     577777.01 0A     004771.00
        BXE,$+1.32                                             4773.32 C2     004771.40
        SIC,SEN                 -COMP RESULTING IN ABOVE       1310.00 80     004772.00
        B,SERS                  -BIT TO ABA FAILS.             1304.10 00     004772.40
        -
        LX,$X0,BIT30            -TEST XFER TO ABA, BIT30.      13112.00 10     004773.00
        C+1,$X0,0                                                 0.01 00     004773.40
        KC,$X0,BIT2                                           13056.01 90     004774.00
        BXE,$+1.32                                             4776.32 C2     004774.40
        SIC,SEN                                                1310.00 80     004775.00
        B,SERS                  -ABOVE BIT TO ABA FAILS.        1304.10 00     004775.40
        -
        LCI,$X0,%8¤677777                                     677777.01 02     004776.00
        C-1,$X0,0                                                 0.01 08     004776.40
        KCI,$X0,%8¤677777                                     677777.01 0A     004777.00
        BXE,$+1.32                                             5001.32 C2     004777.40
        SIC,SEN                 -COMP RESULTING IN ABOVE       1310.00 80     005000.00
        B,SERS                  -BIT TO ABA FAILS.             1304.10 00     005000.40
```

```
LX,$X0,BIT31        -TEST XFER TO ABA, BIT31.      13113.00 10      005001.00
C+I,$X0,0                                            0.01 00      005001.40
KC,$X0,BIT3                                      13057.01 90      005002.00
BXE,$+1.32                                        5004.32 C2      005002.40
SIC,SEN                                           1310.00 80      005003.00
B,SERS              -ABOVE BIT TO ABA FAILS.      1304.10 00      005003.40
-
LCI,$X0,%8¤737777                                737777.01 02      005004.00
C-I,$X0,0                                            0.01 08      005004.40
KCI,$X0,%8¤737777                                737777.01 0A      005005.00
BXE,$+1.32                                        5007.32 C2      005005.40
SIC,SEN             -COMP RESULTING IN ABOVE      1310.00 80      005006.00
B,SERS              -BIT TO ABA FAILS.            1304.10 00      005006.40
-
LX,$X0,BIT32        -TEST XFER TO ABA, BIT32.      13114.00 10      005007.00
C+I,$X0,0                                            0.01 00      005007.40
KC,$X0,BIT4                                      13060.01 90      005010.00
BXE,$+1.32                                        5012.32 C2      005010.40
SIC,SEN                                           1310.00 80      005011.00
B,SERS              -ABOVE BIT TO ABA FAILS.      1304.10 00      005011.40
-
LCI,$X0,%8¤757777                                757777.01 02      005012.00
C-I,$X0,0                                            0.01 08      005012.40
KCI,$X0,%8¤757777                                757777.01 0A      005013.00
BXE,$+1.32                                        5015.32 C2      005013.40
SIC,SEN             -COMP RESULTING IN ABOVE      1310.00 80      005014.00
B,SERS              -BIT TO ABA FAILS.            1304.10 00      005014.40
-
LX,$X0,BIT33        -TEST XFER TO ABA, BIT33.      13115.00 10      005015.00
C+I,$X0,0                                            0.01 00      005015.40
KC,$X0,BIT5                                      13061.01 90      005016.00
BXE,$+1.32                                        5020.32 C2      005016.40
SIC,SEN                                           1310.00 80      005017.00
B,SERS              -ABOVE BIT TO ABA FAILS.      1304.10 00      005017.40
-
LCI,$X0,%8¤767777                                767777.01 02      005020.00
C-I,$X0,0                                            0.01 08      005020.40
KCI,$X0,%8¤767777                                767777.01 0A      005021.00
BXE,$+1.32                                        5023.32 C2      005021.40
SIC,SEN             -COMP RESULTING IN ABOVE      1310.00 80      005022.00
B,SERS              -BIT TO ABA FAILS.            1304.10 00      005022.40
-
B,$+1.0                                           5024.10 00      005023.00
BD,I361                                           4757.04 00      005023.40
SIC,SEN0+.32                                      1311.40 80      005024.00
B,SSW               -TO SSIP.                     1301.10 00      005024.40
BD,$+.32                                          5025.44 00      005025.00
                                                                  -
LX,$X13,IC236       -UPDATE CONTINUITY CHECK.      5275.32 10      005025.40
V+,$X13,BIT0                                     13054.32 B0      005026.00
SX,$X13,IC236                                     5275.33 10      005026.40
```

```
1362    LX,$X0,BIT34        -TEST XFER TO ABA, BIT34.      13116.00 10      005027.00
        C+I,$X0,0                                              0.01 00      005027.40
        KC,$X0,BIT6                                        13062.01 90      005030.00
        BXE,$+1.32                                          5032.32 C2      005030.40
        SIC,SEN                                             1310.00 80      005031.00
        -
        B,SERS              -ABOVE BIT TO ABA FAILS.        1304.10 00      005031.40
        LCI,$X0,%8¤773777                                  773777.01 02      005032.00
        C-I,$X0,0                                              0.01 08      005032.40
        KCI,$X0,%8¤773777                                  773777.01 0A      005033.00
        BXE,$+1.32                                          5035.32 C2      005033.40
        SIC,SEN             -COMP RESULTING IN ABOVE        1310.00 80      005034.00
        B,SERS              -BIT TO ABA FAILS.              1304.10 00      005034.40
        -
        LX,$X0,BIT35        -TEST XFER TO ABA, BIT35.      13117.00 10      005035.00
        C+I,$X0,0                                              0.01 00      005035.40
        KC,$X0,BIT7                                        13063.01 90      005036.00
        BXE,$+1.32                                          5040.32 C2      005036.40
        SIC,SEN                                             1310.00 80      005037.00
        B,SERS              -ABOVE BIT TO ABA FAILS.        1304.10 00      005037.40
        -
        LCI,$X0,%8¤775777                                  775777.01 02      005040.00
        C-I,$X0,0                                              0.01 08      005040.40
        KCI,$X0,%8¤775777                                  775777.01 0A      005041.00
        BXE,$+1.32                                          5043.32 C2      005041.40
        SIC,SEN             -COMP RESULTING IN ABOVE        1310.00 80      005042.00
        B,SERS              -BIT TO ABA FAILS.              1304.10 00      005042.40
        -
        LX,$X0,BIT36        -TEST XFER TO ABA, BIT36.      13120.00 10      005043.00
        C+I,$X0,0                                              0.01 00      005043.40
        KC,$X0,BIT8                                        13064.01 90      005044.00
        BXE,$+1.32                                          5046.32 C2      005044.40
        SIC,SEN                                             1310.00 80      005045.00
        B,SERS              -ABOVE BIT TO ABA FAILS.        1304.10 00      005045.40
        -
        LCI,$X0,%8¤776777                                  776777.01 02      005046.00
        C-I,$X0,0                                              0.01 08      005046.40
        KCI,$X0,%8¤776777                                  776777.01 0A      005047.00
        BXE,$+1.32                                          5051.32 C2      005047.40
        SIC,SEN             -COMP RESULTING IN ABOVE        1310.00 80      005050.00
        B,SERS              -BIT TO ABA FAILS.              1304.10 00      005050.40
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LX,$X0,BIT37        -TEST XFER TO ABA, BIT37.      13121.00 10      005051.00
C+I,$X0,0                                            0.01 00      005051.40
KC,$X0,BIT9                                      13065.01 90      005052.00
BXE,$+1.32                                        5054.32 C2      005052.40
SIC,SEN                                           1310.00 80      005053.00
B,SERS              -ABOVE BIT TO ABA FAILS.      1304.10 00      005053.40
-
LCI,$X0,%8¤777377                                777377.01 02      005054.00
C-I,$X0,0                                            0.01 08      005054.40
KCI,$X0,%8¤777377                                777377.01 0A      005055.00
BXE,$+1.32                                        5057.32 C2      005055.40
SIC,SEN             -COMP RESULTING IN ABOVE      1310.00 80      005056.00
B,SERS              -BIT TO ABA FAILS.            1304.10 00      005056.40
-
LX,$X0,BIT38        -TEST XFER TO ABA, BIT38.      13122.00 10      005057.00
C+I,$X0,0                                            0.01 00      005057.40
KC,$X0,BIT10                                     13066.01 90      005060.00
BXE,$+1.32                                        5062.32 C2      005060.40
SIC,SEN                                           1310.00 80      005061.00
B,SERS              -ABOVE BIT TO ABA FAILS.      1304.10 00      005061.40
-
LCI,$X0,%8¤777577                                777577.01 02      005062.00
C-I,$X0,0                                            0.01 08      005062.40
KCI,$X0,%8¤777577                                777577.01 0A      005063.00
BXE,$+1.32                                        5065.32 C2      005063.40
SIC,SEN             -COMP RESULTING IN ABOVE      1310.00 80      005064.00
B,SERS              -BIT TO ABA FAILS.            1304.10 00      005064.40
-
LX,$X0,BIT39        -TEST XFER TO ABA, BIT39.      13123.00 10      005065.00
C+I,$X0,0                                            0.01 00      005065.40
KC,$X0,BIT11                                     13067.01 90      005066.00
BXE,$+1.32                                        5070.32 C2      005066.40
SIC,SEN                                           1310.00 80      005067.00
B,SERS              -ABOVE BIT TO ABA FAILS.      1304.10 00      005067.40
-
LCI,$X0,%8¤777677                                777677.01 02      005070.00
C-I,$X0,0                                            0.01 08      005070.40
KCI,$X0,%8¤777677                                777677.01 0A      005071.00
BXE,$+1.32                                        5073.32 C2      005071.40
SIC,SEN             -COMP RESULTING IN ABOVE      1310.00 80      005072.00
B,SERS              -BIT TO ABA FAILS.            1304.10 00      005072.40
-
B,$+1.0                                           5074.10 00      005073.00
BD,1362                                           5027.04 00      005073.40
SIC,SEN0+.32                                      1311.40 80      005074.00
B,SSW               -TO SSIP.                     1301.10 00      005074.40
BD,$+.32                                          5075.44 00      005075.00
                                                                -
LX,$X13,IC236       -UPDATE CONTINUITY CHECK.      5275.32 10      005075.40
V+,$X13,BIT1                                     13055.32 B0      005076.00
SX,$X13,IC236                                     5275.33 10      005076.40
```

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1363    LX,$X0,BIT40          -TEST XFER TO ABA, BIT40.      13124.00 10    005077.00
        C+I,$X0,0                                              0.01 00    005077.40
        KC,$X0,BIT12                                       13070.01 90    005100.00
        BXE,$+1.32                                          5102.32 C2    005100.40
        SIC,SEN                                             1310.00 80    005101.00
        B,SERS                -ABOVE BIT TO ABA FAILS.      1304.10 00    005101.40
        -
        LCI,$X0,%8¤777737                                  777737.01 02    005102.00
        C-I,$X0,0                                              0.01 08    005102.40
        KCI,$X0,%8¤777737                                  777737.01 0A    005103.00
        BXE,$+1.32                                          5105.32 C2    005103.40
        SIC,SEN               -COMP RESULTING IN ABOVE      1310.00 80    005104.00
        B,SERS                -BIT TO ABA FAILS.            1304.10 00    005104.40
        -
        LX,$X0,BIT41          -TEST XFER TO ABA, BIT41.     13125.00 10    005105.00
        C+I,$X0,0                                              0.01 00    005105.40
        KC,$X0,BIT13                                       13071.01 90    005106.00
        BXE,$+1.32                                          5110.32 C2    005106.40
        SIC,SEN                                             1310.00 80    005107.00
        B,SERS                -ABOVE BIT TO ABA FAILS.      1304.10 00    005107.40
        -
        LCI,$X0,%8¤777757                                  777757.01 02    005110.00
        C-I,$X0,0                                              0.01 08    005110.40
        KCI,$X0,%8¤777757                                  777757.01 0A    005111.00
        BXE,$+1.32                                          5113.32 C2    005111.40
        SIC,SEN               -COMP RESULTING IN ABOVE      1310.00 80    005112.00
        B,SERS                -BIT TO ABA FAILS.            1304.10 00    005112.40
        -
        LX,$X0,BIT42          -TEST XFER TO ABA, BIT42.     13126.00 10    005113.00
        C+I,$X0,0                                              0.01 00    005113.40
        KC,$X0,BIT14                                       13072.01 90    005114.00
        BXE,$+1.32                                          5116.32 C2    005114.40
        SIC,SEN                                             1310.00 80    005115.00
        B,SERS                -ABOVE BIT TO ABA FAILS.      1304.10 00    005115.40
        -
        LCI,$X0,%8¤777767                                  777767.01 02    005116.00
        C-I,$X0,0                                              0.01 08    005116.40
        KCI,$X0,%8¤777767                                  777767.01 0A    005117.00
        BXE,$+1.32                                          5121.32 C2    005117.40
        SIC,SEN               -COMP RESULTING IN ABOVE      1310.00 80    005120.00
        B,SERS                -BIT TO ABA FAILS.            1304.10 00    005120.40
        -
```

```
LX,$X0,BIT43          -TEST XFER TO ABA, BIT43.      13127.00 10    005121.00
C+I,$X0,0                                              0.01 00    005121.40
KC,$X0,BIT15                                       13073.01 90    005122.00
BXE,$+1.32                                          5124.32 C2    005122.40
SIC,SEN                                             1310.00 80    005123.00
B,SERS                -ABOVE BIT TO ABA FAILS.      1304.10 00    005123.40
-
LCI,$X0,%8¤777773                                  777773.01 02    005124.00
C-I,$X0,0                                              0.01 08    005124.40
KCI,$X0,%8¤777773                                  777773.01 0A    005125.00
BXE,$+1.32                                          5127.32 C2    005125.40
SIC,SEN               -COMP RESULTING IN ABOVE      1310.00 80    005126.00
B,SERS                -BIT TO ABA FAILS.            1304.10 00    005126.40
-
LX,$X0,BIT44          -TEST XFER TO ABA, BIT44.      13130.00 10    005127.00
C+I,$X0,0                                              0.01 00    005127.40
KC,$X0,BIT16                                       13074.01 90    005130.00
BXE,$+1.32                                          5132.32 C2    005130.40
SIC,SEN                                             1310.00 80    005131.00
B,SERS                -ABOVE BIT TO ABA FAILS.      1304.10 00    005131.40
-
LCI,$X0,%8¤777775                                  777775.01 02    005132.00
C-I,$X0,0                                              0.01 08    005132.40
KCI,$X0,%8¤777775                                  777775.01 0A    005133.00
BXE,$+1.32                                          5135.32 C2    005133.40
SIC,SEN               -COMP RESULTING IN ABOVE      1310.00 80    005134.00
B,SERS                -BIT TO ABA FAILS.            1304.10 00    005134.40
-
LX,$X0,BIT45          -TEST XFER TO ABA, BIT45.      13131.00 10    005135.00
C+I,$X0,0                                              0.01 00    005135.40
KC,$X0,BIT17                                       13075.01 90    005136.00
BXE,$+1.32                                          5140.32 C2    005136.40
SIC,SEN                                             1310.00 80    005137.00
B,SERS                -ABOVE BIT TO ABA FAILS.      1304.10 00    005137.40
LCI,$X0,%8¤777776                                  777776.01 02    005140.00
C-I,$X0,0                                              0.01 08    005140.40
KCI,$X0,%8¤777776                                  777776.01 0A    005141.00
BXE,$+1.32                                          5143.32 C2    005141.40
SIC,SEN               -COMP RESULTING IN ABOVE      1310.00 80    005142.00
B,SERS                -BIT TO ABA FAILS.            1304.10 00    005142.40
-
B,$+1.0                                             5144.10 00    005143.00
BD,I363                                             5077.04 00    005143.40
SIC,SEN0+.32                                        1311.40 80    005144.00
B,SSW                 -TO SSIP.                     1301.10 00    005144.40
BD,$+.32                                            5145.44 00    005145.00
                                                       -
LX,$X13,IC236         -UPDATE CONTINUITY CHECK.      5275.32 10    005145.40
V+,$X13,BIT2                                       13056.32 B0    005146.00
SX,$X13,IC236                                       5275.33 10    005146.40
```

```
                                -TEST TWO.
                                -
1364    LX,$X0,100Z             -TEST XFER TO ABB, BIT 28.      13034.00 10     005147.00
        C+1,$X0,%8¤400000                                       400000.01 00    005147.40
        KC,$X0,BIT0                                             13054.01 90     005150.00
        BXE,$+1.32                                               5152.32 C2     005150.40
        SIC,SEN                                                  1310.00 80     005151.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005151.40
        -
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 29.      13034.00 10     005152.00
        C+1,$X0,%8¤200000                                       200000.01 00    005152.40
        KC,$X0,BIT1                                             13055.01 90     005153.00
        BXE,$+1.32                                               5155.32 C2     005153.40
        SIC,SEN                                                  1310.00 80     005154.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005154.40
        -
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 30.      13034.00 10     005155.00
        C+1,$X0,%8¤100000                                       100000.01 00    005155.40
        KC,$X0,BIT2                                             13056.01 90     005156.00
        BXE,$+1.32                                               5160.32 C2     005156.40
        SIC,SEN                                                  1310.00 80     005157.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005157.40
        -
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 31.      13034.00 10     005160.00
        C+1,$X0,%8¤40000                                         40000.01 00    005160.40
        KC,$X0,BIT3                                             13057.01 90     005161.00
        BXE,$+1.32                                               5163.32 C2     005161.40
        SIC,SEN                                                  1310.00 80     005162.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005162.40
        -
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 32.      13034.00 10     005163.00
        C+1,$X0,%8¤20000                                         20000.01 00    005163.40
        KC,$X0,BIT4                                             13060.01 90     005164.00
        BXE,$+1.32                                               5166.32 C2     005164.40
        SIC,SEN                                                  1310.00 80     005165.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005165.40
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 33.      13034.00 10     005166.00
        C+1,$X0,%8¤10000                                         10000.01 00    005166.40
        KC,$X0,BIT5                                             13061.01 90     005167.00
        BXE,$+1.32                                               5171.32 C2     005167.40
        SIC,SEN                                                  1310.00 80     005170.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005170.40
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 34.      13034.00 10     005171.00
        C+1,$X0,%8¤4000                                           4000.01 00    005171.40
        KC,$X0,BIT6                                             13062.01 90     005172.00
        BXE,$+1.32                                               5174.32 C2     005172.40
        SIC,SEN                                                  1310.00 80     005173.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005173.40
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 35.      13034.00 10     005174.00
        C+1,$X0,%8¤2000                                           2000.01 00    005174.40
        KC,$X0,BIT7                                             13063.01 90     005175.00
        BXE,$+1.32                                               5177.32 C2     005175.40
        SIC,SEN                                                  1310.00 80     005176.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005176.40
        -
        LX,$X0,100Z             -TEST XFER TO ABB, BIT 36.      13034.00 10     005177.00
        C+1,$X0,%8¤1000                                           1000.01 00    005177.40
        KC,$X0,BIT8                                             13064.01 90     005200.00
        BXE,$+1.32                                               5202.32 C2     005200.40
        SIC,SEN                                                  1310.00 80     005201.00
        B,SERS                  -ABOVE BIT TO ABB FAILS.         1304.10 00     005201.40
        -
```

```
B,$+1.0                                                  5203.10 00      005202.00
BD,I364                                                  5147.04 00      005202.40
SIC,SEN0+.32                                             1311.40 80      005203.00
B,SSW               -TO SSIP.                            1301.10 00      005203.40
BD,$+.32                                                 5204.44 00      005204.00

LX,$X13,IC236       -UPDATE CONTINUITY CHECK.            5275.32 10      005204.40
V+,$X13,BIT3                                            13057.32 B0      005205.00
SX,$X13,IC236                                            5275.33 10      005205.40
```

```
1365    LX,$X0,100Z         -TEST XFER TO ABB, BIT 37.      13034.00 10     005206.00
        C+1,$X0,%8¤400                                        400.01 00     005206.40
        KC,$X0,BIT9                                         13065.01 90     005207.00
        BXE,$+1.32                                           5211.32 C2     005207.40
        SIC,SEN                                              1310.00 80     005210.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005210.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 38.      13034.00 10     005211.00
        C+1,$X0,%8¤200                                        200.01 00     005211.40
        KC,$X0,BIT10                                        13066.01 90     005212.00
        BXE,$+1.32                                           5214.32 C2     005212.40
        SIC,SEN                                              1310.00 80     005213.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005213.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 39.      13034.00 10     005214.00
        C+1,$X0,%8¤100                                        100.01 00     005214.40
        KC,$X0,BIT11                                        13067.01 90     005215.00
        BXE,$+1.32                                           5217.32 C2     005215.40
        SIC,SEN                                              1310.00 80     005216.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005216.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 40.      13034.00 10     005217.00
        C+1,$X0,%8¤40                                          40.01 00     005217.40
        KC,$X0,BIT12                                        13070.01 90     005220.00
        BXE,$+1.32                                           5222.32 C2     005220.40
        SIC,SEN                                              1310.00 80     005221.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005221.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 41.      13034.00 10     005222.00
        C+1,$X0,%8¤20                                          20.01 00     005222.40
        KC,$X0,BIT13                                        13071.01 90     005223.00
        BXE,$+1.32                                           5225.32 C2     005223.40
        SIC,SEN                                              1310.00 80     005224.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005224.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 42.      13034.00 10     005225.00
        C+1,$X0,%8¤10                                          10.01 00     005225.40
        KC,$X0,BIT14                                        13072.01 90     005226.00
        BXE,$+1.32                                           5230.32 C2     005226.40
        SIC,SEN                                              1310.00 80     005227.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005227.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 43.      13034.00 10     005230.00
        C+1,$X0,%8¤4                                            4.01 00     005230.40
        KC,$X0,BIT15                                        13073.01 90     005231.00
        BXE,$+1.32                                           5233.32 C2     005231.40
        SIC,SEN                                              1310.00 80     005232.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005232.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 44.      13034.00 10     005233.00
        C+1,$X0,%8¤2                                            2.01 00     005233.40
        KC,$X0,BIT16                                        13074.01 90     005234.00
        BXE,$+1.32                                           5236.32 C2     005234.40
        SIC,SEN                                              1310.00 80     005235.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005235.40
        -
        LX,$X0,100Z         -TEST XFER TO ABB, BIT 45.      13034.00 10     005236.00
        C+1,$X0,%8¤1                                            1.01 00     005236.40
        KC,$X0,BIT17                                        13075.01 90     005237.00
        BXE,$+1.32                                           5241.32 C2     005237.40
        SIC,SEN                                              1310.00 80     005240.00
        B,SERS              -ABOVE BIT TO ABB FAILS.         1304.10 00     005240.40
```

```
-
B,$+1.0                                                  5242.10 00      005241.00
BD,I365                                                  5206.04 00      005241.40
SIC,SEN0+.32                                             1311.40 80      005242.00
B,SSW                  -TO SSIP.                         1301.10 00      005242.40
BD,$+.32                                                 5243.44 00      005243.00
                                                                -
LX,$X13,IC236          -UPDATE CONTINUITY CHECK.         5275.32 10      005243.40
V+,$X13,BIT4                                            13060.32 B0      005244.00
SX,$X13,IC236                                            5275.33 10      005244.40
```

```
                                 -TEST THREE.
          -
1366      LX,$X0,BIT28           -CHECK EAC                                      13110.00 10            005245.00
          C+I,$X0,%8¤400000                                                     400000.01 00            005245.40
          KC,$X0,BIT17                                                           13075.01 90            005246.00
          BZXE,$+1.32                                                             5250.32 C0            005246.40
          SIC,SEN                                                                 1310.00 80            005247.00
          B,SERS                -EAC ERROR                                        1304.10 00            005247.40
          -
          LX,$X0,BIT45           -CHK RECOMP IF NO EAC ON C-I.                   13131.00 10            005250.00
          C-I,$X0,%8¤1                                                               1.01 08            005250.40
          KC,$X0,I00Z                                                            13034.01 90            005251.00
          BXE,$+1.32                                                              5253.32 C2            005251.40
          SIC,SEN                                                                 1310.00 80            005252.00
          B,SERS                 -FAILED TO RECOMP ALL BITS.                      1304.10 00            005252.40
          -
          LX,$X0,I00Z                                                            13034.00 10            005253.00
          C-I,$X0,1                                                                  1.01 08            005253.40
          KC,$X0,I00VO                                                           13036.01 90            005254.00
          BXE,$+1.32                                                              5256.32 C2            005254.40
          SIC,SEN                                                                 1310.00 80            005255.00
          B,SERS                 -RECOMP WITH EAC.                                1304.10 00            005255.40
          -
          LX,$X0,I00Z            -CHECK CORRUPTION.                              13034.00 10            005256.00
          C+I,$X0,I000                                                           13035.01 00            005256.40
          KV,$X0,I00Z                                                            13034.00 90            005257.00
          SIC,SEN                                                                 1310.00 80            005257.40
          BXL,SERS               -C+I CORRUPTS BIT 24.                            1304.32 42            005260.00
          -
          LX,$X0,$X0                                                                20.00 10            005260.40
          SIC,SEN                                                                 1310.00 80            005261.00
          BXF,SERS               -C+I CORRUPTS BIT 25.                            1304.23 42            005261.40
          -
          KV,$X0,I00Z                                                            13034.00 90            005262.00
          BXE,$+1.32                                                              5264.32 C2            005262.40
          SIC,SEN                                                                 1310.00 80            005263.00
          B,SERS                 -C+I CORRUPTS VALUE, 0-23.                       1304.10 00            005263.40
          -
          SR,$X0,$X0                                                                20.01 70            005264.00
          KV,$X0,I00Z                                                            13034.00 90            005264.40
          BXE,$+1.32                                                              5266.72 C2            005265.00
          SIC,SEN                                                                 1310.00 80            005265.40
          B,SERS                 -C+I CORRUPTS REFILL FIELD.                      1304.10 00            005266.00
          -
          B,$+1.0                                                                 5267.50 00            005266.40
          BD,I366                                                                 5245.04 00            005267.00
          SIC,SEN0+.32                                                            1311.40 80            005267.40
          B,SSW                  -TO SSIP.                                        1301.10 00            005270.00
          BD,$+.32                                                                5271.04 00            005270.40
                                                                            -
          LX,$X13,IC236          -UPDATE CONTINUITY CHECK.                        5275.32 10            005271.00
          V+,$X13,BIT5                                                           13061.32 B0            005271.40
          SX,$X13,IC236                                                           5275.33 10            005272.00
                                                                            -
          LX,$X13,IC236          -UPDATE CONTINUITY CHECK.                        5275.32 10            005272.40
          KV,$X13,ICK236                                                          5276.32 90            005273.00
          SIC,SEN                                                                 1310.00 80            005273.40
          BZXE,SERS              -CONTINUITY ERROR.                               1304.32 C0            005274.00
          B,I38                                                                   5277.10 00            005274.40
                                                                            -
IC236     XW,0,0,0               -CONTINUITY REG I236.                               0.00 00 000000.00 00  005275.00
ICK236    XW,%8¤770000.00,0,0                                                   770000.00 00 000000.00 00  005276.00
```

```
                    ----1238---REFILL AND REFILL IF COUNT ZERO.
                                                                                -
                    -THIS TEST IS COMPOSED OF THREE ROUTINES WHICH
                    -CHECK THE FUNCTIONS DESCRIBED BELOW. THE
                    -REFILL DATA ITSELF IS NOT CHECKED BIT BY
                    -BIT SINCE THESE DATA PATHS HAVE BEEN PREVIOUSLY
                    -CHECKED AND HENCE ARE ASSUMED OPERATIVE. THE
                    -PATH FROM X TO W, NOT PREVIOUSLY CHECKED, IS
                    -HOWEVER CHECKED BIT BY BIT.
                                                                                -
                              -TEST 1 CHECKS BASIC CONTROL AND
                                   -X TO W TRANSFER.
                                                                                -
                              -TEST 2 CHECKS 6 CASES OF ADDRESSING
                                   -AND NOPING IF RF IS FROM 1
                                   -TO 15.
                                                                                -
                              -TEST 3 CHECKS RCZ, ZERO GATING.
                                                                                -
1238    LX,$X0,1381D        -UPDATE IDENT.                      5302.00 10      005277.00
        SX,$X0,DPET13                                           1437.01 10      005277.40
        SIC,RET                                                 1306.40 80      005300.00
        B,IDF1                                                  1443.10 00      005300.40
        Z,IC238                                                 5570.22 00      005301.00
        BD,1381                                                 5303.04 00      005301.40
        CNOP
1381D   %IQSZ¤DD%BU,64,8¤,1238     Z                                           005302.00
```

```
                                  -TEST 1.
 1381   LX,$X15,BIT59             -CHECK BASIC CONTROL - ALL ADDRESSES     13147.36 10                005303.00
        LX,$X0,BIT14              -IN COMMENTS BELOW ARE OCTAL.            13072.00 10                005303.40
        SX,$X0,8                                                              10.01 10                005304.00
        LX,$X0,BIT16                                                       13074.00 10                005304.40
        SV,$X0,2                                                               1.01 30                005305.00
        LX,$X0,BIT13                                                       13071.00 10                005305.40
        LX,$X1,0                                                               0.02 10                005306.00
        SV,$X1,1                                                               0.43 30                005306.40
        R,$X15                                                                37.02 00                005307.00
        NOP                                                                    0.30 00                005307.40
        NOP                                                                    0.30 00                005310.00
        NOP                                                                    0.30 00                005310.40
        KVI,$X15,%8¤0.40                                                       0.77 04                005311.00
        BXH,$+2.0                                                           5313.73 42                005311.40
        SIC,SEN                   -REFILLED X15 FROM LOCN 1 INSTEAD         1310.00 80                005312.00
        B,SERS                    -OF LOCN 20.                              1304.10 00                005312.40
        B,13813                   -TERM TEST 1.                             5437.50 00                005313.00

        LX,$X15,$X15                                                          37.36 10                005313.40
        BXF,1382                                                            5322.23 42                005314.00
        BXCZ,$+1.0                                                          5315.70 42                005314.40
        B,1382                                                              5322.10 00                005315.00
        BXVZ,$+1.0                                                          5316.71 42                005315.40
        B,1382                                                              5322.10 00                005316.00
        SR,$X15,$X14                                                          36.37 70                005316.40
        KV,$X14,BIT13                                                      13071.34 90                005317.00
        BXE,$+1.0                                                           5320.72 C2                005317.40
        B,1382                                                              5322.10 00                005320.00
        SIC,SEN                                                             1310.00 80                005320.40
        B,SERS                    -REFILL FAILS TO ALTER ANY BITS.          1304.10 00                005321.00
        B,13813                   -TERM TEST 1.                             5437.50 00                005321.40

 1382   KV,$X15,BIT13             -REFILL DID SOMETHING, WAS IT OK.        13071.36 90                005322.00
        BXE,13814                 -YES, GO TO X TO W XFER CHECK.            5444.72 C2                005322.40

        L%BU¤,$X15                -DID IT REFILL FROM ZERO.                   37.00 80 000000.20 50   005323.00
        BZRZ,$+2.0                                                          5326.34 C0                005324.00
        SIC,SEN                   -REFILLED X15 FROM LOCN 0                 1310.00 80                005324.40
        B,SERS                    -INSTEAD OF LOCN 20.                      1304.10 00                005325.00
        B,13813                   -TERM TEST 1.                             5437.50 00                005325.40

        KV,$X15,BIT16                                                      13074.36 90                005326.00
        BZXE,$+2.0                                                          5330.72 C0                005326.40
        SIC,SEN                   -REFILLED X15 FROM LOCN 2                 1310.00 80                005327.00
        B,SERS                    -INSTEAD OF LOCN 20.                      1304.10 00                005327.40
        B,13813                   -TERM TEST 1.                             5437.50 00                005330.00
```

```
         L%BU¤,4                                                       0.04 80 000000.20 50     005330.40
         KV,$X15,$R                                                   11.36 90                  005331.40
         BZXE,$+2.0                                                 5334.32 C0                  005332.00
         SIC,SEN              -REFILLED X15 FROM LOCN 4             1310.00 80                  005332.40
         B,SERS               -INSTEAD OF LOCN 20.                  1304.10 00                  005333.00
         B,13813              -TERM TEST 1.                         5437.50 00                  005333.40
                                                              -
         KV,$X15,BIT14                                             13072.36 90                  005334.00
         BZXE,$+2.0                                                 5336.72 C0                  005334.40
         SIC,SEN              -REFILLED $X15 FROM LOCN 10           1310.00 80                  005335.00
         B,SERS               -INSTEAD OF LOCN 20.                  1304.10 00                  005335.40
         B,13813              -TERM TEST 1.                         5437.50 00                  005336.00
                                                              -
         SC,$X15,$X1                                                  21.37 50                  005336.40
         SR,$X15,$X2                                                  22.37 70                  005337.00
                                                              -
1383     L%BU¤,%8¤40.0                                                40.00 80 000000.20 50     005337.40
         KV,$X15,$R                                                   11.36 90                  005340.40
         BZXE,1384                                                  5346.72 C0                  005341.00
         LX,$X0,%8¤40                                                 40.00 10                  005341.40
         SC,$X0,$X0                                                   20.01 50                  005342.00
         KV,$X1,$X0                                                   20.02 90                  005342.40
         BZXE,1384                                                  5346.72 C0                  005343.00
         SR,$X0,$X0                                                   20.01 70                  005343.40
         KV,$X2,$X0                                                   20.04 90                  005344.00
         BZXE,1384                                                  5346.72 C0                  005344.40
         SIC,SEN              -REFILLED X15 FROM LOCN 40            1310.00 80                  005345.00
         B,SERS               -INSTEAD OF LOCN 20.                  1304.10 00                  005345.40
         B,13813              -TERM TEST 1.                         5437.50 00                  005346.00
                                                              -
1384     L%BU¤,%8¤100.0                                              100.00 80 000000.20 50     005346.40
         KV,$X15,$R                                                   11.36 90                  005347.40
         BZXE,1385                                                  5355.72 C0                  005350.00
         LX,$X0,%8¤100                                               100.00 10                  005350.40
         SC,$X0,$X0                                                   20.01 50                  005351.00
         KV,$X1,$X0                                                   20.02 90                  005351.40
         BZXE,1385                                                  5355.72 C0                  005352.00
         SR,$X0,$X0                                                   20.01 70                  005352.40
         KV,$X2,$X0                                                   20.04 90                  005353.00
         BZXE,1385                                                  5355.72 C0                  005353.40
         SIC,SEN              -REFILLED X15 FROM LOCN 100           1310.00 80                  005354.00
         B,SERS               -INSTEAD OF LOCN 20.                  1304.10 00                  005354.40
         B,13813              -TERM TEST 1.                         5437.50 00                  005355.00
```

```
1385    L%BU¤,%8¤200.0                                    200.00 80 000000.20 50      005355.40
        KV,$X15,$R                                         11.36 90                   005356.40
        BZXE,1386                                        5364.72 C0                   005357.00
        LX,$X0,%8¤200                                     200.00 10                   005357.40
        SC,$X0,$X0                                         20.01 50                   005360.00
        KV,$X1,$X0                                         20.02 90                   005360.40
        BZXE,1386                                        5364.72 C0                   005361.00
        SR,$X0,$X0                                         20.01 70                   005361.40
        KV,$X2,$X0                                         20.04 90                   005362.00
        BZXE,1386                                        5364.72 C0                   005362.40
        SIC,SEN          -REFILLED X15 FROM LOCN 200     1310.00 80                   005363.00
        B,SERS           -INSTEAD OF LOCN 20.            1304.10 00                   005363.40
        B,13813          -TERM TEST 1.                   5437.50 00                   005364.00
-
1386    L%BU¤,%8¤400.0                                    400.00 80 000000.20 50      005364.40
        KV,$X15,$R                                         11.36 90                   005365.40
        BZXE,1387                                        5373.72 C0                   005366.00
        LX,$X0,%8¤400                                     400.00 10                   005366.40
        SC,$X0,$X0                                         20.01 50                   005367.00
        KV,$X1,$X0                                         20.02 90                   005367.40
        BZXE,1387                                        5373.72 C0                   005370.00
        SR,$X0,$X0                                         20.01 70                   005370.40
        KV,$X2,$X0                                         20.04 90                   005371.00
        BZXE,1387                                        5373.72 C0                   005371.40
        SIC,SEN          -REFILLED X15 FROM LOCN 400     1310.00 80                   005372.00
        B,SERS           -INSTEAD OF LOCN 20.            1304.10 00                   005372.40
        B,13813          -TERM TEST 1.                   5437.50 00                   005373.00
-
1387    L%BU¤,%8¤1000.0                                  1000.00 80 000000.20 50      005373.40
        KV,$X15,$R                                         11.36 90                   005374.40
        BZXE,1388                                        5402.72 C0                   005375.00
        LX,$X0,%8¤1000                                   1000.00 10                   005375.40
        SC,$X0,$X0                                         20.01 50                   005376.00
        KV,$X1,$X0                                         20.02 90                   005376.40
        BZXE,1388                                        5402.72 C0                   005377.00
        SR,$X0,$X0                                         20.01 70                   005377.40
        KV,$X2,$X0                                         20.04 90                   005400.00
        BZXE,1388                                        5402.72 C0                   005400.40
        SIC,SEN          -REFILLED X15 FROM LOCN 1000    1310.00 80                   005401.00
        B,SERS           -INSTEAD OF LOCN 20.            1304.10 00                   005401.40
        B,13813          -TERM TEST 1.                   5437.50 00                   005402.00
```

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1388    L%BU¤,%8¤2000.0                                    2000.00 80 000000.20 50     005402.40
        KV,$X15,$R                                           11.36 90                  005403.40
        BZXE,1389                                          5411.72 C0                  005404.00
        LX,$X0,%8¤2000                                     2000.00 10                  005404.40
        SC,$X0,$X0                                           20.01 50                  005405.00
        KV,$X1,$X0                                           20.02 90                  005405.40
        BZXE,1389                                          5411.72 C0                  005406.00
        SR,$X0,$X0                                           20.01 70                  005406.40
        KV,$X2,$X0                                           20.04 90                  005407.00
        BZXE,1389                                          5411.72 C0                  005407.40
        SIC,SEN             -REFILLED X15 FROM LOCN 2000   1310.00 80                  005410.00
        B,SERS              -INSTEAD OF LOCN 20.           1304.10 00                  005410.40
        B,13813             -TERM TEST 1.                  5437.50 00                  005411.00
-
1389    L%BU¤,%8¤4000.0                                    4000.00 80 000000.20 50     005411.40
        KV,$X15,$R                                           11.36 90                  005412.40
        BZXE,13810                                         5420.72 C0                  005413.00
        LX,$X0,%8¤4000                                     4000.00 10                  005413.40
        SC,$X0,$X0                                           20.01 50                  005414.00
        KV,$X1,$X0                                           20.02 90                  005414.40
        BZXE,13810                                         5420.72 C0                  005415.00
        SR,$X0,$X0                                           20.01 70                  005415.40
        KV,$X2,$X0                                           20.04 90                  005416.00
        BZXE,13810                                         5420.72 C0                  005416.40
        SIC,SEN             -REFILLED X15 FROM LOCN 4000   1310.00 80                  005417.00
        B,SERS              -INSTEAD OF LOCN 20.           1304.10 00                  005417.40
        B,13813             -TERM TEST 1.                  5437.50 00                  005420.00
-
13810   L%BU¤,%8¤10000.0                                  10000.00 80 000000.20 50     005420.40
        KV,$X15,$R                                           11.36 90                  005421.40
        BZXE,13811                                         5427.72 C0                  005422.00
        LX,$X0,%8¤10000                                   10000.00 10                  005422.40
        SC,$X0,$X0                                           20.01 50                  005423.00
        KV,$X1,$X0                                           20.02 90                  005423.40
        BZXE,13811                                         5427.72 C0                  005424.00
        SR,$X0,$X0                                           20.01 70                  005424.40
        KV,$X2,$X0                                           20.04 90                  005425.00
        BZXE,13811                                         5427.72 C0                  005425.40
        SIC,SEN             -REFILLED X15 FROM LOCN 10000  1310.00 80                  005426.00
        B,SERS              -INSTEAD OF LOCN 20.           1304.10 00                  005426.40
        B,13813             -TERM TEST 1.                  5437.50 00                  005427.00
```

```
13811   L%BU¤,%8¤20000.0                                    20000.00 80 000000.20 50     005427.40
        KV,$X15,$R                                             11.36 90                  005430.40
        BZXE,13812                                           5436.72 C0                  005431.00
        LX,$X0,%8¤20000                                     20000.00 10                  005431.40
        SC,$X0,$X0                                             20.01 50                  005432.00
        KV,$X1,$X0                                             20.02 90                  005432.40
        BZXE,13812                                           5436.72 C0                  005433.00
        SR,$X0,$X0                                             20.01 70                  005433.40
        KV,$X2,$X0                                             20.04 90                  005434.00
        BZXE,13812                                           5436.72 C0                  005434.40
        SIC,SEN                 -REFILLED X15 FROM LOCN 20000  1310.00 80                005435.00
        B,SERS                  -INSTEAD OF LOCN 20.           1304.10 00                005435.40
        B,13813                 -TERM TEST 1.                  5437.50 00                005436.00
                                                                -
13812   SIC,SEN                 -REFILLED X15 FROM SOME LOCN OTHER THAN  1310.00 80      005436.40
        B,SERS                  -0, 1, 2, 4, 10, 40, 100, 200, 400, 1000,  1304.10 00    005437.00
                                -2000, 4000, 10000, OR 20000. SHOULD
                                -HAVE REFILLED FROM LOCN 20.
                                                                -
13813   B,$+1.0                 -TERM TEST 1 LOOP ENTRY.       5440.50 00                005437.40
        BD,1381                                                5303.04 00                005440.00
        SIC,SEN0+.32                                           1311.40 80                005440.40
        B,SSW                   -TO SSIP.                      1301.10 00                005441.00
        BD,$+.32                                               5442.04 00                005441.40
                                                                -
        LX,$X13,IC238           -UPDATE CONTINUITY CHECK.      5570.32 10                005442.00
        V+,$X13,BIT0                                         13054.32 B0                 005442.40
        V+,$X13,BIT1                                         13055.32 B0                 005443.00
        SX,$X13,IC238                                          5570.33 10                005443.40
        B,13821                 -TERM TEST 1                   5476.10 00                005444.00
                                                                -
13814   B,$+1.0                 -CONTINUE LOOP ENTRY.          5445.50 00                005444.40
        BD,1381                                                5303.04 00                005445.00
        SIC,SEN0+.32                                           1311.40 80                005445.40
        B,SSW                   -TO SSIP.                      1301.10 00                005446.00
        BD,$+.32                                               5447.04 00                005446.40
                                                                -
        LX,$X13,IC238           -UPDATE CONTINUITY CHECK.      5570.32 10                005447.00
        V+,$X13,BIT0                                         13054.32 B0                 005447.40
        SX,$X13,IC238                                          5570.33 10                005450.00
```

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13815   LX,$X3,138XW9                                5602.06 10                  005450.40
        LX,$X5,138XW2                                5573.12 10                  005451.00
13816   SVA,$X3,13817                                5455.47 D0                  005451.40
        SVA,$X5,13819                                5466.53 D0                  005452.00
        LX,$X4,138XW4                                5575.10 10                  005452.40
        LX,$X1,138XW1                                5572.02 10                  005453.00
        LX,$X2,138XW2                                5573.04 10                  005453.40
        LX,$X0,138XW3                                5574.00 10                  005454.00
        LX,$X8,138XW5                                5576.20 10                  005454.40
        SX,$X0,8                                       10.01 10                  005455.00
13817   LX,$X15,0                                       0.36 10                  005455.40
        SR,$X15,$X15                                   37.37 70                  005456.00
        SVA,$X15,13818                               5457.77 D0                  005456.40
        R,$X15                                         37.02 00                  005457.00
13818   L%BU¤,0                                         0.00 80 000000.20 50     005457.40
        KV,$X15,$R                                     11.36 90                  005460.40
        BXE,$+1.0                                    5462.32 C2                  005461.00
        B,13819             -X TO W FAILED.          5466.50 00                  005461.40
        LX,$X14,$R                                     11.34 10                  005462.00
        SC,$X14,$X14                                   36.35 50                  005462.40
        KC,$X15,$X14                                   36.37 90                  005463.00
        BXE,$+1.0                                    5464.72 C2                  005463.40
        B,13819             -X TO W FAILED.          5466.50 00                  005464.00
        SR,$X14,$X14                                   36.35 70                  005464.40
        SR,$X15,$X15                                   37.37 70                  005465.00
        KV,$X15,$X14                                   36.36 90                  005465.40
        BXE,$+1.0                                    5467.32 C2                  005466.00
13819   $B,0                -X TO W FAILED.             0.10 00                  005466.40

13820   V+I,$X3,1.0                                     1.07 05                  005467.00
        C-I,$X3,1                                       1.07 08                  005467.40
        V+I,$X5,2.0                                     2.13 05                  005470.00
        LX,$X6,$X3                                     23.14 10                  005470.40
        BXCZ,$+1.0                                   5472.30 42                  005471.00
        B,13816                                      5451.50 00                  005471.40

        B,$+1.0                                      5473.10 00                  005472.00
        BD,13815                                     5450.44 00                  005472.40
        SIC,SEN0+.32                                 1311.40 80                  005473.00
        B,SSW               -TO SSIP.                1301.10 00                  005473.40
        BD,$+.32                                     5474.44 00                  005474.00

        LX,$X13,IC238       -UPDATE CONTINUITY CHECK. 5570.32 10                 005474.40
        V+,$X13,BIT1                                13055.32 B0                  005475.00
        SX,$X13,IC238                                5570.33 10                  005475.40
```

△

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13821   LX,$X1,138K1        -START 6 CASES OF ADDRESSING.          5625.02 10 ✓    005476.00
        SX,$X1,138RFL       -TEST 2A-OP ADR IS EM.                 5627.03 10 ✓    005476.40
        R,138RFL            -          RF ADR IS EM.               5627.02 00      005477.00
        NOP                                                          0.30 00       005477.40
        NOP                                                          0.30 00       005500.00
        LX,$X0,138RFL                                             5627.00 10       005500.40
        KV,$X0,138XW3                                             5574.00 90       005501.00
        BXE,$+1.32                                                5503.32 C2       005501.40
        SIC,SEN                                                   1310.00 80       005502.00
        B,SERS              -FAILED TO REFILL EXT MEM FRM EXT MEM. 1304.10 00      005502.40

        LX,$X1,138XW3       -TEST 2B-OP ADR IS EM.                 5574.02 10       005503.00
        LX,$X0,138K2        -          RF ADR IS XS.               5626.00 10       005503.40
        SX,$X0,138RFL                                             5627.01 10 ✓     005504.00
        R,138RFL                                                  5627.02 00       005504.40
        NOP                                                          0.30 00       005505.00
        NOP                                                          0.30 00       005505.40
        LX,$X0,138RFL                                             5627.00 10       005506.00
        KV,$X0,138XW3                                             5574.00 90       005506.40
        BXE,$+1.32                                                5510.72 C2       005507.00
        SIC,SEN                                                   1310.00 80       005507.40
        B,SERS              -FAILED TO REFILL EXT MEM FRM IX STG. 1304.10 00       005510.00

        LX,$X0,138K1        -TEST 2C-OP ADR IS XS.                 5625.00 10 ✓    005510.40
        R,$X0               -          RF ADR IS EM.                 20.02 00      005511.00
        KV,$X0,138XW3                                             5574.00 90       005511.40
        BXE,$+1.32                                                5513.72 C2       005512.00
        SIC,SEN                                                   1310.00 80       005512.40
        B,SERS              -FAILED TO REFILL IX STG FRM EXT MEM. 1304.10 00       005513.00

        LX,$X0,138K2        -TEST 2D-OP ADR IS XS.                 5626.00 10       005513.40
        LX,$X1,138XW3       -          RF ADR IS XS.               5574.02 10       005514.00
        R,$X0                                                        20.02 00      005514.40
        KV,$X0,$X1                                                   21.00 90      005515.00
        BXE,$+1.32                                                5517.32 C2       005515.40
        SIC,SEN                                                   1310.00 80       005516.00
        B,SERS              -FAILED TO REFILL IX STG FRM IX STG.  1304.10 00       005516.40
```

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         L%BU¤,I38K1          -TEST 2E-OP ADR IS IM.                  5625.00 80 000000.20 50      005517.00
         R,$R                 -          RF ADR IS EM.                  11.02 00                  005520.00
         LX,$X0,$R                                                      11.00 10                  005520.40
         KV,$X0,I38XW3                                                5574.00 90                  005521.00
         BXE,$+1.32                                                   5523.32 C2                  005521.40
         SIC,SEN                                                      1310.00 80                  005522.00
         B,SERS               -FAILED TO REFILL INT MEM FRM EXT MEM.  1304.10 00                  005522.40
                                                                                -
         LX,$X1,I38XW3        -TEST 2F - OP ADR I SIM.                5574.02 10                  005523.00
         L%BU¤,I38K2          -          RF ADR IS XS.                5626.00 80 000000.20 50      005523.40
         R,$R                                                           11.02 00                  005524.40
         KV,$X1,$R                                                      11.02 90                  005525.00
         BXE,$+1.32                                                   5527.32 C2                  005525.40
         SIC,SEN                                                      1310.00 80                  005526.00
         B,SERS               -FAILED TO REFILL INT MEM FRM IX STG.   1304.10 00                  005526.40
                                                                                -
         LX,$X0,I00VO         -TEST 2G - CHK REFILL FRM LOCN 0.      13036.00 10                  005527.00
         R,$X0                                                          20.02 00                  005527.40
         KV,$X0,I00Z                                                  13034.00 90                  005530.00
         BXE,$+1.32                                                   5532.32 C2                  005530.40
         SIC,SEN                                                      1310.00 80                  005531.00
         B,SERS               -FAILED TO REFILL FRM LOCN 0.           1304.10 00                  005531.40
                                                                                -
I3822    LX,$X14,I38XW5       -TEST 2H - CHK NO REFILL FRM LOCNS      5576.34 10                  005532.00
         LX,$X15,I38XW6       -1 THROUGH 17.                          5577.36 10                  005532.40
         Z,$X0                                                          20.22 00                  005533.00
I3823    SVA,$X14,I3824                                               5535.35 D0                  005533.40
         SVA,$X15,I3825                                               5537.37 D0                  005534.00
         LVI,$X0,%8¤765432.40                                       765432.41 01                  005534.40
I3824    LRI,$X0,0.0                                                    0.01 03                   005535.00
         R,$X0                                                         20.02 00                   005535.40
         KVI,$X0,%8¤765432.40                                       765432.41 04                  005536.00
         BXE,$+1.0                                                    5537.72 C2                  005536.40
I3825    $B,0                 -DID REFILL.                            0.10 00                   005537.00
                                                                                -
I3826    V+I,$X14,1.0                                                   1.35 05                   005537.40
         C-I,$X14,1                                                     1.35 08                   005540.00
         BXCZ,I3827                                                   5542.30 42                  005540.40
         V+I,$X15,2.0                                                   2.37 05                   005541.00
         B,I3823                                                      5533.50 00                  005541.40
                                                                                -
I3827    B,$+1.0                                                      5543.10 00                  005542.00
         BD,I3821                                                     5476.04 00                  005542.40
         SIC,SEN0+.32                                                 1311.40 80                  005543.00
         B,SSW                -TO SSIP.                               1301.10 00                  005543.40
         BD,$+.32                                                     5544.44 00                  005544.00
                                                                                -
         LX,$X13,IC238        -UPDATE CONTINUITY CHECK.               5570.32 10                  005544.40
         V+,$X13,BIT2                                                13056.32 B0                  005545.00
         SX,$X13,IC238                                                5570.33 10                  005545.40
```

```
                          -TEST 3.
13828  LX,$X0,I38K1       -START CHECK OF RCZ.                     5625.00 10                005546.00
       RCZ,$X0                                                       20.06 00                005546.40
       KV,$X0,I38XW3                                               5574.00 90                005547.00
       BXE,$+1.32                                                  5551.32 C2                005547.40
       SIC,SEN                                                     1310.00 80                005550.00
       B,SERS             -RCZ FAILS TO REFILL WHEN CT ZERO.       1304.10 00                005550.40

       LX,$X14,I38XW7     -CHECK ZERO GATING OF RCZ.               5600.34 10                005551.00
       LX,$X15,I38XW8                                              5601.36 10                005551.40
13829  SVA,$X14,I3830                                              5553.75 D0                005552.00
       SVA,$X15,I3831                                              5556.37 D0                005552.40
       LRI,$X0,I38XW3                                              5574.01 03                005553.00
13830  LC,$X0,0                                                       0.00 50                005553.40
       LV,$X0,I00Z                                                13034.00 30                005554.00
       RCZ,$X0                                                       20.06 00                005554.40
       KV,$X0,I00Z                                                13034.00 90                005555.00
       BXE,$+1.0                                                   5556.72 C2                005555.40
13831  $B,0               -REFILL WHEN COUNT NOT ZERO.                0.10 00                005556.00

13832  C-I,$X14,1                                                     1.35 08                005556.40
       BXCZ,I3833                                                  5561.30 42                005557.00
       V+I,$X14,1.0                                                   1.35 05                005557.40
       V+I,$X15,2.0                                                   2.37 05                005560.00
       B,I3829                                                     5552.10 00                005560.40

13833  B,$+1.0                                                     5562.10 00                005561.00
       BD,I3828                                                    5546.04 00                005561.40
       SIC,SEN0+.32                                                1311.40 80                005562.00
       B,SSW              -TO SSIP.                                1301.10 00                005562.40
       BD,$+.32                                                    5563.44 00                005563.00
       LX,$X13,IC238                                               5570.32 10                005563.40
       V+,$X13,BIT3                                               13057.32 B0                005564.00
       SX,$X13,IC238                                               5570.33 10                005564.40

       LX,$X13,IC238      -UPDATE CONTINUITY CHECK.                5570.32 10                005565.00
       KV,$X13,ICK238                                              5571.32 90                005565.40
       SIC,SEN                                                     1310.00 80                005566.00
       BZXE,SERS          -CONTINUITY ERROR.                       1304.32 C0                005566.40
       B,I40                                                       5776.10 00                005567.00

IC238  XW,0,0,0           -CONTINUITY REG I238.                       0.00 00 000000.00 00   005570.00
ICK238 XW,%8¤740000.00,0,0                                       740000.00 00 000000.00 00   005571.00
```

```
                CNOP                    -CONSTANTS FOR I238

I38XW1          XW,B|T50,14,0
I38XW2          XW,|38B5,0,0
I38XW3          XW,%8¤123456.76,%8¤543210,%8¤123456
I38XW4          XW,%8¤313403.61,%8¤436271,%8¤305761
I38XW5          XW,1.0,15,0
I38XW6          XW,|38B6,0,0
I38XW7          XW,B|T0,18,0
I38XW8          XW,|38B7,0,0
I38XW9          XW,|38B50,14,0          -ALTER FOR MAX MEM
I38B46          XW,0.0,0,%8¤400000
I38B47          XW,0.0,0,%8¤200000
I38B48          XW,0.0,0,%8¤100000
I38B49          XW,0.0,0,%8¤40000
I38B50          XW,0.0,0,%8¤20000
                XW,0.0,0,%8¤10000
                XW,0.0,0,%8¤4000
                XW,0.0,0,%8¤2000
                XW,0.0,0,%8¤1000
                XW,0.0,0,%8¤400
                XW,0.0,0,%8¤200
                XW,0.0,0,%8¤100
                XW,0.0,0,%8¤40
                XW,0.0,0,%8¤20
                XW,0.0,0,%8¤50
                XW,0.0,0,%8¤44
                XW,0.0,0,%8¤42
                XW,0.0,0,%8¤41

I38K1           XW,0,0,I38XW3
I38K2           XW,0,0,$X1

I38RFL          NOP
                NOP

                                        -YOU CAME TO THIS ERROR TABLE FROM I3819
I38B1           SIC,SEN
                B,SERS                  -X TO W XFER FAILURE, BIT 46.
                B,I3820
                NOP

I38B2           SIC,SEN
                B,SERS                  -X TO W XFER FAILURE, BIT 47.
                B,I3820
                NOP

I38B3           SIC,SEN
                B,SERS                  -X TO W XFER FAILURE, BIT 48.
                B,I3820
                NOP

I38B4           SIC,SEN
                B,SERS                  -X TO W XFER FAILURE, BIT 49.
                B,I3820
                NOP

I38B5           SIC,SEN
                B,SERS                  -X TO W XFER FAILURE, BIT 50.
                B,I3820
                NOP
```

```
-
  13136.00 00 000340.00 00      005572.00
   5640.00 00 000000.00 00      005573.00
 123456.76 0B 064202.47 2E      005574.00
 313403.61 08 745626.13 F1      005575.00
      1.00 00 000360.00 00      005576.00
   5674.00 00 000000.00 00      005577.00
  13054.00 00 000440.00 00      005600.00
   5732.00 00 000000.00 00      005601.00
   5607.00 00 000340.00 00      005602.00
      0.00 00 000010.00 00      005603.00
      0.00 00 000004.00 00      005604.00
      0.00 00 000002.00 00      005605.00
      0.00 00 000001.00 00      005606.00
      0.00 00 000000.40 00      005607.00
      0.00 00 000000.20 00      005610.00
      0.00 00 000000.10 00      005611.00
      0.00 00 000000.04 00      005612.00
      0.00 00 000000.02 00      005613.00
      0.00 00 000000.01 00      005614.00
      0.00 00 000000.00 80      005615.00
      0.00 00 000000.00 40      005616.00
      0.00 00 000000.00 20      005617.00
      0.00 00 000000.00 10      005620.00
      0.00 00 000000.00 28      005621.00
      0.00 00 000000.00 24      005622.00
      0.00 00 000000.00 22      005623.00
      0.00 00 000000.00 21      005624.00
-
      0.00 00 000000.13 7C      005625.00
      0.00 00 000000.00 11      005626.00
-
      0.30 00                   005627.00
      0.30 00                   005627.00
-
   1310.00 80                   005630.00
   1304.10 00                   005630.40
   5467.10 00                   005631.00
      0.30 00                   005631.40
-
   1310.00 80                   005632.00
   1304.10 00                   005632.40
   5467.10 00                   005633.00
      0.30 00                   005633.40
-
   1310.00 80                   005634.00
   1304.10 00                   005634.40
   5467.10 00                   005635.00
      0.30 00                   005635.40
-
   1310.00 80                   005636.00
   1304.10 00                   005636.40
   5467.10 00                   005637.00
      0.30 00                   005637.40
-
   1310.00 80                   005640.00
   1304.10 00                   005640.40
   5467.10 00                   005641.00
      0.30 00                   005641.40
-
```

```
SIC,SEN                                          1310.00 80     005642.00
B,SERS          -X TO W XFER FAILURE, BIT 51.    1304.10 00     005642.40
B,13820                                          5467.10 00     005643.00
NOP                                                 0.30 00     005643.40
                                          -
SIC,SEN                                          1310.00 80     005644.00
B,SERS          -X TO W XFER FAILURE, BIT 52.    1304.10 00     005644.40
B,13820                                          5467.10 00     005645.00
NOP                                                 0.30 00     005645.40
                                          -
SIC,SEN                                          1310.00 80     005646.00
B,SERS          -X TO W XFER FAILURE, BIT 53.    1304.10 00     005646.40
B,13820                                          5467.10 00     005647.00
NOP                                                 0.30 00     005647.40
```

```
SIC,SEN                                                   1310.00 80      005650.00
B,SERS          -X TO W XFER FAILURE, BIT 54.             1304.10 00      005650.40
B,13820                                                   5467.10 00      005651.00
NOP                                                          0.30 00      005651.40
                                                    -
SIC,SEN                                                   1310.00 80      005652.00
B,SERS          -X TO W XFER FAILURE, BIT 55.             1304.10 00      005652.40
B,13820                                                   5467.10 00      005653.00
NOP                                                          0.30 00      005653.40
                                                    -
SIC,SEN                                                   1310.00 80      005654.00
B,SERS          -X TO W XFER FAILURE, BIT 56.             1304.10 00      005654.40
B,13820                                                   5467.10 00      005655.00
NOP                                                          0.30 00      005655.40
                                                    -
SIC,SEN                                                   1310.00 80      005656.00
B,SERS          -X TO W XFER FAILURE, BIT 57.             1304.10 00      005656.40
B,13820                                                   5467.10 00      005657.00
NOP                                                          0.30 00      005657.40
                                                    -
SIC,SEN                                                   1310.00 80      005660.00
B,SERS          -X TO W XFER FAILURE, BIT 58.             1304.10 00      005660.40
B,13820                                                   5467.10 00      005661.00
NOP                                                          0.30 00      005661.40
                                                    -
SIC,SEN                                                   1310.00 80      005662.00
B,SERS          -X TO W XFER FAILURE, BIT 59.             1304.10 00      005662.40
B,13820                                                   5467.10 00      005663.00
NOP                                                          0.30 00      005663.40
                                                    -
SIC,SEN                                                   1310.00 80      005664.00
B,SERS          -X TO W XFER FAILURE, BIT 60.             1304.10 00      005664.40
B,13820                                                   5467.10 00      005665.00
NOP                                                          0.30 00      005665.40
                                                    -
SIC,SEN                                                   1310.00 80      005666.00
B,SERS          -X TO W XFER FAILURE, BIT 61.             1304.10 00      005666.40
B,13820                                                   5467.10 00      005667.00
NOP                                                          0.30 00      005667.40
                                                    -
SIC,SEN                                                   1310.00 80      005670.00
B,SERS          -X TO W XFER FAILURE, BIT 62.             1304.10 00      005670.40
B,13820                                                   5467.10 00      005671.00
NOP                                                          0.30 00      005671.40
                                                    -
SIC,SEN                                                   1310.00 80      005672.00
B,SERS          -X TO W XFER FAILURE, BIT 63.             1304.10 00      005672.40
B,13820                                                   5467.10 00      005673.00
NOP                                                          0.30 00      005673.40
```

```
                                -YOU CAME TO THIS ERROR TABLE FROM 13825
13886   SIC,SEN                                          1310.00 80      005674.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 1. 1304.10 00      005674.40
        B,13826                                          5537.50 00      005675.00
        NOP                                                 0.30 00      005675.40
                                                                -

        SIC,SEN                                          1310.00 80      005676.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 2. 1304.10 00      005676.40
        B,13826                                          5537.50 00      005677.00
        NOP                                                 0.30 00      005677.40
                                                                -

        SIC,SEN                                          1310.00 80      005700.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 3. 1304.10 00      005700.40
        B,13826                                          5537.50 00      005701.00
        NOP                                                 0.30 00      005701.40
                                                                -

        SIC,SEN                                          1310.00 80      005702.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 4. 1304.10 00      005702.40
        B,13826                                          5537.50 00      005703.00
        NOP                                                 0.30 00      005703.40
                                                                -

        SIC,SEN                                          1310.00 80      005704.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 5. 1304.10 00      005704.40
        B,13826                                          5537.50 00      005705.00
        NOP                                                 0.30 00      005705.40
                                                                -

        SIC,SEN                                          1310.00 80      005706.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 6. 1304.10 00      005706.40
        B,13826                                          5537.50 00      005707.00
        NOP                                                 0.30 00      005707.40
                                                                -

        SIC,SEN                                          1310.00 80      005710.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 7. 1304.10 00      005710.40
        B,13826                                          5537.50 00      005711.00
        NOP                                                 0.30 00      005711.40
                                                                -

        SIC,SEN                                          1310.00 80      005712.00
        B,SERS          -FAILED TO NOP WHEN RF ADR IS 8. 1304.10 00      005712.40
        B,13826                                          5537.50 00      005713.00
        NOP                                                 0.30 00      005713.40
```

```
SIC,SEN                                                  1310.00 80      005714.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 9.         1304.10 00      005714.40
B,13826                                                  5537.50 00      005715.00
NOP                                                         0.30 00      005715.40
                                                                -

SIC,SEN                                                  1310.00 80      005716.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 10.        1304.10 00      005716.40
B,13826                                                  5537.50 00      005717.00
NOP                                                         0.30 00      005717.40
                                                                -

SIC,SEN                                                  1310.00 80      005720.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 11.        1304.10 00      005720.40
B,13826                                                  5537.50 00      005721.00
NOP                                                         0.30 00      005721.40
                                                                -

SIC,SEN                                                  1310.00 80      005722.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 12.        1304.10 00      005722.40
B,13826                                                  5537.50 00      005723.00
NOP                                                         0.30 00      005723.40
                                                                -

SIC,SEN                                                  1310.00 80      005724.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 13.        1304.10 00      005724.40
B,13826                                                  5537.50 00      005725.00
NOP                                                         0.30 00      005725.40
                                                                -

SIC,SEN                                                  1310.00 80      005726.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 14.        1304.10 00      005726.40
B,13826                                                  5537.50 00      005727.00
NOP                                                         0.30 00      005727.40
                                                                -

SIC,SEN                                                  1310.00 80      005730.00
B,SERS          -FAILED TO NOP WHEN RF ADR IS 15.        1304.10 00      005730.40
B,13826                                                  5537.50 00      005731.00
NOP                                                         0.30 00      005731.40
                                                                -
```

```
                                -YOU CAME TO THIS ERROR TABLE FROM 13831
138B7   SIC,SEN                                          1310.00 80          005732.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 400000.  1304.10 00      005732.40
        B,13832                                           5556.50 00        005733.00
        NOP                                                  0.30 00        005733.40
                                                                -
        SIC,SEN                                           1310.00 80        005734.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 200000.  1304.10 00      005734.40
        B,13832                                           5556.50 00        005735.00
        NOP                                                  0.30 00        005735.40
                                                                -
        SIC,SEN                                           1310.00 80        005736.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 100000.  1304.10 00      005736.40
        B,13832                                           5556.50 00        005737.00
        NOP                                                  0.30 00        005737.40
                                                                -
        SIC,SEN                                           1310.00 80        005740.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 40000.   1304.10 00      005740.40
        B,13832                                           5556.50 00        005741.00
        NOP                                                  0.30 00        005741.40
                                                                -
        SIC,SEN                                           1310.00 80        005742.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 20000.   1304.10 00      005742.40
        B,13832                                           5556.50 00        005743.00
        NOP                                                  0.30 00        005743.40
                                                                -
        SIC,SEN                                           1310.00 80        005744.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 10000.   1304.10 00      005744.40
        B,13832                                           5556.50 00        005745.00
        NOP                                                  0.30 00        005745.40
                                                                -
        SIC,SEN                                           1310.00 80        005746.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 4000.    1304.10 00      005746.40
        B,13832                                           5556.50 00        005747.00
        NOP                                                  0.30 00        005747.40
                                                                -
        SIC,SEN                                           1310.00 80        005750.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 2000.    1304.10 00      005750.40
        B,13832                                           5556.50 00        005751.00
        NOP                                                  0.30 00        005751.40
                                                                -
        SIC,SEN                                           1310.00 80        005752.00
        B,SERS          -RCZ REFILLS WHEN COUNT IS 1000.    1304.10 00      005752.40
        B,13832                                           5556.50 00        005753.00
        NOP                                                  0.30 00        005753.40
```

```
SIC,SEN                                             1310.00 80        005754.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 400.      1304.10 00        005754.40
B,13832                                             5556.50 00        005755.00
NOP                                                    0.30 00        005755.40
                                              -
SIC,SEN                                             1310.00 80        005756.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 200.      1304.10 00        005756.40
B,13832                                             5556.50 00        005757.00
NOP                                                    0.30 00        005757.40
                                              -
SIC,SEN                                             1310.00 80        005760.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 100.      1304.10 00        005760.40
B,13832                                             5556.50 00        005761.00
NOP                                                    0.30 00        005761.40
                                              -
SIC,SEN                                             1310.00 80        005762.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 40.       1304.10 00        005762.40
B,13832                                             5556.50 00        005763.00
NOP                                                    0.30 00        005763.40
                                              -
SIC,SEN                                             1310.00 80        005764.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 20.       1304.10 00        005764.40
B,13832                                             5556.50 00        005765.00
NOP                                                    0.30 00        005765.40
                                              -
SIC,SEN                                             1310.00 80        005766.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 10.       1304.10 00        005766.40
B,13832                                             5556.50 00        005767.00
NOP                                                    0.30 00        005767.40
                                              -
SIC,SEN                                             1310.00 80        005770.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 4.        1304.10 00        005770.40
B,13832                                             5556.50 00        005771.00
NOP                                                    0.30 00        005771.40
                                              -
SIC,SEN                                             1310.00 80        005772.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 2.        1304.10 00        005772.40
B,13832                                             5556.50 00        005773.00
NOP                                                    0.30 00        005773.40
                                              -
SIC,SEN                                             1310.00 80        005774.00
B,SERS         -RCZ REFILLS WHEN COUNT IS 1.        1304.10 00        005774.40
B,13832                                             5556.50 00        005775.00
NOP                                                    0.30 00        005775.40
```

```
                ----1240---V+C, V+IC, V-IC TESTS.

                -THIS TEST CHECKS THE ABOVE OPERATIONS
                -OBTAINING THE OPERANDS FROM THE THREE
                -DIFFERENT TYPES OF MEMORY WHEN
                -APPLICABLE. IT IS COMPOSEC OF FIVE
                -BASIC TESTS WHICH PERFORM THE FOLLOW-
                -ING CHECKS,

                          -TEST 1. V+C, OPERAND FROM
                               -EXTERNAL MEMORY.

                          -TEST 2. V+C, OPERAND FROM
                               -INTERNAL MEMORY.

                          -TEST 3. V+C, OPERAND FROM
                               -INDEX CORE STORAGE.

                          -TEST 4. V+IC CHECK.

                          -TEST 5. V-IC CHECK.

1400    LX,$X1,1401D      -UPDATE IDENT.          6001.02 10      005776.00
        SX,$X1,DPET13                             1437.03 10      005776.40
        SIC,RET                                   1306.40 80      005777.00
              B,IDF1      -PRINT ID.              1443.10 00      005777.40
        Z,IC240                                   6213.22 00      006000.00
        BD,1401                                   6002.04 00      006000.40
        CNOP
1401D   %IQSZ¤DD%BU,64,8¤,1240    Z                              006001.00
```

```
                        -TEST 1. V+C, EXT MEM.
                                                                  -
        CNOP                             -
1401    LX,$X1,140XW1       -V IS 777777.37, C IS 1.              6014.02 10                 006002.00
140A    V+C,$X1,140VC1                   -V+.01,C-1.0             6016.42 D0                 006002.40
        KVI,$X1,%8¤777777.40             -V SHOULD CARRY IN BIT POSITS. 777777.43 04         006003.00
        BXEZ,140B                        -BRANCH IF V+ CARRY CORRECT   6005.32 C6           006003.40
        SIC,SEN                                                   1310.00 80                 006004.00
                 B,SERS                  -DID NOT V+ CARRY CORRECT     1304.10 00           006004.40
140B    BXCZ,140C                        -C SHOULD HAVE REACHED ZERO   6007.30 42           006005.00
        SIC,SEN                                                   1310.00 80                 006005.40
                 B,SERS                  -COUNT DIDNT GO TO  ZERO 1304.10 00                 006006.00
        NOP,0.0                          -OFFSET V+C IN Y REGS       0.30 00                 006006.40
140C    V+C,$X1,140VC2                   -V+.32,C-1.0             6016.02 D0                 006007.00
        KVI,$X1,0.0                      -V SHOULD CARRY IN ALL UNIT POS.  0.03 04           006007.40
        BXEZ,140D                        -BRANCH IF V IS ZERO     6011.72 C6                 006010.00
        SIC,SEN                                                   1310.00 80                 006010.40
                 B,SERS                  -V IS NOT ZERO CARRY FAILED   1304.10 00           006011.00
140D    KCI,$X1,%8¤777777.               -COUNT FROM ZERO TO ALL ONES  777777.03 0A         006011.40
        BXEZ,140E                        -BRANCH IF ALL ONES      6017.32 C6                 006012.00
        SIC,SEN                                                   1310.00 80                 006012.40
                 B,SERS                  -COUNT NOT ALL ONES      1304.10 00                 006013.00
        B,140E                           -                        6017.10 00                 006013.40
140XW1  XW,%8¤777777.37,1,0              -COMMON XW %1¤         777777.37 00 000020.00 00    006014.00
140XW2  XW,%8¤-0.41,1,0                  -COMMON XW %2¤              0.41 80 000020.00 00    006015.00
140VC2  VF,%8¤0.40                       -VALUE .32                  0.40+                   006016.00
140VC1  VF,%8¤0.01                       -VALUE .01                  0.01+                   006016.40
140E    LX,$X1,140XW2                    -V IS%8¤-0.41 C IS 1.0   6015.02 10                 006017.00
140F    V+C,$X1,140VC1                   -V+.01 C-1.0             6016.42 D0                 006017.40
        KVNI,$X1,%8¤.40                  -KV-.40                     0.43 0C                 006020.00
        BXEZ,140G                        -BRANCH IF EQUAL         6022.32 C6                 006020.40
        SIC,SEN                                                   1310.00 80                 006021.00
                 B,SERS                  -V NOT EQUAL-0.40        1304.10 00                 006021.40
140G    BXCZ,140H                        -BRANCH IF C IS ZERO     6024.30 42                 006022.00
        SIC,SEN                                                   1310.00 80                 006022.40
                 B,SERS                  -COUNT NOT ZERO          1304.10 00                 006023.00
        NOP,0.0                          -OFFSET V+C IN Y REGS       0.30 00                 006023.40
140H    V+C,$X1,140VC2                   -V+.40 C-1.0             6016.02 D0                 006024.00
        KVI,$X1,0.0                      -V SHOULD BE ZERO           0.03 04                 006024.40
        BXEZ,140I                        -BRANCH IF ZERO          6026.72 C6                 006025.00
        SIC,SEN                                                   1310.00 80                 006025.40
                 B,SERS                  -V NOT ZERO              1304.10 00                 006026.00
140I    KCI,$X1,%8¤777777.               -KC TO %8¤777777.      777777.03 0A                 006026.40
        BXEZ,140J                        -BRANCH IF EQUAL         6031.72 C6                 006027.00
        SIC,SEN                                                   1310.00 80                 006027.40
                 B,SERS                  -COUNT DID NOT WRAP AROUND    1304.10 00           006030.00
        B,$+1.0                          -BRANCH TO               6031.50 00                 006030.40
        BD,1401             -LOOP IF                              6002.04 00                 006031.00
140J    SIC,SEN0+.32                                              1311.40 80                 006031.40
                      B,SSW              -IF SSW 2 ON             1301.10 00                 006032.00
        BD,$+.32                                                  6033.04 00                 006032.40
                                                                  -
        LX,$X13,IC240       -UPDATE CONTINUITY CHECK.             6213.32 10                 006033.00
        V+,$X13,BIT0                                             13054.32 B0                 006033.40
        SX,$X13,IC240                                             6213.33 10                 006034.00
```

-TEST 2. V+C, INT MEM.

```
          CNOP,0.0                                                  0.30 00                        006034.40
140J1     L%BU,64,8¤,140JX1          -LOAD R ACC. WITH CONSTANTS 6050.00 80 000000.20 50         006035.00
          LX,$X1,140JX2              -V IS 777777.37 C IS 1.0    6051.02 10                      006036.00
140J2     V+C,$X1,$R                 -V+.01 C-1.0                  11.02 D0                      006036.40
          KVI,$X1,%8¤777777.40       -KV TO 777777.40          777777.43 04                      006037.00
          BXEZ,140J3                 -BRANCH IF EQUAL            6041.32 C6                      006037.40
          SIC,SEN                                                1310.00 80                      006040.00
                   B,SERS            -FAILED TO CARRY BIT POSITS. 1304.10 00                     006040.40
140J3     BXCZ,140J4                 -BRANCH IF COUNT IS ZERO    6043.30 42                      006041.00
          SIC,SEN                                                1310.00 80                      006041.40
                   B,SERS            -COUNT NOT ZERO             1304.10 00                      006042.00
          NOP,0.0                    -OFFSET V+C IN Y REGS          0.30 00                      006042.40
140J4     V+C,$X1,$R+.32             -V+.40 C-1.0                  11.42 D0                      006043.00
          KVI,$X1,0.0                -KV TO 0.0                     0.03 04                      006043.40
          BXEZ,140J5                 -BRANCH IF WRAP AROUND ZERO 6045.72 C6                      006044.00
          SIC,SEN                                                1310.00 80                      006044.40
                   B,SERS            -WRAPAROUND NOT ZERO        1304.10 00                      006045.00
140J5     KCI,$X1,%8¤777777.         -COUNT WRAP AROUND ALL 1S 777777.03 0A                      006045.40
          BXEZ,140J6                 -BRANCH IF ALL 1S           6053.32 C6                      006046.00
          SIC,SEN                                                1310.00 80                      006046.40
                   B,SERS            -COUNT DIDNT WRAPAROUND     1304.10 00                      006047.00
          B,140J6                    -                           6053.10 00                      006047.40
140JX1    VF,0.01                                                   0.01+                        006050.00
                   VF,%8¤0.40        -VALUE DATA                    0.40+                        006050.40
140JX2    XW,%8¤777777.37,1,0        -XW %A¤                   777777.37 00 000020.00 00         006051.00
140JX3    XW,%8¤-0.41,1,0            -XW %B¤                        0.41 80 000020.00 00         006052.00
140J6     L%BU,64,8¤,140JX1,64       -LOAD LEFT ACC WITH DATA    6050.00 80 000040.20 50         006053.00
140J7     LX,$X1,140JX3              -V IS %-0.41¤ C IS 1.0      6052.02 10                      006054.00
          NOP,0.0                    -OFFSET V+C IN Y REGS          0.30 00                      006054.40
140J8     V+C,$X1,$L                 -V+.01 C-1.0                  10.02 D0                      006055.00
          KVNI,$X1,%8¤.40            -KV TO -.40                    0.43 0C                      006055.40
          BXEZ,140J9                 -BRANCH IF BIT ADDED        6057.72 C6                      006056.00
          SIC,SEN                                                1310.00 80                      006056.40
                   B,SERS            -BIT DID NOT ADD RIGHT      1304.10 00                      006057.00
140J9     BXCZ,140J10                -BRANCH IF COUNT IS ZERO    6061.70 42                      006057.40
          SIC,SEN                                                1310.00 80                      006060.00
                   B,SERS            -COUNT NOT ZERO             1304.10 00                      006060.40
          NOP,0.0                    -OFFSET V+C IN Y REGS          0.30 00                      006061.00
140J10    V+C,$X1,$L+.32             -V+.40 C-1.0                  10.42 D0                      006061.40
          KVI,$X1,0.0                -KV TO 0.0                     0.03 04                      006062.00
          BXEZ,140J11                -BRANCH IF VALUE IS ZERO    6064.32 C6                      006062.40
          SIC,SEN                                                1310.00 80                      006063.00
                   B,SERS            -VALUE NOT ZERO             1304.10 00                      006063.40
140J11    KCI,$X1,%8¤777777.         -KC TO ALL 1S             777777.03 0A                      006064.00
          BXE,$+1.32         -BRANCH IF COUNT WRAP AROUND.       6066.32 C2                      006064.40
          SIC,SEN                                                1310.00 80                      006065.00
                   B,SERS            -COUNT NOT ALL 1S           1304.10 00                      006065.40
          B,$+1.0                    -BRANCH TO LOOP             6067.10 00                      006066.00
          BD,140J1           -LOOP IF                            6035.04 00                      006066.40
          SIC,SEN0+.32                                           1311.40 80                      006067.00
                        B,SSW        -SSW2 ON                    1301.10 00                      006067.40
          BD,$+.32                                               6070.44 00                      006070.00

          LX,$X13,IC240      -UPDATE CONTINUITY CHECK.           6213.32 10                      006070.40
          V+,$X13,BIT1                                          13055.32 B0                      006071.00
          SX,$X13,IC240                                          6213.33 10                      006071.40
```

```
                       -TEST 3. V+C, IX CORE STG.
                                                -
        CNOP,0.0                    -
I40J12  LV,$X7,I40VC1               -V IS 0.01                     6016.56 30                        006072.00
        LV,$X8,I40VC2               -V IS 0.40                     6016.20 30                        006072.40
I40J13  LX,$X1,I40XJ7               -V IS -777777.37, C IS 1.0     6105.02 10                        006073.00
I40J14  V+C,$X1,$X7                 -V+.01 C-1.0                     27.02 D0                        006073.40
        KVI,$X1,%8¤777777.40        -KV TO%8¤ 777777.40          777777.43 04                        006074.00
        BXEZ,I40J15                 -BRANCH IF EQUAL               6076.32 C6                        006074.40
        SIC,SEN                                                    1310.00 80                        006075.00
                 B,SERS             -DIDNT CARRY IN BIT POSITS.    1304.10 00                        006075.40
I40J15  BXCZ,I40J16                 -IS COUNT ZERO                 6100.30 42                        006076.00
        SIC,SEN                                                    1310.00 80                        006076.40
                 B,SERS             -COUNT NOT ZERO                1304.10 00                        006077.00
        NOP,0.0                     -OFFSET V+C IN Y REGS             0.30 00                        006077.40
I40J16  V+C,$X1,$X8                 -V+0.40, C-1.0                   30.02 D0                        006100.00
        KVI,$X1,0.0                 -KV TO 0.0                        0.03 04                        006100.40
        BXEZ,I40J17                 -BRANCH IF EQUAL               6102.72 C6                        006101.00
        SIC,SEN                                                    1310.00 80                        006101.40
                 B,SERS             -VALUE DID NOT WRAP AROUND     1304.10 00                        006102.00
I40J17  KCI,$X1,%8¤777777.          -KC TO ALL ONES              777777.03 0A                        006102.40
        BXEZ,I40J18                 -BRANCH IF EQUAL               6107.32 C6                        006103.00
        SIC,SEN                                                    1310.00 80                        006103.40
                 B,SERS             -COUNT DID NOT WRAP AROUND     1304.10 00                        006104.00
I40XJ7  XW,%8¤777777.37,1,0         -COMMON XW%7¤                777777.37 00 000020.00 00           006105.00
I40XJ8  XW,%8¤-0.41,1,0             -COMMON XW%8¤                     0.41 80 000020.00 00           006106.00
I40J18  LX,$X1,I40XJ8               -V IS-0.41 CIS 1.0             6106.02 10                        006107.00
I40J19  V+C,$X1,$X7                 -V+0.01 C-1.0                    27.02 D0                        006107.40
        KVNI,$X1,%8¤.40             -KV TO-.40                        0.43 0C                        006110.00
        BXEZ,I40J20                 -BRANCH IF EQUAL               6112.32 C6                        006110.40
        SIC,SEN                                                    1310.00 80                        006111.00
                 B,SERS             --.41+0.01 NOT-.40             1304.10 00                        006111.40
I40J20  BXCZ,I40J21                 -BRANCH IF COUNT ZERO          6114.30 42                        006112.00
        SIC,SEN                                                    1310.00 80                        006112.40
                 B,SERS             -COUNT NOT ZERO                1304.10 00                        006113.00
        NOP,0.0                     -OFFSET V+C IN Y REGS             0.30 00                        006113.40
I40J21  V+C,$X1,$X8                 -V+.40 C-1.0                     30.02 D0                        006114.00
        KVI,$X1,0.0                 -KV TO 0.0                        0.03 04                        006114.40
        BXEZ,I40J22                 -BRANCH IF EQUAL               6116.72 C6                        006115.00
        SIC,SEN                                                    1310.00 80                        006115.40
                 B,SERS             --.40+.40 NOT 0.0              1304.10 00                        006116.00
I40J22  KCI,$X1,%8¤777777.          -KC TO ALL ONES              777777.03 0A                        006116.40
        BXEZ,I40J23                 -BRANCH IF EQUAL               6121.72 C6                        006117.00
        SIC,SEN                                                    1310.00 80                        006117.40
                 B,SERS             -COUNT DIDNT WRAPAROUND        1304.10 00                        006120.00
        B,$+1.0                     -BRANCH TO                     6121.50 00                        006120.40
        BD,I40J12          -LOOP                                   6072.04 00                        006121.00
I40J23  SIC,SEN0+.32                                               1311.40 80                        006121.40
                      B,SSW         -IF SSW2 ON                    1301.10 00                        006122.00
        BD,$+.32                                                   6123.04 00                        006122.40
                                                -
        LX,$X13,IC240      -UPDATE CONTINUITY CHECK.               6213.32 10                        006123.00
        V+,$X13,BIT2                                              13056.32 B0                        006123.40
        SX,$X13,IC240                                              6213.33 10                        006124.00
```

```
                              -TEST 4. V+IC CHECK.
                                                                    -
            CNOP                              -                                 0.30 00                       006124.40
I40K        LX,$X1,I40XW3                     -V IS %8¤777776.40, C IS 1.0   6137.02 10                       006125.00
I40L        V+IC,$X1,%8¤.40                   -V+.40,C-1.0                      0.43 06                       006125.40
            KVI,$X1,%8¤777777.0               -V SHOULD ADD IN BIT 18       777777.03 04                       006126.00
            BXEZ,I40M                         -BRANCH IF V+ CARRY CORRECT     6130.32 C6                       006126.40
            SIC,SEN                                                           1310.00 80                       006127.00
                    B,SERS                    -DID NOT V+ CARRY CORRECT       1304.10 00                       006127.40
I40M        BXCZ,I40N                         -C SHOULD HAVE REACHED ZERO     6132.30 42                       006130.00
            SIC,SEN                                                           1310.00 80                       006130.40
                    B,SERS                    -COUNT DIDNT GO TO ZERO         1304.10 00                       006131.00
            NOP,0.0                           -OFFSET V+C IN Y REGS             0.30 00                       006131.40
I40N        V+IC,$X1,1.0                      -V+ 1.0,C-1.0                     1.03 06                       006132.00
            KVI,$X1,0.0                       -V SHOULD CARRY IN ALL UNIT POS.  0.03 04                       006132.40
            BXEZ,I40O                         -BRANCH IF V IS ZERO            6134.72 C6                       006133.00
            SIC,SEN                                                           1310.00 80                       006133.40
                    B,SERS                    -V IS NOT ZERO CARRY FAILED     1304.10 00                       006134.00
I40O        KCI,$X1,%8¤777777.                -COUNT FROM ZERO TO ALL ONES  777777.03 0A                       006134.40
            BXEZ,I40P                         -BRANCH IF ALL ONES             6142.32 C6                       006135.00
            SIC,SEN                                                           1310.00 80                       006135.40
                    B,SERS                    -COUNT NOT ALL ONES             1304.10 00                       006136.00
            B,I40P                            -                               6142.10 00                       006136.40
I40XW3      XW,%8¤777776.40,1,0               -COMMON XW %3¤                777776.40 00 000020.00 00          006137.00
I40XW4      XW,%8¤-1.40,1,0                   -COMMON XW %4¤                    1.40 80 000020.00 00          006140.00
            NOP,%8¤525252.40                  -POSITION VPIC IN             525252.70 00                       006141.00
            NOP,%8¤252525.40                  -Y REGISTERS                  252525.70 00                       006141.40
I40P        LX,$X1,I40XW4                     -V IS %8¤-1.40, CIS1.0          6140.02 10                       006142.00
I40Q        V+IC,$X1,1.0                      -V+1.0,C-1.0                      1.03 06                       006142.40
            KVNI,$X1,%8¤.40                   -KV-.40                           0.43 0C                       006143.00
            BXEZ,I40R                         -BRANCH IF EQUAL                6145.32 C6                       006143.40
            SIC,SEN                                                           1310.00 80                       006144.00
                    B,SERS                    -V NOT EQUAL-0.40               1304.10 00                       006144.40
I40R        BXCZ,I40S                         -BRANCH IF C IS ZERO            6147.30 42                       006145.00
            SIC,SEN                                                           1310.00 80                       006145.40
                    B,SERS                    -COUNT NOT ZERO                 1304.10 00                       006146.00
            NOP,0.0                           -OFFSET V+C IN Y REGS             0.30 00                       006146.40
I40S        V+IC,$X1,%8¤.40                   -V+.40,C-1.0                      0.43 06                       006147.00
            KVI,$X1,0.0                       -V SHOULD BE ZERO                 0.03 04                       006147.40
            BXEZ,I40T                         -BRANCH IF ZERO                 6151.72 C6                       006150.00
            SIC,SEN                                                           1310.00 80                       006150.40
                    B,SERS                    -V NOT ZERO                     1304.10 00                       006151.00
I40T        KCI,$X1,%8¤777777.                -KC TO %8¤777777.             777777.03 0A                       006151.40
            BXE,I40U                -BRANCH IF EQUAL.                         6154.72 C2                       006152.00
            SIC,SEN                                                           1310.00 80                       006152.40
                    B,SERS                    -COUNT DID NOT WRAP AROUND      1304.10 00                       006153.00
            B,$+1.0                           -BRANCH TO                      6154.50 00                       006153.40
            BD,I40K                 -LOOP                                     6125.04 00                       006154.00
I40U        SIC,SEN0+.32                                                      1311.40 80                       006154.40
                              B,SSW           -IF SSW2 ON                     1301.10 00                       006155.00
            BD,$+.32                                                          6156.04 00                       006155.40
                                                                    -
            LX,$X13,IC240           -UPDATE CONTINUITY CHECK.                 6213.32 10                       006156.00
            V+,$X13,BIT3                                                     13057.32 B0                       006156.40
            SX,$X13,IC240                                                     6213.33 10                       006157.00
```

-TEST 5. V-IC CHECK.

```
        CNOP                               -                                      0.30 00                       006157.40
140W    LX,$X1,140XW5                      -V IS 1.0 C IS 1.0                  6172.02 10                       006160.00
140W1   V-IC,$X1,%8¤.40                    -V-%8¤.40 C-1.0                        0.43 0E                       006160.40
        KVI,$X1,%8¤0.40                    -KV TO %8¤.40                          0.43 04                       006161.00
        BXEZ,140W2                         -BRANCH IF EQUAL                    6163.32 C6                       006161.40
        SIC,SEN                                                                1310.00 80                       006162.00
                  B,SERS                   -VALUE 1.0,-%8¤.40, NOT %8¤.40      1304.10 00                       006162.40
140W2   BXCZ,140W3                         -BRANCH IF COUNT EQUALS ZERO        6165.30 42                       006163.00
        SIC,SEN                                                                1310.00 80                       006163.40
                  B,SERS                   -COUNT NOT EQUAL TO ZERO            1304.10 00                       006164.00
        NOP,0.0                            -OFFSET V-IC IN Y REGS                 0.30 00                       006164.40
140W3   V-IC,$X1,%8¤1.0                    -V-1.0 C-1.0                           1.03 0E                       006165.00
        KVNI,$X1,%8¤0.40                   -KV TO %8¤-.40                         0.43 0C                       006165.40
        BXEZ,140W4                         -BRANCH IF EQUAL                    6167.72 C6                       006166.00
        SIC,SEN                                                                1310.00 80                       006166.40
                  B,SERS                   -VALUE %8¤.40,-1.0,NOT-%8¤.40       1304.10 00                       006167.00
140W4   KCI,$X1,%8¤777777.                 -COUNT FROM ZERO TO ALL ONES      777777.03 0A                       006167.40
        BXEZ,140W5                         -BRANCH IF EQUAL                    6173.32 C6                       006170.00
        SIC,SEN                                                                1310.00 80                       006170.40
                  B,SERS                   -COUNT NOT ALL ONES                 1304.10 00                       006171.00
        B,140W5                            -                                   6173.10 00                       006171.40
140XW5  XW,%8¤1.0,1,0                      -COMMON XW                             1.00 00 000020.00 00          006172.00
140W5   LC,$X1,140CV3                      -SET UP NEW COUNT 1.0               6177.42 50                       006173.00
140W6   V-IC,$X1,%8¤777777.                -V-%-1.0¤ C-1.0                   777777.03 0E                       006173.40
        KVNI,$X1,%8¤777777.40                                                777777.43 0C                       006174.00
        BXEZ,140W7                         -BRANCH IF EQUAL                    6176.32 C6                       006174.40
        SIC,SEN                                                                1310.00 80                       006175.00
                  B,SERS                   -V-%8¤.40,-%-1.0¤, NOT%8¤.40        1304.10 00                       006175.40
140W7   BXCZ,140W8                         -BRANCH IF COUNT IS ZERO            6200.30 42                       006176.00
        SIC,SEN                                                                1310.00 80                       006176.40
                  B,SERS                   -COUNT NOT ZERO                     1304.10 00                       006177.00
140CV3  NOP,1.32                           -OFFSET V-IC IN V REGS.+DATA           1.70 00                       006177.40
140W8   V-IC,$X1,%8¤777777.40              -V-%-.40¤,C-1.0                   777777.43 0E                       006200.00
        KVNI,$X1,%8¤777777.0                                                 777777.03 0C                       006200.40
        BXEZ,140W9                         -BRANCH IF EQUAL                    6202.72 C6                       006201.00
        SIC,SEN                                                                1310.00 80                       006201.40
                  B,SERS                   -V+%8¤.40,-%-.40¤, NOT 1.0          1304.10 00                       006202.00
140W9   KCI,$X1,%8¤777777.                 -COUNT FROM ZERO TO ALL ONES      777777.03 0A                       006202.40
        BXEZ,140X                          -BRANCH IF EQUAL                    6205.72 C6                       006203.00
        SIC,SEN                                                                1310.00 80                       006203.40
                  B,SERS                   -COUNT NOT ALL ONES                 1304.10 00                       006204.00
        B,$+1.0                            -BRANCH TO                          6205.50 00                       006204.40
        BD,140W              -LOOP                                             6160.04 00                       006205.00
140X    SIC,SEN0+.32                                                           1311.40 80                       006205.40
                       B,SSW               -IF SSW2 ON                         1301.10 00                       006206.00
        BD,$+.32                                                               6207.04 00                       006206.40

        LX,$X13,IC240        -UPDATE CONTINUITY CHECK.                         6213.32 10                       006207.00
        V+,$X13,BIT4                                                          13060.32 B0                       006207.40
        SX,$X13,IC240                                                          6213.33 10                       006210.00

        LX,$X13,IC240        -UPDATE CONTINUITY CHECK.                         6213.32 10                       006210.40
        KV,$X13,ICK240                                                         6214.32 90                       006211.00
        SIC,SEN                                                                1310.00 80                       006211.40
        BZXE,SERS            -CONTINUITY ERROR.                                1304.32 C0                       006212.00
        B,142                                                                  6215.10 00                       006212.40

IC240   XW,0,0,0             -CONTINUITY REG I240.                                0.00 00 000000.00 00          006213.00
ICK240  XW,%8¤760000.00,0,0                                                  760000.00 00 000000.00 00          006214.00
```

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        ----I242--- V+CR, V+ICR, V-ICR.

                 -THIS TEST IS COMPOSED OF ROUTINES WHICH
                 -CHECK THE ABOVE INSTRUCTIONS. ALL MEMORIES
                 -WHICH ARE APPLICABLE IN ANY GIVEN TEST
                 -ARE UTILIZED.

I42     LX,$X1,I42ID        -UPDATE IDENT.                        6220.02 10              006215.00
        SX,$X1,DPET13                                             1437.03 10              006215.40
        SIC,RET                                                   1306.40 80              006216.00
        B,IDF1                                                    1443.10 00              006216.40
        Z,IC242                                                   6346.22 00              006217.00
        BD,I42A                                                   6221.04 00              006217.40
        CNOP
I42ID   %IQSZ¤DD%BU,64,8¤,I242    Z                                                       006220.00

        CNOP,0.0
I42A    LX,$X1,I42XW1       -V IS%8¤777777.37,C IS 2.0            6240.02 10              006221.00
I42A1   V+CR,$X1,I42VFA     -V+%8¤.41 C-1.0                       6242.02 F0              006221.40
        KVI,$X1,0.0         -%8¤777777.37+.41 SHOULD BE ZERO         0.03 04              006222.00
        BXEZ,I42A2          -BRANCH IF ZERO VALUE                 6224.32 C6              006222.40
        SIC,SEN             -%8¤777777.37+.41 SHOULD HAVE CARRIED 1310.00 80              006223.00
        B,SERS              -OVER ALL POSITIONS, BUT DIDNT.       1304.10 00              006223.40

I42A2   KCI,$X1,1.0         -COMPARE COUNT TO 1.0                    1.03 0A              006224.00
        BXEZ,I42A3          -BRANCH IF COUNT IS ONE               6226.32 C6              006224.40
        SIC,SEN             -COUNT DID NOT                        1310.00 80              006225.00
        B,SERS              -STEP DOWN TO ONE                     1304.10 00              006225.40

I42A3   V+CR,$X1,I42VFB     -V+%8¤1.0, C-1.0 TO ZERO, REFILL      6241.42 F0              006226.00
        KVI,$X1,%8¤525252.  -KV TO %8¤525252.                   525252.03 04              006226.40
        BXEZ,I42A4          -BRANCH IF EQUAL                      6230.72 C6              006227.00
        SIC,SEN             -FAILED TO REFILL OR                  1310.00 80              006227.40
        B,SERS              -FAILED TO REFILL PROPERLY            1304.10 00              006230.00

I42A4   KCI,$X1,%8¤525252.  -KC TO %8¤525252.                   525252.03 0A              006230.40
        BXEZ,I42A5          -BRANCH IF EQUAL                      6232.72 C6              006231.00
        SIC,SEN             -FAILED TO REFILL OR                  1310.00 80              006231.40
        B,SERS              -FAILED TO REFILL PROPERLY            1304.10 00              006232.00

I42A5   SR,$X1,I42RFA       -STORE REFILL                         6241.03 70              006232.40
        KV,$X1,I42RFA       -KV AGAINST REFILL                    6241.02 90              006233.00
        BXEZ,I42A6          -BRANCH IF EQUAL                      6235.32 C6              006233.40
        SIC,SEN             -FAILED TO REFILL OR, FAILED TO       1310.00 80              006234.00
        B,SERS              -REFILL VALUE OR REFILL PROPERLY      1304.10 00              006234.40

I42A6   KC,$X1,I42RFA       -KC AGAINST REFILL                    6241.03 90              006235.00
        BXEZ,I42A7          -BRANCH IF C +R ARE EQUAL             6244.72 C6              006235.40
        SIC,SEN             -FAILED TO REFILL OR, FAILED TO       1310.00 80              006236.00
        B,SERS              -REFILL COUNT OR REFILL PROPERLY      1304.10 00              006236.40

        B,I42A7             -BRANCH OVER DATA                     6244.50 00              006237.00

I42XW1  XW,%8¤777777.37,2.0,I42XW2 -COMMON XW                   777777.37 00 000040.14 A3 006240.00
I42RFA  VF,0.0              -REFILL STORAGE                          0.00+                006241.00
I42VFB  VF,1.0              -VALUE 1.0                               1.00+                006241.40
I42VFA  VF,%8¤.41           -VALUE %8¤.41                            0.41+                006242.00
I42XW2  XW,%8¤525252.0,%8¤525252,%8¤525252      -REFILL XW      525252.00 0A 525252.52 AA 006243.00

        BD,I42A                                                   6221.04 00              006244.00
I42A7   SIC,SEN0+.32        -LOOP BACK                            1311.40 80              006244.40
        B,SSW               -IF SSW2 ON                           1301.10 00              006245.00
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```
BD,$+.32                                                   6246.04 00        006245.40

LX,$X13,IC242       -UPDATE CONTINUITY CHECK.              6346.32 10        006246.00
V+,$X13,BIT0                                              13054.32 B0        006246.40
SX,$X13,IC242                                              6346.33 10        006247.00
```

```
        CNOP,0.0                                                    0.30 00              006247.40
142B    LX,$X1,142XW3      -V IS%8¤777777.37,C IS 2.0            6267.02 10              006250.00
        LX,$X8,142XW2      -SET UP REFILL XW                     6243.20 10              006250.40
142B1   V+CR,$X1,142VFA    -V+%8¤.41 C-1.0                       6242.02 F0              006251.00
        KVI,$X1,0.0        -%8¤777777.37+.41 SHOULD BE ZERO         0.03 04              006251.40
        BXEZ,142B2         -BRANCH IF ZERO VALUE                 6253.72 C6              006252.00
        SIC,SEN            -%8¤777777.37+.41 SHOULD HAVE CARRIED 1310.00 80              006252.40
        B,SERS             -OVER ALL POSITIONS, BUT DIDNT.       1304.10 00              006253.00
                                                            -
142B2   KCI,$X1,1.0        -COMPARE COUNT TO 1.0                    1.03 0A              006253.40
        BXEZ,142B3         -BRANCH IF COUNT IS ONE               6255.72 C6              006254.00
        SIC,SEN            -COUNT DID NOT                        1310.00 80              006254.40
        B,SERS             -STEP DOWN TO ONE                     1304.10 00              006255.00
                                                            -
142B3   V+CR,$X1,142VFB    -V+%8¤1.0, C-1.0 TO ZERO, REFILL      6241.42 F0              006255.40
        KVI,$X1,%8¤525252. -KV TO %8¤525252.                   525252.03 04              006256.00
        BXEZ,142B4         -BRANCH IF EQUAL                      6260.32 C6              006256.40
        SIC,SEN            -FAILED TO REFILL OR                  1310.00 80              006257.00
        B,SERS             -FAILED TO REFILL PROPERLY            1304.10 00              006257.40
                                                            -
142B4   KCI,$X1,%8¤525252. -KC TO %8¤525252.                   525252.03 0A              006260.00
        BXEZ,142B5         -BRANCH IF EQUAL                      6262.32 C6              006260.40
        SIC,SEN            -FAILED TO REFILL OR                  1310.00 80              006261.00
        B,SERS             -FAILED TO REFILL PROPERLY            1304.10 00              006261.40
                                                            -
142B5   SR,$X1,142RFA      -STORE REFILL                         6241.03 70              006262.00
        KV,$X1,142RFA      -KV AGAINST REFILL                    6241.02 90              006262.40
        BXEZ,142B6         -BRANCH IF EQUAL                      6264.72 C6              006263.00
        SIC,SEN            -FAILED TO REFILL OR, FAILED TO       1310.00 80              006263.40
        B,SERS             -REFILL VALUE OR REFILL PROPERLY      1304.10 00              006264.00
                                                            -
142B6   KC,$X1,142RFA      -KC AGAINST REFILL                    6241.03 90              006264.40
        BXEZ,142B7         -BRANCH IF C +R ARE EQUAL             6270.72 C6              006265.00
        SIC,SEN            -FAILED TO REFILL OR, FAILED TO       1310.00 80              006265.40
        B,SERS             -REFILL COUNT OR REFILL PROPERLY      1304.10 00              006266.00
                                                            -
        B,142B7            -BRANCH OVER DATA                     6270.50 00              006266.40
                                                            -
142XW3  XW,%8¤777777.37,2.0,$X8 -REFILL XW                     777777.37 00 000040.00 18 006267.00
                                                            -
        BD,142B                                                  6250.04 00              006270.00
142B7   SIC,SEN0+.32       -LOOP BACK                            1311.40 80              006270.40
        B,SSW              -IF SSW2 ON                           1301.10 00              006271.00
        BD,$+.32                                                 6272.04 00              006271.40
                                                            -
        LX,$X13,IC242      -UPDATE CONTINUITY CHECK.             6346.32 10              006272.00
        V+,$X13,BIT1                                            13055.32 B0              006272.40
        SX,$X13,IC242                                            6346.33 10              006273.00
```

```
         CNOP,0.0                                             0.30 00                006273.40
142D     LX,$X1,142XW5        -V IS%8¤777777.40,C IS 2.0    6314.02 10                006274.00
142D1    V+ICR,$X1,%8¤.40     -V+%8¤.40 C-1.0                 0.43 07                006274.40
         KVI,$X1,0.0          -%8¤777777.40+.40 SHOULD BE ZERO  0.03 04              006275.00
         BXEZ,142D2           -BRANCH IF ZERO VALUE         6277.32 C6                006275.40
         SIC,SEN              -%8¤777777.37+.41 SHOULD HAVE CARRIED  1310.00 80      006276.00
         B,SERS               -OVER ALL POSITIONS, BUT DIDNT.  1304.10 00            006276.40
                                                           -
142D2    KCI,$X1,1.0          -COMPARE COUNT TO 1.0           1.03 0A                006277.00
         BXEZ,142D3           -BRANCH IF COUNT IS ONE       6301.32 C6                006277.40
         SIC,SEN              -COUNT DID NOT                1310.00 80                006300.00
         B,SERS               -STEP DOWN TO ONE             1304.10 00                006300.40
                                                           -
142D3    V+ICR,$X1,1.0        -V+%8¤1.0, C-1.0 TO ZERO, REFILL  1.03 07              006301.00
         KVI,$X1,%8¤525252.   -KV TO %8¤525252.           525252.03 04                006301.40
         BXEZ,142D4           -BRANCH IF EQUAL              6303.72 C6                006302.00
         SIC,SEN              -FAILED TO REFILL OR          1310.00 80                006302.40
         B,SERS               -FAILED TO REFILL PROPERLY    1304.10 00                006303.00
                                                           -
142D4    KCI,$X1,%8¤525252.   -KC TO %8¤525252.           525252.03 0A                006303.40
         BXEZ,142D5           -BRANCH IF EQUAL              6305.72 C6                006304.00
         SIC,SEN              -FAILED TO REFILL OR          1310.00 80                006304.40
         B,SERS               -FAILED TO REFILL PROPERLY    1304.10 00                006305.00
                                                           -
142D5    SR,$X1,142RFA        -STORE REFILL                 6241.03 70                006305.40
         KV,$X1,142RFA        -KV AGAINST REFILL            6241.02 90                006306.00
         BXEZ,142D6           -BRANCH IF EQUAL              6310.32 C6                006306.40
         SIC,SEN              -FAILED TO REFILL OR, FAILED TO  1310.00 80             006307.00
         B,SERS               -REFILL VALUE OR REFILL PROPERLY  1304.10 00            006307.40
                                                           -
142D6    KC,$X1,142RFA        -KC AGAINST REFILL            6241.03 90                006310.00
         BXEZ,142D7           -BRANCH IF C +R ARE EQUAL     6315.72 C6                006310.40
         SIC,SEN              -FAILED TO REFILL OR, FAILED TO  1310.00 80             006311.00
         B,SERS               -REFILL COUNT OR REFILL PROPERLY  1304.10 00            006311.40
                                                           -
         B,142D7              -BRANCH OVER DATA             6315.50 00                006312.00
                                                           -
142XW4   XW,%8¤777777.37,2.0,$R -REFILL XW         777777.37 00 000040.00 09          006313.00
142XW5   XW,%8¤777777.40,2,142XW2     -COMMON XW   777777.40 00 000040.14 A3          006314.00
                                                           -
         BD,142D                                            6274.04 00                006315.00
142D7    SIC,SEN0+.32         -LOOP BACK                    1311.40 80                006315.40
         B,SSW                -IF SSW2 ON                   1301.10 00                006316.00
         BD,$+.32                                           6317.04 00                006316.40
                                                           -
         LX,$X13,IC242        -UPDATE CONTINUITY CHECK.     6346.32 10                006317.00
         V+,$X13,BIT2                                      13056.32 B0                006317.40
         SX,$X13,IC242                                      6346.33 10                006320.00
```

```
         CNOP,0.0                                                     0.30 00                  006320.40
142E     LX,$X1,142XW5          -V IS%8¤777777.40,C IS 2.0         6314.02 10                  006321.00
142E1    V-ICR,$X1,%8¤777777.40    -V-%8¤-.40 ,C-1.0             777777.43 0F                  006321.40
         KVI,$X1,0.0            -%8¤777777.40-%-.40¤ SHOULD BE ZERO   0.03 04                  006322.00
         BXEZ,142E2             -BRANCH IF ZERO VALUE              6324.32 C6                  006322.40
         SIC,SEN                -%8¤777777.37+.41 SHOULD HAVE CARRIED 1310.00 80               006323.00
         B,SERS                 -OVER ALL POSITIONS, BUT DIDNT.    1304.10 00                  006323.40
                                                                 -
142E2    KCI,$X1,1.0            -COMPARE COUNT TO 1.0                 1.03 0A                  006324.00
         BXEZ,142E3             -BRANCH IF COUNT IS ONE            6326.32 C6                  006324.40
         SIC,SEN                -COUNT DID NOT                     1310.00 80                  006325.00
         B,SERS                 -STEP DOWN TO ONE                  1304.10 00                  006325.40
                                                                 -
142E3    V-ICR,$X1,1.0          -V+%8¤1.0, C-1.0 TO ZERO, REFILL      1.03 0F                  006326.00
         KVI,$X1,%8¤525252.     -KV TO %8¤525252.                525252.03 04                  006326.40
         BXEZ,142E4             -BRANCH IF EQUAL                   6330.72 C6                  006327.00
         SIC,SEN                -FAILED TO REFILL OR               1310.00 80                  006327.40
         B,SERS                 -FAILED TO REFILL PROPERLY         1304.10 00                  006330.00
                                                                 -
142E4    KCI,$X1,%8¤525252.     -KC TO %8¤525252.                525252.03 0A                  006330.40
         BXEZ,142E5             -BRANCH IF EQUAL                   6332.72 C6                  006331.00
         SIC,SEN                -FAILED TO REFILL OR               1310.00 80                  006331.40
         B,SERS                 -FAILED TO REFILL PROPERLY         1304.10 00                  006332.00
                                                                 -
142E5    SR,$X1,142RFA          -STORE REFILL                      6241.03 70                  006332.40
         KV,$X1,142RFA          -KV AGAINST REFILL                 6241.02 90                  006333.00
         BXEZ,142E6             -BRANCH IF EQUAL                   6335.32 C6                  006333.40
         SIC,SEN                -FAILED TO REFILL OR, FAILED TO    1310.00 80                  006334.00
         B,SERS                 -REFILL VALUE OR REFILL PROPERLY   1304.10 00                  006334.40
                                                                 -
142E6    KC,$X1,142RFA          -KC AGAINST REFILL                 6241.03 90                  006335.00
         BXEZ,142E7             -BRANCH IF C +R ARE EQUAL          6340.32 C6                  006335.40
         SIC,SEN                -FAILED TO REFILL OR, FAILED TO    1310.00 80                  006336.00
         B,SERS                 -REFILL COUNT OR REFILL PROPERLY   1304.10 00                  006336.40
         B,142E7                -BRANCH OVER DATA                  6340.10 00                  006337.00
                                                                 -
         BD,142E                                                   6321.04 00                  006337.40
142E7    SIC,SEN0+.32           -LOOP BACK                         1311.40 80                  006340.00
         B,SSW                  -IF SSW2 ON                        1301.10 00                  006340.40
         BD,$+.32                                                  6341.44 00                  006341.00
                                                                 -
         LX,$X13,IC242          -UPDATE CONTINUITY CHECK.          6346.32 10                  006341.40
         V+,$X13,BIT3                                             13057.32 B0                  006342.00
         SX,$X13,IC242                                             6346.33 10                  006342.40
                                                                 -
         LX,$X13,IC242          -UPDATE CONTINUITY CHECK.          6346.32 10                  006343.00
         KV,$X13,ICK242                                            6347.32 90                  006343.40
         SIC,SEN                                                   1310.00 80                  006344.00
         BZXE,SERS              -CONTINUITY ERROR.                 1304.32 C0                  006344.40
         B,144                                                     6350.10 00                  006345.00
                                                                 -
IC242    XW,0,0,0               -CONTINUITY REG I242.                 0.00 00 000000.00 00     006346.00
ICK242   XW,%8¤740000.00,0,0                                     740000.00 00 000000.00 00     006347.00
```

```
----1244---RENAME CHECK.

-THIS TEST HAS FOUR BASIC ROUTINES WHICH
-CHECK THAT RNX PERFORMS ALL ITS OPERATIONS
-CORRECTLY. THE ROUTINES ARE AS FOLLOWS,

          -1. CHECK THAT CONTENTS OF IX REG
               -SPECIFIED BY J FIELD GET
               -TRANSFERRED TO LOCN SPECIFIED
               -BY REFILL OF IX REG 0.

          -2. CHECK THAT THE EFECTIVE ADDRESS
               -REPLACES ONLY REFILL FIELD OF
               -IX REG 0.

          -3. CHECK THAT THE CONTENTS OF THE
               -LOCN SPECIFIED BY THE NEW,
               -SEE 2 ABOVE, REFILL FIELD
               -OF IX REG 0 REPLACE THE
               -CONTENTS OF THE INDEX
               -REG SPECIFIED BY THE J
               -FIELD.

          -4. CHECK THAT THE INSTRUCTION IS
               -NO OPPED WHEN EITHER THE
               -OLD OR THE NEW REFILL FIELD
               -OF IX REG 0 LIES IN THE
               -RANGE OF 1 TO 37 OCTAL.
```

```
1244     LX,$X1,1441D          -UPDATE IDENT.          6353.02 10      006350.00
         SX,$X1,DPET13                                 1437.03 10      006350.40
         SIC,RET                                       1306.40 80      006351.00
               B,IDF1          -PRINT ID.              1443.10 00      006351.40
         Z,IC244                                       6524.22 00      006352.00
         BD,1441                                       6354.04 00      006352.40
         CNOP
1441D    %IQSZ¤DD%BU,64,8¤,1244     Z                                  006353.00
```

```
                                 -TEST 1.
                                                                          -
 1441   LCI,$X14,10                                                         12.35 02                          006354.00
 1442   LRI,$X0,144D1                                                     6726.01 03                          006354.40
        Z,144D1                                                           6726.22 00                          006355.00
        LX,$X1,1000                                                      13035.02 10                          006355.40
        RNX,$X1,144D2                                                     6727.03 F0                          006356.00
        L%BU¤,144D1                                                       6726.00 80 000000.20 50             006356.40
        BRZ,$+1.0                                                         6360.74 C2                          006357.40
        B,1443                                                            6362.10 00                          006360.00
        SIC,SEN                  -NO BITS OF IX SPECIFIED BY J FIELD      1310.00 80                          006360.40
        B,SERS                   -XFERD TO LOCN SPECIFIED BY REFILL       1304.10 00                          006361.00
        B,1444                   -FIELD OF IX 0.                          6373.10 00                          006361.40
                                                                          -
 1443   LX,$X1,144D1                                                      6726.02 10                          006362.00
        KV,$X1,1000                                                      13035.02 90                          006362.40
        BXE,$+1.32                                                        6364.72 C2                          006363.00
        SIC,SEN                  -LOST VALUE BITS IN XFER J FLD IX TO     1310.00 80                          006363.40
        B,SERS                   -LOCN IN REFILL OF X0.                   1304.10 00                          006364.00
                                                                          -
        KC,$X1,1000                                                      13035.03 90                          006364.40
        BXE,$+1.32                                                        6366.72 C2                          006365.00
        SIC,SEN                  -LOST COUNT BITS IN XFER J FLD IX TO     1310.00 80                          006365.40
        B,SERS                   -LOCN IN REFILL OF X0.                   1304.10 00                          006366.00
                                                                          -
        SR,$X1,$X1                                                          21.03 70                          006366.40
        KVI,$X1,%8¤777777.0                                             777777.03 04                          006367.00
        BXE,$+1.32                                                        6371.32 C2                          006367.40
        SIC,SEN                  -LOST REFILL BITS IN XFER J FLD          1310.00 80                          006370.00
        B,SERS                   -IX TO LOCN IN REFILL OF IX 0.           1304.10 00                          006370.40
                                                                          -
        LX,$X1,$X1                                                          21.02 10                          006371.00
        BXF,$+1.32                                                        6373.23 42                          006371.40
        SIC,SEN                  -LOST BIT 25 IN XFER J FLD IX            1310.00 80                          006372.00
        B,SERS                   -TO LOCN IN REFILL OF IX 0.              1304.10 00                          006372.40
```

```
1444    LX,$X1,1000                                    13035.02 10                    006373.00
        SX,$X1,144D1                                    6726.03 10                    006373.40
        Z,$X1                                             21.22 00                    006374.00
        LR1,$X0,144D1                                   6726.01 03                    006374.40
        RNX,$X1,144D2                                   6727.03 F0                    006375.00
        L%BU¤,144D1                                     6726.00 80 000000.20 50       006375.40
        BRZ,1445                                        6406.34 C2                    006376.40
        LX,$X1,144D1                                    6726.02 10                    006377.00
        BXVZ,$+1.32                                     6401.31 42                    006377.40
        SIC,SEN          -SPUR VALUE BITS IN XFER J FLD 1310.00 80                    006400.00
        B,SERS           -IX TO LOCN IN REFILL OF IX 0. 1304.10 00                    006400.40
                                                                -
        BXCZ,$+1.32                                     6402.70 42                    006401.00
        SIC,SEN          -SPUR COUNT BITS IN XFER J FLD 1310.00 80                    006401.40
        B,SERS           -IX TO LOCN IN REFILL OF IX 0. 1304.10 00                    006402.00
                                                                -
        BZXF,$+1.32                                     6404.23 40                    006402.40
        SIC,SEN          -SPUR BIT 25 IN XFER J FLD IX  1310.00 80                    006403.00
        B,SERS           -TO LOCN IN REFILL OF IX 0.    1304.10 00                    006403.40
                                                                -
        SR,$X1,$X1                                        21.03 70                    006404.00
        BXVZ,$+1.32                                     6406.31 42                    006404.40
        SIC,SEN          -SPUR REFILL BITS IN XFER J FLD IX 1310.00 80                006405.00
        B,SERS           -TO LOCN IN REFILL OF IX 0.    1304.10 00                    006405.40
                                                                -
1445    C-1,$X14,1                                        1.35 08                    006406.00
        BXCZ,$+1.0                                      6407.70 42                    006406.40
        BD,1442                                         6354.44 00                    006407.00
                                                                -
        B,$+1.0                                         6410.50 00                    006407.40
        BD,1441                                         6354.04 00                    006410.00
        SIC,SEN0+.32                                    1311.40 80                    006410.40
        B,SSW            -TO SSIP                       1301.10 00                    006411.00
        BD,$+.32                                        6412.04 00                    006411.40
                                                                -
        LX,$X13,IC244    -UPDATE CONTINUITY CHECK.      6524.32 10                    006412.00
        V+,$X13,BIT0                                   13054.32 B0                    006412.40
        SX,$X13,IC244                                   6524.33 10                    006413.00
```

```
                     -TEST 2.
1446  LCI,$X14,10                                          12.35 02      006413.40
1447  LX,$X0,1000                                       13035.00 10      006414.00
      LRI,$X0,144D1                                      6726.01 03      006414.40
      RNX,$X1,144D2                                      6727.03 F0      006415.00
      KV,$X0,1000                                       13035.00 90      006415.40
      BXE,$+1.32                                         6417.72 C2      006416.00
      SIC,SEN                                            1310.00 80      006416.40
      B,SERS         -RNX DESTROYS VALUE BITS IN IX 0.   1304.10 00      006417.00

      KC,$X0,1000                                       13035.01 90      006417.40
      BXE,$+1.32                                         6421.72 C2      006420.00
      SIC,SEN                                            1310.00 80      006420.40
      B,SERS         -RNX DESTROYS COUNT BITS IN IX 0.   1304.10 00      006421.00

      SR,$X0,$X0                                           20.01 70      006421.40
      KVI,$X0,144D2                                      6727.01 04      006422.00
      BXE,$+1.32                                         6424.32 C2      006422.40
      SIC,SEN        -RNX FAILS TO XFER EFFECT ADDRESS   1310.00 80      006423.00
      B,SERS         -TO REFILL FLD OF IX 0.             1304.10 00      006423.40

      LX,$X0,100Z                                       13034.00 10      006424.00
      LRI,$X0,144D1                                      6726.01 03      006424.40
      RNX,$X1,144D2                                      6727.03 F0      006425.00
      LX,$X0,$X0                                           20.00 10      006425.40
      BXVZ,$+1.32                                        6427.71 42      006426.00
      SIC,SEN                                            1310.00 80      006426.40
      B,SERS         -RNX GROWS BITS IN VALUE OF IX 0.   1304.10 00      006427.00

      BXCZ,$+1.32                                        6431.30 42      006427.40
      SIC,SEN                                            1310.00 80      006430.00
      B,SERS         -RNX GROWS BITS IN COUNT OF IX 0.   1304.10 00      006430.40

      C-I,$X14,1                                            1.35 08      006431.00
      BXCZ,$+1.0                                         6432.70 42      006431.40
      BD,1447                                            6414.04 00      006432.00

      B,$+1.0                                            6433.50 00      006432.40
      BD,1446                                            6413.44 00      006433.00
      SIC,SEN0+.32                                       1311.40 80      006433.40
      B,SSW          -TO SSIP.                           1301.10 00      006434.00
      BD,$+.32                                           6435.04 00      006434.40

      LX,$X13,IC244  -UPDATE CONTINUITY CHECK.           6524.32 10      006435.00
      V+,$X13,BIT1                                      13055.32 B0      006435.40
      SX,$X13,IC244                                      6524.33 10      006436.00
```

```
                    -TEST 3.
                                                                     -
1448   LCI,$X14,10                                          12.35 02                    006436.40
1449   LRI,$X0,144D1                                      6726.01 03                    006437.00
       Z,$X1                                                21.22 00                    006437.40
       RNX,$X1,1000                                      13035.03 F0                    006440.00
       L%BU¤,$X1                                            21.00 80 000000.20 50       006440.40
       BZRZ,$+2.0                                         6443.74 C0                    006441.40
       SIC,SEN          -RNX FAILS TO XFER ANY BITS INTO  1310.00 80                    006442.00
       B,SERS           -IX SPECIFIED BY J FIELD          1304.10 00                    006442.40
       B,14410                                            6452.10 00                    006443.00
                                                                     -
       KV,$X1,1000                                       13035.02 90                    006443.40
       BXE,$+1.32                                         6445.72 C2                    006444.00
       SIC,SEN          -RNX LOST VALUE BITS IN XFER TO   1310.00 80                    006444.40
       B,SERS           -IX SPECIFIED BY J FIELD.         1304.10 00                    006445.00
                                                                     -
       KC,$X1,1000                                       13035.03 90                    006445.40
       BXE,$+1.32                                         6447.72 C2                    006446.00
       SIC,SEN          -RNX LOST COUNT BITS IN XFER TO   1310.00 80                    006446.40
       B,SERS           -IX SPECIFIED BY J FIELD.         1304.10 00                    006447.00
                                                                     -
       SR,$X1,$X1                                           21.03 70                    006447.40
       KVI,$X1,%8¤777777.0                              777777.03 04                    006450.00
       BXE,$+1.32                                         6452.32 C2                    006450.40
       SIC,SEN          -RNX LOST REFILL BITS IN XFER TO  1310.00 80                    006451.00
       B,SERS           -IX SPECIFIED BY J FIELD.         1304.10 00                    006451.40
                                                                     -
14410  LX,$X1,1000                                       13035.02 10                    006452.00
       LRI,$X0,144D1                                      6726.01 03                    006452.40
       RNX,$X1,100Z                                      13034.03 F0                    006453.00
       L%BU¤,$X1                                            21.00 80 000000.20 50       006453.40
       BRZ,14411        -ALL OK                           6462.74 C2                    006454.40
       LX,$X1,$X1                                           21.02 10                    006455.00
       BXVZ,$+1.32                                        6457.31 42                    006455.40
       SIC,SEN          -RNX GROWS VALUE BITS IN XFER TO  1310.00 80                    006456.00
       B,SERS           -IX SPECIFIED BY J FIELD.         1304.10 00                    006456.40
                                                                     -
       BXCZ,$+1.32                                        6460.70 42                    006457.00
       SIC,SEN          -RNX GROWS COUNT BITS IN XFER TO  1310.00 80                    006457.40
       B,SERS           -IX SPECIFIED BY J FIELD.         1304.10 00                    006460.00
                                                                     -
       SR,$X1,$X1                                           21.03 70                    006460.40
       BXVZ,$+1.32                                        6462.71 42                    006461.00
       SIC,SEN          -RNX GROWS REFILL BITS IN XFER TO 1310.00 80                    006461.40
       B,SERS           -IX SPECIFIED BY J FIELD.         1304.10 00                    006462.00
                                                                     -
14411  C-I,$X14,1                                            1.35 08                    006462.40
       BXCZ,$+1.0                                         6464.30 42                    006463.00
       BD,1449                                            6437.04 00                    006463.40
                                                                     -
       B,$+1.0                                            6465.10 00                    006464.00
       BD,1448                                            6436.44 00                    006464.40
       SIC,SEN0+.32                                       1311.40 80                    006465.00
       B,SSW            -TO SSIP.                         1301.10 00                    006465.40
       BD,$+.32                                           6466.44 00                    006466.00
                                                                     -
       LX,$X13,IC244    -UPDATE CONTINUITY CHECK.         6524.32 10                    006466.40
       V+,$X13,BIT2                                      13056.32 B0                    006467.00
       SX,$X13,IC244                                      6524.33 10                    006467.40
```

```
                           -TEST 4.
14412   LX,$X15,I44XW1     -SETUP                          6730.36 10          006470.00
        LX,$X14,I44XW2                                     6731.34 10          006470.40
        LX,$X12,I44XW3                                     6732.30 10          006471.00
14413   SVA,$X15,I4416                                     6501.37 D0          006471.40
        SVA,$X14,I4419                                     6507.35 D0          006472.00
        SVA,$X12,I4415                                     6477.31 D0          006472.40
        SVA,$X12,I4418                                     6505.31 D0          006473.00
        LCI,$X11,10                                          12.27 02          006473.40
        Z,$X10                                               32.22 00          006474.00
                                                   -
14414   Z,$X1              -START TEST.                      21.22 00          006474.40
        LCI,$X1,%8¤777777                                777777.03 02          006475.00
        Z,I44D1                                            6726.22 00          006475.40
        LX,$X2,I00V0                                      13036.04 10          006476.00
        SX,$X2,I44D2                                       6727.05 10          006476.40
14415   LRI,$X0,0.0                                           0.01 03          006477.00
        RNX,$X1,I44D2                                      6727.03 F0          006477.40
        LX,$X1,$X1                                           21.02 10          006500.00
        BXVZ,$+1.0                                         6501.71 42          006500.40
14416   $B,0               -BRANCH TO ERROR TABLE 1.          0.10 00          006501.00
        BXCZ,I4416                                         6501.30 42          006501.40
                                                   -
14417   Z,$X1                                                21.22 00          006502.00
        LCI,$X1,%8¤777777                                777777.03 02          006502.40
        Z,I44D1                                            6726.22 00          006503.00
        LX,$X2,I00V0                                      13036.04 10          006503.40
        SX,$X2,I44D2                                       6727.05 10          006504.00
        LRI,$X0,I44D2                                      6727.01 03          006504.40
14418   RNX,$X1,I4418                                      6505.03 F0          006505.00
        LX,$X1,I44D2                                       6727.02 10          006505.40
        BXVZ,I4419                                         6507.31 42          006506.00
        BXCZ,I4420                                         6507.70 42          006506.40
14419   $B,0               -BRANCH TO ERROR TABLE 2.          0.10 00          006507.00
                                                   -
14420   LX,$X10,$X10                                         32.24 10          006507.40
        BZXVZ,I4421        -TO NEXT ADDRESS                6512.31 40          006510.00
                                                   -
        C-I,$X11,1         -NO ERROR, CONTINUE.               1.27 08          006510.40
        BXCZ,$+1.0                                         6512.30 42          006511.00
        BD,I4414                                           6474.44 00          006511.40
                                                   -
14421   C-I,$X12,1                                            1.31 08          006512.00
        BXCZ,I4422                                         6515.30 42          006512.40
        V+I,$X12,1.0                                          1.31 05          006513.00
        V+I,$X14,2.0                                          2.35 05          006513.40
        V+I,$X15,2.0                                          2.37 05          006514.00
        B,I4413                                            6471.50 00          006514.40
                                                   -
14422   B,$+1.0                                            6516.10 00          006515.00
        BD,I4412                                           6470.04 00          006515.40
        SIC,SEN0+.32                                       1311.40 80          006516.00
        B,SSW              -TO SSIP                        1301.10 00          006516.40
        BD,$+.32                                           6517.44 00          006517.00
                                                   -
        LX,$X13,IC244      -UPDATE CONTINUITY CHECK.       6524.32 10          006517.40
        V+,$X13,BIT3                                      13057.32 B0          006520.00
        SX,$X13,IC244                                      6524.33 10          006520.40
                                                   -
        LX,$X13,IC244      -UPDATE CONTINUITY CHECK.       6524.32 10          006521.00
        KV,$X13,ICK244                                     6525.32 90          006521.40
```

```
          SIC,SEN                                          1310.00 80                    006522.00
          BZXE,SERS          -CONTINUITY ERROR.            1304.32 C0                    006522.40
          B,146                                            6736.10 00                    006523.00
                                                         -
          CNOP                                                0.30 00                    006523.40
                                                         -
IC244     XW,0,0,0           -CONTINUITY REG I244.            0.00 00 000000.00 00       006524.00
ICK244    XW,%8¤740000.00,0,0                            740000.00 00 000000.00 00       006525.00
```

```
                                -ERROR BRANCH TABLE 1.
                                -YOU CAME TO THIS ERROR TABLE FROM 14416
144B1A  SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006526.00
        B,SERS                  -ADDRESS IS 0.                               1304.10 00    006526.40
        V+1,$X10,1.0                                                            1.25 05    006527.00
        B,14417                                                              6502.10 00    006527.40

144B1   SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006530.00
        B,SERS                  -ADDRESS IS 1.                               1304.10 00    006530.40
        V+1,$X10,1.0                                                            1.25 05    006531.00
        B,14417                                                              6502.10 00    006531.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006532.00
        B,SERS                  -ADDRESS IS 2.                               1304.10 00    006532.40
        V+1,$X10,1.0                                                            1.25 05    006533.00
        B,14417                                                              6502.10 00    006533.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006534.00
        B,SERS                  -ADDRESS IS 3.                               1304.10 00    006534.40
        V+1,$X10,1.0                                                            1.25 05    006535.00
        B,14417                                                              6502.10 00    006535.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006536.00
        B,SERS                  -ADDRESS IS 4.                               1304.10 00    006536.40
        V+1,$X10,1.0                                                            1.25 05    006537.00
        B,14417                                                              6502.10 00    006537.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006540.00
        B,SERS                  -ADDRESS IS 5.                               1304.10 00    006540.40
        V+1,$X10,1.0                                                            1.25 05    006541.00
        B,14417                                                              6502.10 00    006541.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006542.00
        B,SERS                  -ADDRESS IS 6.                               1304.10 00    006542.40
        V+1,$X10,1.0                                                            1.25 05    006543.00
        B,14417                                                              6502.10 00    006543.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006544.00
        B,SERS                  -ADDRESS IS 7.                               1304.10 00    006544.40
        V+1,$X10,1.0                                                            1.25 05    006545.00
        B,14417                                                              6502.10 00    006545.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006546.00
        B,SERS                  -ADDRESS IS 8.                               1304.10 00    006546.40
        V+1,$X10,1.0                                                            1.25 05    006547.00
        B,14417                                                              6502.10 00    006547.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006550.00
        B,SERS                  -ADDRESS IS 9.                               1304.10 00    006550.40
        V+1,$X10,1.0                                                            1.25 05    006551.00
        B,14417                                                              6502.10 00    006551.40

        SIC,SEN                 -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006552.00
        B,SERS                  -ADDRESS IS 10.                              1304.10 00    006552.40
        V+1,$X10,1.0                                                            1.25 05    006553.00
        B,14417                                                              6502.10 00    006553.40
```

```
SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006554.00
B,SERS           -ADDRESS IS 11.                             1304.10 00    006554.40
V+1,$X10,1.0                                                    1.25 05    006555.00
B,14417                                                      6502.10 00    006555.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006556.00
B,SERS           -ADDRESS IS 12.                             1304.10 00    006556.40
V+1,$X10,1.0                                                    1.25 05    006557.00
B,14417                                                      6502.10 00    006557.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006560.00
B,SERS           -ADDRESS IS 13.                             1304.10 00    006560.40
V+1,$X10,1.0                                                    1.25 05    006561.00
B,14417                                                      6502.10 00    006561.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006562.00
B,SERS           -ADDRESS IS 14.                             1304.10 00    006562.40
V+1,$X10,1.0                                                    1.25 05    006563.00
B,14417                                                      6502.10 00    006563.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006564.00
B,SERS           -ADDRESS IS 15.                             1304.10 00    006564.40
V+1,$X10,1.0                                                    1.25 05    006565.00
B,14417                                                      6502.10 00    006565.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006566.00
B,SERS           -ADDRESS IS 16.                             1304.10 00    006566.40
V+1,$X10,1.0                                                    1.25 05    006567.00
B,14417                                                      6502.10 00    006567.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006570.00
B,SERS           -ADDRESS IS 17.                             1304.10 00    006570.40
V+1,$X10,1.0                                                    1.25 05    006571.00
B,14417                                                      6502.10 00    006571.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006572.00
B,SERS           -ADDRESS IS 18.                             1304.10 00    006572.40
V+1,$X10,1.0                                                    1.25 05    006573.00
B,14417                                                      6502.10 00    006573.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006574.00
B,SERS           -ADDRESS IS 19.                             1304.10 00    006574.40
V+1,$X10,1.0                                                    1.25 05    006575.00
B,14417                                                      6502.10 00    006575.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006576.00
B,SERS           -ADDRESS IS 20.                             1304.10 00    006576.40
V+1,$X10,1.0                                                    1.25 05    006577.00
B,14417                                                      6502.10 00    006577.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL   1310.00 80    006600.00
B,SERS           -ADDRESS IS 21.                             1304.10 00    006600.40
V+1,$X10,1.0                                                    1.25 05    006601.00
B,14417                                                      6502.10 00    006601.40
```

```
SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006602.00
B,SERS           -ADDRESS IS 22.                            1304.10 00   006602.40
V+1,$X10,1.0                                                   1.25 05   006603.00
B,14417                                                     6502.10 00   006603.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006604.00
B,SERS           -ADDRESS IS 23.                            1304.10 00   006604.40
V+1,$X10,1.0                                                   1.25 05   006605.00
B,14417                                                     6502.10 00   006605.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006606.00
B,SERS           -ADDRESS IS 24.                            1304.10 00   006606.40
V+1,$X10,1.0                                                   1.25 05   006607.00
B,14417                                                     6502.10 00   006607.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006610.00
B,SERS           -ADDRESS IS 25.                            1304.10 00   006610.40
V+1,$X10,1.0                                                   1.25 05   006611.00
B,14417                                                     6502.10 00   006611.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006612.00
B,SERS           -ADDRESS IS 26.                            1304.10 00   006612.40
V+1,$X10,1.0                                                   1.25 05   006613.00
B,14417                                                     6502.10 00   006613.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006614.00
B,SERS           -ADDRESS IS 27.                            1304.10 00   006614.40
V+1,$X10,1.0                                                   1.25 05   006615.00
B,14417                                                     6502.10 00   006615.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006616.00
B,SERS           -ADDRESS IS 28.                            1304.10 00   006616.40
V+1,$X10,1.0                                                   1.25 05   006617.00
B,14417                                                     6502.10 00   006617.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006620.00
B,SERS           -ADDRESS IS 29.                            1304.10 00   006620.40
V+1,$X10,1.0                                                   1.25 05   006621.00
B,14417                                                     6502.10 00   006621.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006622.00
B,SERS           -ADDRESS IS 30.                            1304.10 00   006622.40
V+1,$X10,1.0                                                   1.25 05   006623.00
B,14417                                                     6502.10 00   006623.40

SIC,SEN          -RNX FAILS TO NOP WHEN IX 0 INITIAL REFILL  1310.00 80   006624.00
B,SERS           -ADDRESS IS 31.                            1304.10 00   006624.40
V+1,$X10,1.0                                                   1.25 05   006625.00
B,14417                                                     6502.10 00   006625.40
```

```
                        -ERROR BRANCH TABLE 2.
                        -YOU CAME TO THIS ERROR TABLE FROM 14419
144B2A  SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006626.00
        B,SERS          -ADDRESS IS 0.                            1304.10 00      006626.40
        V+1,$X10,1.0                                                 1.25 05      006627.00
        B,14420                                                   6507.50 00      006627.40
                                                                        -
144B2   SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006630.00
        B,SERS          -ADDRESS IS 1.                            1304.10 00      006630.40
        V+1,$X10,1.0                                                 1.25 05      006631.00
        B,14420                                                   6507.50 00      006631.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006632.00
        B,SERS          -ADDRESS IS 2.                            1304.10 00      006632.40
        V+1,$X10,1.0                                                 1.25 05      006633.00
        B,14420                                                   6507.50 00      006633.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006634.00
        B,SERS          -ADDRESS IS 3.                            1304.10 00      006634.40
        V+1,$X10,1.0                                                 1.25 05      006635.00
        B,14420                                                   6507.50 00      006635.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006636.00
        B,SERS          -ADDRESS IS 4.                            1304.10 00      006636.40
        V+1,$X10,1.0                                                 1.25 05      006637.00
        B,14420                                                   6507.50 00      006637.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006640.00
        B,SERS          -ADDRESS IS 5.                            1304.10 00      006640.40
        V+1,$X10,1.0                                                 1.25 05      006641.00
        B,14420                                                   6507.50 00      006641.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006642.00
        B,SERS          -ADDRESS IS 6.                            1304.10 00      006642.40
        V+1,$X10,1.0                                                 1.25 05      006643.00
        B,14420                                                   6507.50 00      006643.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006644.00
        B,SERS          -ADDRESS IS 7.                            1304.10 00      006644.40
        V+1,$X10,1.0                                                 1.25 05      006645.00
        B,14420                                                   6507.50 00      006645.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006646.00
        B,SERS          -ADDRESS IS 8.                            1304.10 00      006646.40
        V+1,$X10,1.0                                                 1.25 05      006647.00
        B,14420                                                   6507.50 00      006647.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006650.00
        B,SERS          -ADDRESS IS 9.                            1304.10 00      006650.40
        V+1,$X10,1.0                                                 1.25 05      006651.00
        B,14420                                                   6507.50 00      006651.40
                                                                        -
        SIC,SEN         -RNX FAILS TO NOP WHEN EFFECTIVE          1310.00 80      006652.00
        B,SERS          -ADDRESS IS 10.                           1304.10 00      006652.40
        V+1,$X10,1.0                                                 1.25 05      006653.00
        B,14420                                                   6507.50 00      006653.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 11.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006654.00
1304.10 00      006654.40
   1.25 05      006655.00
6507.50 00      006655.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 12.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006656.00
1304.10 00      006656.40
   1.25 05      006657.00
6507.50 00      006657.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 13.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006660.00
1304.10 00      006660.40
   1.25 05      006661.00
6507.50 00      006661.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 14.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006662.00
1304.10 00      006662.40
   1.25 05      006663.00
6507.50 00      006663.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 15.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006664.00
1304.10 00      006664.40
   1.25 05      006665.00
6507.50 00      006665.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 16.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006666.00
1304.10 00      006666.40
   1.25 05      006667.00
6507.50 00      006667.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 17.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006670.00
1304.10 00      006670.40
   1.25 05      006671.00
6507.50 00      006671.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 18.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006672.00
1304.10 00      006672.40
   1.25 05      006673.00
6507.50 00      006673.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 19.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006674.00
1304.10 00      006674.40
   1.25 05      006675.00
6507.50 00      006675.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 20.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006676.00
1304.10 00      006676.40
   1.25 05      006677.00
6507.50 00      006677.40
```

```
SIC,SEN                 -RNX FAILS TO NOP WHEN EFFECTIVE
B,SERS                  -ADDRESS IS 21.
V+1,$X10,1.0
B,14420
```

```
1310.00 80      006700.00
1304.10 00      006700.40
   1.25 05      006701.00
6507.50 00      006701.40
```

```
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006702.00
B,SERS           -ADDRESS IS 22.                       1304.10 00      006702.40
V+1,$X10,1.0                                             1.25 05      006703.00
B,14420                                               6507.50 00      006703.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006704.00
B,SERS           -ADDRESS IS 23.                       1304.10 00      006704.40
V+1,$X10,1.0                                             1.25 05      006705.00
B,14420                                               6507.50 00      006705.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006706.00
B,SERS           -ADDRESS IS 24.                       1304.10 00      006706.40
V+1,$X10,1.0                                             1.25 05      006707.00
B,14420                                               6507.50 00      006707.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006710.00
B,SERS           -ADDRESS IS 25.                       1304.10 00      006710.40
V+1,$X10,1.0                                             1.25 05      006711.00
B,14420                                               6507.50 00      006711.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006712.00
B,SERS           -ADDRESS IS 26.                       1304.10 00      006712.40
V+1,$X10,1.0                                             1.25 05      006713.00
B,14420                                               6507.50 00      006713.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006714.00
B,SERS           -ADDRESS IS 27.                       1304.10 00      006714.40
V+1,$X10,1.0                                             1.25 05      006715.00
B,14420                                               6507.50 00      006715.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006716.00
B,SERS           -ADDRESS IS 28.                       1304.10 00      006716.40
V+1,$X10,1.0                                             1.25 05      006717.00
B,14420                                               6507.50 00      006717.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006720.00
B,SERS           -ADDRESS IS 29.                       1304.10 00      006720.40
V+1,$X10,1.0                                             1.25 05      006721.00
B,14420                                               6507.50 00      006721.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006722.00
B,SERS           -ADDRESS IS 30.                       1304.10 00      006722.40
V+1,$X10,1.0                                             1.25 05      006723.00
B,14420                                               6507.50 00      006723.40
                                                                -
SIC,SEN          -RNX FAILS TO NOP WHEN EFFECTIVE      1310.00 80      006724.00
B,SERS           -ADDRESS IS 31.                       1304.10 00      006724.40
V+1,$X10,1.0                                             1.25 05      006725.00
B,14420                                               6507.50 00      006725.40
```

```
                    -CONSTANTS FOR 1244.
         CNOP
144D1    XW,0,0,0                                              0.00 00 000000.00 00      006726.00
144D2    XW,0,0,0                                              0.00 00 000000.00 00      006727.00

144XW1   XW,144B1,0,0                                       6530.00 00 000000.00 00      006730.00
144XW2   XW,144B2,0,0                                       6630.00 00 000000.00 00      006731.00
144XW3   XW,1.0,31,0                                           1.00 00 000760.00 00      006732.00
                    -IF 0 BECOMES ILLEGAL FOR RNX, USE THE
                    -FOLLOWING THREE INDEX WORDS TO REPLACE
                    -THOSE DIRECTLY ABOVE.
144XWA   XW,144B1A,0,0                                      6526.00 00 000000.00 00      006733.00
144XWB   XW,144B2A,0,0                                      6626.00 00 000000.00 00      006734.00
144XWC   XW,0.0,32,0                                           0.00 00 001000.00 00      006735.00
```

```
                ----1246---TEST TRANSMIT AND SWAP.
                -
                -THIS TEST IS COMPOSED OF TWO BASIC
                -ROUTINES WHICH CHECK THE FOLLOWING,
                -
                          -1. CHECKS THE NINE POSSIBILITIES
                               -OF ADDRESS COMBINATIONS.
                          -
                          -2. CHECKS THE THREE MODIFIER BITS,
                          -
                               -A. FORWARD OR BACKWARD.
                               -B. DIRECT OR IMMEDIATE
                               -C. TRANSMIT OR SWAP.
                -
1246    LX,$X1,1246ID          -UPDATE IDENT.          6741.02 10      006736.00
        SX,$X1,DPET13                                  1437.03 10      006736.40
        SIC,RET                                        1306.40 80      006737.00
              B,IDF1           -PRINT ID.              1443.10 00      006737.40
        Z,IC246                                        7422.22 00      006740.00
        BD,1461                                        6742.04 00      006740.40
        CNOP
1246ID  %IQSZ¤DD%BU,64,8¤,1246     Z                                   006741.00
```

```
                                 -TEST 1. NINE ADDRESS COMBINATIONS.
                                                                    -
1461   Z,146D2                   -TEST 1A, EXT MEM TO EXT MEM.        7425.22 00                       006742.00
       LX,$X1,1000                                                   13035.02 10                       006742.40
       SX,$X1,146D4                                                   7427.03 10                       006743.00
       LX,$X1,BIT45                                                  13131.02 10                       006743.40
       T,$X1,146D4,146D2                                              7427.00 80 007425.02 20          006744.00
       L%BU¤,146D2                                                    7425.00 80 000000.20 50          006745.00
       BZRZ,$+2.0                                                     6750.34 C0                       006746.00
       SIC,SEN                   -TRANSMIT 1 WD EXT MEM TO            1310.00 80                       006746.40
       B,SERS                    -EXT MEM DROPS ALL BITS.             1304.10 00                       006747.00
       B,14610                                                        6761.10 00                       006747.40
                                                                    -
       LX,$X2,146D2                                                   7425.04 10                       006750.00
       KV,$X2,1000                                                   13035.04 90                       006750.40
       BXE,$+1.32                                                     6752.72 C2                       006751.00
       SIC,SEN                   -ABOVE TYPE TRANSMIT LOSES SOME      1310.00 80                       006751.40
       B,SERS                    -OF BITS 0-24.                       1304.10 00                       006752.00
                                                                    -
       KC,$X2,1000                                                   13035.05 90                       006752.40
       BXE,$+1.32                                                     6754.72 C2                       006753.00
       SIC,SEN                   -ABOVE TYPE TRANSMIT LOSES SOME      1310.00 80                       006753.40
       B,SERS                    -OF BITS 28-45.                      1304.10 00                       006754.00
                                                                    -
       SR,$X2,$X2                                                       22.05 70                       006754.40
       KVI,$X2,%8¤777777.0                                          777777.05 04                       006755.00
       BXE,$+1.32                                                     6757.32 C2                       006755.40
       SIC,SEN                   -ABOVE TYPE TRANSMIT LOSES SOME      1310.00 80                       006756.00
       B,SERS                    -OF BITS 46 TO 63.                   1304.10 00                       006756.40
                                                                    -
       LX,$X2,$X2                                                       22.04 10                       006757.00
       BXF,$+1.32                                                     6761.23 42                       006757.40
       SIC,SEN                   -ABOVE TYPE TRANSMIT LOSES           1310.00 80                       006760.00
       B,SERS                    -BIT 25.                             1304.10 00                       006760.40
                                                                    -
14610  Z,146D2                   -CHECK FOR SPURIOUS BITS.            7425.22 00                       006761.00
       Z,146D4                                                        7427.22 00                       006761.40
       LX,$X1,BIT45                                                  13131.02 10                       006762.00
       T,$X1,146D4,146D2                                              7427.00 80 007425.02 20          006762.40
       L%BU¤,146D2                                                    7425.00 80 000000.20 50          006763.40
       BRZ,$+1.32                                                     6766.34 C2                       006764.40
       SIC,SEN                   -ABOVE TYPE TRANSMIT PICKS           1310.00 80                       006765.00
       B,SERS                    -UP SOME BITS 0-63.                  1304.10 00                       006765.40
                                                                    -
       B,$+1.0                                                        6767.10 00                       006766.00
       BD,1461                                                        6742.04 00                       006766.40
       SIC,SEN0+.32                                                   1311.40 80                       006767.00
       B,SSW                     -TO SSIP.                            1301.10 00                       006767.40
       BD,$+.32                                                       6770.44 00                       006770.00
                                                                    -
       LX,$X13,1C246             -UPDATE CONTINUITY CHECK.            7422.32 10                       006770.40
       V+,$X13,BIT0                                                  13054.32 B0                       006771.00
       SX,$X13,1C246                                                  7422.33 10                       006771.40
```

```
1462    Z,$X3                   -TEST 1B,EXT MEM TO IX STG.          23.22 00                    006772.00
        LX,$X1,1000                                                13035.02 10                    006772.40
        SX,$X1,146D4                                                7427.03 10                    006773.00
        LX,$X1,BIT45                                               13131.02 10                    006773.40
        T,$X1,146D4,$X3                                             7427.00 80 000023.02 20       006774.00
        L%BU¤,$X3                                                     23.00 80 000000.20 50       006775.00
        BZRZ,$+2.0                                                  7000.34 C0                    006776.00
        SIC,SEN                 -TRANSMIT 1 WD EXT MEM TO           1310.00 80                    006776.40
        B,SERS                  -IX STG DROPS ALL BITS,             1304.10 00                    006777.00
        B,14611                                                     7011.10 00                    006777.40
                                                                                -
        LX,$X2,$X3                                                    23.04 10                    007000.00
        KV,$X2,1000                                                13035.04 90                    007000.40
        BXE,$+1.32                                                  7002.72 C2                    007001.00
        SIC,SEN                 -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                    007001.40
        B,SERS                  -OF BITS 0-24.                      1304.10 00                    007002.00
                                                                                -
        KC,$X2,1000                                                13035.05 90                    007002.40
        BXE,$+1.32                                                  7004.72 C2                    007003.00
        SIC,SEN                 -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                    007003.40
        B,SERS                  -OF BITS 28-45.                     1304.10 00                    007004.00
                                                                                -
        SR,$X2,$X2                                                    22.05 70                    007004.40
        KVI,$X2,%8¤777777.0                                        777777.05 04                    007005.00
        BXE,$+1.32                                                  7007.32 C2                    007005.40
        SIC,SEN                 -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                    007006.00
        B,SERS                  -OF BITS 46 TO 63.                  1304.10 00                    007006.40
                                                                                -
        LX,$X2,$X2                                                    22.04 10                    007007.00
        BXF,$+1.32                                                  7011.23 42                    007007.40
        SIC,SEN                 -ABOVE TYPE TRANSMIT LOSES          1310.00 80                    007010.00
        B,SERS                  -BIT 25.                            1304.10 00                    007010.40
                                                                                -
14611   Z,$X3                   -CHECK FOR SPURIOUS BITS.            23.22 00                    007011.00
        Z,146D4                                                     7427.22 00                    007011.40
        LX,$X1,BIT45                                               13131.02 10                    007012.00
        T,$X1,146D4,$X3                                             7427.00 80 000023.02 20       007012.40
        L%BU¤,$X3                                                     23.00 80 000000.20 50       007013.40
        BRZ,$+1.32                                                  7016.34 C2                    007014.40
        SIC,SEN                 -ABOVE TYPE TRANSMIT PICKS          1310.00 80                    007015.00
        B,SERS                  -UP SOME BITS 0-63.                 1304.10 00                    007015.40
                                                                                -
        B,$+1.0                                                     7017.10 00                    007016.00
        BD,1462                                                     6772.04 00                    007016.40
        SIC,SEN0+.32                                                1311.40 80                    007017.00
        B,SSW                   -TO SSIP.                           1301.10 00                    007017.40
        BD,$+.32                                                    7020.44 00                    007020.00
                                                                                -
        LX,$X13,IC246           -UPDATE CONTINUITY CHECK.           7422.32 10                    007020.40
        V+,$X13,BIT1                                               13055.32 B0                    007021.00
        SX,$X13,IC246                                               7422.33 10                    007021.40
```

```
1463    Z,$R                -TEST 1C, EXT MEM TO INT MEM.      11.22 00                    007022.00
        LX,$X1,1000                                         13035.02 10                    007022.40
        SX,$X1,146D4                                         7427.03 10                    007023.00
        LX,$X1,BIT45                                        13131.02 10                    007023.40
        T,$X1,146D4,$R                                       7427.00 80 000011.02 20       007024.00
        L%BU¤,$R                                               11.00 80 000000.20 50       007025.00
        BZRZ,$+2.0                                           7030.34 C0                    007026.00
        SIC,SEN             -TRANSMIT 1 WD EXT MEM TO       1310.00 80                    007026.40
        B,SERS              -INT MEM DROPS ALL BITS.        1304.10 00                    007027.00
        B,14612                                             7041.10 00                    007027.40
                                                                -
        LX,$X2,$R                                              11.04 10                    007030.00
        KV,$X2,1000                                         13035.04 90                    007030.40
        BXE,$+1.32                                           7032.72 C2                    007031.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME 1310.00 80                    007031.40
        B,SERS              -OF BITS 0-24.                  1304.10 00                    007032.00
                                                                -
        KC,$X2,1000                                         13035.05 90                    007032.40
        BXE,$+1.32                                           7034.72 C2                    007033.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME 1310.00 80                    007033.40
        B,SERS              -OF BITS 28-45.                 1304.10 00                    007034.00
                                                                -
        SR,$X2,$X2                                             22.05 70                    007034.40
        KVI,$X2,%8¤777777.0                                777777.05 04                    007035.00
        BXE,$+1.32                                           7037.32 C2                    007035.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME 1310.00 80                    007036.00
        B,SERS              -OF BITS 46 TO 63.              1304.10 00                    007036.40
                                                                -
        LX,$X2,$X2                                             22.04 10                    007037.00
        BXF,$+1.32                                           7041.23 42                    007037.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES      1310.00 80                    007040.00
        B,SERS              -BIT 25.                        1304.10 00                    007040.40
                                                                -
14612   Z,$R                -CHECK FOR SPURIOUS BITS.          11.22 00                    007041.00
        Z,146D4                                              7427.22 00                    007041.40
        LX,$X1,BIT45                                        13131.02 10                    007042.00
        T,$X1,146D4,$R                                       7427.00 80 000011.02 20       007042.40
        L%BU¤,$R                                               11.00 80 000000.20 50       007043.40
        BRZ,$+1.32                                           7046.34 C2                    007044.40
        SIC,SEN             -ABOVE TYPE TRANSMIT PICKS      1310.00 80                    007045.00
        B,SERS              -UP SOME BITS 0-63.             1304.10 00                    007045.40
                                                                -
        B,$+1.0                                              7047.10 00                    007046.00
        BD,1463                                              7022.04 00                    007046.40
        SIC,SEN0+.32                                         1311.40 80                    007047.00
        B,SSW               -TO SSIP.                       1301.10 00                    007047.40
        BD,$+.32                                             7050.44 00                    007050.00
                                                                -
        LX,$X13,IC246       -UPDATE CONTINUITY CHECK.       7422.32 10                    007050.40
        V+,$X13,BIT2                                        13056.32 B0                    007051.00
        SX,$X13,IC246                                        7422.33 10                    007051.40
```

```
1464    Z,146D2              -TEST 1D, IX STG TO, EXT MEM.      7425.22 00                    007052.00
        LX,$X1,1000                                            13035.02 10                    007052.40
        SX,$X1,$X4                                               24.03 10                    007053.00
        LX,$X1,BIT45                                           13131.02 10                    007053.40
        T,$X1,$X4,146D2                                          24.00 80 007425.02 20        007054.00
        L%BU¤,146D2                                            7425.00 80 000000.20 50        007055.00
        BZRZ,$+2.0                                             7060.34 C0                    007056.00
        SIC,SEN              -TRANSMIT 1 WD IX CORE STG TO     1310.00 80                    007056.40
        B,SERS               -EXT MEM DROPS ALL BITS.          1304.10 00                    007057.00
        B,14613                                                7071.10 00                    007057.40
                                                                                             -
        LX,$X2,146D2                                           7425.04 10                    007060.00
        KV,$X2,1000                                           13035.04 90                    007060.40
        BXE,$+1.32                                             7062.72 C2                    007061.00
        SIC,SEN              -ABOVE TYPE TRANSMIT LOSES SOME   1310.00 80                    007061.40
        B,SERS               -OF BITS 0-24.                    1304.10 00                    007062.00
                                                                                             -
        KC,$X2,1000                                           13035.05 90                    007062.40
        BXE,$+1.32                                             7064.72 C2                    007063.00
        SIC,SEN              -ABOVE TYPE TRANSMIT LOSES SOME   1310.00 80                    007063.40
        B,SERS               -OF BITS 28-45.                   1304.10 00                    007064.00
                                                                                             -
        SR,$X2,$X2                                               22.05 70                    007064.40
        KVI,$X2,%8¤777777.0                                   777777.05 04                    007065.00
        BXE,$+1.32                                             7067.32 C2                    007065.40
        SIC,SEN              -ABOVE TYPE TRANSMIT LOSES SOME   1310.00 80                    007066.00
        B,SERS               -OF BITS 46 TO 63.                1304.10 00                    007066.40
                                                                                             -
        LX,$X2,$X2                                               22.04 10                    007067.00
        BXF,$+1.32                                             7071.23 42                    007067.40
        SIC,SEN              -ABOVE TYPE TRANSMIT LOSES        1310.00 80                    007070.00
        B,SERS               -BIT 25.                          1304.10 00                    007070.40
                                                                                             -
14613   Z,146D2              -CHECK FOR SPURIOUS BITS.         7425.22 00                    007071.00
        Z,$X4                                                    24.22 00                    007071.40
        LX,$X1,BIT45                                           13131.02 10                    007072.00
        T,$X1,$X4,146D2                                          24.00 80 007425.02 20        007072.40
        L%BU¤,146D2                                            7425.00 80 000000.20 50        007073.40
        BRZ,$+1.32                                             7076.34 C2                    007074.40
        SIC,SEN              -ABOVE TYPE TRANSMIT PICKS        1310.00 80                    007075.00
        B,SERS               -UP SOME BITS 0-63.               1304.10 00                    007075.40
                                                                                             -
        B,$+1.0                                                7077.10 00                    007076.00
        BD,1464                                                7052.04 00                    007076.40
        SIC,SEN0+.32                                           1311.40 80                    007077.00
        B,SSW                -TO SSIP.                         1301.10 00                    007077.40
        BD,$+.32                                               7100.44 00                    007100.00
                                                                                             -
        LX,$X13,IC246        -UPDATE CONTINUITY CHECK.         7422.32 10                    007100.40
        V+,$X13,BIT3                                          13057.32 B0                    007101.00
        SX,$X13,IC246                                          7422.33 10                    007101.40
```

```
1465    Z,$X3               -TEST 1E,IX STG TO IX STGZ.          23.22 00                    007102.00
        LX,$X1,1000                                           13035.02 10                    007102.40
        SX,$X1,$X4                                              24.03 10                    007103.00
        LX,$X1,BIT45                                          13131.02 10                    007103.40
        T,$X1,$X4,$X3                                           24.00 80 000023.02 20       007104.00
        L%BU¤,$X3                                               23.00 80 000000.20 50       007105.00
        BZRZ,$+2.0                                             7110.34 C0                   007106.00
        SIC,SEN             -TRANSMIT 1 WD IX CORE STG TO       1310.00 80                  007106.40
        B,SERS              -IX STG DROPS ALL BITS.             1304.10 00                  007107.00
        B,14614                                                 7121.10 00                  007107.40
                                                                -
        LX,$X2,$X3                                              23.04 10                    007110.00
        KV,$X2,1000                                           13035.04 90                    007110.40
        BXE,$+1.32                                             7112.72 C2                   007111.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                  007111.40
        B,SERS              -OF BITS 0-24.                      1304.10 00                  007112.00
                                                                -
        KC,$X2,1000                                           13035.05 90                    007112.40
        BXE,$+1.32                                             7114.72 C2                   007113.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                  007113.40
        B,SERS              -OF BITS 28-45.                     1304.10 00                  007114.00
                                                                -
        SR,$X2,$X2                                              22.05 70                    007114.40
        KVI,$X2,%8¤777777.0                                   777777.05 04                  007115.00
        BXE,$+1.32                                             7117.32 C2                   007115.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                  007116.00
        B,SERS              -OF BITS 46 TO 63.                  1304.10 00                  007116.40
                                                                -
        LX,$X2,$X2                                              22.04 10                    007117.00
        BXF,$+1.32                                             7121.23 42                   007117.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES          1310.00 80                  007120.00
        B,SERS              -BIT 25.                            1304.10 00                  007120.40
                                                                -
14614   Z,$X3               -CHECK FOR SPURIOUS BITS.           23.22 00                    007121.00
        Z,$X4                                                   24.22 00                    007121.40
        LX,$X1,BIT45                                          13131.02 10                    007122.00
        T,$X1,$X4,$X3                                           24.00 80 000023.02 20       007122.40
        L%BU¤,$X3                                               23.00 80 000000.20 50       007123.40
        BRZ,$+1.32                                             7126.34 C2                   007124.40
        SIC,SEN             -ABOVE TYPE TRANSMIT PICKS          1310.00 80                  007125.00
        B,SERS              -UP SOME BITS 0-63.                 1304.10 00                  007125.40
                                                                -
        B,$+1.0                                                 7127.10 00                  007126.00
        BD,1465                                                 7102.04 00                  007126.40
        SIC,SEN0+.32                                            1311.40 80                  007127.00
        B,SSW               -TO SSIP.                           1301.10 00                  007127.40
        BD,$+.32                                                7130.44 00                  007130.00
                                                                -
        LX,$X13,IC246       -UPDATE CONTINUITY CHECK.           7422.32 10                  007130.40
        V+,$X13,BIT4                                          13060.32 B0                   007131.00
        SX,$X13,IC246                                           7422.33 10                  007131.40
```

```
1466   Z,$R                -TEST 1F, IX STG TO INT MEM.           11.22 00                     007132.00
       LX,$X1,1000                                            13035.02 10                     007132.40
       SX,$X1,$X4                                                24.03 10                     007133.00
       LX,$X1,BIT45                                           13131.02 10                     007133.40
       T,$X1,$X4,$R                                              24.00 80  000011.02 20       007134.00
       L%BU¤,$R                                                  11.00 80  000000.20 50       007135.00
       BZRZ,$+2.0                                              7140.34 C0                     007136.00
       SIC,SEN             -TRANSMIT 1 WD IX CORE STG TO       1310.00 80                     007136.40
       B,SERS              -INT MEM DROPS ALL BITS.            1304.10 00                     007137.00
       B,14615                                                 7151.10 00                     007137.40

       LX,$X2,$R                                                 11.04 10                     007140.00
       KV,$X2,1000                                            13035.04 90                     007140.40
       BXE,$+1.32                                              7142.72 C2                     007141.00
       SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                     007141.40
       B,SERS              -OF BITS 0-24.                      1304.10 00                     007142.00

       KC,$X2,1000                                            13035.05 90                     007142.40
       BXE,$+1.32                                              7144.72 C2                     007143.00
       SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                     007143.40
       B,SERS              -OF BITS 28-45.                     1304.10 00                     007144.00

       SR,$X2,$X2                                                22.05 70                     007144.40
       KVI,$X2,%8¤777777.0                                   777777.05 04                     007145.00
       BXE,$+1.32                                              7147.32 C2                     007145.40
       SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME     1310.00 80                     007146.00
       B,SERS              -OF BITS 46 TO 63.                  1304.10 00                     007146.40

       LX,$X2,$X2                                                22.04 10                     007147.00
       BXF,$+1.32                                              7151.23 42                     007147.40
       SIC,SEN             -ABOVE TYPE TRANSMIT LOSES          1310.00 80                     007150.00
       B,SERS              -BIT 25.                            1304.10 00                     007150.40

14615  Z,$R                -CHECK FOR SPURIOUS BITS.             11.22 00                     007151.00
       Z,$X4                                                     24.22 00                     007151.40
       LX,$X1,BIT45                                           13131.02 10                     007152.00
       T,$X1,$X4,$R                                              24.00 80  000011.02 20       007152.40
       L%BU¤,$R                                                  11.00 80  000000.20 50       007153.40
       BRZ,$+1.32                                              7156.34 C2                     007154.40
       SIC,SEN             -ABOVE TYPE TRANSMIT PICKS          1310.00 80                     007155.00
       B,SERS              -UP SOME BITS 0-63.                 1304.10 00                     007155.40

       B,$+1.0                                                 7157.10 00                     007156.00
       BD,1466                                                 7132.04 00                     007156.40
       SIC,SEN0+.32                                            1311.40 80                     007157.00
       B,SSW               -TO SSIP.                           1301.10 00                     007157.40
       BD,$+.32                                                7160.44 00                     007160.00

       LX,$X13,1C246       -UPDATE CONTINUITY CHECK.           7422.32 10                     007160.40
       V+,$X13,BIT5                                           13061.32 B0                     007161.00
       SX,$X13,1C246                                           7422.33 10                     007161.40
```

```
1467    Z,146D2             -TEST 1G, INT MEM TO EXT MEM.      7425.22 00                  007162.00
        LX,$X1,1000                                           13035.02 10                  007162.40
        SX,$X1,$L                                               10.03 10                  007163.00
        LX,$X1,BIT45                                          13131.02 10                  007163.40
        T,$X1,$L,146D2                                          10.00 80 007425.02 20      007164.00
        L%BU¤,146D2                                           7425.00 80 000000.20 50      007165.00
        BZRZ,$+2.0                                            7170.34 C0                   007166.00
        SIC,SEN             -TRANSMIT 1 WD INT MEM TO         1310.00 80                   007166.40
        B,SERS              -EXT MEM DROPS ALL BITS.          1304.10 00                   007167.00
        B,14616                                               7201.10 00                   007167.40
                                                                -
        LX,$X2,146D2                                          7425.04 10                   007170.00
        KV,$X2,1000                                           13035.04 90                  007170.40
        BXE,$+1.32                                            7172.72 C2                   007171.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME   1310.00 80                   007171.40
        B,SERS              -OF BITS 0-24.                    1304.10 00                   007172.00
                                                                -
        KC,$X2,1000                                           13035.05 90                  007172.40
        BXE,$+1.32                                            7174.72 C2                   007173.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME   1310.00 80                   007173.40
        B,SERS              -OF BITS 28-45.                   1304.10 00                   007174.00
                                                                -
        SR,$X2,$X2                                              22.05 70                   007174.40
        KVI,$X2,%8¤777777.0                                   777777.05 04                 007175.00
        BXE,$+1.32                                            7177.32 C2                   007175.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME   1310.00 80                   007176.00
        B,SERS              -OF BITS 46 TO 63.                1304.10 00                   007176.40
                                                                -
        LX,$X2,$X2                                              22.04 10                   007177.00
        BXF,$+1.32                                            7201.23 42                   007177.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES        1310.00 80                   007200.00
        B,SERS              -BIT 25.                          1304.10 00                   007200.40
                                                                -
14616    Z,146D2            -CHECK FOR SPURIOUS BITS.          7425.22 00                  007201.00
        Z,$L                                                    10.22 00                   007201.40
        LX,$X1,BIT45                                          13131.02 10                  007202.00
        T,$X1,$L,146D2                                          10.00 80 007425.02 20      007202.40
        L%BU¤,146D2                                           7425.00 80 000000.20 50      007203.40
        BRZ,$+1.32                                            7206.34 C2                   007204.40
        SIC,SEN             -ABOVE TYPE TRANSMIT PICKS        1310.00 80                   007205.00
        B,SERS              -UP SOME BITS 0-63.               1304.10 00                   007205.40
                                                                -
        B,$+1.0                                               7207.10 00                   007206.00
        BD,1467                                               7162.04 00                   007206.40
        SIC,SEN0+.32                                          1311.40 80                   007207.00
        B,SSW               -TO SSIP.                         1301.10 00                   007207.40
        BD,$+.32                                              7210.44 00                   007210.00
                                                                -
        LX,$X13,IC246       -UPDATE CONTINUITY CHECK.         7422.32 10                   007210.40
        V+,$X13,BIT6                                          13062.32 B0                  007211.00
        SX,$X13,IC246                                         7422.33 10                   007211.40
```

```
1468    Z,$X3               -TEST 1H, INT MEM TO IX STG.          23.22 00                    007212.00
        LX,$X1,1000                                            13035.02 10                    007212.40
        SX,$X1,$L                                                 10.03 10                    007213.00
        LX,$X1,BIT45                                           13131.02 10                    007213.40
        T,$X1,$L,$X3                                              10.00 80 000023.02 20       007214.00
        L%BU¤,$X3                                                 23.00 80 000000.20 50       007215.00
        BZRZ,$+2.0                                             7220.34 C0                     007216.00
        SIC,SEN             -TRANSMIT 1 WD INT MEM TO          1310.00 80                     007216.40
        B,SERS              -IX STG DROPS ALL BITS.            1304.10 00                     007217.00
        B,14617                                                7231.10 00                     007217.40
                                                                -
        LX,$X2,$X3                                                23.04 10                    007220.00
        KV,$X2,1000                                            13035.04 90                    007220.40
        BXE,$+1.32                                             7222.72 C2                     007221.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME    1310.00 80                     007221.40
        B,SERS              -OF BITS 0-24.                     1304.10 00                     007222.00
                                                                -
        KC,$X2,1000                                            13035.05 90                    007222.40
        BXE,$+1.32                                             7224.72 C2                     007223.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME    1310.00 80                     007223.40
        B,SERS              -OF BITS 28-45.                    1304.10 00                     007224.00
                                                                -
        SR,$X2,$X2                                                22.05 70                    007224.40
        KVI,$X2,%8¤777777.0                                   777777.05 04                    007225.00
        BXE,$+1.32                                             7227.32 C2                     007225.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME    1310.00 80                     007226.00
        B,SERS              -OF BITS 46 TO 63.                 1304.10 00                     007226.40
                                                                -
        LX,$X2,$X2                                                22.04 10                    007227.00
        BXF,$+1.32                                             7231.23 42                     007227.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES         1310.00 80                     007230.00
        B,SERS              -BIT 25.                           1304.10 00                     007230.40
                                                                -
14617   Z,$X3               -CHECK FOR SPURIOUS BITS.             23.22 00                    007231.00
        Z,$L                                                      10.22 00                    007231.40
        LX,$X1,BIT45                                           13131.02 10                    007232.00
        T,$X1,$L,$X3                                              10.00 80 000023.02 20       007232.40
        L%BU¤,$X3                                                 23.00 80 000000.20 50       007233.40
        BRZ,$+1.32                                             7236.34 C2                     007234.40
        SIC,SEN             -ABOVE TYPE TRANSMIT PICKS         1310.00 80                     007235.00
        B,SERS              -UP SOME BITS 0-63.                1304.10 00                     007235.40
                                                                -
        B,$+1.0                                                7237.10 00                     007236.00
        BD,1468                                                7212.04 00                     007236.40
        SIC,SEN0+.32                                           1311.40 80                     007237.00
        B,SSW               -TO SSIP.                          1301.10 00                     007237.40
        BD,$+.32                                               7240.44 00                     007240.00
                                                                -
        LX,$X13,IC246       -UPDATE CONTINUITY CHECK.          7422.32 10                     007240.40
        V+,$X13,BIT7                                           13063.32 B0                    007241.00
        SX,$X13,IC246                                          7422.33 10                     007241.40
```

```
1469    Z,$R                -TEST 11, INT MEM TO INT MEM.          11.22 00                      007242.00
        LX,$X1,1000                                             13035.02 10                      007242.40
        SX,$X1,$L                                                  10.03 10                      007243.00
        LX,$X1,BIT45                                            13131.02 10                      007243.40
        T,$X1,$L,$R                                                10.00 80 000011.02 20         007244.00
        L%BU¤,$R                                                   11.00 80 000000.20 50         007245.00
        BZRZ,$+2.0                                               7250.34 C0                      007246.00
        SIC,SEN             -TRANSMIT 1 WD INT MEM TO            1310.00 80                      007246.40
        B,SERS              -INT MEM DROPS ALL BITS.             1304.10 00                      007247.00
        B,14618                                                  7261.10 00                      007247.40
                                                              -
        LX,$X2,$R                                                  11.04 10                      007250.00
        KV,$X2,1000                                             13035.04 90                      007250.40
        BXE,$+1.32                                               7252.72 C2                      007251.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME      1310.00 80                      007251.40
        B,SERS              -OF BITS 0-24.                       1304.10 00                      007252.00
                                                              -
        KC,$X2,1000                                             13035.05 90                      007252.40
        BXE,$+1.32                                               7254.72 C2                      007253.00
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME      1310.00 80                      007253.40
        B,SERS              -OF BITS 28-45.                      1304.10 00                      007254.00
                                                              -
        SR,$X2,$X2                                                 22.05 70                      007254.40
        KVI,$X2,%8¤777777.0                                    777777.05 04                      007255.00
        BXE,$+1.32                                               7257.32 C2                      007255.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES SOME      1310.00 80                      007256.00
        B,SERS              -OF BITS 46 TO 63.                   1304.10 00                      007256.40
                                                              -
        LX,$X2,$X2                                                 22.04 10                      007257.00
        BXF,$+1.32                                               7261.23 42                      007257.40
        SIC,SEN             -ABOVE TYPE TRANSMIT LOSES           1310.00 80                      007260.00
        B,SERS              -BIT 25.                             1304.10 00                      007260.40
                                                              -
14618   Z,$R                -CHECK FOR SPURIOUS BITS.              11.22 00                      007261.00
        Z,$L                                                       10.22 00                      007261.40
        LX,$X1,BIT45                                            13131.02 10                      007262.00
        T,$X1,$L,$R                                                10.00 80 000011.02 20         007262.40
        L%BU¤,$R                                                   11.00 80 000000.20 50         007263.40
        BRZ,$+1.32                                               7266.34 C2                      007264.40
        SIC,SEN             -ABOVE TYPE TRANSMIT PICKS           1310.00 80                      007265.00
        B,SERS              -UP SOME BITS 0-63.                  1304.10 00                      007265.40
                                                              -
        B,$+1.0                                                  7267.10 00                      007266.00
        BD,1469                                                  7242.04 00                      007266.40
        SIC,SEN0+.32                                             1311.40 80                      007267.00
        B,SSW               -TO SSIP.                            1301.10 00                      007267.40
        BD,$+.32                                                 7270.44 00                      007270.00
                                                              -
        LX,$X13,1C246       -UPDATE CONTINUITY.                  7422.32 10                      007270.40
        V+,$X13,BIT8                                            13064.32 B0                      007271.00
        SX,$X13,1C246                                            7422.33 10                      007271.40
```

```
                                -TEST 2. CHECK MODIFIER BITS.
                                                                -
                                -TEST 2A.
                                                                -
14620   Z,146D1                 -TEST FORWARD-BACKWARD MODIFIER,      7424.22 00                  007272.00
        Z,146D2                 -START WITH FOWARD OPERATION.         7425.22 00                  007272.40
        Z,146D3                                                       7426.22 00                  007273.00
        LX,$X1,146XW1                                                 7432.02 10                  007273.40
        LX,$X2,146XW2                                                 7433.04 10                  007274.00
        LX,$X3,146XW3                                                 7434.06 10                  007274.40
        SX,$X1,146D4                                                  7427.03 10                  007275.00
        SX,$X2,146D5                                                  7430.05 10                  007275.40
        SX,$X3,146D6                                                  7431.07 10                  007276.00
        LX,$X2,BIT44                                                 13130.04 10                  007276.40
        T,$X2,146D5,146D2                                             7430.00 80 007425.04 20     007277.00
        L%BU¤,146D1                                                   7424.00 80 000000.20 50     007300.00
        BRZ,$+2.0                                                     7303.34 C2                  007301.00
        SIC,SEN                 -RECEIVING ADDRESS GOING BACKWARD     1310.00 80                  007301.40
        B,SERS                  -ON A FORWARD OPERATION.              1304.10 00                  007302.00
        B,14621                                                       7314.50 00                  007302.40
                                                                -
        LX,$X1,146D2                                                  7425.02 10                  007303.00
        BZXCZ,$+2.0                                                   7305.70 40                  007303.40
        SIC,SEN                 -RECEIVING LOCATION DOES NOT GET      1310.00 80                  007304.00
        B,SERS                  -FIRST WORD FROM SENDING LOCN.        1304.10 00                  007304.40
        B,14621                                                       7314.50 00                  007305.00
                                                                -
        LX,$X1,146D3                                                  7426.02 10                  007305.40
        BXVZ,$+2.0                                                    7310.31 42                  007306.00
        SIC,SEN                 -SENDING ADDRESS GOING BACKWARD       1310.00 80                  007306.40
        B,SERS                  -ON A FORWARD OPERATION.              1304.10 00                  007307.00
        B,14621                                                       7314.50 00                  007307.40
        BXCZ,$+2.0                                                    7312.30 42                  007310.00
        SIC,SEN                 -SENDING ADDRESS NOT STEPPED ON       1310.00 80                  007310.40
        B,SERS                  -A FORWARD OPERATION.                 1304.10 00                  007311.00
        B,14621                                                       7314.50 00                  007311.40
        SR,$X1,$X2                                                      22.03 70                  007312.00
        LX,$X2,$X2                                                      22.04 10                  007312.40
        BZXVZ,14621                                                   7314.71 40                  007313.00
                                                                -
        SIC,SEN                 -NO WORD GOES TO SECOND RECEIVING     1310.00 80                  007313.40
        B,SERS                  -LOCATION ON A FORWARD OPERATION.     1304.10 00                  007314.00
```

```
14621   Z,146D1             -DO A BACKWARD OPERATION.          7424.22 00                  007314.40
        Z,146D2                                                7425.22 00                  007315.00
        Z,146D3                                                7426.22 00                  007315.40
        LX,$X1,146XW1                                          7432.02 10                  007316.00
        LX,$X2,146XW2                                          7433.04 10                  007316.40
        LX,$X3,146XW3                                          7434.06 10                  007317.00
        SX,$X1,146D4                                           7427.03 10                  007317.40
        SX,$X2,146D5                                           7430.05 10                  007320.00
        SX,$X3,146D6                                           7431.07 10                  007320.40
        LX,$X2,BIT44                                          13130.04 10                  007321.00
        TB,$X2,146D5,146D2                                     7430.00 80 007425.05 20     007321.40
        L%BU¤,146D3                                            7426.00 80 000000.20 50     007322.40
        BRZ,$+2.0                                              7325.74 C2                  007323.40
        SIC,SEN             -RECEIVING ADDRESS GOING FORWARD   1310.00 80                  007324.00
        B,SERS              -ON A BACKWARD OPERATION.          1304.10 00                  007324.40
        B,14622                                                7337.50 00                  007325.00
                                                                -
        LX,$X1,146D2                                           7425.02 10                  007325.40
        BZXCZ,$+2.0                                            7330.30 40                  007326.00
        SIC,SEN             -RECEIVING LOCATION DOES NOT GET   1310.00 80                  007326.40
        B,SERS              -FIRST WORD FROM SENDING LOCN.     1304.10 00                  007327.00
        B,14622                                                7337.50 00                  007327.40
                                                                -
        LX,$X1,146D1                                           7424.02 10                  007330.00
        SR,$X1,$X2                                               22.03 70                  007330.40
        LX,$X2,$X2                                               22.04 10                  007331.00
        BXVZ,$+2.0                                             7333.71 42                  007331.40
        SIC,SEN             -SENDING ADDRESS GOING FORWARD ON  1310.00 80                  007332.00
        B,SERS              -A BACKWARD OPERATION.             1304.10 00                  007332.40
        B,14622                                                7337.50 00                  007333.00
                                                                -
        LX,$X1,146D1                                           7424.02 10                  007333.40
        BXCZ,$+2.0                                             7336.30 42                  007334.00
        SIC,SEN             -SENDING ADDRESS NOT STEPPED ON    1310.00 80                  007334.40
        B,SERS              -A BACKWARD OPERATION.             1304.10 00                  007335.00
        B,14622                                                7337.50 00                  007335.40
                                                                -
        BZXVZ,14622         -OK                                7337.71 40                  007336.00
        SIC,SEN             -NO WORD GOES TO SECOND RECEIVING  1310.00 80                  007336.40
        B,SERS              -LOCATION ON A BACKWARD OPERATION. 1304.10 00                  007337.00
                                                                -
14622   B,$+1.0                                                7340.50 00                  007337.40
        BD,14620                                               7272.04 00                  007340.00
        SIC,SEN0+.32                                           1311.40 80                  007340.40
        B,SSW               -TO SSIP.                          1301.10 00                  007341.00
        BD,$+.32                                               7342.04 00                  007341.40
                                                                -
        LX,$X13,IC246       -UPDATE CONTINUITY.                7422.32 10                  007342.00
        V+,$X13,BIT9                                          13065.32 B0                  007342.40
        SX,$X13,IC246                                          7422.33 10                  007343.00
```

```
                              -TEST 2B.
                                                                   -
14623   Z,146D1               -TEST DIRECT-INNEDIATE MODIFIER.          7424.22 00                        007343.40
        Z,146D2                                                         7425.22 00                        007344.00
        LX,$X1,1000                                                    13035.02 10                        007344.40
        SX,$X1,146D4                                                    7427.03 10                        007345.00
        SX,$X1,146D5                                                    7430.03 10                        007345.40
        LX,$X1,BIT44                                                   13130.02 10                        007346.00
        TI,1,146D4,146D1                                                7427.00 80 007424.02 A0           007346.40
        L%BU¤,146D2                                                     7425.00 80 000000.20 50           007347.40
        BRZ,$+2.0                                                       7352.74 C2                        007350.40
        SIC,SEN               -TRANSMIT IMMEDIATE USES                  1310.00 80                        007351.00
        B,SERS                -A DIRECT COUNT.                          1304.10 00                        007351.40
        B,14624                                                         7355.10 00                        007352.00
                                                                   -
        L%BU¤,146D1                                                     7424.00 80 000000.20 50           007352.40
        BZRZ,14624                                                      7355.34 C0                        007353.40
        SIC,SEN               -RECEIVING LOCATION DOES NOT GET          1310.00 80                        007354.00
        B,SERS                -FIRST WORD FROM SENDING LOCN.            1304.10 00                        007354.40
                                                                   -
14624   Z,146D1                                                         7424.22 00                        007355.00
        Z,146D2                                                         7425.22 00                        007355.40
        LX,$X1,1000                                                    13035.02 10                        007356.00
        SX,$X1,146D4                                                    7427.03 10                        007356.40
        SX,$X1,146D5                                                    7430.03 10                        007357.00
        LX,$X2,BIT45                                                   13131.04 10                        007357.40
        T,$X2,146D4,146D1                                               7427.00 80 007424.04 20           007360.00
        L%BU¤,146D2                                                     7425.00 80 000000.20 50           007361.00
        BRZ,$+2.0                                                       7364.34 C2                        007362.00
        SIC,SEN               -TRANSMIT DIRECT USES                     1310.00 80                        007362.40
        B,SERS                -AN IMMEDIATE COUNT.                      1304.10 00                        007363.00
        B,14625                                                         7366.50 00                        007363.40
                                                                   -
        L%BU¤,146D1                                                     7424.00 80 000000.20 50           007364.00
        BZRZ,14625                                                      7366.74 C0                        007365.00
        SIC,SEN               -RECEIVING LOCATION DOES NOT GET          1310.00 80                        007365.40
        B,SERS                -FIRST WORD FROM SENDING LOCN.            1304.10 00                        007366.00
                                                                   -
14625   B,$+1.0                                                         7367.50 00                        007366.40
        BD,14623                                                        7343.44 00                        007367.00
        SIC,SEN0+.32                                                    1311.40 80                        007367.40
        B,SSW                 -TO SSIP.                                 1301.10 00                        007370.00
        BD,$+.32                                                        7371.04 00                        007370.40
                                                                   -
        LX,$X13,IC246         -UPDATE CONTINUITY.                       7422.32 10                        007371.00
        V+,$X13,BIT10                                                  13066.32 B0                        007371.40
        SX,$X13,IC246                                                   7422.33 10                        007372.00
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```
                             -TEST 2C.
14626   Z,I46D1              -TEST TRANSMIT-SWAP MODIFIER.       -      7424.22 00                       007372.40
        LX,$X1,I000                                                    13035.02 10                       007373.00
        SX,$X1,I46D4                                                    7427.03 10                       007373.40
        LX,$X1,BIT45                                                   13131.02 10                       007374.00
        T,$X1,I46D1,I46D4                                               7424.00 80 007427.02 20          007374.40
        L%BU¤,I46D1                                                     7424.00 80 000000.20 50          007375.40
        BRZ,$+2.0                                                       7400.74 C2                       007376.40
        SIC,SEN              -TRANSMIT DESTROYS ORIGINAL WORD           1310.00 80                       007377.00
        B,SERS               -AND THEREFORE ACTS LIKE SWAP.             1304.10 00                       007377.40
        B,I4627                                                         7403.10 00                       007400.00
                                                                 -
        L%BU¤,I46D4                                                     7427.00 80 000000.20 50          007400.40
        BRZ,$+1.32                                                      7403.34 C2                       007401.40
        SIC,SEN              -RECEIVING LOCATION DOES NOT GET           1310.00 80                       007402.00
        B,SERS               -FIRST WORD FROM SENDING LOCN.             1304.10 00                       007402.40
                                                                 -
I4627   Z,I46D1                                                         7424.22 00                       007403.00
        LX,$X1,I000                                                    13035.02 10                       007403.40
        SX,$X1,I46D4                                                    7427.03 10                       007404.00
        LX,$X1,BIT45                                                   13131.02 10                       007404.40
        SWAP,$X1,I46D1,I46D4                                            7424.00 80 007427.02 60          007405.00
        L%BU¤,I46D1                                                     7424.00 80 000000.20 50          007406.00
        BZRZ,$+2.0                                                      7411.34 C0                       007407.00
        SIC,SEN              -SWAP FAILS TO ALTER ORIGINAL WD           1310.00 80                       007407.40
        B,SERS               -AND THEREFORE ACTS LIKE TRANSMIT          1304.10 00                       007410.00
        B,I4628                                                         7413.50 00                       007410.40
                                                                 -
        L%BU¤,I46D4                                                     7427.00 80 000000.20 50          007411.00
        BRZ,I4628                                                       7413.74 C2                       007412.00
        SIC,SEN              -RECEIVING LOCATION DOES NOT GET           1310.00 80                       007412.40
        B,SERS               -FIRST WORD FROM SENDING LOCN.             1304.10 00                       007413.00
                                                                 -
I4628   B,$+1.0                                                         7414.50 00                       007413.40
        BD,I4626                                                        7372.44 00                       007414.00
        SIC,SENO+.32                                                    1311.40 80                       007414.40
        B,SSW                                                           1301.10 00                       007415.00
        BD,$+.32                                                        7416.04 00                       007415.40
        LX,$X13,IC246        -UPDATE CONTINUITY.                        7422.32 10                       007416.00
        V+,$X13,BIT11                                                  13067.32 B0                       007416.40
        SX,$X13,IC246                                                   7422.33 10                       007417.00
                                                                 -
        LX,$X13,IC246        -UPDATE CONTINUITY CHECK.                  7422.32 10                       007417.40
        KV,$X13,ICK246                                                  7423.32 90                       007420.00
        SIC,SEN                                                         1310.00 80                       007420.40
        BZXE,SERS            -CONTINUITY ERROR.                         1304.32 C0                       007421.00
        BD,I48                                                          7435.04 00                       007421.40
                                                                 -
IC246   XW,0,0,0             -CONTINUITY REG I246.                         0.00 00 000000.00 00          007422.00
ICK246  XW,%8¤777700.00,0,0                                           777700.00 00 000000.00 00          007423.00
                                                                 -
                                                                 -
I46D1   XW,0,0,0                                                           0.00 00 000000.00 00          007424.00
I46D2   XW,0,0,0                                                           0.00 00 000000.00 00          007425.00
I46D3   XW,0,0,0                                                           0.00 00 000000.00 00          007426.00
I46D4   XW,0,0,0                                                           0.00 00 000000.00 00          007427.00
I46D5   XW,0,0,0                                                           0.00 00 000000.00 00          007430.00
I46D6   XW,0,0,0                                                           0.00 00 000000.00 00          007431.00
                                                                 -
I46XW1  XW,%8¤777777.77,0,0                                           777777.77 00 000000.00 00          007432.00
I46XW2  XW,0,%8¤777777,0                                                   0.00 0F 777760.00 00          007433.00
```

```
146XW3  XW,0,0,%8¤777777                                                    0.00 00 000017.77 FF      007434.00

                    ----1248---INDEX MODIFICATION TEST.

                    -CHECK ADDRESS MODIFICATION THRU IX ADDING.

                    -THIS TEST IS COMPOSED OF FOUR ROUTINES
                    -WHICH TEST MODIFICATION AS FOLLOWS.

                              -TEST1. BASIC TESTS INCLUDING I
                                   -FIELD INDEX SELECTION AND
                                   -TESTING OF THOSE NON I-BOX
                                   -INSTRUCTIONS NECESSARY TO PER-
                                   -FORM THE INDEX MODIFICATION
                                   -TESTS.

                              -TEST2. CHECK FULL WORD MODIFICATION
                                   -IN BOTH LEFT AND RIGHT HALF
                                   -OF THE INSTRUCTION.

                              -TEST3. CHECK I-BOX HALF WORD
                                   -MODIFICATION, 19 BITS.

                              -TEST4. CHECK FLOATING POINT, 18
                                   -BITS, MODIFICATION.

                              -TEST5. CHECK PROGRESSIVE INDEX-
                                   -ING, EIGHT CODES.

148     LX,$X1,1481D          -UPDATE IDENT.                     7440.02 10          007435.00
        SX,$X1,DPET13                                            1437.03 10          007435.40
        SIC,RET                                                  1306.40 80          007436.00
        B,IDF1                                                   1443.10 00          007436.40
        Z,IC248                                                 11306.22 00          007437.00
        BD,1481                                                  7441.04 00          007437.40

        CNOP
1481D   %IQSZ¤DD%BU,64,8¤,1248    Z                                                  007440.00
```

```
                                -TEST1A I-FLD IX SELN.
                                                                -
1481    Z,148ER1                -CLEAR ERROR INDICATOR.          11372.22 00                    007441.00
                                                                -
1482    SIC,148S2               -CHK I-FLD SELN FOR IX 0.        11320.00 80                    007441.40
        B,148S1                 -GO CLEAR ALL INDEX REGS.        11310.10 00                    007442.00
        LX,$X0,148K0                                             11321.00 10                    007442.40
        LX,$X1,148K1                                             11322.02 10                    007443.00
        LX,$X2,148K2                                             11323.04 10                    007443.40
        LX,$X3,148K3                                             11324.06 10                    007444.00
        LX,$X4,148K4                                             11325.10 10                    007444.40
        LX,$X5,148K5                                             11326.12 10                    007445.00
        LX,$X6,148K6                                             11327.14 10                    007445.40
        LX,$X7,148K7                                             11330.16 10                    007446.00
        LX,$X8,148K8                                             11331.20 10                    007446.40
        LX,$X9,148K9                                             11332.22 10                    007447.00
        LX,$X10,148K10                                           11333.24 10                    007447.40
        LX,$X11,148K11                                           11334.26 10                    007450.00
        LX,$X12,148K12                                           11335.30 10                    007450.40
        LX,$X13,148K13                                           11336.32 10                    007451.00
        LX,$X14,148K14                                           11337.34 10                    007451.40
        LX,$X15,148K15                                           11340.36 10                    007452.00
        Z,148DMP                                                 11373.22 00                    007452.40
        NOP                                                          0.30 00                    007453.00
            NOP                                                      0.30 00                    007453.40
        SX,$X0,0%$X0¤                                                0.01 10                    007454.00
        NOP                                                          0.30 00                    007454.40
            NOP                                                      0.30 00                    007455.00
        L%BU¤,148DMP                                             11373.00 80 000000.20 50       007455.40
        BRZ,$+2.32                                                7461.34 C2                    007456.40
        SIC,SEN                 -IX MODIFICATION WHEN             1310.00 80                    007457.00
        B,SERS                  -I FIELD IS 0.                    1304.10 00                    007457.40
                                                                -
        LX,$X1,100VO            -STORE ERROR INDICATOR.          13036.02 10                    007460.00
        SX,$X1,148ER1                                            11372.03 10                    007460.40
                                                                -
        SIC,148S2               -CHK I-FLD SELN FOR IX 1.        11320.00 80                    007461.00
        B,148S1                 -GO CLEAR ALL INDEX REGS.        11310.10 00                    007461.40
        LX,$X1,148K1                                             11322.02 10                    007462.00
        Z,148DMP                                                 11373.22 00                    007462.40
        NOP                                                          0.30 00                    007463.00
            NOP                                                      0.30 00                    007463.40
        SX,$X1,0%$X1¤                                                0.03 11                    007464.00
        NOP                                                          0.30 00                    007464.40
            NOP                                                      0.30 00                    007465.00
        L%BU¤,148DMP                                             11373.00 80 000000.20 50       007465.40
        BZRZ,$+2.32                                               7471.34 C0                    007466.40
        SIC,SEN                 -NO IX MODIFICATION WHEN          1310.00 80                    007467.00
        B,SERS                  -I FIELD IS 1.                    1304.10 00                    007467.40
                                                                -
        LX,$X1,100VO            -STORE ERROR INDICATOR.          13036.02 10                    007470.00
        SX,$X1,148ER1                                            11372.03 10                    007470.40
                                                                -
        SIC,148S2               -CHK I-FLD SELN FOR IX 2.        11320.00 80                    007471.00
        B,148S1                 -GO CLEAR ALL INDEX REGS.        11310.10 00                    007471.40
        LX,$X2,148K2                                             11323.04 10                    007472.00
        Z,148DMP                                                 11373.22 00                    007472.40
        NOP                                                          0.30 00                    007473.00
            NOP                                                      0.30 00                    007473.40
        SX,$X2,0%$X2¤                                                0.05 12                    007474.00
        NOP                                                          0.30 00                    007474.40
            NOP                                                      0.30 00                    007475.00
```

```
L%BU¤,148DMP                                          11373.00 80 000000.20 50      007475.40
BZRZ,$+2.32                                            7501.34 C0                   007476.40
SIC,SEN             -NO IX MODIFICATION WHEN           1310.00 80                   007477.00
B,SERS              -I FIELD IS 2.                     1304.10 00                   007477.40
                                                                                    -
LX,$X1,100VO        -STORE ERROR INDICATOR.           13036.02 10                   007500.00
SX,$X1,148ER1                                         11372.03 10                   007500.40
```

```
      SIC,148S2          -CHK I-FLD SELN FOR IX 3.      11320.00 80                    007501.00
      B,148S1            -GO CLEAR ALL INDEX REGS.      11310.10 00                    007501.40
      LX,$X3,148K3                                      11324.06 10                    007502.00
      Z,148DMP                                          11373.22 00                    007502.40
      NOP                                                   0.30 00                    007503.00
          NOP                                               0.30 00                    007503.40
      SX,$X3,0%$X3¤                                         0.07 13                    007504.00
      NOP                                                   0.30 00                    007504.40
          NOP                                               0.30 00                    007505.00
      L%BU¤,148DMP                                  11373.00 80 000000.20 50           007505.40
      BZRZ,$+2.32                                    7511.34 C0                        007506.40
      SIC,SEN            -NO IX MODIFICATION WHEN    1310.00 80                        007507.00
      B,SERS             -I FIELD IS 3.              1304.10 00                        007507.40
                                                                -
      LX,$X1,100VO       -STORE ERROR INDICATOR.     13036.02 10                        007510.00
      SX,$X1,148ER1                                  11372.03 10                        007510.40
                                                                -
      B,$+1.0                                        7512.10 00                         007511.00
      BD,1482                                        7441.44 00                         007511.40
      SIC,SEN0+.32                                   1311.40 80                         007512.00
      B,SSW              -TO SSIP.                   1301.10 00                         007512.40
      BD,$+.32                                       7513.44 00                         007513.00
                                                                -
      LX,$X13,IC248      -UPDATE CONTINUITY CHECK.   11306.32 10                        007513.40
      V+,$X13,BIT0                                   13054.32 B0                        007514.00
      SX,$X13,IC248                                  11306.33 10                        007514.40
                                                                -
1483  SIC,148S2          -CHK I-FLD SELN FOR IX 4.      11320.00 80                    007515.00
      B,148S1            -GO CLEAR ALL INDEX REGS.      11310.10 00                    007515.40
      LX,$X4,148K4                                      11325.10 10                    007516.00
      Z,148DMP                                          11373.22 00                    007516.40
      NOP                                                   0.30 00                    007517.00
          NOP                                               0.30 00                    007517.40
      SX,$X4,0%$X4¤                                         0.11 14                    007520.00
      NOP                                                   0.30 00                    007520.40
          NOP                                               0.30 00                    007521.00
      L%BU¤,148DMP                                  11373.00 80 000000.20 50           007521.40
      BZRZ,$+2.32                                    7525.34 C0                        007522.40
      SIC,SEN            -NO IX MODIFICATION WHEN    1310.00 80                        007523.00
      B,SERS             -I FIELD IS 4.              1304.10 00                        007523.40
                                                                -
      LX,$X1,100VO       -STORE ERROR INDICATOR.     13036.02 10                        007524.00
      SX,$X1,148ER1                                  11372.03 10                        007524.40
                                                                -
      SIC,148S2          -CHK I-FLD SELN FOR IX 5.      11320.00 80                    007525.00
      B,148S1            -GO CLEAR ALL INDEX REGS.      11310.10 00                    007525.40
      LX,$X5,148K5                                      11326.12 10                    007526.00
      Z,148DMP                                          11373.22 00                    007526.40
      NOP                                                   0.30 00                    007527.00
          NOP                                               0.30 00                    007527.40
      SX,$X5,0%$X5¤                                         0.13 15                    007530.00
      NOP                                                   0.30 00                    007530.40
          NOP                                               0.30 00                    007531.00
      L%BU¤,148DMP                                  11373.00 80 000000.20 50           007531.40
      BZRZ,$+2.32                                    7535.34 C0                        007532.40
      SIC,SEN            -NO IX MODIFICATION WHEN    1310.00 80                        007533.00
      B,SERS             -I FIELD IS 5.              1304.10 00                        007533.40
                                                                -
      LX,$X1,100VO       -STORE ERROR INDICATOR.     13036.02 10                        007534.00
      SX,$X1,148ER1                                  11372.03 10                        007534.40
```

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                SIC,I48S2           -CHK I-FLD SELN FOR IX 6.      11320.00 80                    007535.00
                B,I48S1             -GO CLEAR ALL INDEX REGS.      11310.10 00                    007535.40
                LX,$X6,I48K6                                       11327.14 10                    007536.00
                Z,I48DMP                                           11373.22 00                    007536.40
                NOP                                                    0.30 00                    007537.00
                    NOP                                                0.30 00                    007537.40
                SX,$X6,0%$X6¤                                          0.15 16                    007540.00
                NOP                                                    0.30 00                    007540.40
                    NOP                                                0.30 00                    007541.00
                L%BU¤,I48DMP                                       11373.00 80 000000.20 50       007541.40
                BZRZ,$+2.32                                         7545.34 C0                    007542.40
                SIC,SEN             -NO IX MODIFICATION WHEN        1310.00 80                    007543.00
                B,SERS              -I FIELD IS 6.                  1304.10 00                    007543.40
                                                                                -
                LX,$X1,I00VO        -STORE ERROR INDICATOR.        13036.02 10                    007544.00
                SX,$X1,I48ER1                                      11372.03 10                    007544.40
                                                                                -
                SIC,I48S2           -CHK I-FLD SELN FOR IX 7.      11320.00 80                    007545.00
                B,I48S1             -GO CLEAR ALL INDEX REGS.      11310.10 00                    007545.40
                LX,$X7,I48K7                                       11330.16 10                    007546.00
                Z,I48DMP                                           11373.22 00                    007546.40
                NOP                                                    0.30 00                    007547.00
                    NOP                                                0.30 00                    007547.40
                SX,$X7,0%$X7¤                                          0.17 17                    007550.00
                NOP                                                    0.30 00                    007550.40
                    NOP                                                0.30 00                    007551.00
                L%BU¤,I48DMP                                       11373.00 80 000000.20 50       007551.40
                BZRZ,$+2.32                                         7555.34 C0                    007552.40
                SIC,SEN             -NO IX MODIFICATION WHEN        1310.00 80                    007553.00
                B,SERS              -I FIELD IS 7.                  1304.10 00                    007553.40
                                                                                -
                LX,$X1,I00VO        -STORE ERROR INDICATOR.        13036.02 10                    007554.00
                SX,$X1,I48ER1                                      11372.03 10                    007554.40
                                                                                -
                B,$+1.0                                             7556.10 00                    007555.00
                BD,I483                                             7515.04 00                    007555.40
                SIC,SEN0+.32                                        1311.40 80                    007556.00
                B,SSW               -TO SSIP.                       1301.10 00                    007556.40
                BD,$+.32                                            7557.44 00                    007557.00
                                                                                -
                LX,$X13,IC248       -UPDATE CONTINUITY CHECK.      11306.32 10                    007557.40
                V+,$X13,BIT1                                       13055.32 B0                    007560.00
                SX,$X13,IC248                                      11306.33 10                    007560.40
                                                                                -
1484            SIC,I48S2           -CHK I-FLD SELN FOR IX 8.      11320.00 80                    007561.00
                B,I48S1             -GO CLEAR ALL INDEX REGS.      11310.10 00                    007561.40
                LX,$X8,I48K8                                       11331.20 10                    007562.00
                Z,I48DMP                                           11373.22 00                    007562.40
                NOP                                                    0.30 00                    007563.00
                    NOP                                                0.30 00                    007563.40
                SX,$X8,0%$X8¤                                          0.21 18                    007564.00
                NOP                                                    0.30 00                    007564.40
                    NOP                                                0.30 00                    007565.00
                L%BU¤,I48DMP                                       11373.00 80 000000.20 50       007565.40
                BZRZ,$+2.32                                         7571.34 C0                    007566.40
                SIC,SEN             -NO IX MODIFICATION WHEN        1310.00 80                    007567.00
                B,SERS              -I FIELD IS 8.                  1304.10 00                    007567.40
                                                                                -
                LX,$X1,I00VO        -STORE ERROR INDICATOR.        13036.02 10                    007570.00
                SX,$X1,I48ER1                                      11372.03 10                    007570.40
```

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SIC,148S2          -CHK 1-FLD SELN FOR IX 9.          11320.00 80                    007571.00
B,148S1            -GO CLEAR ALL INDEX REGS.          11310.10 00                    007571.40
LX,$X9,148K9                                          11332.22 10                    007572.00
Z,148DMP                                              11373.22 00                    007572.40
NOP                                                       0.30 00                    007573.00
    NOP                                                   0.30 00                    007573.40
SX,$X9,0%$X9¤                                             0.23 19                    007574.00
NOP                                                       0.30 00                    007574.40
    NOP                                                   0.30 00                    007575.00
L%BU¤,148DMP                                          11373.00 80 000000.20 50       007575.40
BZRZ,$+2.32                                            7601.34 C0                    007576.40
SIC,SEN            -NO IX MODIFICATION WHEN            1310.00 80                    007577.00
B,SERS             -1 FIELD IS 9.                      1304.10 00                    007577.40
                                                                  -
LX,$X1,100VO       -STORE ERROR INDICATOR.             13036.02 10                    007600.00
SX,$X1,148ER1                                          11372.03 10                    007600.40
                                                                  -
SIC,148S2          -CHK 1-FLD SELN FOR IX 10.          11320.00 80                    007601.00
B,148S1            -GO CLEAR ALL INDEX REGS.           11310.10 00                    007601.40
LX,$X10,148K10                                        11333.24 10                    007602.00
Z,148DMP                                              11373.22 00                    007602.40
NOP                                                       0.30 00                    007603.00
    NOP                                                   0.30 00                    007603.40
SX,$X10,0%$X10¤                                           0.25 1A                    007604.00
NOP                                                       0.30 00                    007604.40
    NOP                                                   0.30 00                    007605.00
L%BU¤,148DMP                                          11373.00 80 000000.20 50       007605.40
BZRZ,$+2.32                                            7611.34 C0                    007606.40
SIC,SEN            -NO IX MODIFICATION WHEN            1310.00 80                    007607.00
B,SERS             -1 FIELD IS 10.                     1304.10 00                    007607.40
                                                                  -
LX,$X1,100VO       -STORE ERROR INDICATOR.             13036.02 10                    007610.00
SX,$X1,148ER1                                          11372.03 10                    007610.40
                                                                  -
SIC,148S2          -CHK 1-FLD SELN FOR IX 11.          11320.00 80                    007611.00
B,148S1            -GO CLEAR ALL INDEX REGS.           11310.10 00                    007611.40
LX,$X11,148K11                                        11334.26 10                    007612.00
Z,148DMP                                              11373.22 00                    007612.40
NOP                                                       0.30 00                    007613.00
    NOP                                                   0.30 00                    007613.40
SX,$X11,0%$X11¤                                           0.27 1B                    007614.00
NOP                                                       0.30 00                    007614.40
    NOP                                                   0.30 00                    007615.00
L%BU¤,148DMP                                          11373.00 80 000000.20 50       007615.40
BZRZ,$+2.32                                            7621.34 C0                    007616.40
SIC,SEN            -NO IX MODIFICATION WHEN            1310.00 80                    007617.00
B,SERS             -1 FIELD IS 11.                     1304.10 00                    007617.40
                                                                  -
LX,$X1,100VO       -STORE ERROR INDICATOR.             13036.02 10                    007620.00
SX,$X1,148ER1                                          11372.03 10                    007620.40
                                                                  -
B,$+1.0                                                7622.10 00                    007621.00
BD,1484                                                7561.04 00                    007621.40
SIC,SEN0+.32                                           1311.40 80                    007622.00
B,SSW              -TO SSIP.                           1301.10 00                    007622.40
BD,$+.32                                               7623.44 00                    007623.00
                                                                  -
LX,$X13,IC248      -UPDATE CONTINUITY CHECK.           11306.32 10                    007623.40
V+,$X13,BIT2                                           13056.32 B0                   007624.00
SX,$X13,IC248                                          11306.33 10                    007624.40
```

```
1485    SIC,148S2           -CHK I-FLD SELN FOR IX 12.
        B,148S1             -GO CLEAR ALL INDEX REGS.
        LX,$X12,148K12
        Z,148DMP
        NOP
            NOP
        SX,$X12,0%$X12¤
        NOP
            NOP
        L%BU¤,148DMP
        BZRZ,$+2.32
        SIC,SEN             -NO IX MODIFICATION WHEN
        B,SERS              -I FIELD IS 12.

        LX,$X1,100VO        -STORE ERROR INDICATOR.
        SX,$X1,148ER1

        SIC,148S2           -CHK I-FLD SELN FOR IX 13.
        B,148S1             -GO CLEAR ALL INDEX REGS.
        LX,$X13,148K13
        Z,148DMP
        NOP
            NOP
        SX,$X13,0%$X13¤
        NOP
            NOP
        L%BU¤,148DMP
        BZRZ,$+2.32
        SIC,SEN             -NO IX MODIFICATION WHEN
        B,SERS              -I FIELD IS 13.

        LX,$X1,100VO        -STORE ERROR INDICATOR.
        SX,$X1,148ER1

        SIC,148S2           -CHK I-FLD SELN FOR IX 14.
        B,148S1             -GO CLEAR ALL INDEX REGS.
        LX,$X14,148K14
        Z,148DMP
        NOP
            NOP
        SX,$X14,0%$X14¤
        NOP
            NOP
        L%BU¤,148DMP
        BZRZ,$+2.32
        SIC,SEN             -NO IX MODIFICATION WHEN
        B,SERS              -I FIELD IS 14.

        LX,$X1,100VO        -STORE ERROR INDICATOR.
        SX,$X1,148ER1
```

```
11320.00 80                          007625.00
11310.10 00                          007625.40
11335.30 10                          007626.00
11373.22 00                          007626.40
    0.30 00                          007627.00
    0.30 00                          007627.40
    0.31 1C                          007630.00
    0.30 00                          007630.40
    0.30 00                          007631.00
11373.00 80 000000.20 50             007631.40
 7635.34 C0                          007632.40
 1310.00 80                          007633.00
 1304.10 00                          007633.40
-
13036.02 10                          007634.00
11372.03 10                          007634.40
-
11320.00 80                          007635.00
11310.10 00                          007635.40
11336.32 10                          007636.00
11373.22 00                          007636.40
    0.30 00                          007637.00
    0.30 00                          007637.40
    0.33 1D                          007640.00
    0.30 00                          007640.40
    0.30 00                          007641.00
11373.00 80 000000.20 50             007641.40
 7645.34 C0                          007642.40
 1310.00 80                          007643.00
 1304.10 00                          007643.40
-
13036.02 10                          007644.00
11372.03 10                          007644.40
-
11320.00 80                          007645.00
11310.10 00                          007645.40
11337.34 10                          007646.00
11373.22 00                          007646.40
    0.30 00                          007647.00
    0.30 00                          007647.40
    0.35 1E                          007650.00
    0.30 00                          007650.40
    0.30 00                          007651.00
11373.00 80 000000.20 50             007651.40
 7655.34 C0                          007652.40
 1310.00 80                          007653.00
 1304.10 00                          007653.40
-
13036.02 10                          007654.00
11372.03 10                          007654.40
-
```

```
SIC,148S2          -CHK 1-FLD SELN FOR IX 15.      11320.00 80                    007655.00
B,148S1            -GO CLEAR ALL INDEX REGS.       11310.10 00                    007655.40
LX,$X15,148K15                                     11340.36 10                    007656.00
Z,148DMP                                           11373.22 00                    007656.40
NOP                                                    0.30 00                    007657.00
    NOP                                                0.30 00                    007657.40
SX,$X15,0%$X15¤                                        0.37 1F                    007660.00
NOP                                                    0.30 00                    007660.40
    NOP                                                0.30 00                    007661.00
L%BU¤,148DMP                                       11373.00 80 000000.20 50       007661.40
BZRZ,$+2.32                                         7665.34 C0                    007662.40
SIC,SEN            -NO IX MODIFICATION WHEN         1310.00 80                    007663.00
B,SERS             -1 FIELD IS 15.                  1304.10 00                    007663.40
                                                                                -
LX,$X1,100V0       -STORE ERROR INDICATOR.          13036.02 10                    007664.00
SX,$X1,148ER1                                       11372.03 10                    007664.40
                                                                                -
B,$+1.0                                             7666.10 00                    007665.00
BD,1485                                             7625.04 00                    007665.40
SIC,SEN0+.32                                        1311.40 80                    007666.00
B,SSW              -TO SSIP.                        1301.10 00                    007666.40
BD,$+.32                                            7667.44 00                    007667.00
                                                                                -
LX,$X13,1C248      -UPDATE CONTINUITY CHECK.        11306.32 10                    007667.40
V+,$X13,BIT3                                        13057.32 B0                    007670.00
SX,$X13,1C248                                       11306.33 10                    007670.40
```

```
1486    L%U¤,1000          -TEST 1B BASIC TEST OF                     13035.40 60      007671.00
        LX,$X1,$L          -FLOATING POINT LOAD.                         10.02 10      007671.40
        KV,$X1,1000                                                   13035.02 90      007672.00
        BXE,$+2.0                                                      7674.72 C2      007672.40
        SIC,SEN            -FP UNNOR LOAD FAILS TO LOAD ALL            1310.00 80      007673.00
        B,SERS             -BITS 0-24, DELETE FP IX MOD.               1304.10 00      007673.40
        B,1487             -GO STORE ERR IND.                          7711.10 00      007674.00
                                                             -
        L%U¤,100Z                                                     13034.40 60      007674.40
        LX,$X1,$L                                                        10.02 10      007675.00
        BXVZ,$+2.0                                                     7677.71 42      007675.40
        SIC,SEN            -FP UNNOR LOAD FAILS TO LOAD NO             1310.00 80      007676.00
        B,SERS             -BITS 0-24, DELETE FP IX MOD.               1304.10 00      007676.40
        B,1487             -GO STORE ERR IND.                          7711.10 00      007677.00
                                                             -
        L%N¤,1000                                                     13035.00 60      007677.40
        LX,$X1,$L                                                        10.02 10      007700.00
        KV,$X1,1000                                                   13035.02 90      007700.40
        BXE,$+2.0                                                      7703.32 C2      007701.00
        SIC,SEN            -FP NOR LOAD FAILS TO LOAD ALL              1310.00 80      007701.40
        B,SERS             -BITS 0-24, DELETE FP IX MOD.               1304.10 00      007702.00
        B,1487             -GO STORE ERR IND.                          7711.10 00      007702.40
                                                             -
        L%N¤,BIT24                                                    13104.00 60      007703.00   ← Pk 54
        LX,$X1,$L                                                        10.02 10      007703.40
        BZXVZ,$+2.0                                                    7706.31 40      007704.00
        SIC,SEN            -FP NOR LOAD FAILS TO LOAD BIT 24           1310.00 80      007704.40
        B,SERS             -AND SET, DELETE FP IX MOD.                 1304.10 00      007705.00
        B,1487             -GO STORE ERR IND.                          7711.10 00      007705.40
                                                             -
        L%U¤,BIT24         -TEST NOR MODIFIER.                        13104.40 60      007706.00
        LX,$X1,$L                                                        10.02 10      007706.40
        BXVZ,1488                                                      7712.71 42      007707.00
        SIC,SEN            -FP UNNOR LOAD ACTS LIKE                    1310.00 80      007707.40
        B,SERS             -A FP NOR LOAD.                             1304.10 00      007710.00
        B,1487             -GO STORE ERR IND.                          7711.10 00      007710.40
                                                             -
1487    LX,$X1,148ER1      -STORE FP ERR IND.                         11372.02 10      007711.00
        C+1,$X1,%8¤777777                                            777777.03 00      007711.40
        SX,$X1,148ER1                                                 11372.03 10      007712.00
                                                             -
1488    B,$+1.0                                                        7713.50 00      007712.40
        BD,1489                                                        7717.04 00      007713.00
        SIC,SEN0+.32                                                   1311.40 80      007713.40
        B,SSW              -TO SSIP                                    1301.10 00      007714.00
        BD,$+.32                                                       7715.04 00      007714.40
                                                             -
        LX,$X13,1C248      -UPDATE CONTINUITY CHECK.                  11306.32 10      007715.00
        V+,$X13,BIT4                                                  13060.32 B0      007715.40
        SX,$X13,1C248                                                 11306.33 10      007716.00
        BD,14810                                                       7721.44 00      007716.40
                                                             -
1489    LX,$X1,148ER1      -LOOP ON TEST 1B, CLR ERR IND.             11372.02 10      007717.00
        Z,$X0                                                            20.22 00      007717.40
        V+,$X0,$X1                                                       21.00 B0      007720.00
        SX,$X0,148ER1                                                 11372.01 10      007720.40
        B,1486                                                         7671.10 00      007721.00
```

```
14810   L%BU¤,BIT24,1          -TEST 1C BASIC TEST OF VFL
        LX,$X1,$R              -LOAD, BS, OFFSET, AND LENGTH.
        BZXVZ,$+2.0
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 1 FADS.
        B,14811

        L%BU¤,BIT25,2
        LX,$X1,$R
        BZXVZ,$+2.0
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 2 FAILS.
        B,14811

        L%BU¤,BIT27,4
        LX,$X1,$R
        BZXVZ,$+2.0
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 4 FAILS.
        B,14811

        L%BU¤,BIT31,8
        LX,$X1,$R
        BZXVZ,$+2.0
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 8 FAILS.
        B,14811

        L%BU¤,BIT39,16
        LX,$X1,$R
        BZXVZ,$+2.0
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 16 FAILS.
        B,14811

        L%BU¤,BIT55,32
        LX,$X1,$R
        BZXVZ,$+2.0
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 32 FAILS.
        B,14811
        L%BU¤,BIT23,64
        LX,$X1,$L
        BZXVZ,14812
        SIC,SEN
        B,SERS                 -VFL LOAD WITH OFFSET OF 64 FAILS.

14811   LX,$X0,148ER1          -STORE ERROR IND.
        LRI,$X0,%8¤777777
        SX,$X0,148ER1
```

```
13104.00 80 000000.60 50    007721.40
   11.02 10                 007722.40
 7725.31 40                 007723.00
 1310.00 80                 007723.40
 1304.10 00                 007724.00
 7751.50 00                 007724.40
-
13105.00 80 000001.20 50    007725.00
   11.02 10                 007726.00
 7730.71 40                 007726.40
 1310.00 80                 007727.00
 1304.10 00                 007727.40
 7751.50 00                 007730.00
-
13107.00 80 000002.20 50    007730.40
   11.02 10                 007731.40
 7734.31 40                 007732.00
 1310.00 80                 007732.40
 1304.10 00                 007733.00
 7751.50 00                 007733.40
-
13113.00 80 000004.20 50    007734.00
   11.02 10                 007735.00
 7737.71 40                 007735.40
 1310.00 80                 007736.00
 1304.10 00                 007736.40
 7751.50 00                 007737.00
-
13123.00 80 000010.20 50    007737.40
   11.02 10                 007740.40
 7743.31 40                 007741.00
 1310.00 80                 007741.40
 1304.10 00                 007742.00
 7751.50 00                 007742.40
-
13143.00 80 000020.20 50    007743.00
   11.02 10                 007744.00
 7746.71 40                 007744.40
 1310.00 80                 007745.00
 1304.10 00                 007745.40
 7751.50 00                 007746.00
13103.00 80 000040.20 50    007746.40
   10.02 10                 007747.40
 7753.31 40                 007750.00
 1310.00 80                 007750.40
 1304.10 00                 007751.00
-
11372.00 10                 007751.40
777777.01 03                007752.00
11372.01 10                 007752.40
```

```
14812   B,$+1.0                                         7754.10 00                      007753.00
        BD,14813                                        7757.44 00                      007753.40
        SIC,SEN0+.32                                    1311.40 80                      007754.00
        B,SSW              -TO SSIP.                    1301.10 00                      007754.40
        BD,$+.32                                        7755.44 00                      007755.00
                                                  -
        LX,$X13,IC248      -UPDATE CONTINUITY CHECK.   11306.32 10                      007755.40
        V+,$X13,BIT5                                   13061.32 B0                      007756.00
        SX,$X13,IC248                                  11306.33 10                      007756.40
        BD,14814                                        7761.44 00                      007757.00
                                                  -
14813   LX,$X0,148ER1      -LOOP, CLR ERR IND.         11372.00 10                      007757.40
        LRI,$X0,0                                          0.01 03                      007760.00
        SX,$X0,148ER1                                  11372.01 10                      007760.40
        B,14810                                         7721.50 00                      007761.00
                                                  -
14814   L%B¤,1000          -TEST VFL BS AND FLD LENGTH. 13035.00 80 000100.00 50        007761.40
        BRN,$+2.0                                       7764.75 C2                      007762.40
        SIC,SEN                                         1310.00 80                      007763.00
        B,SERS             -VFL SIGN MOD FAILS.         1304.10 00                      007763.40
        B,14815                                        10035.10 00                      007764.00
                                                  -
        L%B,1,1¤,148K16                                11341.00 80 001100.00 50         007764.40
        BRN,$+1.0                                       7766.75 C2                      007765.40
        B,$+1.0                                         7767.10 00                      007766.00
        BRZ,$+2.0                                       7770.74 C2                      007766.40
        SIC,SEN            -VFL LOAD, BS 1, FLD         1310.00 80                      007767.00
        B,SERS             -LNGTH 1, FAILS              1304.10 00                      007767.40
        B,14815                                        10035.10 00                      007770.00
                                                  -
        L%B,2,2¤,148K17                                11342.00 80 002200.00 50         007770.40
        BRN,$+1.0                                       7772.75 C2                      007771.40
        B,$+1.0                                         7773.10 00                      007772.00
        BRZ,$+2.0                                       7774.74 C2                      007772.40
        SIC,SEN            -VFL LOAD, BS 2, FLD         1310.00 80                      007773.00
        B,SERS             -LENGTH 2, FAILS.            1304.10 00                      007773.40
        B,14815                                        10035.10 00                      007774.00
                                                  -
        L%B,3,3¤,148K18                                11343.00 80 003300.00 50         007774.40
        BRN,$+1.0                                       7776.75 C2                      007775.40
        B,$+1.0                                         7777.10 00                      007776.00
        BRZ,$+2.0                                      10000.74 C2                      007776.40
        SIC,SEN            -VFL LOAD, BS 3, FLD         1310.00 80                      007777.00
        B,SERS             -LENGTH 3, FAILS.            1304.10 00                      007777.40
        B,14815                                        10035.10 00                      010000.00
                                                  -
        L%B,4,4¤,148K19                                11344.00 80 004400.00 50         010000.40
        BRN,$+1.0                                      10002.75 C2                      010001.40
        B,$+1.0                                        10003.10 00                      010002.00
        BRZ,$+2.0                                      10004.74 C2                      010002.40
        SIC,SEN            -VFL LOAD BS 4, FLD          1310.00 80                      010003.00
        B,SERS             -LENGTH 4, FAILS.            1304.10 00                      010003.40
        B,14815                                        10035.10 00                      010004.00
                                                  -
        L%B,5,5¤,148K20                                11345.00 80 005500.00 50         010004.40
        BRN,$+1.0                                      10006.75 C2                      010005.40
        B,$+1.0                                        10007.10 00                      010006.00
        BRZ,$+2.0                                      10010.74 C2                      010006.40
        SIC,SEN            -VFL LOAD, BS 5, FLD         1310.00 80                      010007.00
        B,SERS             -LENGTH 5, FAILS.            1304.10 00                      010007.40
        B,14815                                        10035.10 00                      010010.00
```

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         L%B,6,6¤,148K21                                             11346.00 80 006600.00 50     010010.40
         BRN,$+1.0                                                   10012.75 C2                  010011.40
         B,$+1.0                                                     10013.10 00                  010012.00
         BRZ,$+2.0                                                   10014.74 C2                  010012.40
         SIC,SEN              -VFL LOAD, BS 6, FLD                    1310.00 80                  010013.00
         B,SERS               -LENGTH 6, FAILS.                       1304.10 00                  010013.40
         B,14815                                                     10035.10 00                  010014.00
                                                                  -
         L%B,7,7¤,148K22                                             11347.00 80 007700.00 50     010014.40
         BRN,$+1.0                                                   10016.75 C2                  010015.40
         B,$+1.0                                                     10017.10 00                  010016.00
         BRZ,$+2.0                                                   10020.74 C2                  010016.40
         SIC,SEN              -VFL LOAD, BS 7, FLD                    1310.00 80                  010017.00
         B,SERS               -LENGTH 7, FAILS.                       1304.10 00                  010017.40
         B,14815                                                     10035.10 00                  010020.00
                                                                  -
         L%B,8,8¤,148K23                                             11350.00 80 010000.00 50     010020.40
         BRN,$+1.0                                                   10022.75 C2                  010021.40
         B,$+1.0                                                     10023.10 00                  010022.00
         BRZ,$+2.0                                                   10024.74 C2                  010022.40
         SIC,SEN              -VFL LOAD, BS 8, FLD                    1310.00 80                  010023.00
         B,SERS               -LENGTH 8, FAILS.                       1304.10 00                  010023.40
         B,14815                                                     10035.10 00                  010024.00
                                                                  -
         L%BU,16,8¤,1000                                             13035.00 80 020000.20 50     010024.40
         LX,$X0,$R                                                      11.00 10                  010025.40
         SR,$X0,$X1                                                     21.01 70                  010026.00
         KV,$X1,BIT2                                                 13056.02 90                  010026.40
         BXH,$+2.0                                                   10031.33 42                  010027.00
         SIC,SEN                                                      1310.00 80                  010027.40
         B,SERS               -VFL LOAD WITH LENGTH 16 FAILS.         1304.10 00                  010030.00
         B,14815                                                     10035.10 00                  010030.40
                                                                  -
         L%BU,32,8¤,1000                                             13035.00 80 040000.20 50     010031.00
         LX,$X0,$R                                                      11.00 10                  010032.00
         SC,$X0,$X1                                                     21.01 50                  010032.40
         KV,$X1,BIT4                                                 13060.02 90                  010033.00
         BXH,14816                                                   10043.33 42                  010033.40
         SIC,SEN                                                      1310.00 80                  010034.00
         B,SERS               -VFL LOAD WITH LENGTH 32 FAILS.         1304.10 00                  010034.40
                                                                  -
14815    B,$+1.0                                                     10036.10 00                  010035.00
         BD,14814                                                     7761.44 00                  010035.40
         SIC,SEN0+.32                                                 1311.40 80                  010036.00
         B,SSW                -TO SSIP.                               1301.10 00                  010036.40
         BD,$+.32                                                    10037.44 00                  010037.00
                                                                  -
         LX,$X13,1C248        -UPDATE CONTINUITY CHECK.              11306.32 10                  010037.40
         V+,$X13,BIT6                                                13062.32 B0                  010040.00
         SX,$X13,1C248                                               11306.33 10                  010040.40
         LX,$X0,148ER1                                               11372.00 10                  010041.00
         LRI,$X0,%8¤777777                                          777777.01 03                  010041.40
         SX,$X0,148ER1                                               11372.01 10                  010042.00
         BD,14817                                                    10047.04 00                  010042.40
                                                                  -
14816    B,$+1.0                                                     10044.10 00                  010043.00
         BD,14814                                                     7761.44 00                  010043.40
         SIC,SEN0+.32                                                 1311.40 80                  010044.00
         B,SSW                -TO SSIP.                               1301.10 00                  010044.40
         BD,$+.32                                                    10045.44 00                  010045.00
                                                                  -
         LX,$X13,1C248        -UPDATE CONTINUITY CHECK.              11306.32 10                  010045.40
```

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       V+,$X13,BIT6                                    13062.32 B0                 010046.00
       SX,$X13,IC248                                   11306.33 10                 010046.40

14817  LX,$X0,I48ER1     -TEST 2A, CHECK RIGHT HALF WORD     11372.00 10           010047.00
       BXVZ,I4817A       -MODIFICATION OF FULL WD. INST.     10053.71 42           010047.40
       SIC,SEN           -PREVIOUS I-FLD SELN PROHIBITS       1310.00 80           010050.00
       B,SERS            -RUNNING THIS PROGRAM.               1304.10 00           010050.40
                                                         -
       LX,$X13,IC248     -UPDATE CONTINUITY CHECK.           11306.32 10           010051.00
       KVI,$X13,%8¤774000.0                                 774000.33 04           010051.40
       SIC,SEN                                                1310.00 80           010052.00
       BZXE,SERS         -CONTINUITY ERROR.                   1304.32 C0           010052.40
       B,I50             -TERMINATE I248.                    11424.10 00           010053.00
                                                         -
14817A SR,$X0,$X0                                               20.01 70           010053.40
       LX,$X0,$X0                                               20.00 10           010054.00
       BXVZ,I4818                                            10061.71 42           010054.40
       SIC,SEN           -PREVIOUS VFL FAILURE PROHIBITS      1310.00 80           010055.00
       B,SERS            -RUNNING THIS TEST.                  1304.10 00           010055.40
                                                         -
       LX,$X13,IC248     -UPDATE CONTINUITY.                 11306.32 10           010056.00
       V+,$X13,BIT7                                          13063.32 B0           010056.40
       V+,$X13,BIT8                                          13064.32 B0           010057.00
       V+,$X13,BIT9                                          13065.32 B0           010057.40
       V+,$X13,BIT10                                         13066.32 B0           010060.00
       SX,$X13,IC248                                         11306.33 10           010060.40
       B,I4822           -TERMINATE TEST 2A.                 10264.10 00           010061.00
                                                         -
14818  LX,$X1,BIT0       -TEST RHW OF FW, INDEX BIT 32.      13054.02 10           010061.40
       L%BU¤,BIT0,%$X1¤  -NO CHANGE TO INSTRUCTION.          13054.00 80 000000.20 51  010062.00
       LX,$X2,$R                                                11.04 10           010063.00
       NOP                                                       0.30 00           010063.40
       KV,$X2,BIT0                                           13054.04 90           010064.00
       BXE,$+1.0                                             10065.72 C2           010064.40
       B,$+1.32                                              10066.50 00           010065.00
       NOP                                                       0.30 00           010065.40
       B,$+1.32                                              10067.50 00           010066.00
       SIC,SEN           -RHW MODIFICATION OF FULL WD INST    1310.00 80           010066.40
       B,SERS            -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00           010067.00
                                                         -
       LX,$X1,BIT1       -TEST RHW OF FW, INDEX BIT 33.      13055.02 10           010067.40
       L%BU¤,BIT0,%$X1¤  -NO CHANGE TO INSTRUCTION.          13054.00 80 000000.20 51  010070.00
       LX,$X2,$R                                                11.04 10           010071.00
       NOP                                                       0.30 00           010071.40
       KV,$X2,BIT0                                           13054.04 90           010072.00
       BXE,$+1.0                                             10073.72 C2           010072.40
       B,$+1.32                                              10074.50 00           010073.00
       NOP                                                       0.30 00           010073.40
       B,$+1.32                                              10075.50 00           010074.00
       SIC,SEN           -RHW MODIFICATION OF FULL WD INST    1310.00 80           010074.40
       B,SERS            -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00           010075.00
                                                         -
       LX,$X1,BIT2       -TEST RHW OF FW, INDEX BIT 34       13056.02 10           010075.40
       L%BU¤,BIT0,%$X1¤  -NO CHANGE TO INSTRUCTION.          13054.00 80 000000.20 51  010076.00
       LX,$X2,$R                                                11.04 10           010077.00
       NOP                                                       0.30 00           010077.40
       KV,$X2,BIT0                                           13054.04 90           010100.00
       BXE,$+1.0                                             10101.72 C2           010100.40
       B,$+1.32                                              10102.50 00           010101.00
       NOP                                                       0.30 00           010101.40
       B,$+1.32                                              10103.50 00           010102.00
       SIC,SEN           -RHW MODIFICATION OF FULL WD INST    1310.00 80           010102.40
       B,SERS            -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00           010103.00
```

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                LX,$X1,BIT3          -TEST RHW OF FW, INDEX BIT 35.      13057.02 10                    010103.40
                L%BU¤,1000,%$X1¤     -BECOMES BU 32, 8                   13035.00 80 000000.20 51       010104.00
                LX,$X2,$R                                                   11.04 10                    010105.00
                NOP                                                          0.30 00                    010105.40
                KC,$X2,BIT4                                             13060.05 90                    010106.00
                BXH,$+1.0                                               10107.73 42                    010106.40
                B,$+1.32                                                10110.50 00                    010107.00
                KC,$X2,BIT3                                             13057.05 90                    010107.40
                BXL,$+1.32                                              10111.72 42                    010110.00
                SIC,SEN              -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010110.40
                B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010111.00
                                                                                -
                LX,$X1,BIT4          -TEST RHW OF FW, INDEX BIT 36.      13060.02 10                    010111.40
                L%BU¤,1000,%$X1¤     -BECOMES BU, 16, 8                  13035.00 80 000000.20 51       010112.00
                LX,$X2,$R                                                   11.04 10                    010113.00
                SR,$X2,$X2                                                  22.05 70                    010113.40
                KV,$X2,BIT2                                             13056.04 90                    010114.00
                BXH,$+1.0                                               10115.73 42                    010114.40
                B,$+1.32                                                10116.50 00                    010115.00
                KV,$X2,BIT1                                             13055.04 90                    010115.40
                BXL,$+1.32                                              10117.72 42                    010116.00
                SIC,SEN              -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010116.40
                B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010117.00
                                                                                -
                B,$+1.0                                                 10120.50 00                    010117.40
                BD,14818                                                10061.44 00                    010120.00
                SIC,SEN0+.32                                             1311.40 80                    010120.40
                B,SSW                -TO SSIP.                           1301.10 00                    010121.00
                BD,$+.32                                                10122.04 00                    010121.40
                                                                                -
                LX,$X13,IC248        -UPDATE CONTINUITY.                11306.32 10                    010122.00
                V+,$X13,BIT7                                            13063.32 B0                    010122.40
                SX,$X13,IC248                                           11306.33 10                    010123.00
                                                                                -
14819           LX,$X1,BIT5          -TEST RHW OF FW, INDEX BIT 37.      13061.02 10                    010123.40
                L%BU¤,1000,%$X1¤     -BECOMES BU, 8, 8                   13035.00 80 000000.20 51       010124.00
                LX,$X2,$R                                                   11.04 10                    010125.00
                SR,$X2,$X2                                                  22.05 70                    010125.40
                KV,$X2,BIT10                                            13066.04 90                    010126.00
                BXH,$+1.0                                               10127.73 42                    010126.40
                B,$+1.32                                                10130.50 00                    010127.00
                KV,$X2,BIT9                                             13065.04 90                    010127.40
                BXL,$+1.32                                              10131.72 42                    010130.00
                SIC,SEN              -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010130.40
                B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010131.00
                                                                                -
                LX,$X1,BIT6          -TEST RHW OF FW, INDEX BIT 38.      13062.02 10                    010131.40
                L%BU¤,1000,%$X1¤     -BECOMES BU, 4, 8                   13035.00 80 000000.20 51       010132.00
                LX,$X2,$R                                                   11.04 10                    010133.00
                SR,$X2,$X2                                                  22.05 70                    010133.40
                KV,$X2,BIT14                                            13072.04 90                    010134.00
                BXH,$+1.0                                               10135.73 42                    010134.40
                B,$+1.32                                                10136.50 00                    010135.00
                KV,$X2,BIT13                                            13071.04 90                    010135.40
                BXL,$+1.32                                              10137.72 42                    010136.00
                SIC,SEN              -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010136.40
                B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010137.00
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LX,$X1,BIT7          -TEST RHW OF FW, INDEX BIT 39.          13063.02 10                    010137.40
L%BU¤,1000,%$X1¤     -BECOMES BU, 2, 8                       13035.00 80 000000.20 51       010140.00
LX,$X2,$R                                                       11.04 10                    010141.00
SR,$X2,$X2                                                      22.05 70                    010141.40
KV,$X2,BIT16                                                 13074.04 90                    010142.00
BXH,$+1.0                                                    10143.73 42                    010142.40
B,$+1.32                                                     10144.50 00                    010143.00
KV,$X2,BIT15                                                 13073.04 90                    010143.40
BXL,$+1.32                                                   10145.72 42                    010144.00
SIC,SEN              -RHW MODIFICATION OF FULL WD INST         1310.00 80                    010144.40
B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.         1304.10 00                    010145.00
                                                                                             -
LX,$X1,BIT8          -TEST RHW OF FW, INDEX BIT 40.          13064.02 10                    010145.40
L%BU¤,1000,%$X1¤     -BECOMES BU, 1, 8                       13035.00 80 000000.20 51       010146.00
LX,$X2,$R                                                       11.04 10                    010147.00
SR,$X2,$X2                                                      22.05 70                    010147.40
KV,$X2,BIT17                                                 13075.04 90                    010150.00
BXE,$+1.0                                                    10151.72 C2                    010150.40
B,$+1.32                                                     10152.50 00                    010151.00
NOP                                                              0.30 00                    010151.40
B,$+1.32                                                     10153.50 00                    010152.00
SIC,SEN              -RHW MODIFICATION OF FULL WD INST         1310.00 80                    010152.40
B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.         1304.10 00                    010153.00
                                                                                             -
LX,$X1,BIT9          -TEST RHW OF FW, INDEX BIT 41.          13065.02 10                    010153.40
L%B,64,8¤,148K29,%$X1¤   -BECOMES B,64,4                     11356.00 80 000000.00 51       010154.00
LX,$X2,$R                                                       11.04 10                    010155.00
SR,$X2,$X2                                                      22.05 70                    010155.40
KV,$X2,BIT17                                                 13075.04 90                    010156.00
BXE,$+1.0                                                    10157.72 C2                    010156.40
B,$+1.32                                                     10160.50 00                    010157.00
NOP                                                              0.30 00                    010157.40
B,$+1.32                                                     10161.50 00                    010160.00
SIC,SEN              -RHW MODIFICATION OF FULL WD INST         1310.00 80                    010160.40
B,SERS               -FAILS WHEN INDEXED BY ABOVE BIT.         1304.10 00                    010161.00
                                                                                             -
B,$+1.0                                                      10162.50 00                    010161.40
BD,14819                                                     10123.44 00                    010162.00
SIC,SEN0+.32                                                  1311.40 80                    010162.40
B,SSW                -TO SSIP.                                1301.10 00                    010163.00
BD,$+.32                                                     10164.04 00                    010163.40
                                                                                             -
LX,$X13,IC248        -UPDATE CONTINUITY.                     11306.32 10                    010164.00
V+,$X13,BIT8                                                 13064.32 B0                    010164.40
SX,$X13,IC248                                                11306.33 10                    010165.00
                                                                                             -
14820  LX,$X1,BIT10          -TEST RHW OF FW, INDEX BIT 42.    13066.02 10                    010165.40
       L%B,64,8¤,148K30,%$X1¤   -BECOMES B,64,2               11357.00 80 000000.00 51       010166.00
       LX,$X2,$R                                                 11.04 10                    010167.00
       SR,$X2,$X2                                                22.05 70                    010167.40
       KV,$X2,BIT17                                           13075.04 90                    010170.00
       BXE,$+1.0                                              10171.72 C2                    010170.40
       B,$+1.32                                               10172.50 00                    010171.00
       NOP                                                         0.30 00                    010171.40
       B,$+1.32                                               10173.50 00                    010172.00
       SIC,SEN               -RHW MODIFICATION OF FULL WD INST   1310.00 80                    010172.40
       B,SERS                -FAILS WHEN INDEXED BY ABOVE BIT.   1304.10 00                    010173.00
                                                                                               -
       LX,$X1,BIT11          -TEST RHW OF FW, INDEX BIT 43.    13067.02 10                    010173.40
       L%B,64,8¤,148K31,%$X1¤   -BECOMES B,64,1               11360.00 80 000000.00 51       010174.00
       LX,$X2,$R                                                 11.04 10                    010175.00
       SR,$X2,$X2                                                22.05 70                    010175.40
```

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KV,$X2,BIT17                                                13075.04 90      010176.00
BXE,$+1.0                                                   10177.72 C2      010176.40
B,$+1.32                                                    10200.50 00      010177.00
NOP                                                             0.30 00      010177.40
B,$+1.32                                                    10201.50 00      010200.00
SIC,SEN          -RHW MODIFICATION OF FULL WD INST            1310.00 80      010200.40
B,SERS           -FAILS WHEN INDEXED BY ABOVE BIT.            1304.10 00      010201.00
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LX,$X1,BIT12          -TEST RHW OF FW, INDEX BIT 44.      13070.02 10                  010201.40
L%BU¤,BIT23,%$X1¤     -OFFSET BECOMES 64.                 13103.00 80 000000.20 51     010202.00
LX,$X2,$L                                                    10.04 10                  010203.00
NOP                                                           0.30 00                  010203.40
KV,$X2,BIT23                                           13103.04 90                     010204.00
BXE,$+1.0                                              10205.72 C2                     010204.40
B,$+1.32                                               10206.50 00                     010205.00
NOP                                                           0.30 00                  010205.40
B,$+1.32                                               10207.50 00                     010206.00
SIC,SEN               -RHW MODIFICATION OF FULL WD INST     1310.00 80                  010206.40
B,SERS                -FAILS WHEN INDEXED BY ABOVE BIT.     1304.10 00                  010207.00
                                                                                        -
LX,$X1,BIT13          -TEST RHW OF FW, INDEX BIT 45.      13071.02 10                  010207.40
L%BU¤,BIT55,%$X1¤     -OFFSET BECOMES 32.                 13143.00 80 000000.20 51     010210.00
LX,$X2,$R                                                    11.04 10                  010211.00
NOP                                                           0.30 00                  010211.40
KV,$X2,BIT23                                           13103.04 90                     010212.00
BXE,$+1.0                                              10213.72 C2                     010212.40
B,$+1.32                                               10214.50 00                     010213.00
NOP                                                           0.30 00                  010213.40
B,$+1.32                                               10215.50 00                     010214.00
SIC,SEN               -RHW MODIFICATION OF FULL WD INST     1310.00 80                  010214.40
B,SERS                -FAILS WHEN INDEXED BY ABOVE BIT.     1304.10 00                  010215.00
                                                                                        -
LX,$X1,BIT14          -TEST RHW OF FW, INDEX BIT 46.      13072.02 10                  010215.40
L%BU¤,BIT39,%$X1¤     -OFFSET BECOMES 16.                 13123.00 80 000000.20 51     010216.00
LX,$X2,$R                                                    11.04 10                  010217.00
NOP                                                           0.30 00                  010217.40
KV,$X2,BIT23                                           13103.04 90                     010220.00
BXE,$+1.0                                              10221.72 C2                     010220.40
B,$+1.32                                               10222.50 00                     010221.00
NOP                                                           0.30 00                  010221.40
B,$+1.32                                               10223.50 00                     010222.00
SIC,SEN               -RHW MODIFICATION OF FULL WD INST     1310.00 80                  010222.40
B,SERS                -FAILS WHEN INDEXED BY ABOVE BIT.     1304.10 00                  010223.00
                                                                                        -
B,$+1.0                                                10224.50 00                     010223.40
BD,14820                                               10165.44 00                     010224.00
SIC,SEN0+.32                                            1311.40 80                     010224.40
B,SSW                 -TO SSIP.                         1301.10 00                     010225.00
BD,$+.32                                               10226.04 00                     010225.40
                                                                                        -
LX,$X13,IC248         -UPDATE CONTINUITY.               11306.32 10                     010226.00
V+,$X13,BIT9                                           13065.32 B0                     010226.40
SX,$X13,IC248                                          11306.33 10                     010227.00
```

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14821   LX,$X1,BIT15        -TEST RHW OF FW, INDEX BIT 47.      13073.02 10                    010227.40
        L%BU¤,BIT31,%$X1¤   -OFFSET BECOMES 8.                 13113.00 80 000000.20 51       010230.00
        LX,$X2,$R                                                 11.04 10                    010231.00
        NOP                                                        0.30 00                    010231.40
        KV,$X2,BIT23                                           13103.04 90                    010232.00
        BXE,$+1.0                                              10233.72 C2                    010232.40
        B,$+1.32                                               10234.50 00                    010233.00
        NOP                                                        0.30 00                    010233.40
        B,$+1.32                                               10235.50 00                    010234.00
        SIC,SEN             -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010234.40
        B,SERS              -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010235.00
                                                                    -
        LX,$X1,BIT16        -TEST RHW OF FW, INDEX BIT 48.      13074.02 10                    010235.40
        L%BU¤,BIT27,%$X1¤   -OFFSET BECOMES 4.                 13107.00 80 000000.20 51       010236.00
        LX,$X2,$R                                                 11.04 10                    010237.00
        NOP                                                        0.30 00                    010237.40
        KV,$X2,BIT23                                           13103.04 90                    010240.00
        BXE,$+1.0                                              10241.72 C2                    010240.40
        B,$+1.32                                               10242.50 00                    010241.00
        NOP                                                        0.30 00                    010241.40
        B,$+1.32                                               10243.50 00                    010242.00
        SIC,SEN             -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010242.40
        B,SERS              -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010243.00
                                                                    -
        LX,$X1,BIT17        -TEST RHW OF FW, INDEX BIT 49.      13075.02 10                    010243.40
        L%BU¤,BIT25,%$X1¤   -OFFSET BECOMES 2.                 13105.00 80 000000.20 51       010244.00
        LX,$X2,$R                                                 11.04 10                    010245.00
        NOP                                                        0.30 00                    010245.40
        KV,$X2,BIT23                                           13103.04 90                    010246.00
        BXE,$+1.0                                              10247.72 C2                    010246.40
        B,$+1.32                                               10250.50 00                    010247.00
        NOP                                                        0.30 00                    010247.40
        B,$+1.32                                               10251.50 00                    010250.00
        SIC,SEN             -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010250.40
        B,SERS              -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010251.00
                                                                    -
        LX,$X1,BIT18        -TEST RHW OF FW, INDEX BIT 50.      13076.02 10                    010251.40
        L%BU¤,BIT24,%$X1¤   -OFFSET BECOMES 1.                 13104.00 80 000000.20 51       010252.00
        LX,$X2,$R                                                 11.04 10                    010253.00
        NOP                                                        0.30 00                    010253.40
        KV,$X2,BIT23                                           13103.04 90                    010254.00
        BXE,$+1.0                                              10255.72 C2                    010254.40
        B,$+1.32                                               10256.50 00                    010255.00
        NOP                                                        0.30 00                    010255.40
        B,$+1.32                                               10257.50 00                    010256.00
        SIC,SEN             -RHW MODIFICATION OF FULL WD INST    1310.00 80                    010256.40
        B,SERS              -FAILS WHEN INDEXED BY ABOVE BIT.    1304.10 00                    010257.00
                                                                    -
        B,$+1.0                                                10260.50 00                    010257.40
        BD,14821                                               10227.44 00                    010260.00
        SIC,SEN0+.32                                            1311.40 80                    010260.40
        B,SSW               -TO SSIP.                           1301.10 00                    010261.00
        BD,$+.32                                               10262.04 00                    010261.40
                                                                    -
        LX,$X13,IC248       -UPDATE CONTINUITY.                 11306.32 10                    010262.00
        V+,$X13,BIT10                                          13066.32 B0                    010262.40
        SX,$X13,IC248                                          11306.33 10                    010263.00
```

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                        -TEST 2B CHECK IX MOD OF
                        -LHW OF FW INSTRCTN.

                CNOP    -LH IX MODIFICATION, SUBTRACT BIT 0.      0.30 00                 010263.40
14822           LVI,$X0,148K24                                 11351.01 01                 010264.00
                V+,$X0,BIT0                                    13054.00 B0                 010264.40
                LV,$X1,BIT23M                                  11423.02 30                 010265.00
                NOP                                               0.30 00                 010265.40
                SVA,$X0,$+.32                                  10266.41 D0                 010266.00
                L%BU¤,0%$X1¤                                      0.00 81 000000.20 50     010266.40
                LX,$X1,$R                                        11.02 10                 010267.40
                KV,$X1,148K24                                  11351.02 90                 010270.00
                BXE,$+1.0                                      10271.72 C2                 010270.40
                B,$+1.32                                       10272.50 00                 010271.00
                KC,$X1,148K24                                  11351.03 90                 010271.40
                BXE,$+1.32                                     10273.72 C2                 010272.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD  1310.00 80        010272.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.  1304.10 00        010273.00

                CNOP    -LH IX MODIFICATION, SUBTRACT BIT 1.      0.30 00                 010273.40
                LVI,$X0,148K24                                 11351.01 01                 010274.00
                V+,$X0,BIT1                                    13055.00 B0                 010274.40
                LV,$X1,BIT22M                                  11422.02 30                 010275.00
                NOP                                               0.30 00                 010275.40
                SVA,$X0,$+.32                                  10276.41 D0                 010276.00
                L%BU¤,0%$X1¤                                      0.00 81 000000.20 50     010276.40
                LX,$X1,$R                                        11.02 10                 010277.40
                KV,$X1,148K24                                  11351.02 90                 010300.00
                BXE,$+1.0                                      10301.72 C2                 010300.40
                B,$+1.32                                       10302.50 00                 010301.00
                KC,$X1,148K24                                  11351.03 90                 010301.40
                BXE,$+1.32                                     10303.72 C2                 010302.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD  1310.00 80        010302.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.  1304.10 00        010303.00

                CNOP    -LH IX MODIFICATION, SUBTRACT BIT 2.      0.30 00                 010303.40
                LVI,$X0,148K24                                 11351.01 01                 010304.00
                V+,$X0,BIT2                                    13056.00 B0                 010304.40
                LV,$X1,BIT21M                                  11421.02 30                 010305.00
                NOP                                               0.30 00                 010305.40
                SVA,$X0,$+.32                                  10306.41 D0                 010306.00
                L%BU¤,0%$X1¤                                      0.00 81 000000.20 50     010306.40
                LX,$X1,$R                                        11.02 10                 010307.40
                KV,$X1,148K24                                  11351.02 90                 010310.00
                BXE,$+1.0                                      10311.72 C2                 010310.40
                B,$+1.32                                       10312.50 00                 010311.00
                KC,$X1,148K24                                  11351.03 90                 010311.40
                BXE,$+1.32                                     10313.72 C2                 010312.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD  1310.00 80        010312.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.  1304.10 00        010313.00

                B,$+1.0                                        10314.50 00                 010313.40
                BD,14822                                       10264.04 00                 010314.00
                SIC,SEN0+.32                                    1311.40 80                 010314.40
                B,SSW           -TO SSIP.                       1301.10 00                 010315.00
                BD,$+.32                                       10316.04 00                 010315.40

                LX,$X13,IC248   -UPDATE CONTINUITY.            11306.32 10                 010316.00
                V+,$X13,BIT11                                  13067.32 B0                 010316.40
                SX,$X13,IC248                                  11306.33 10                 010317.00
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                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 3.          0.30 00                    010317.40
14823           LVI,$X0,I48K24                                            11351.01 01                    010320.00
                V+,$X0,BIT3                                               13057.00 B0                    010320.40
                LV,$X1,BIT20M                                             11420.02 30                    010321.00
                NOP                                                           0.30 00                    010321.40
                SVA,$X0,$+.32                                             10322.41 D0                    010322.00
                L%BU¤,0%$X1¤                                                  0.00 81 000000.20 50       010322.40
                LX,$X1,$R                                                    11.02 10                    010323.40
                KV,$X1,I48K24                                             11351.02 90                    010324.00
                BXE,$+1.0                                                 10325.72 C2                    010324.40
                B,$+1.32                                                  10326.50 00                    010325.00
                KC,$X1,I48K24                                             11351.03 90                    010325.40
                BXE,$+1.32                                                10327.72 C2                    010326.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010326.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010327.00
                                                                                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 4.          0.30 00                    010327.40
                LVI,$X0,I48K24                                            11351.01 01                    010330.00
                V+,$X0,BIT4                                               13060.00 B0                    010330.40
                LV,$X1,BIT19M                                             11417.02 30                    010331.00
                NOP                                                           0.30 00                    010331.40
                SVA,$X0,$+.32                                             10332.41 D0                    010332.00
                L%BU¤,0%$X1¤                                                  0.00 81 000000.20 50       010332.40
                LX,$X1,$R                                                    11.02 10                    010333.40
                KV,$X1,I48K24                                             11351.02 90                    010334.00
                BXE,$+1.0                                                 10335.72 C2                    010334.40
                B,$+1.32                                                  10336.50 00                    010335.00
                KC,$X1,I48K24                                             11351.03 90                    010335.40
                BXE,$+1.32                                                10337.72 C2                    010336.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010336.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010337.00
                                                                                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 5.          0.30 00                    010337.40
                LVI,$X0,I48K24                                            11351.01 01                    010340.00
                V+,$X0,BIT5                                               13061.00 B0                    010340.40
                LV,$X1,BIT18M                                             11416.02 30                    010341.00
                NOP                                                           0.30 00                    010341.40
                SVA,$X0,$+.32                                             10342.41 D0                    010342.00
                L%BU¤,0%$X1¤                                                  0.00 81 000000.20 50       010342.40
                LX,$X1,$R                                                    11.02 10                    010343.40
                KV,$X1,I48K24                                             11351.02 90                    010344.00
                BXE,$+1.0                                                 10345.72 C2                    010344.40
                B,$+1.32                                                  10346.50 00                    010345.00
                KC,$X1,I48K24                                             11351.03 90                    010345.40
                BXE,$+1.32                                                10347.72 C2                    010346.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010346.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010347.00
                                                                                -
                B,$+1.0                                                   10350.50 00                    010347.40
                BD,I4823                                                  10320.04 00                    010350.00
                SIC,SEN0+.32                                                1311.40 80                   010350.40
                B,SSW           -TO SSIP.                                   1301.10 00                   010351.00
                BD,$+.32                                                  10352.04 00                    010351.40
                                                                                -
                LX,$X13,IC248   -UPDATE CONTINUITY.                       11306.32 10                    010352.00
                V+,$X13,BIT12                                             13070.32 B0                    010352.40
                SX,$X13,IC248                                             11306.33 10                    010353.00
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                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 6.          0.30 00                    010353.40
14824           LVI,$X0,I48K24                                            11351.01 01                    010354.00
                V+,$X0,BIT6                                               13062.00 B0                    010354.40
                LV,$X1,BIT17M                                             11415.02 30                    010355.00
                NOP                                                           0.30 00                    010355.40
                SVA,$X0,$+.32                                             10356.41 D0                    010356.00
                L%BU¤,0%$X1¤                                                  0.00 81 000000.20 50       010356.40
                LX,$X1,$R                                                    11.02 10                    010357.40
                KV,$X1,I48K24                                             11351.02 90                    010360.00
                BXE,$+1.0                                                 10361.72 C2                    010360.40
                B,$+1.32                                                  10362.50 00                    010361.00
                KC,$X1,I48K24                                             11351.03 90                    010361.40
                BXE,$+1.32                                                10363.72 C2                    010362.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010362.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010363.00
                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 7.          0.30 00                    010363.40
                LVI,$X0,I48K24                                            11351.01 01                    010364.00
                V+,$X0,BIT7                                               13063.00 B0                    010364.40
                LV,$X1,BIT16M                                             11414.02 30                    010365.00
                NOP                                                           0.30 00                    010365.40
                SVA,$X0,$+.32                                             10366.41 D0                    010366.00
                L%BU¤,0%$X1¤                                                  0.00 81 000000.20 50       010366.40
                LX,$X1,$R                                                    11.02 10                    010367.40
                KV,$X1,I48K24                                             11351.02 90                    010370.00
                BXE,$+1.0                                                 10371.72 C2                    010370.40
                B,$+1.32                                                  10372.50 00                    010371.00
                KC,$X1,I48K24                                             11351.03 90                    010371.40
                BXE,$+1.32                                                10373.72 C2                    010372.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010372.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010373.00
                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 8.          0.30 00                    010373.40
                LVI,$X0,I48K24                                            11351.01 01                    010374.00
                V+,$X0,BIT8                                               13064.00 B0                    010374.40
                LV,$X1,BIT15M                                             11413.02 30                    010375.00
                NOP                                                           0.30 00                    010375.40
                SVA,$X0,$+.32                                             10376.41 D0                    010376.00
                L%BU¤,0%$X1¤                                                  0.00 81 000000.20 50       010376.40
                LX,$X1,$R                                                    11.02 10                    010377.40
                KV,$X1,I48K24                                             11351.02 90                    010400.00
                BXE,$+1.0                                                 10401.72 C2                    010400.40
                B,$+1.32                                                  10402.50 00                    010401.00
                KC,$X1,I48K24                                             11351.03 90                    010401.40
                BXE,$+1.32                                                10403.72 C2                    010402.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010402.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010403.00
                -
                B,$+1.0                                                   10404.50 00                    010403.40
                BD,I4824                                                  10354.04 00                    010404.00
                SIC,SEN0+.32                                                1311.40 80                   010404.40
                B,SSW           -TO SSIP.                                   1301.10 00                   010405.00
                BD,$+.32                                                  10406.04 00                    010405.40
                -
                LX,$X13,IC248   -UPDATE CONTINUITY.                       11306.32 10                    010406.00
                V+,$X13,BIT13                                             13071.32 B0                    010406.40
                SX,$X13,IC248                                             11306.33 10                    010407.00
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        CNOP            -LH IX MODIFICATION, SUBTRACT BIT 9.      0.30 00                    010407.40
14825   LVI,$X0,I48K24                                        11351.01 01                    010410.00
        V+,$X0,BIT9                                           13065.00 B0                    010410.40
        LV,$X1,BIT14M                                         11412.02 30                    010411.00
        NOP                                                       0.30 00                    010411.40
        SVA,$X0,$+.32                                         10412.41 D0                    010412.00
        L%BU□,0%$X1□                                              0.00 81 000000.20 50       010412.40
        LX,$X1,$R                                                11.02 10                    010413.40
        KV,$X1,I48K24                                         11351.02 90                    010414.00
        BXE,$+1.0                                             10415.72 C2                    010414.40
        B,$+1.32                                              10416.50 00                    010415.00
        KC,$X1,I48K24                                         11351.03 90                    010415.40
        BXE,$+1.32                                            10417.72 C2                    010416.00
        SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD     1310.00 80                010416.40
        B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.     1304.10 00                010417.00
                                                                                             -
        CNOP            -LH IX MODIFICATION, SUBTRACT BIT 10.     0.30 00                    010417.40
        LVI,$X0,I48K24                                        11351.01 01                    010420.00
        V+,$X0,BIT10                                          13066.00 B0                    010420.40
        LV,$X1,BIT13M                                         11411.02 30                    010421.00
        NOP                                                       0.30 00                    010421.40
        SVA,$X0,$+.32                                         10422.41 D0                    010422.00
        L%BU□,0%$X1□                                              0.00 81 000000.20 50       010422.40
        LX,$X1,$R                                                11.02 10                    010423.40
        KV,$X1,I48K24                                         11351.02 90                    010424.00
        BXE,$+1.0                                             10425.72 C2                    010424.40
        B,$+1.32                                              10426.50 00                    010425.00
        KC,$X1,I48K24                                         11351.03 90                    010425.40
        BXE,$+1.32                                            10427.72 C2                    010426.00
        SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD     1310.00 80                010426.40
        B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.     1304.10 00                010427.00
                                                                                             -
        CNOP            -LH IX MODIFICATION, SUBTRACT BIT 11.     0.30 00                    010427.40
        LVI,$X0,I48K24                                        11351.01 01                    010430.00
        V+,$X0,BIT11                                          13067.00 B0                    010430.40
        LV,$X1,BIT12M                                         11410.02 30                    010431.00
        NOP                                                       0.30 00                    010431.40
        SVA,$X0,$+.32                                         10432.41 D0                    010432.00
        L%BU□,0%$X1□                                              0.00 81 000000.20 50       010432.40
        LX,$X1,$R                                                11.02 10                    010433.40
        KV,$X1,I48K24                                         11351.02 90                    010434.00
        BXE,$+1.0                                             10435.72 C2                    010434.40
        B,$+1.32                                              10436.50 00                    010435.00
        KC,$X1,I48K24                                         11351.03 90                    010435.40
        BXE,$+1.32                                            10437.72 C2                    010436.00
        SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD     1310.00 80                010436.40
        B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.     1304.10 00                010437.00
                                                                                             -
        B,$+1.0                                               10440.50 00                    010437.40
        BD,I4825                                              10410.04 00                    010440.00
        SIC,SEN0+.32                                           1311.40 80                    010440.40
        B,SSW           -TO SSIP.                              1301.10 00                    010441.00
        BD,$+.32                                              10442.04 00                    010441.40
                                                                                             -
        LX,$X13,IC248   -UPDATE CONTINUITY.                   11306.32 10                    010442.00
        V+,$X13,BIT14                                         13072.32 B0                    010442.40
        SX,$X13,IC248                                         11306.33 10                    010443.00
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          CNOP                    -LH IX MODIFICATION, SUBTRACT BIT 12.          0.30 00                   010443.40
14826     LVI,$X0,I48K24                                                     11351.01 01                   010444.00
          V+,$X0,BIT12                                                       13070.00 B0                   010444.40
          LV,$X1,BIT11M                                                      11407.02 30                   010445.00
          NOP                                                                    0.30 00                   010445.40
          SVA,$X0,$+.32                                                      10446.41 D0                   010446.00
          L%BU¤,0%$X1¤                                                           0.00 81  000000.20 50     010446.40
          LX,$X1,$R                                                             11.02 10                   010447.40
          KV,$X1,I48K24                                                      11351.02 90                   010450.00
          BXE,$+1.0                                                          10451.72 C2                   010450.40
          B,$+1.32                                                           10452.50 00                   010451.00
          KC,$X1,I48K24                                                      11351.03 90                   010451.40
          BXE,$+1.32                                                         10453.72 C2                   010452.00
          SIC,SEN                 -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010452.40
          B,SERS                  -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010453.00

          CNOP                    -LH IX MODIFICATION, SUBTRACT BIT 13.          0.30 00                   010453.40
          LVI,$X0,I48K24                                                     11351.01 01                   010454.00
          V+,$X0,BIT13                                                       13071.00 B0                   010454.40
          LV,$X1,BIT10M                                                      11406.02 30                   010455.00
          NOP                                                                    0.30 00                   010455.40
          SVA,$X0,$+.32                                                      10456.41 D0                   010456.00
          L%BU¤,0%$X1¤                                                           0.00 81  000000.20 50     010456.40
          LX,$X1,$R                                                             11.02 10                   010457.40
          KV,$X1,I48K24                                                      11351.02 90                   010460.00
          BXE,$+1.0                                                          10461.72 C2                   010460.40
          B,$+1.32                                                           10462.50 00                   010461.00
          KC,$X1,I48K24                                                      11351.03 90                   010461.40
          BXE,$+1.32                                                         10463.72 C2                   010462.00
          SIC,SEN                 -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010462.40
          B,SERS                  -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010463.00

          CNOP                    -LH IX MODIFICATION, SUBTRACT BIT 14.          0.30 00                   010463.40
          LVI,$X0,I48K24                                                     11351.01 01                   010464.00
          V+,$X0,BIT14                                                       13072.00 B0                   010464.40
          LV,$X1,BIT9M                                                       11405.02 30                   010465.00
          NOP                                                                    0.30 00                   010465.40
          SVA,$X0,$+.32                                                      10466.41 D0                   010466.00
          L%BU¤,0%$X1¤                                                           0.00 81  000000.20 50     010466.40
          LX,$X1,$R                                                             11.02 10                   010467.40
          KV,$X1,I48K24                                                      11351.02 90                   010470.00
          BXE,$+1.0                                                          10471.72 C2                   010470.40
          B,$+1.32                                                           10472.50 00                   010471.00
          KC,$X1,I48K24                                                      11351.03 90                   010471.40
          BXE,$+1.32                                                         10473.72 C2                   010472.00
          SIC,SEN                 -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                   010472.40
          B,SERS                  -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                   010473.00

          B,$+1.0                                                            10474.50 00                   010473.40
          BD,I4826                                                           10444.04 00                   010474.00
          SIC,SEN0+.32                                                        1311.40 80                   010474.40
          B,SSW                   -TO SSIP.                                   1301.10 00                   010475.00
          BD,$+.32                                                           10476.04 00                   010475.40
          BD,$+.32                                                           10476.44 00                   010476.00

          LX,$X13,IC248           -UPDATE CONTINUITY.                        11306.32 10                   010476.40
          V+,$X13,BIT15                                                      13073.32 B0                   010477.00
          SX,$X13,IC248                                                      11306.33 10                   010477.40
```

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                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 15.
14827           LVI,$X0,I48K24                      11351.01 01                    010500.00
                V+,$X0,BIT15                        13073.00 B0                    010500.40
                LV,$X1,BIT8M                        11404.02 30                    010501.00
                NOP                                     0.30 00                    010501.40
                SVA,$X0,$+.32                       10502.41 D0                    010502.00
                L%BU¤,0%$X1¤                            0.00 81 000000.20 50       010502.40
                LX,$X1,$R                              11.02 10                    010503.40
                KV,$X1,I48K24                       11351.02 90                    010504.00
                BXE,$+1.0                           10505.72 C2                    010504.40
                B,$+1.32                            10506.50 00                    010505.00
                KC,$X1,I48K24                       11351.03 90                    010505.40
                BXE,$+1.32                          10507.72 C2                    010506.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD   1310.00 80                    010506.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.   1304.10 00                    010507.00
                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 16.        0.30 00                    010507.40
                LVI,$X0,I48K24                      11351.01 01                    010510.00
                V+,$X0,BIT16                        13074.00 B0                    010510.40
                LV,$X1,BIT7M                        11403.02 30                    010511.00
                NOP                                     0.30 00                    010511.40
                SVA,$X0,$+.32                       10512.41 D0                    010512.00
                L%BU¤,0%$X1¤                            0.00 81 000000.20 50       010512.40
                LX,$X1,$R                              11.02 10                    010513.40
                KV,$X1,I48K24                       11351.02 90                    010514.00
                BXE,$+1.0                           10515.72 C2                    010514.40
                B,$+1.32                            10516.50 00                    010515.00
                KC,$X1,I48K24                       11351.03 90                    010515.40
                BXE,$+1.32                          10517.72 C2                    010516.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD   1310.00 80                    010516.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.   1304.10 00                    010517.00
                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 17.        0.30 00                    010517.40
                LVI,$X0,I48K24                      11351.01 01                    010520.00
                V+,$X0,BIT17                        13075.00 B0                    010520.40
                LV,$X1,BIT6M                        11402.02 30                    010521.00
                NOP                                     0.30 00                    010521.40
                SVA,$X0,$+.32                       10522.41 D0                    010522.00
                L%BU¤,0%$X1¤                            0.00 81 000000.20 50       010522.40
                LX,$X1,$R                              11.02 10                    010523.40
                KV,$X1,I48K24                       11351.02 90                    010524.00
                BXE,$+1.0                           10525.72 C2                    010524.40
                B,$+1.32                            10526.50 00                    010525.00
                KC,$X1,I48K24                       11351.03 90                    010525.40
                BXE,$+1.32                          10527.72 C2                    010526.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD   1310.00 80                    010526.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.   1304.10 00                    010527.00
                -
                B,$+1.0                             10530.50 00                    010527.40
                BD,I4827                            10500.04 00                    010530.00
                SIC,SEN0+.32                         1311.40 80                    010530.40
                B,SSW           -TO SSIP.            1301.10 00                    010531.00
                BD,$+.32                            10532.04 00                    010531.40
                -
                LX,$X13,IC248   -UPDATE CONTINUITY.  11306.32 10                    010532.00
                V+,$X13,BIT16                       13074.32 B0                    010532.40
                SX,$X13,IC248                       11306.33 10                    010533.00
```

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                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 18.      0.30 00                    010533.40
14828           LVI,$X0,I48K24                                         11351.01 01                    010534.00
                V+,$X0,BIT18                                           13076.00 B0                    010534.40
                LV,$X1,BIT5M                                           11401.02 30                    010535.00
                NOP                                                        0.30 00                    010535.40
                SVA,$X0,$+.32                                          10536.41 D0                    010536.00
                L%BU¤,0%$X1¤                                               0.00 81 000000.20 50       010536.40
                LX,$X1,$R                                                 11.02 10                    010537.40
                KV,$X1,I48K24                                          11351.02 90                    010540.00
                BXE,$+1.0                                              10541.72 C2                    010540.40
                B,$+1.32                                               10542.50 00                    010541.00
                KC,$X1,I48K24                                          11351.03 90                    010541.40
                BXE,$+1.32                                             10543.72 C2                    010542.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                010542.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                010543.00
                                                                           -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 19.      0.30 00                    010543.40
                LVI,$X0,I48K24                                         11351.01 01                    010544.00
                V+,$X0,BIT19                                           13077.00 B0                    010544.40
                LV,$X1,BIT4M                                           11400.02 30                    010545.00
                NOP                                                        0.30 00                    010545.40
                SVA,$X0,$+.32                                          10546.41 D0                    010546.00
                L%BU¤,0%$X1¤                                               0.00 81 000000.20 50       010546.40
                LX,$X1,$R                                                 11.02 10                    010547.40
                KV,$X1,I48K24                                          11351.02 90                    010550.00
                BXE,$+1.0                                              10551.72 C2                    010550.40
                B,$+1.32                                               10552.50 00                    010551.00
                KC,$X1,I48K24                                          11351.03 90                    010551.40
                BXE,$+1.32                                             10553.72 C2                    010552.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                010552.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                010553.00
                                                                           -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 20.      0.30 00                    010553.40
                LVI,$X0,I48K24                                         11351.01 01                    010554.00
                V+,$X0,BIT20                                           13100.00 B0                    010554.40
                LV,$X1,BIT3M                                           11377.02 30                    010555.00
                NOP                                                        0.30 00                    010555.40
                SVA,$X0,$+.32                                          10556.41 D0                    010556.00
                L%BU¤,0%$X1¤                                               0.00 81 000000.20 50       010556.40
                LX,$X1,$R                                                 11.02 10                    010557.40
                KV,$X1,I48K24                                          11351.02 90                    010560.00
                BXE,$+1.0                                              10561.72 C2                    010560.40
                B,$+1.32                                               10562.50 00                    010561.00
                KC,$X1,I48K24                                          11351.03 90                    010561.40
                BXE,$+1.32                                             10563.72 C2                    010562.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                010562.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                010563.00
                                                                           -
                B,$+1.0                                                10564.50 00                    010563.40
                BD,I4828                                               10534.04 00                    010564.00
                SIC,SEN0+.32                                                1311.40 80                010564.40
                B,SSW           -TO SSIP.                                   1301.10 00                010565.00
                BD,$+.32                                               10566.04 00                    010565.40
                                                                           -
                LX,$X13,IC248   -UPDATE CONTINUITY.                    11306.32 10                    010566.00
                V+,$X13,BIT17                                          13075.32 B0                    010566.40
                SX,$X13,IC248                                          11306.33 10                    010567.00
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                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 21.      0.30 00                    010567.40
14829           LVI,$X0,I48K24                                         11351.01 01                    010570.00
                V+,$X0,BIT21                                           13101.00 B0                    010570.40
                LV,$X1,BIT2M                                           11376.02 30                    010571.00
                NOP                                                        0.30 00                    010571.40
                SVA,$X0,$+.32                                          10572.41 D0                    010572.00
                L%BU¤,0%$X1¤                                               0.00 81 000000.20 50       010572.40
                LX,$X1,$R                                                 11.02 10                    010573.40
                KV,$X1,I48K24                                          11351.02 90                    010574.00
                BXE,$+1.0                                              10575.72 C2                    010574.40
                B,$+1.32                                               10576.50 00                    010575.00
                KC,$X1,I48K24                                          11351.03 90                    010575.40
                BXE,$+1.32                                             10577.72 C2                    010576.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                010576.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                010577.00
                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 22.      0.30 00                    010577.40
                LVI,$X0,I48K24                                         11351.01 01                    010600.00
                V+,$X0,BIT22                                           13102.00 B0                    010600.40
                LV,$X1,BIT1M                                           11375.02 30                    010601.00
                NOP                                                        0.30 00                    010601.40
                SVA,$X0,$+.32                                          10602.41 D0                    010602.00
                L%BU¤,0%$X1¤                                               0.00 81 000000.20 50       010602.40
                LX,$X1,$R                                                 11.02 10                    010603.40
                KV,$X1,I48K24                                          11351.02 90                    010604.00
                BXE,$+1.0                                              10605.72 C2                    010604.40
                B,$+1.32                                               10606.50 00                    010605.00
                KC,$X1,I48K24                                          11351.03 90                    010605.40
                BXE,$+1.32                                             10607.72 C2                    010606.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                010606.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                010607.00
                -
                CNOP            -LH IX MODIFICATION, SUBTRACT BIT 23.      0.30 00                    010607.40
                LVI,$X0,I48K24                                         11351.01 01                    010610.00
                V+,$X0,BIT23                                           13103.00 B0                    010610.40
                LV,$X1,BIT0M                                           11374.02 30                    010611.00
                NOP                                                        0.30 00                    010611.40
                SVA,$X0,$+.32                                          10612.41 D0                    010612.00
                L%BU¤,0%$X1¤                                               0.00 81 000000.20 50       010612.40
                LX,$X1,$R                                                 11.02 10                    010613.40
                KV,$X1,I48K24                                          11351.02 90                    010614.00
                BXE,$+1.0                                              10615.72 C2                    010614.40
                B,$+1.32                                               10616.50 00                    010615.00
                KC,$X1,I48K24                                          11351.03 90                    010615.40
                BXE,$+1.32                                             10617.72 C2                    010616.00
                SIC,SEN         -ABOVE BIT WHEN SUBTRACTED THRU IX MOD      1310.00 80                010616.40
                B,SERS          -FAILS TO YIELD CORRECT EFFECTIVE ADR.      1304.10 00                010617.00
                -
                B,$+1.0                                                10620.50 00                    010617.40
                BD,I4829                                               10570.04 00                    010620.00
                SIC,SEN0+.32                                                1311.40 80                010620.40
                B,SSW           -TO SSIP.                                   1301.10 00                010621.00
                BD,$+.32                                               10622.04 00                    010621.40
                -
                LX,$X13,IC248   -UPDATE CONTINUITY.                    11306.32 10                    010622.00
                V+,$X13,BIT18                                          13076.32 B0                    010622.40
                SX,$X13,IC248                                          11306.33 10                    010623.00
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14830   LX,$X1,1000         -TEST 3 CHECK 1-BOX HALF WORD 19      13035.02 10                  010623.40
        SX,$X1,148DMP       -BIT MODIFICATION.                    11373.03 10                  010624.00
        SIC,148S2                                                 11320.00 80                  010624.40
        B,148S1                                                   11310.10 00                  010625.00
        LX,$X1,148XW1                                             11361.02 10                  010625.40
        LR,$X0,0%$X1¤                                                 0.00 71                  010626.00
        L%BU¤,$X0                                                    20.00 80 000000.20 50     010626.40
        BZRZ,14831          -OK                                   10711.74 C0                  010627.40
                                                                      -
        LV,$X1,100Z                                               13034.02 30                  010630.00
        L%BU¤,$X1                                                    21.00 80 000000.20 50     010630.40
        BRZ,$+2.0                                                 10633.74 C2                  010631.40
        SIC,SEN                                                    1310.00 80                  010632.00
        B,SERS              -GATING BIT 22 SPUR.                   1304.10 00                  010632.40
        B,14831                                                   10711.50 00                  010633.00
                                                                      -
        L%BU¤,$X2                                                    22.00 80 000000.20 50     010633.40
        BRZ,$+2.0                                                 10636.74 C2                  010634.40
        SIC,SEN                                                    1310.00 80                  010635.00
        B,SERS              -GATING BIT 21 SPUR.                   1304.10 00                  010635.40
        B,14831                                                   10711.50 00                  010636.00
                                                                      -
        L%BU¤,$X3                                                    23.00 80 000000.20 50     010636.40
        BRZ,$+2.0                                                 10641.74 C2                  010637.40
        SIC,SEN                                                    1310.00 80                  010640.00
        B,SERS              -GATING BITS 21,22 SPUR.               1304.10 00                  010640.40
        B,14831                                                   10711.50 00                  010641.00
                                                                      -
        L%BU¤,$X4                                                    24.00 80 000000.20 50     010641.40
        BRZ,$+2.0                                                 10644.74 C2                  010642.40
        SIC,SEN                                                    1310.00 80                  010643.00
        B,SERS              -GATING BIT 20 SPUR.                   1304.10 00                  010643.40
        B,14831                                                   10711.50 00                  010644.00
                                                                      -
        L%BU¤,$X5                                                    25.00 80 000000.20 50     010644.40
        BRZ,$+2.0                                                 10647.74 C2                  010645.40
        SIC,SEN                                                    1310.00 80                  010646.00
        B,SERS              -GATING BITS 20,22 SPUR.               1304.10 00                  010646.40
        B,14831                                                   10711.50 00                  010647.00
                                                                      -
        L%BU¤,$X6                                                    26.00 80 000000.20 50     010647.40
        BRZ,$+2.0                                                 10652.74 C2                  010650.40
        SIC,SEN                                                    1310.00 80                  010651.00
        B,SERS              -GATING BITS 20,21 SPUR.               1304.10 00                  010651.40
        B,14831                                                   10711.50 00                  010652.00
                                                                      -
        L%BU¤,$X7                                                    27.00 80 000000.20 50     010652.40
        BRZ,$+2.0                                                 10655.74 C2                  010653.40
        SIC,SEN                                                    1310.00 80                  010654.00
        B,SERS              -GATING BITS 20,21,22 SPUR.            1304.10 00                  010654.40
        B,14831                                                   10711.50 00                  010655.00
                                                                      -
        L%BU¤,$X8                                                    30.00 80 000000.20 50     010655.40
        BRZ,$+2.0                                                 10660.74 C2                  010656.40
        SIC,SEN                                                    1310.00 80                  010657.00
        B,SERS              -GATING BIT 19 SPUR.                   1304.10 00                  010657.40
        B,14831                                                   10711.50 00                  010660.00
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                L%BU¤,$X9
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,22 SPUR.
                B,14831

                L%BU¤,$X10
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,21 SPUR.
                B,14831
                L%BU¤,$X11
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,21,22 SPUR.
                B,14831

                L%BU¤,$X12
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,20, SPUR.
                B,14831

                L%BU¤,$X13
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,20,22 SPUR.
                B,14831

                L%BU¤,$X14
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,20,21 SPUR.
                B,14831

                L%BU¤,$X15
                BRZ,$+2.0
                SIC,SEN
                B,SERS          -GATING BITS 19,20,21,22 SPUR.
                B,14831

                LX,$X1,148DMP
                SR,$X1,$X1
                BXVZ,$+2.0
                SIC,SEN
                B,SERS          -GATING AT LEAST BIT 23 SPUR.
                B,14831

                SIC,SEN         -FAILURE IN BITS 0-18 AND POSSIBLE
                B,SERS          -FAILURE IN BITS 19-23.

14831           B,$+1.0
                BD,14830
                SIC,SEN0+.32
                B,SSW           -TO SSIP
                BD,$+.32

                LX,$X13,IC248   -UPDATE CONTINUITY.
                V+,$X13,BIT19
                SX,$X13,IC248
```

```
    31.00 80 000000.20 50     010660.40
10663.74 C2                   010661.40
 1310.00 80                   010662.00
 1304.10 00                   010662.40
10711.50 00                   010663.00
-
    32.00 80 000000.20 50     010663.40
10666.74 C2                   010664.40
 1310.00 80                   010665.00
 1304.10 00                   010665.40
10711.50 00                   010666.00
    33.00 80 000000.20 50     010666.40
10671.74 C2                   010667.40
 1310.00 80                   010670.00
 1304.10 00                   010670.40
10711.50 00                   010671.00
-
    34.00 80 000000.20 50     010671.40
10674.74 C2                   010672.40
 1310.00 80                   010673.00
 1304.10 00                   010673.40
10711.50 00                   010674.00
-
    35.00 80 000000.20 50     010674.40
10677.74 C2                   010675.40
 1310.00 80                   010676.00
 1304.10 00                   010676.40
10711.50 00                   010677.00
-
    36.00 80 000000.20 50     010677.40
10702.74 C2                   010700.40
 1310.00 80                   010701.00
 1304.10 00                   010701.40
10711.50 00                   010702.00
-
    37.00 80 000000.20 50     010702.40
10705.74 C2                   010703.40
 1310.00 80                   010704.00
 1304.10 00                   010704.40
10711.50 00                   010705.00
-
11373.02 10                   010705.40
   21.03 70                   010706.00
10710.71 42                   010706.40
 1310.00 80                   010707.00
 1304.10 00                   010707.40
10711.50 00                   010710.00
-
 1310.00 80                   010710.40
 1304.10 00                   010711.00
-
10712.50 00                   010711.40
10623.44 00                   010712.00
 1311.40 80                   010712.40
 1301.10 00                   010713.00
10714.04 00                   010713.40
-
11306.32 10                   010714.00
13077.32 B0                   010714.40
11306.33 10                   010715.00
```

```
                LX,$X1,I48ER1       -TEST 4, 18 BIT FLOATING          11372.02 10    010715.40
                BXCZ,I4832          -POINT MODIFICATION.              10721.70 42    010716.00
                SIC,SEN             -PREVIOUS FP FAILURE PROHIBITS     1310.00 80    010716.40
                B,SERS              -RUNNING THIS TEST.                1304.10 00    010717.00
                                                                                -
                LX,$X13,IC248       -UPDATE CONTINUITY.               11306.32 10    010717.40
                V+,$X13,BIT20                                         13100.32 B0    010720.00
                SX,$X13,IC248                                         11306.33 10    010720.40
                B,I4833             -TERMINATE.                       10736.50 00    010721.00
                                                                                -
I4832           LX,$X1,I48XW2                                         11362.02 10    010721.40
                L%N□,0%$X1□                                             0.00 61    010722.00
                LX,$X1,$L                                              10.02 10    010722.40
                KV,$X1,BIT13                                          13071.02 90    010723.00
                BXH,$+2.0                                             10725.73 42    010723.40
                SIC,SEN                                                1310.00 80    010724.00
                B,SERS              -GATING BIT 18 SPURIOUSLY.         1304.10 00    010724.40
                B,I48321                                              10732.50 00    010725.00
                                                                                -
                LX,$X1,I48XW3                                         11363.02 10    010725.40
                L%U□,0%$X1□                                             0.40 61    010726.00
                LX,$X1,$L                                              10.02 10    010726.40
                KV,$X1,I48K24                                         11351.02 90    010727.00
                BXE,$+1.0                                             10730.72 C2    010727.40
                B,$+1.32                                              10731.50 00    010730.00
                KC,$X1,I48K24                                         11351.03 90    010730.40
                BXE,$+1.32                                            10732.72 C2    010731.00
                SIC,SEN                                                1310.00 80    010731.40
                B,SERS              -GATING SOME OF 19-23 SPUR.        1304.10 00    010732.00
                                                                                -
I48321          B,$+1.0                                               10733.50 00    010732.40
                BD,I4832                                              10721.44 00    010733.00
                SIC,SEN0+.32                                           1311.40 80    010733.40
                B,SSW               -TO SSIP.                          1301.10 00    010734.00
                BD,$+.32                                              10735.04 00    010734.40
                                                                                -
                LX,$X13,IC248       -UPDATE CONTINUITY.               11306.32 10    010735.00
                V+,$X13,BIT20                                         13100.32 B0    010735.40
                SX,$X13,IC248                                         11306.33 10    010736.00
```

```
                                -TEST 5 CHECKS ALL 8 CODES
                                -IN THE P FIELD OF A VFL LOAD.
                                                                                -
14833   Z,$X1                   -TEST 5A CHKS P FIELD OF 000.          21.22 00                        010736.40
        L%BU¤,148K24%$X1¤                                           11351.00 81 000000.20 50        010737.00
        LX,$X0,$R                                                      11.00 10                     010740.00
        KV,$X0,148K24                                               11351.00 90                     010740.40
        BXE,$+1.0                                                   10742.32 C2                     010741.00
        B,14834                                                     10746.50 00                     010741.40
        KC,$X0,148K24                                               11351.01 90                     010742.00
        BXE,$+1.0                                                   10743.72 C2                     010742.40
        B,14834                                                     10746.50 00                     010743.00
        L%BU¤,$X1                                                      21.00 80 000000.20 50        010743.40
        BRZ,14835               -P OF 000 ALL OK.                   10763.74 C2                     010744.40
                                                                                -
        SIC,SEN                 -P OF 000 LOADS OK BUT MODIFIES IX     1310.00 80                     010745.00
        B,SERS                  -REG SPECIFIED BY I-LEFT.              1304.10 00                     010745.40
        B,14835                                                     10763.50 00                     010746.00
                                                                                -
14834   KV1,$X0,148K24                                              11351.01 04                     010746.40
        BZXE,$+2.0                                                  10751.32 C0                     010747.00
        SIC,SEN                 -P OF 000 ACTS LIKE                    1310.00 80                     010747.40
        B,SERS                  -A P OF 100.                           1304.10 00                     010750.00
        B,14835                                                     10763.50 00                     010750.40
                                                                                -
        L%BU¤,$X0                                                      20.00 80 000000.20 50        010751.00
        BRZ,$+1.0                                                   10753.34 C2                     010752.00
        B,14836                                                     10757.50 00                     010752.40
        L%BU¤,$X1                                                      21.00 80 000000.20 50        010753.00
        BRZ,$+2.0                                                   10756.34 C2                     010754.00
        SIC,SEN                 -P OF 000 ACTS LIKE P OF 001, 010,     1310.00 80                     010754.40
        B,SERS                  -011,101,110, OR 111.                  1304.10 00                     010755.00
        B,14835                                                     10763.50 00                     010755.40
                                                                                -
        SIC,SEN                 -LOADED FROM I-LEFT INDEX VALUE ADR    1310.00 80                     010756.00
        B,SERS                  -BUT DID NOT MODIFY IX REG,            1304.10 00                     010756.40
        B,14835                                                     10763.50 00                     010757.00
                                                                                -
14836   L%BU¤,$X1                                                      21.00 80 000000.20 50        010757.40
        BRZ,$+2.0                                                   10762.74 C2                     010760.40
        SIC,SEN                 -LOADED FROM UNKNOWN LOCN BUT DID      1310.00 80                     010761.00
        B,SERS                  -MODIFY IX REG SPECIFIED BY I-LEFT.    1304.10 00                     010761.40
        B,14835                                                     10763.50 00                     010762.00
                                                                                -
        SIC,SEN                 -LOADED FROM UNKNOWN LOCN,DID NOT      1310.00 80                     010762.40
        B,SERS                  -MODIFY IX REG SPECIFIED BY I-LEFT.    1304.10 00                     010763.00
                                                                                -
14835   B,$+1.0                                                     10764.50 00                     010763.40
        BD,14833                                                    10736.44 00                     010764.00
        SIC,SEN0+.32                                                   1311.40 80                     010764.40
        B,SSW                   -TO SSIP                               1301.10 00                     010765.00
        BD,$+.32                                                    10766.04 00                     010765.40
                                                                                -
        LX,$X13,IC248           -UPDATE CONTINUITY.                 11306.32 10                     010766.00
        V+,$X13,BIT21                                               13101.32 B0                     010766.40
        SX,$X13,IC248                                               11306.33 10                     010767.00
```

```
14836A  LVI,$X1,BIT0        -TEST 5B CHKS P FIELD OF 100.        13054.03 01                 010767.40
        LVI,$X2,14839       -IMMEDIATE MODE, Z TO LA TEST.       11003.05 01                 010770.00
        LCI,$X1,24                                                  30.03 02                 010770.40
14837   Z,$X0                                                       20.22 00                 010771.00
        SVA,$X2,14838                                            11000.05 D0                 010771.40
        SVA,$X1,$+.32                                            10772.43 D0                 010772.00
        LX,$X3,0                                                    0.06 10                 010772.40
        SVA,$X3,$+.32                                            10773.47 D0                 010773.00
        LI%BU,64,8¤,0                                               0.00 80 400000.20 50    010773.40 F
        NOP                                                         0.30 00                 010774.40
        NOP                                                         0.30 00                 010775.00
        NOP                                                         0.30 00                 010775.40
        LX,$X3,$R                                                  11.06 10                 010776.00
        SVA,$X1,$+.32                                            10777.03 D0                 010776.40
        KV,$X3,0                                                    0.06 90                 010777.00
        BXE,$+1.0                                                11000.72 C2                 010777.40
14838   $B,0                -FAILURE                                0.10 00                 011000.00

14838A  C-I,$X1,1           -SEE IF DONE.                           1.03 08                 011000.40
        BXCZ,14840                                               11063.30 42                 011001.00
        V+I,$X1,1.0                                                 1.03 05                 011001.40
        V+I,$X2,2.0                                                 2.05 05                 011002.00
        BD,14837                                                 10771.04 00                 011002.40
        CNOP

14839   SIC,SEN             -LOAD IMMEDIATE FAILURE,BIT 0.       1310.00 80                 011003.00
        B,SERS                                                   1304.10 00                 011003.40
        B,14838A                                                11000.50 00                 011004.00
        NOP                                                         0.30 00                 011004.40

                            -YOU CAME TO THIS ERROR TABLE FROM 14438
        SIC,SEN             -LOAD IMMEDIATE FAILURE,BIT 1.       1310.00 80                 011005.00
        B,SERS                                                   1304.10 00                 011005.40
        B,14838A                                                11000.50 00                 011006.00
        NOP                                                         0.30 00                 011006.40

        SIC,SEN             -LOAD IMMEDIATE FAILURE,BIT 2.       1310.00 80                 011007.00
        B,SERS                                                   1304.10 00                 011007.40
        B,14838A                                                11000.50 00                 011010.00
        NOP                                                         0.30 00                 011010.40

        SIC,SEN             -LOAD IMMEDIATE FAILURE,BIT 3.       1310.00 80                 011011.00
        B,SERS                                                   1304.10 00                 011011.40
        B,14838A                                                11000.50 00                 011012.00
        NOP                                                         0.30 00                 011012.40

        SIC,SEN             -LOAD IMMEDIATE FAILURE,BIT 4.       1310.00 80                 011013.00
        B,SERS                                                   1304.10 00                 011013.40
        B,14838A                                                11000.50 00                 011014.00
        NOP                                                         0.30 00                 011014.40

        SIC,SEN             -LOAD IMMEDIATE FAILURE,BIT 5.       1310.00 80                 011015.00
        B,SERS                                                   1304.10 00                 011015.40
        B,14838A                                                11000.50 00                 011016.00
        NOP                                                         0.30 00                 011016.40
```

```
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 6.      1310.00 80      011017.00
B,SERS                                               1304.10 00      011017.40
B,14838A                                            11000.50 00      011020.00
NOP                                                     0.30 00      011020.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 7.      1310.00 80      011021.00
B,SERS                                               1304.10 00      011021.40
B,14838A                                            11000.50 00      011022.00
NOP                                                     0.30 00      011022.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 8.      1310.00 80      011023.00
B,SERS                                               1304.10 00      011023.40
B,14838A                                            11000.50 00      011024.00
NOP                                                     0.30 00      011024.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 9.      1310.00 80      011025.00
B,SERS                                               1304.10 00      011025.40
B,14838A                                            11000.50 00      011026.00
NOP                                                     0.30 00      011026.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 10.     1310.00 80      011027.00
B,SERS                                               1304.10 00      011027.40
B,14838A                                            11000.50 00      011030.00
NOP                                                     0.30 00      011030.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 11.     1310.00 80      011031.00
B,SERS                                               1304.10 00      011031.40
B,14838A                                            11000.50 00      011032.00
NOP                                                     0.30 00      011032.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 12.     1310.00 80      011033.00
B,SERS                                               1304.10 00      011033.40
B,14838A                                            11000.50 00      011034.00
NOP                                                     0.30 00      011034.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 13.     1310.00 80      011035.00
B,SERS                                               1304.10 00      011035.40
B,14838A                                            11000.50 00      011036.00
NOP                                                     0.30 00      011036.40
                                                                -
SIC,SEN          -LOAD IMMEDIATE FAILURE,BIT 14.     1310.00 80      011037.00
B,SERS                                               1304.10 00      011037.40
B,14838A                                            11000.50 00      011040.00
NOP                                                     0.30 00      011040.40
```

```
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 15.     1310.00 80      011041.00
                B,SERS                                              1304.10 00      011041.40
                B,14838A                                           11000.50 00      011042.00
                NOP                                                    0.30 00      011042.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 16.     1310.00 80      011043.00
                B,SERS                                              1304.10 00      011043.40
                B,14838A                                           11000.50 00      011044.00
                NOP                                                    0.30 00      011044.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 17.     1310.00 80      011045.00
                B,SERS                                              1304.10 00      011045.40
                B,14838A                                           11000.50 00      011046.00
                NOP                                                    0.30 00      011046.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 18.     1310.00 80      011047.00
                B,SERS                                              1304.10 00      011047.40
                B,14838A                                           11000.50 00      011050.00
                NOP                                                    0.30 00      011050.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 19.     1310.00 80      011051.00
                B,SERS                                              1304.10 00      011051.40
                B,14838A                                           11000.50 00      011052.00
                NOP                                                    0.30 00      011052.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 20.     1310.00 80      011053.00
                B,SERS                                              1304.10 00      011053.40
                B,14838A                                           11000.50 00      011054.00
                NOP                                                    0.30 00      011054.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 21.     1310.00 80      011055.00
                B,SERS                                              1304.10 00      011055.40
                B,14838A                                           11000.50 00      011056.00
                NOP                                                    0.30 00      011056.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 22.     1310.00 80      011057.00
                B,SERS                                              1304.10 00      011057.40
                B,14838A                                           11000.50 00      011060.00
                NOP                                                    0.30 00      011060.40
                -
                SIC,SEN         -LOAD IMMEDIATE FAILURE,BIT 23.     1310.00 80      011061.00
                B,SERS                                              1304.10 00      011061.40
                B,14838A                                           11000.50 00      011062.00
                NOP                                                    0.30 00      011062.40
                -
                -
14840           B,$+1.0                                            11064.10 00      011063.00
                BD,14836A                                          10767.44 00      011063.40
                SIC,SEN0+.32                                        1311.40 80      011064.00
                B,SSW           -TO SSIP.                           1301.10 00      011064.40
                BD,$+.32                                           11065.44 00      011065.00
                -
                LX,$X13,IC248   -UPDATE CONTINUITY.                11306.32 10      011065.40
                V+,$X13,BIT22                                      13102.32 B0      011066.00
                SX,$X13,IC248                                      11306.33 10      011066.40
```

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14841   LVI,$X1,BIT0        -CHECK INDEXING IMMEDIATE LOAD.      13054.03 01                  011067.00
        LVI,$X2,14844                                            11102.05 01                  011067.40
        LCI,$X1,24                                                  30.03 02                  011070.00
148412  SVA,$X2,14842                                            11076.45 D0                  011070.40
        SVA,$X1,$+.32                                            11071.43 D0                  011071.00
        LV,$X3,0                                                     0.06 30                  011071.40
        LI%BU,64,8¤,0%$X3¤                                           0.00 83 400000.20 50     011072.00 F
        NOP                                                          0.30 00                  011073.00
        NOP                                                          0.30 00                  011073.40
        NOP                                                          0.30 00                  011074.00
        LX,$X3,$R                                                   11.06 10                  011074.40
        SVA,$X1,$+.32                                            11075.43 D0                  011075.00
        KV,$X3,0                                                     0.06 90                  011075.40
        BXE,$+1.0                                                11077.32 C2                  011076.00
14842   $B,0                -FAILURE.                                0.10 00                  011076.40
14843   C-I,$X1,1           -DONE,                                   1.03 08                  011077.00
        BXCZ,14844A         -YES.                                11162.30 42                  011077.40
        V+I,$X1,1.0         -NO.                                     1.03 05                  011100.00
        V+I,$X2,2.0                                                  2.05 05                  011100.40
        BD,148412                                                11070.44 00                  011101.00
        CNOP                                                         0.30 00                  011101.40
                                                                                              -
                            -YOU CAME TO THIS ERROR TABLE FROM 14842
14844   SIC,SEN             -LD IMMED 0 INDEXED BY BIT 0          1310.00 80                  011102.00
        B,SERS              -FAILED                               1304.10 00                  011102.40
        B,14843             -FAILED                              11077.10 00                  011103.00
        NOP                 -FAILED.                                 0.30 00                  011103.40
                                                                                              -
        SIC,SEN             -LD IMMED 0 INDEXED BY BIT 1          1310.00 80                  011104.00
        B,SERS              -FAILED                               1304.10 00                  011104.40
        B,14843             -FAILED                              11077.10 00                  011105.00
        NOP                 -FAILED.                                 0.30 00                  011105.40
                                                                                              -
        SIC,SEN             -LD IMMED 0 INDEXED BY BIT 2          1310.00 80                  011106.00
        B,SERS              -FAILED                               1304.10 00                  011106.40
        B,14843             -FAILED                              11077.10 00                  011107.00
        NOP                 -FAILED.                                 0.30 00                  011107.40
                                                                                              -
        SIC,SEN             -LD IMMED 0 INDEXED BY BIT 3          1310.00 80                  011110.00
        B,SERS              -FAILED                               1304.10 00                  011110.40
        B,14843             -FAILED                              11077.10 00                  011111.00
        NOP                 -FAILED.                                 0.30 00                  011111.40
                                                                                              -
        SIC,SEN             -LD IMMED 0 INDEXED BY BIT 4          1310.00 80                  011112.00
        B,SERS              -FAILED                               1304.10 00                  011112.40
        B,14843             -FAILED                              11077.10 00                  011113.00
        NOP                 -FAILED.                                 0.30 00                  011113.40
                                                                                              -
        SIC,SEN             -LD IMMED 0 INDEXED BY BIT 5          1310.00 80                  011114.00
        B,SERS              -FAILED                               1304.10 00                  011114.40
        B,14843             -FAILED                              11077.10 00                  011115.00
        NOP                 -FAILED.                                 0.30 00                  011115.40
                                                                                              -
        SIC,SEN             -LD IMMED 0 INDEXED BY BIT 6          1310.00 80                  011116.00
        B,SERS              -FAILED                               1304.10 00                  011116.40
        B,14843             -FAILED                              11077.10 00                  011117.00
        NOP                 -FAILED.                                 0.30 00                  011117.40
                                                                                              -
```

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SIC,SEN          -LD IMMED 0 INDEXED BY BIT 7          1310.00 80          011120.00
B,SERS           -FAILED                               1304.10 00          011120.40
B,14843          -FAILED                              11077.10 00          011121.00
NOP              -FAILED.                                 0.30 00          011121.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 8          1310.00 80          011122.00
B,SERS           -FAILED                               1304.10 00          011122.40
B,14843          -FAILED                              11077.10 00          011123.00
NOP              -FAILED.                                 0.30 00          011123.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 9          1310.00 80          011124.00
B,SERS           -FAILED                               1304.10 00          011124.40
B,14843          -FAILED                              11077.10 00          011125.00
NOP              -FAILED.                                 0.30 00          011125.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 10         1310.00 80          011126.00
B,SERS           -FAILED                               1304.10 00          011126.40
B,14843          -FAILED                              11077.10 00          011127.00
NOP              -FAILED.                                 0.30 00          011127.40
SIC,SEN          -LD IMMED 0 INDEXED BY BIT 11         1310.00 80          011130.00
B,SERS           -FAILED                               1304.10 00          011130.40
B,14843          -FAILED                              11077.10 00          011131.00
NOP              -FAILED.                                 0.30 00          011131.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 12         1310.00 80          011132.00
B,SERS           -FAILED                               1304.10 00          011132.40
B,14843          -FAILED                              11077.10 00          011133.00
NOP              -FAILED.                                 0.30 00          011133.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 13         1310.00 80          011134.00
B,SERS           -FAILED                               1304.10 00          011134.40
B,14843          -FAILED                              11077.10 00          011135.00
NOP              -FAILED.                                 0.30 00          011135.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 14         1310.00 80          011136.00
B,SERS           -FAILED                               1304.10 00          011136.40
B,14843          -FAILED                              11077.10 00          011137.00
NOP              -FAILED.                                 0.30 00          011137.40
                                                                -

SIC,SEN          -LD IMMED 0 INDEXED BY BIT 15         1310.00 80          011140.00
B,SERS           -FAILED                               1304.10 00          011140.40
B,14843          -FAILED                              11077.10 00          011141.00
NOP              -FAILED.                                 0.30 00          011141.40
                                                                -
```

```
          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 16      1310.00 80      011142.00
          B,SERS         -FAILED                            1304.10 00      011142.40
          B,14843        -FAILED                           11077.10 00      011143.00
          NOP            -FAILED.                              0.30 00      011143.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 17      1310.00 80      011144.00
          B,SERS         -FAILED                            1304.10 00      011144.40
          B,14843        -FAILED                           11077.10 00      011145.00
          NOP            -FAILED.                              0.30 00      011145.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 18      1310.00 80      011146.00
          B,SERS         -FAILED                            1304.10 00      011146.40
          B,14843        -FAILED                           11077.10 00      011147.00
          NOP            -FAILED.                              0.30 00      011147.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 19      1310.00 80      011150.00
          B,SERS         -FAILED                            1304.10 00      011150.40
          B,14843        -FAILED                           11077.10 00      011151.00
          NOP            -FAILED.                              0.30 00      011151.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 20      1310.00 80      011152.00
          B,SERS         -FAILED                            1304.10 00      011152.40
          B,14843        -FAILED                           11077.10 00      011153.00
          NOP            -FAILED.                              0.30 00      011153.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 21      1310.00 80      011154.00
          B,SERS         -FAILED                            1304.10 00      011154.40
          B,14843        -FAILED                           11077.10 00      011155.00
          NOP            -FAILED.                              0.30 00      011155.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 22      1310.00 80      011156.00
          B,SERS         -FAILED                            1304.10 00      011156.40
          B,14843        -FAILED                           11077.10 00      011157.00
          NOP            -FAILED.                              0.30 00      011157.40
                                                                -

          SIC,SEN        -LD IMMED 0 INDEXED BY BIT 23      1310.00 80      011160.00
          B,SERS         -FAILED                            1304.10 00      011160.40
          B,14843        -FAILED                           11077.10 00      011161.00
          NOP            -FAILED.                              0.30 00      011161.40
14844A    B,$+1.0                                          11163.10 00      011162.00
          BD,14841                                         11067.04 00      011162.40
          SIC,SENO+.32                                      1311.40 80      011163.00
          B,SSW          -TO SSIP.                          1301.10 00      011163.40
          BD,$+.32                                         11164.44 00      011164.00
                                                                -

          LX,$X13,IC248  -UPDATE CONTINUITY.               11306.32 10      011164.40
          V+,$X13,BIT23                                    13103.32 B0      011165.00
          SX,$X13,IC248                                    11306.33 10      011165.40
                                                                -
```

```
14845   LX,$X1,I48XW4       -TEST 5C, CHK PROG IX V+I                11364.02 10                    011166.00
        L%V+I¤%BU,64,8¤,1.0%$X1¤                                        1.00 81 100000.20 50       011166.40
        LX,$X2,$R                                                      11.04 10                    011167.40
        KV,$X2,I48K25                                               11352.04 90                    011170.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+I,        1310.00 80                    011170.40
        BZXE,SERS           -FAILED TO OBTAIN CORRECT OPERAND.       1304.32 C0                    011171.00
                                                                                -
        KV,$X1,I48K28                                               11355.02 90                    011171.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+I,        1310.00 80                    011172.00
        BZXE,SERS           -FAILED TO MODIFY IX VALUE CORRECTLY.    1304.32 C0                    011172.40
                                                                                -
        KC,$X1,BIT17                                                13075.03 90                    011173.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+I,        1310.00 80                    011173.40
        BZXE,SERS           -MODIFIED INDEX COUNT.                   1304.32 C0                    011174.00
                                                                                -
        SR,$X1,$X1                                                     21.03 70                    011174.40
        LX,$X1,$X1                                                     21.02 10                    011175.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+I,        1310.00 80                    011175.40
        BZXVZ,SERS          -REFILLED.                               1304.31 40                    011176.00
                                                                                -
        LX,$X1,I48XW5       -TEST 5D, CHK PROG IX V+IC.              11365.02 10                    011176.40
        L%V+IC¤%BU,64,8¤,1.0%$X1¤                                       1.00 81 200000.20 50       011177.00
        LX,$X2,$R                                                      11.04 10                    011200.00
        KV,$X2,I48K25                                               11352.04 90                    011200.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+IC,       1310.00 80                    011201.00
        BZXE,SERS           -FAILED TO OBTAIN CORRECT OPERAND.       1304.32 C0                    011201.40
                                                                                -
        KV,$X1,I48K28                                               11355.02 90                    011202.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+IC,       1310.00 80                    011202.40
        BZXE,SERS           -FAILED TO MODIFY IX VALUE CORRECTLY.    1304.32 C0                    011203.00
                                                                                -
        KC,$X1,BIT17                                                13075.03 90                    011203.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+IC,       1310.00 80                    011204.00
        BZXE,SERS           -MODIFIED INDEX COUNT. INCORRECTLY.      1304.32 C0                    011204.40
                                                                                -
        SR,$X1,$X1                                                     21.03 70                    011205.00
        LX,$X1,$X1                                                     21.02 10                    011205.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+IC,       1310.00 80                    011206.00
        BZXVZ,SERS          -REFILLED.                               1304.31 40                    011206.40
                                                                                -
        B,$+1.0                                                     11210.10 00                    011207.00
        BD,I4845                                                    11166.04 00                    011207.40
        SIC,SEN0+.32                                                 1311.40 80                    011210.00
        B,SSW               -TO SSIP                                 1301.10 00                    011210.40
        BD,$+.32                                                    11211.44 00                    011211.00
                                                                                -
        LX,$X13,IC248       -UPDATE CONTINUITY.                     11306.32 10                    011211.40
        SC,$X13,$X12                                                   34.33 50                    011212.00
        V+,$X12,BIT0                                                13054.30 B0                    011212.40
        LC,$X13,$X12                                                   34.32 50                    011213.00
        SX,$X13,IC248                                               11306.33 10                    011213.40
```

```
14846   LX,$X1,I48XW6       -TEST 5E, CHK PROG IX V+ICR.          11366.02 10                  011214.00
        L%V+ICR¤%BU,64,8¤,1.0%$X1¤                                   1.00 81 300000.20 50      011214.40
        LX,$X2,$R                                                   11.04 10                  011215.40
        KV,$X2,I48K25                                            11352.04 90                  011216.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+ICR,   1310.00 80                  011216.40
        BZXE,SERS           -FAILED TO OBTAIN CORRECT OPERAND.    1304.32 C0                  011217.00
                                                                        -
        KV,$X1,I48K28                                            11355.02 90                  011217.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+ICR,   1310.00 80                  011220.00
        BZXE,SERS           -FAILED TO MODIFY IX VALUE CORRECTLY. 1304.32 C0                  011220.40
                                                                        -
        KC,$X1,BIT17                                             13075.03 90                  011221.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+ICR,   1310.00 80                  011221.40
        BZXE,SERS           -MODIFIED INDEX COUNT. INCORRECTLY.   1304.32 C0                  011222.00
                                                                        -
        SR,$X1,$X1                                                  21.03 70                  011222.40
        LX,$X1,$X1                                                  21.02 10                  011223.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V+ICR,   1310.00 80                  011223.40
        BZXVZ,SERS          -REFILLED INCORRECTLY.                1304.31 40                  011224.00
                                                                        -
        LX,$X1,I48XW7       -TEST 5F, CHK PROG IX V-I.            11367.02 10                  011224.40
        L%V-I¤%BU,64,8¤,1.0%$X1¤                                     1.00 81 500000.20 50      011225.00
        LX,$X2,$R                                                   11.04 10                  011226.00
        KV,$X2,I48K25                                            11352.04 90                  011226.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-I,     1310.00 80                  011227.00
        BZXE,SERS           -FAILED TO OBTAIN CORRECT OPERAND.    1304.32 C0                  011227.40
                                                                        -
        KV,$X1,I48K28                                            11355.02 90                  011230.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-I,     1310.00 80                  011230.40
        BZXE,SERS           -FAILED TO MODIFY IX VALUE CORRECTLY. 1304.32 C0                  011231.00
                                                                        -
        KC,$X1,BIT17                                             13075.03 90                  011231.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-I,     1310.00 80                  011232.00
        BZXE,SERS           -MODIFIED INDEX COUNT.                1304.32 C0                  011232.40
                                                                        -
        SR,$X1,$X1                                                  21.03 70                  011233.00
        LX,$X1,$X1                                                  21.02 10                  011233.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-I,     1310.00 80                  011234.00
        BZXVZ,SERS          -REFILLED.                            1304.31 40                  011234.40
                                                                        -
        B,$+1.0                                                  11236.10 00                  011235.00
        BD,I4846                                                 11214.04 00                  011235.40
        SIC,SEN0+.32                                              1311.40 80                  011236.00
        B,SSW               -TO SSIP                              1301.10 00                  011236.40
        BD,$+.32                                                 11237.44 00                  011237.00
                                                                        -
        LX,$X13,IC248       -UPDATE CONTINUITY.                  11306.32 10                  011237.40
        SC,$X13,$X12                                                34.33 50                  011240.00
        V+,$X12,BIT1                                             13055.30 B0                  011240.40
        LC,$X13,$X12                                                34.32 50                  011241.00
        SX,$X13,IC248                                            11306.33 10                  011241.40
```

```
14847   LX,$X1,I48XW8       -TEST 5G, CHK PROG IX V-IC.          11370.02 10                  011242.00
        L%V-IC¤%BU,64,8¤,1.0%$X1¤                                    1.00 81 600000.20 50     011242.40
        LX,$X2,$R                                                   11.04 10                  011243.40
        KV,$X2,I48K25                                            11352.04 90                  011244.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-IC,    1310.00 80                  011244.40
        BZXE,SERS           -FAILED TO OBTAIN CORRECT OPERAND.    1304.32 C0                  011245.00
                                                                                -
        KV,$X1,I48K28                                            11355.02 90                  011245.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-IC,    1310.00 80                  011246.00
        BZXE,SERS           -FAILED TO MODIFY IX VALUE CORRECTLY. 1304.32 C0                  011246.40
                                                                                -
        KC,$X1,BIT17                                             13075.03 90                  011247.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-IC,    1310.00 80                  011247.40
        BZXE,SERS           -MODIFIED INDEX COUNT INCORRECTLY.    1304.32 C0                  011250.00
                                                                                -
        SR,$X1,$X1                                                  21.03 70                  011250.40
        LX,$X1,$X1                                                  21.02 10                  011251.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-IC,    1310.00 80                  011251.40
        BZXVZ,SERS          -REFILLED.                            1304.31 40                  011252.00
                                                                                -
        LX,$X1,I48XW9       -TEST 5H, CHK PROG IX V-ICR.         11371.02 10                  011252.40
        L%V-ICR¤%BU,64,8¤,1.0%$X1¤                                   1.00 81 700000.20 50     011253.00
        LX,$X2,$R                                                   11.04 10                  011254.00
        KV,$X2,I48K25                                            11352.04 90                  011254.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-ICR,   1310.00 80                  011255.00
        BZXE,SERS           -FAILED TO OBTAIN CORRECT OPERAND.    1304.32 C0                  011255.40
                                                                                -
        KV,$X1,I48K28                                            11355.02 90                  011256.00
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-ICR,   1310.00 80                  011256.40
        BZXE,SERS           -FAILED TO MODIFY IX VALUE CORRECTLY. 1304.32 C0                  011257.00
                                                                                -
        KC,$X1,BIT17                                             13075.03 90                  011257.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-ICR,   1310.00 80                  011260.00
        BZXE,SERS           -MODIFIED INDEX COUNT INCORRECTLY.    1304.32 C0                  011260.40
                                                                                -
        SR,$X1,$X1                                                  21.03 70                  011261.00
        LX,$X1,$X1                                                  21.02 10                  011261.40
        SIC,SEN             -VFL LOAD PROG INDEXED, CODE V-ICR,   1310.00 80                  011262.00
        BZXVZ,SERS          -REFILLED INCORRECTLY.                1304.31 40                  011262.40
                                                                                -
        B,$+1.0                                                  11264.10 00                  011263.00
        BD,I4847                                                 11242.04 00                  011263.40
        SIC,SEN0+.32                                              1311.40 80                  011264.00
        B,SSW               -TO SSIP                              1301.10 00                  011264.40
        BD,$+.32                                                 11265.44 00                  011265.00
                                                                                -
        LX,$X13,IC248       -UPDATE CONTINUITY.                  11306.32 10                  011265.40
        SC,$X13,$X12                                                34.33 50                  011266.00
        V+,$X12,BIT2                                             13056.30 B0                  011266.40
        LC,$X13,$X12                                                34.32 50                  011267.00
        SX,$X13,IC248                                            11306.33 10                  011267.40
```

```
14848   SIC,I48S2           -TEST 51,PROG IX WITH IX 0.      11320.00 80                    011270.00
        B,I48S1                                              11310.10 00                    011270.40
        LX,$X0,I48XW4                                        11364.00 10                    011271.00
        L%BU¤,0                                                  0.00 80 000000.20 50       011271.40
        SIC,SEN             -NOT PROG IX WITH I FLD ZERO USES 1310.00 80                    011272.40
        BZRZ,SERS           -IX 0 TO GENERATE EFFECT ADR.     1304.34 C0                    011273.00
                                                                                            -
        B,$+1.0                                              11274.50 00                    011273.40
        BD,I4848                                             11270.04 00                    011274.00
        SIC,SEN0+.32                                          1311.40 80                    011274.40
        B,SSW               -TO SSIP.                         1301.10 00                    011275.00
        BD,$+.32                                             11276.04 00                    011275.40
                                                                                            -
        LX,$X13,IC248       -UPDATE CONTINUITY.              11306.32 10                    011276.00
        SC,$X13,$X12                                            34.33 50                    011276.40
        V+,$X12,BIT3                                         13057.30 B0                    011277.00
        LC,$X13,$X12                                            34.32 50                    011277.40
        SX,$X13,IC248                                        11306.33 10                    011300.00
                                                                                            -
        LX,$X13,IC248       -UPDATE CONTINUITY CHECK.        11306.32 10                    011300.40
        KV,$X13,ICK248                                       11307.32 90                    011301.00
        SIC,SEN                                               1310.00 80                    011301.40
        BZXE,SERS           -CONTINUITY ERROR.                1304.32 C0                    011302.00
        SC,$X13,$X13                                            35.33 50                    011302.40
        LX,$X12,ICK248                                       11307.30 10                    011303.00
        SC,$X12,$X12                                            34.31 50                    011303.40
        KV,$X13,$X12                                            34.32 90                    011304.00
        SIC,SEN                                               1310.00 80                    011304.40
        BZXE,SERS           -CONTINUITY ERROR.                1304.32 C0                    011305.00
        BD,I50                                               11424.04 00                    011305.40
                                                                                            -
IC248   XW,0,0,0            -CONTINUITY REG I248.                0.00 00 000000.00 00       011306.00
ICK248  XW,%8¤777777.77,%8¤740000,0                       777777.77 0F 000000.00 00       011307.00
                                                                                            -
I48S1   Z,$X0               -SUBROUTINE TO CLEAR              20.22 00                      011310.00
        Z,$X1               -ALL IX REGS.                     21.22 00                      011310.40
        Z,$X3                                                 23.22 00                      011311.00
        Z,$X4                                                 24.22 00                      011311.40
        Z,$X5                                                 25.22 00                      011312.00
        Z,$X6                                                 26.22 00                      011312.40
        Z,$X7                                                 27.22 00                      011313.00
        Z,$X8                                                 30.22 00                      011313.40
        Z,$X9                                                 31.22 00                      011314.00
        Z,$X10                                                32.22 00                      011314.40
        Z,$X11                                                33.22 00                      011315.00
        Z,$X12                                                34.22 00                      011315.40
        Z,$X13                                                35.22 00                      011316.00
        Z,$X14                                                36.22 00                      011316.40
        Z,$X15                                                37.22 00                      011317.00
        Z,$X2                                                 22.22 00                      011317.40
I48S2   $B,0                                                   0.10 00                      011320.00
```

```
          CNOP
148K0     SX,$X0,148DMP
          NOP
148K1     SX,$X1,148DMP
          NOP
148K2     SX,$X2,148DMP
          NOP
148K3     SX,$X3,148DMP
          NOP
148K4     SX,$X4,148DMP
          NOP
148K5     SX,$X5,148DMP
          NOP
148K6     SX,$X6,148DMP
          NOP
148K7     SX,$X7,148DMP
          NOP
148K8     SX,$X8,148DMP
          NOP
148K9     SX,$X9,148DMP
          NOP
148K10    SX,$X10,148DMP
          NOP
148K11    SX,$X11,148DMP
          NOP
148K12    SX,$X12,148DMP
          NOP
148K13    SX,$X13,148DMP
          NOP
148K14    SX,$X14,148DMP
          NOP
148K15    SX,$X15,148DMP
          NOP

148K16    XW,%8¤400000.00,0,0
148K17    XW,%8¤600000.00,0,0
148K18    XW,%8¤700000.00,0,0
148K19    XW,%8¤740000.00,0,0
148K20    XW,%8¤760000.00,0,0
148K21    XW,%8¤770000.00,0,0
148K22    XW,%8¤774000.00,0,0
148K23    XW,%8¤776000.00,0,0
148K24    XW,%8¤123456.76,%8¤123456,0
148K25    XW,%8¤123456.70
148K26    XW,%8¤765432.10
148K27    XW,%8¤123456.70
148K28    XW,148K26,1,0
148K29    XW,0,0,%8¤37
148K30    XW,0,0,7
148K31    XW,0,0,3

148XW1    XW,148DMP+.63,0,0
148XW2    XW,BIT13+.32.0,0
148XW3    XW,148K24+.63,0,0
148XW4    XW,148K25,1,0
148XW5    XW,148K25,2,0
148XW6    XW,148K25,1,148K28
148XW7    XW,148K27,1,0
148XW8    XW,148K27,2,0
148XW9    XW,148K27,1,148K28

148ER1    XW,0,0,0              -V I SELN, C FP, R VFL.
```

```
          0.30 00          011320.40
   11373.01 10             011321.00
          0.30 00          011321.40
   11373.03 10             011322.00
          0.30 00          011322.40
   11373.05 10             011323.00
          0.30 00          011323.40
   11373.07 10             011324.00
          0.30 00          011324.40
   11373.11 10             011325.00
          0.30 00          011325.40
   11373.13 10             011326.00
          0.30 00          011326.40
   11373.15 10             011327.00
          0.30 00          011327.40
   11373.17 10             011330.00
          0.30 00          011330.40
   11373.21 10             011331.00
          0.30 00          011331.40
   11373.23 10             011332.00
          0.30 00          011332.40
   11373.25 10             011333.00
          0.30 00          011333.40
   11373.27 10             011334.00
          0.30 00          011334.40
   11373.31 10             011335.00
          0.30 00          011335.40
   11373.33 10             011336.00
          0.30 00          011336.40
   11373.35 10             011337.00
          0.30 00          011337.40
   11373.37 10             011340.00
          0.30 00          011340.40
-
   400000.00 00 000000.00 00    011341.00
   600000.00 00 000000.00 00    011342.00
   700000.00 00 000000.00 00    011343.00
   740000.00 00 000000.00 00    011344.00
   760000.00 00 000000.00 00    011345.00
   770000.00 00 000000.00 00    011346.00
   774000.00 00 000000.00 00    011347.00
   776000.00 00 000000.00 00    011350.00
   123456.76 02 471340.00 00    011351.00
   123456.70 00 000000.00 00    011352.00
   765432.10 00 000000.00 00    011353.00
   123456.70 00 000000.00 00    011354.00
    11353.00 00 000020.00 00    011355.00
        0.00 00 000000.00 1F    011356.00
        0.00 00 000000.00 07    011357.00
        0.00 00 000000.00 03    011360.00
-
   11373.77 00 000000.00 00     011361.00
   13071.40 00 000000.00 00     011362.00
   11351.77 00 000000.00 00     011363.00
   11352.00 00 000020.00 00     011364.00
   11352.00 00 000040.00 00     011365.00
   11352.00 00 000020.22 ED     011366.00
   11354.00 00 000020.00 00     011367.00
   11354.00 00 000040.00 00     011370.00
   11354.00 00 000020.22 ED     011371.00
-
        0.00 00 000000.00 00    011372.00
```

```
T48DMP  XW,0,0,0


BIT0M   XW,%8¤-0.01
BIT1M   XW,%8¤-0.02
BIT2M   XW,%8¤-0.04
BIT3M   XW,%8¤-0.10
BIT4M   XW,%8¤-0.20
BIT5M   XW,%8¤-0.40
BIT6M   XW,%8¤-1.0
BIT7M   XW,%8¤-2.0
BIT8M   XW,%8¤-4.0
BIT9M   XW,%8¤-10.0
BIT10M  XW,%8¤-20.0
BIT11M  XW,%8¤-40.0
BIT12M  XW,%8¤-100.0
BIT13M  XW,%8¤-200.0
BIT14M  XW,%8¤-400.0
BIT15M  XW,%8¤-1000.0
BIT16M  XW,%8¤-2000.0
BIT17M  XW,%8¤-4000.0
BIT18M  XW,%8¤-10000.0
BIT19M  XW,%8¤-20000.0
BIT20M  XW,%8¤-40000.0
BIT21M  XW,%8¤-100000.0
BIT22M  XW,%8¤-200000.0
BIT23M  XW,%8¤-400000.0
```

```
      0.00 00 000000.00 00      011373.00


      0.01 80 000000.00 00      011374.00
      0.02 80 000000.00 00      011375.00
      0.04 80 000000.00 00      011376.00
      0.10 80 000000.00 00      011377.00
      0.20 80 000000.00 00      011400.00
      0.40 80 000000.00 00      011401.00
      1.00 80 000000.00 00      011402.00
      2.00 80 000000.00 00      011403.00
      4.00 80 000000.00 00      011404.00
     10.00 80 000000.00 00      011405.00
     20.00 80 000000.00 00      011406.00
     40.00 80 000000.00 00      011407.00
    100.00 80 000000.00 00      011410.00
    200.00 80 000000.00 00      011411.00
    400.00 80 000000.00 00      011412.00
   1000.00 80 000000.00 00      011413.00
   2000.00 80 000000.00 00      011414.00
   4000.00 80 000000.00 00      011415.00
  10000.00 80 000000.00 00      011416.00
  20000.00 80 000000.00 00      011417.00
  40000.00 80 000000.00 00      011420.00
 100000.00 80 000000.00 00      011421.00
 200000.00 80 000000.00 00      011422.00
 400000.00 80 000000.00 00      011423.00
```

----I250---CB AND CBR TEST.

```
I50      LX,$X1,I50ID                                              11427.02 10                  011424.00
         SX,$X1,DPET13                                              1437.03 10                  011424.40
         SIC,RET                                                    1306.40 80                  011425.00
                B,IDF1      -PRINT ID.                              1443.10 00                  011425.40
         Z,IC250                                                   11770.22 00                  011426.00
         BD,LORE1                                                  11430.04 00                  011426.40
         CNOP
I50ID    %IQSZ¤DD%BU,64,8¤,I250    Z                                                            011427.00

LORE1    LX,$X1,LORE                                               11772.02 10                  011430.00
         SX,$X1,IBR8                                               11443.03 10                  011430.40
         SX,$X1,IBR18                                              11456.03 10                  011431.00
         SX,$X1,IBR28                                              11471.03 10                  011431.40
         SX,$X1,IBR38                                              11504.03 10                  011432.00
IBR      LX,$X1,IBRA1              -SET UP XW                      11442.02 10                  011432.40
IBR1     CB,$X1,IBR2               -COUNT TO 3 + BRANCH            11434.02 48                  011433.00
         BD,CBERA                  -ERROR OCCURED                  12016.04 00                  011433.40
IBR2     CB,$X1,IBR3               -COUNT TO 2 + BRANCH            11435.42 48                  011434.00
         BD,CBERA1                 -ERROR OCCURED                  12017.44 00                  011434.40
         BD,CBERA2                 -ERROR OCCURED                  12021.04 00                  011435.00
IBR3     CB,$X1,IBR4               -COUNT TO 1 + BRANCH            11437.42 48                  011435.40
         BD,CBERA3                 -ERROR OCCURED                  12022.44 00                  011436.00
         BD,CBERA4                 -ERROR OCCURED                  12024.04 00                  011436.40
         BD,CBERA5                 -ERROR OCCURED                  12025.44 00                  011437.00
IBR4     CB,$X1,IBR7               -COUNT TO ZERO NO BRANCH        11441.02 48                  011437.40
IBR5     SX,$X1,IBR8               -STORE FOR VALUE TEST           11443.03 10                  011440.00
IBR6     B,IBR8                                                    11443.10 00                  011440.40
IBR7     BD,CBERA6                 -ERROR OCCURED                  12027.04 00                  011441.00
IBRA1    XW,IBR9+%8¤.04,4,-1                                       11445.04 00 000117.77 FF     011442.00
IBR8     NOP,0.                                                        0.30 00                  011443.00
                NOP,0.             -BECOMES%BD,IBR9¤,14-0+18-1S        0.30 00                  011443.40
         NOP,                                                          0.30 00                  011444.00
         BD,CBERA7                 -ERROR OCCURED                  12030.44 00                  011444.40
IBR9     VF,%8¤777777.70           -21 ONES OR NOP,-1            777777.70+                     011445.00
         VF,%8¤777777.70           -21 ONES OR NOP,-1            777777.70+                     011445.40
IBR10    LX,$X1,IBRA2              -SET UP XW                      11455.02 10                  011446.00
IBR11    CB+,$X1,IBR12             -COUNT TO 3 + BRANCH            11447.43 48                  011446.40
         BD,CBERB                  -ERROR OCCURED                  12032.04 00                  011447.00
IBR12    CB+,$X1,IBR13             -COUNT TO 2 + BRANCH            11451.03 48                  011447.40
         BD,CBERB1                 -ERROR OCCURED                  12033.44 00                  011450.00
         BD,CBERB2                 -ERROR OCCURED                  12035.04 00                  011450.40
IBR13    CB+,$X1,IBR14             -COUNT TO 1 + BRANCH            11453.03 48                  011451.00
         BD,CBERB3                 -ERROR OCCURED                  12036.44 00                  011451.40
         BD,CBERB4                 -ERROR OCCURED                  12040.04 00                  011452.00
         BD,CBERB5                 -ERROR OCCURED                  12041.44 00                  011452.40
IBR14    CB+,$X1,IBR17             -COUNT TO ZERO NO BRANCH        11454.43 48                  011453.00
IBR15    SX,$X1,IBR18              -STORE FOR VALUE TEST           11456.03 10                  011453.40
IBR16    B,IBR18                                                   11456.10 00                  011454.00
IBR17    BD,CBERB6                 -ERROR OCCURED                  12043.04 00                  011454.40
IBRA2    XW,IBR16+%8¤.04,4,-1                                      11454.04 00 000117.77 FF     011455.00
IBR18    NOP,0.                                                        0.30 00                  011456.00
                NOP,0.             -BECOMES BD,IBR19 +14-0+18-1S       0.30 00                  011456.40
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         NOP,                                                            0.30 00              011457.00
         BD,CBERB7                    -ERROR OCCURED                 12044.44 00              011457.40
IBR19    VF,%8¤777777.70              -21 ONES OR NOP,-1            777777.70+                011460.00
         VF,%8¤777777.70              -21 ONES OR NOP,-1            777777.70+                011460.40
IBR20    LX,$X1,IBRA3                 -SET UP XW                     11470.02 10              011461.00
IBR21    CBH,$X1,IBR22                -COUNT TO 3 + BRANCH           11462.42 C8              011461.40
         BD,CBERC                     -ERROR OCCURED                 12046.04 00              011462.00
IBR22    CBH,$X1,IBR23                -COUNT TO 2 + BRANCH           11464.02 C8              011462.40
         BD,CBERC1                    -ERROR OCCURED                 12047.44 00              011463.00
         BD,CBERC2                    -ERROR OCCURED                 12051.04 00              011463.40
IBR23    CBH,$X1,IBR24                -COUNT TO 1 + BRANCH           11466.02 C8              011464.00
         BD,CBERC3                    -ERROR OCCURED                 12052.44 00              011464.40
         BD,CBERC4                    -ERROR OCCURED                 12054.04 00              011465.00
         BD,CBERC5                    -ERROR OCCURED                 12055.44 00              011465.40
IBR24    CBH,$X1,IBR27                -COUNT TO ZERO NO BRANCH       11467.42 C8              011466.00
IBR25    SX,$X1,IBR28                 -STORE FOR VALUE TEST          11471.03 10              011466.40
IBR26    B,IBR28                                                     11471.10 00              011467.00
IBR27    BD,CBERC6                    -ERROR OCCURED                 12057.04 00              011467.40
IBRA3    XW,IBR28+.04,4,-1                                           11471.04 00 000117.77 FF 011470.00
IBR28    NOP,0.                                                          0.30 00              011471.00
                NOP,0.                -BECOMES BD,IBR29,14-0+18-1S       0.30 00              011471.40
         NOP,                                                            0.30 00              011472.00
         BD,CBERC7                    -ERROR OCCURED                 12060.44 00              011472.40
IBR29    VF,%8¤777777.70              -21 ONES OR NOP,-1            777777.70+                011473.00
         VF,%8¤777777.70              -21 ONES OR NOP,-1            777777.70+                011473.40
IBR30    LX,$X1,IBRA4                 -SET UP XW                     11503.02 10              011474.00
IBR31    CB-,$X1,IBR32                -COUNT TO 3 + BRANCH           11475.43 C8              011474.40
         BD,CBERD                     -ERROR OCCURED                 12062.04 00              011475.00
IBR32    CB-,$X1,IBR33                -COUNT TO 2 + BRANCH           11477.03 C8              011475.40
         BD,CBERD1                    -ERROR OCCURED                 12063.44 00              011476.00
         BD,CBERD2                    -ERROR OCCURED                 12065.04 00              011476.40
IBR33    CB-,$X1,IBR34                -COUNT TO 1 + BRANCH           11501.03 C8              011477.00
         BD,CBERD3                    -ERROR OCCURED                 12066.44 00              011477.40
         BD,CBERD4                    -ERROR OCCURED                 12070.04 00              011500.00
         BD,CBERD5                    -ERROR OCCURED                 12071.44 00              011500.40
IBR34    CB-,$X1,IBR37                -COUNT TO ZERO NO BRANCH       11502.43 C8              011501.00
IBR35    SX,$X1,IBR38                 -STORE FOR VALUE TEST          11504.03 10              011501.40
IBR36    B,IBR38                                                     11504.10 00              011502.00
IBR37    BD,CBERD6                    -ERROR OCCURED                 12073.04 00              011502.40
IBRA4    XW,IBR39+%8¤4.04,4,-1                                       11512.04 00 000117.77 FF 011503.00
IBR38    NOP,0.                                                          0.30 00              011504.00
                NOP,0.                -BECOMES BD,IBR39,14-0+18-1S       0.30 00              011504.40
         NOP,                                                            0.30 00              011505.00
         BD,CBERD7                    -ERROR OCCURED                 12074.44 00              011505.40
IBR39    VF,%8¤777777.70              -21 ONES OR NOP,-1            777777.70+                011506.00
         VF,%8¤777777.70              -21 ONES OR NOP,-1            777777.70+                011506.40

         B,$+1.0                                                     11510.10 00              011507.00
         BD,LORE1                                                    11430.04 00              011507.40
         SIC,SENO+.32                                                 1311.40 80              011510.00
                      B,SSW                                           1301.10 00              011510.40
         BD,$+.32                                                    11511.44 00              011511.00

         LX,$X13,IC250        -UPDATE CONTINUITY CHECK.              11770.32 10              011511.40
         V+,$X13,BIT0                                                13054.32 B0              011512.00
         SX,$X13,IC250                                               11770.33 10              011512.40
```

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LORE2   LX,$X1,LOREA                                    11773.02 10                 011513.00
        SX,$X1,IBR52                                    11527.03 10                 011513.40
        LX,$X1,LOREB                                    11774.02 10                 011514.00
        SX,$X1,IBR66                                    11541.03 10                 011514.40
        LX,$X1,LOREC                                    11775.02 10                 011515.00
        SX,$X1,IBR80                                    11553.03 10                 011515.40
        LX,$X1,LORED                                    11776.02 10                 011516.00
        SX,$X1,IBR94                                    11565.03 10                 011516.40
IBR40   LX,$X1,IBRA5    -SET UP XW                      11526.02 10                 011517.00
IBR41   CBZ,$X1,IBR47   -NO BRANCH C TO 4               11522.42 4A                 011517.40
IBR42   CBZ,$X1,IBR48   -NO BRANCH C TO 3               11523.02 4A                 011520.00
IBR43   CBZ,$X1,IBR49   -NO BRANCH C TO 2               11523.42 4A                 011520.40
IBR44   CBZ,$X1,IBR50   -NO BRANCH C TO 1               11524.02 4A                 011521.00
IBR45   CBZ,$X1,IBR51   -BRANCH,C TO 0                  11524.42 4A                 011521.40
IBR46   BD,CBERE4       -ERROR OCCURED                  12104.04 00                 011522.00
IBR47   BD,CBERE        -ERROR OCCURED                  12076.04 00                 011522.40
IBR48   BD,CBERE1       -ERROR OCCURED                  12077.44 00                 011523.00
IBR49   BD,CBERE2       -ERROR OCCURED                  12101.04 00                 011523.40
IBR50   BD,CBERE3       -ERROR OCCURED                  12102.44 00                 011524.00
IBR51   SX,$X1,IBR52    -STORE FOR VALUE TEST           11527.03 10                 011524.40
        B,IBR52                                         11527.10 00                 011525.00
IBRA5   XW,IBR53+%8¤.04,5,-1    -COMMON XW              11530.04 00 000137.77 FF    011526.00
IBR52   NOP,                                              0.30 00                   011527.00
        BD,CBERE5       -ERROR OCCURED                  12105.44 00                 011527.40
IBR53   VF,%8¤777777.70 -NOP,-1                        777777.70+                  011530.00
        VF,%8¤777777.70 -NOP,-1                        777777.70+                  011530.40
IBR54   LX,$X1,IBRA6    -SET UP XW                      11540.02 10                 011531.00
        CNOP                                              0.30 00                   011531.40
IBR55   CBZ+,$X1,IBR61  -NO BRANCH C TO 4               11535.03 4A                 011532.00
IBR56   CBZ+,$X1,IBR62  -NO BRANCH C TO 3               11535.43 4A                 011532.40
IBR57   CBZ+,$X1,IBR63  -NO BRANCH C TO 2               11536.03 4A                 011533.00
IBR58   CBZ+,$X1,IBR64  -NO BRANCH C TO 1               11536.43 4A                 011533.40
IBR59   CBZ+,$X1,IBR65  -BRANCH C TO 0                  11537.03 4A                 011534.00
IBR60   BD,CBERF4       -ERROR OCCURED                  12115.04 00                 011534.40
IBR61   BD,CBERF        -ERROR OCCURED                  12107.04 00                 011535.00
IBR62   BD,CBERF1       -ERROR OCCURED                  12110.44 00                 011535.40
IBR63   BD,CBERF2       -ERROR OCCURED                  12112.04 00                 011536.00
IBR64   BD,CBERF3       -ERROR OCCURED                  12113.44 00                 011536.40
IBR65   SX,$X1,IBR66    -STORE FOR VALUE TEST           11541.03 10                 011537.00
        B,IBR66                                         11541.10 00                 011537.40
IBRA6   XW,IBR61+%8¤.04,5,-1    -COMMON XW              11535.04 00 000137.77 FF    011540.00
IBR66   NOP,                                              0.30 00                   011541.00
        BD,CBERF5       -ERROR OCCURED                  12116.44 00                 011541.40
IBR67   VF,%8¤777777.70 -NOP,-1                        777777.70+                  011542.00
        VF,%8¤777777.70 -NOP,-1                        777777.70+                  011542.40
IBR68   LX,$X1,IBRA7    -SET UP XW                      11552.02 10                 011543.00
IBR69   CBZ-,$X1,IBR75  -NO BRANCH C TO 4               11546.43 CA                 011543.40
IBR70   CBZ-,$X1,IBR76  -NO BRANCH C TO 3               11547.03 CA                 011544.00
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IBR71   CBZ-,$X1,IBR77          -NO BRANCH C TO 2          11547.43 CA                    011544.40
IBR72   CBZ-,$X1,IBR78          -NO BRANCH C TO 1          11550.03 CA                    011545.00
IBR73   CBZ-,$X1,IBR79          -BRANCH C TO 0             11550.43 CA                    011545.40
IBR74   BD,CBERG4               -ERROR OCCURED             12126.04 00                    011546.00
IBR75   BD,CBERG                -ERROR OCCURED             12120.04 00                    011546.40
IBR76   BD,CBERG1               -ERROR OCCURED             12121.44 00                    011547.00
IBR77   BD,CBERG2               -ERROR OCCURED             12123.04 00                    011547.40
IBR78   BD,CBERG3               -ERROR OCCURED             12124.44 00                    011550.00
IBR79   SX,$X1,IBR80            -STORE FOR VALUE TEST      11553.03 10                    011550.40
        B,IBR80                                            11553.10 00                    011551.00
IBRA7   XW,IBR81+%8¤5.04,5,-1   -COMMON XW                 11561.04 00 000137.77 FF       011552.00
IBR80   NOP,                                                   0.30 00                    011553.00
        BD,CBERG5               -ERROR OCCURED             12127.44 00                    011553.40
IBR81   VF,%8¤777777.70         -NOP,-1                   777777.70+                      011554.00
        VF,%8¤777777.70         -NOP,-1                   777777.70+                      011554.40
IBR82   LX,$X1,IBRA8            -SET UP XW                 11564.02 10                    011555.00
IBR83   CBZH,$X1,IBR89          -NO BRANCH C TO 4          11560.42 CA                    011555.40
IBR84   CBZH,$X1,IBR90          -NO BRANCH C TO 3          11561.02 CA                    011556.00
IBR85   CBZH,$X1,IBR91          -NO BRANCH C TO 2          11561.42 CA                    011556.40
IBR86   CBZH,$X1,IBR92          -NO BRANCH C TO 1          11562.02 CA                    011557.00
IBR87   CBZH,$X1,IBR93          -BRANCH C TO 0             11563.02 CA                    011557.40
IBR88   BD,CBERH4               -ERROR OCCURED             12137.04 00                    011560.00
IBR89   BD,CBERH                -ERROR OCCURED             12131.04 00                    011560.40
IBR90   BD,CBERH1               -ERROR OCCURED             12132.44 00                    011561.00
IBR91   BD,CBERH2               -ERROR OCCURED             12134.04 00                    011561.40
IBR92   BD,CBERH3               -ERROR OCCURED             12135.44 00                    011562.00
        CNOP                                                   0.30 00                    011562.40
IBR93   SX,$X1,IBR94            -STORE FOR VALUE TEST      11565.03 10                    011563.00
        B,IBR94                                            11565.10 00                    011563.40
IBRA8   XW,IBR93+%8¤.44,5,-1    -COMMON XW                 11563.44 00 000137.77 FF       011564.00
IBR94   NOP,                                                   0.30 00                    011565.00
        BD,CBERH5               -ERROR OCCURED             12140.44 00                    011565.40
IBR95   VF,%8¤777777.70         -NOP,-1                   777777.70+                      011566.00
        VF,%8¤777777.70         -NOP,-.32                 777777.70+                      011566.40
        CNOP

        B,$+1.0                                            11570.10 00                    011567.00
        BD,LORE2                                           11513.04 00                    011567.40
        SIC,SEN0+.32                                        1311.40 80                    011570.00
                    B,SSW                                   1301.10 00                    011570.40
        BD,$+.32                                           11571.44 00                    011571.00

        LX,$X13,IC250       -UPDATE CONTINUITY CHECK.      11770.32 10                    011571.40
        V+,$X13,BIT1                                       13055.32 B0                    011572.00
        SX,$X13,IC250                                      11770.33 10                    011572.40
```

```
LORE3   LX,$X1,LOREE
        SX,$X1,IBR100
        LX,$X1,LOREF
        SX,$X1,IBR106
        LX,$X1,LOREG
        SX,$X1,IBR107
        LX,$X1,LOREH
        SX,$X1,IBR113
        LX,$X1,LOREI
        SX,$X1,IBR114
        LX,$X1,LOREJ
        SX,$X1,IBR120
        LX,$X1,LOREK
        SX,$X1,IBR121
IBR96   LX,$X1,IBRA9
IBR97   CBR,$X1,IBR98
        BD,CBERJ
IBR98   CBR,$X1,IBR99
        BD,CBERJ1
        BD,CBERJ2
IBR99   CBR,$X1,HANGS1
        SX,$X1,IBR100
        B,IBR100
                NOP,0.0
IBRA9   XW,IBRA9+%8¤.04,3,IBRA10
IBRA10  XW,IBR101+%8¤.04,%8¤37777,-1
IBR100  NOP,
        BD,CBERJ3
HANGS1  NOP,
        BD,CBERJ4
IBR101  VF,%8¤777777.70
        VF,%8¤777777.70
IBR102  LX,$X1,IBRA11
IBR103  CBR+,$X1,IBR104
        BD,CBERK
IBR104  CBR+,$X1,IBR105
        BD,CBERK1
        BD,CBERK2
IBR105  SX,$X1,IBR106
        CBR+,$X1,HANGS2
        SX,$X1,IBR107
        B,IBR106
                NOP,0.0
IBRA11  XW,IBR106+%8¤.04,3,IBRA12
IBRA12  XW,IBR108+%8¤.04,%8¤37777,-1
IBR106  NOP,
        BD,CBERK3
HANGS2  NOP,
        BD,CBERK4
IBR107  NOP,
        BD,CBERK5
        NOP,
        BD,CBERK6
```

```
-SET UP XW
-COUNT 3 TO 2,BR,NO REFILL
-ERROR OCCURED
-COUNT 2 TO 1,BR,NO REFILL
-ERROR OCCURED
-ERROR OCCURED
-COUNT 1 TO 0,NO BR, REFILL
-STORE NEW XW

-BRANCH TO NEW INST.
-ORIGIANL XW
-REFILL XW

-ERROR OCCURED

-ERROR OCCURED
-NOP,-.32
-NOP,-.32
-SET UP XW
-COUNT 3 TO 2,1 TO VAL,+ BRANCH
-ERROR OCCURED
-COUNT 2 TO 1,1 TO VAL,+BRANCH
-ERROR OCCURED
-ERROR OCCURED
-SX TO TEST VALUE
-COUNT  TO 0,NO V,NO B,REFILL
-SX + TEST FOR REFILL

-BRANCH TO VALUE TEST
-ORIGINAL XW


-ERROR OCCURED

-ERROR OCCURED

-ERROR OCCURED

-ERROR OCCURED
```

```
11777.02 10
11611.03 10
12000.02 10
11624.03 10
12001.02 10
11626.03 10
12002.02 10
11640.03 10
12003.02 10
11642.03 10
12004.02 10
11654.03 10
12005.02 10
11656.03 10
11607.02 10
11603.42 4C
12142.04 00
11605.02 4C
12143.44 00
12145.04 00
11612.02 4C
11611.03 10
11611.10 00
    0.30 00
11607.04 00 000060.23 88
11613.04 00 777777.77 FF
    0.30 00
12146.44 00
    0.30 00
12150.04 00
777777.70+
777777.70+
11622.02 10
11615.43 4C
12151.44 00
11617.03 4C
12153.04 00
12154.44 00
11624.03 10
11625.03 4C
11626.03 10
11624.10 00
    0.30 00
11624.04 00 000060.23 93
11630.04 00 777777.77 FF
    0.30 00
12156.04 00
    0.30 00
12157.44 00
    0.30 00
12161.04 00
    0.30 00
12162.44 00
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011573.00
011573.40
011574.00
011574.40
011575.00
011575.40
011576.00
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011577.00
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011600.00
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011602.00
011602.40
011603.00
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011604.00
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011620.00
011620.40
011621.00
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011624.00
011624.40
011625.00
011625.40
011626.00
011626.40
011627.00
011627.40
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IBR108  VF,%8¤777777.70          -NOP,-.32                  777777.70+                    011630.00
        VF,%8¤777777.70          -NOP,-.32                  777777.70+                    011630.40
IBR109  LX,$X1,IBRA13            -SET UP XW                  11636.02 10                  011631.00
IBR110  CBR-,$X1,IBR111          -COUNT 3TO 2, VAL.-1, +BRANCH 11632.43 CC                011631.40
        BD,CBERL                                             12164.04 00                  011632.00
IBR111  CBR-,$X1,IBR112          -COUNT 2TO 1,VAL.-1,+BRANCH 11634.03 CC                  011632.40
        BD,CBERL1                                            12165.44 00                  011633.00
        BD,CBERL2                                            12167.04 00                  011633.40
IBR112  SX,$X1,IBR113            -SX TO TEST VALUE           11640.03 10                  011634.00
        CBR-,$X1,HANGS3          -COUNT  TO 0,NO V-,NO B,REFILL 11641.03 CC               011634.40
        SX,$X1,IBR114            -SX +TEST FOR REFILL        11642.03 10                  011635.00
        B,IBR113                 -BRANCH TO VALUE TEST       11640.10 00                  011635.40
IBRA13  XW,IBR115+%8¤.04,3,IBRA14 -ORIGINAL XW               11644.04 00 000060.23 9F     011636.00
IBRA14  XW,IBR115+%8¤.04,%8¤37777,-1 -REFILL XW              11644.04 00 777777.77 FF     011637.00
IBR113  NOP,                                                     0.30 00                  011640.00
        BD,CBERL3                                            12170.44 00                  011640.40
HANGS3  NOP,                                                     0.30 00                  011641.00
        BD,CBERL4                                            12172.04 00                  011641.40
IBR114  NOP,                                                     0.30 00                  011642.00
        BD,CBERL5                                            12173.44 00                  011642.40
        NOP,                                                     0.30 00                  011643.00
        BD,CBERL6                                            12175.04 00                  011643.40
IBR115  VF,%8¤777777.70          -NOP,-.32                  777777.70+                    011644.00
        VF,%8¤777777.70          -NOP,-.32                  777777.70+                    011644.40
IBR116  LX,$X1,IBRA15            -SET UP XW                  11652.02 10                  011645.00
IBR117  CBRH,$X1,IBR118          -COUNT 3TO2,VAL+.4,+BRANCH  11646.42 CC                  011645.40
        BD,CBERM                 -ERROR OCCURED              12176.44 00                  011646.00
IBR118  CBRH,$X1,IBR119          -COUNT 2TO1,VAL+.4,+BRANCH  11650.02 CC                  011646.40
        BD,CBERM1                -ERROR OCCURED              12200.04 00                  011647.00
        BD,CBERM2                -ERROR OCCURED              12201.44 00                  011647.40
IBR119  SX,$X1,IBR120            -SX TO TEST VALUE           11654.03 10                  011650.00
        CBRH,$X1,HANGS4          -COUNT 1TO0,NO V+,NOB,REFILL 11655.02 CC                 011650.40
        SX,$X1,IBR121            -SX + TEST FOR REFILL       11656.03 10                  011651.00
        B,IBR120                 -BRANCH TO VALUE TEST       11654.10 00                  011651.40
IBRA15  XW,HANGS4+%8¤.04,3,IBRA16 -ORIGINAL XW               11655.04 00 000060.23 AB     011652.00
IBRA16  XW,IBR122+%8¤.04,%8¤37777,-1 -REFILL XW              11660.04 00 777777.77 FF     011653.00
IBR120  NOP,                                                     0.30 00                  011654.00
        BD,CBERM3                -ERROR OCCURED              12203.04 00                  011654.40
HANGS4  NOP,                                                     0.30 00                  011655.00
        BD,CBERM4                -ERROR OCCURED              12204.44 00                  011655.40
IBR121  NOP,                                                     0.30 00                  011656.00
        BD,CBERM5                -ERROR OCCURED              12206.04 00                  011656.40
        NOP,                                                     0.30 00                  011657.00
        BD,CBERM6                -ERROR OCCURED              12207.44 00                  011657.40
IBR122  VF,%8¤777777.70          -NOP,-.32                  777777.70+                    011660.00
        VF,%8¤777777.70          -NOP,-.32                  777777.70+                    011660.40
                                                                                          -
        B,$+1.0                                              11662.10 00                  011661.00
        BD,LORE3                                             11573.04 00                  011661.40
        SIC,SEN0+.32                                          1311.40 80                  011662.00
                B,SSW                                         1301.10 00                  011662.40
        BD,$+.32                                             11663.44 00                  011663.00
                                                                                          -
        LX,$X13,IC250        -UPDATE CONTINUITY CHECK.       11770.32 10                  011663.40
        V+,$X13,BIT2                                         13056.32 B0                  011664.00
        SX,$X13,IC250                                        11770.33 10                  011664.40
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LORE4   LX,$X1,LOREL                                          12006.02 10                011665.00
        SX,$X1,IBR138                                         11707.03 10                011665.40
        LX,$X1,LOREM                                          12007.02 10                011666.00
        SX,$X1,IBR139                                         11710.03 10                011666.40
        LX,$X1,LOREN                                          12010.02 10                011667.00
        SX,$X1,IBR156                                         11724.03 10                011667.40
        LX,$X1,LOREO                                          12011.02 10                011670.00
        SX,$X1,IBR157                                         11725.03 10                011670.40
        LX,$X1,LOREP                                          12012.02 10                011671.00
        SX,$X1,IBR174                                         11741.03 10                011671.40
        LX,$X1,LOREQ                                          12013.02 10                011672.00
        SX,$X1,IBR175                                         11742.03 10                011672.40
        LX,$X1,LORER                                          12014.02 10                011673.00
        SX,$X1,IBR192                                         11756.03 10                011673.40
        LX,$X1,LORES                                          12015.02 10                011674.00
        SX,$X1,IBR193                                         11757.03 10                011674.40
IBR123  LX,$X1,IBRA17       -SET UP XW                        11705.02 10                011675.00
IBR124  CBRZ,$X1,IBR132     -COUNT 6 TO 5, NO B OR REF.       11701.42 4E                011675.40
IBR125  CBRZ,$X1,IBR133     -COUNT 5 TO 4, NO B OR REF.       11702.02 4E                011676.00
IBR126  CBRZ,$X1,IBR134     -COUNT 4 TO 3, NO B OR REF.       11702.42 4E                011676.40
IBR127  CBRZ,$X1,IBR135     -COUNT 3 TO 2, NO B OR REF.       11703.02 4E                011677.00
IBR128  CBRZ,$X1,IBR136     -COUNT 2 TO 1 NO B OR REF.        11703.42 4E                011677.40
IBR129  SX,$X1,IBR138       -SX FOR VALUE TEST                11707.03 10                011700.00
IBR130  CBRZ,$X1,IBR137     -SHOULD BRANCH + REFILL C TO 0    11704.02 4E                011700.40
IBR131  BD,CBERN5           -ERROR OCCURED                    12220.44 00                011701.00
IBR132  BD,CBERN            -ERROR OCCURED                    12211.04 00                011701.40
IBR133  BD,CBERN1           -ERROR OCCURED                    12212.44 00                011702.00
IBR134  BD,CBERN2           -ERROR OCCURED                    12214.04 00                011702.40
IBR135  BD,CBERN3           -ERROR OCCURED                    12215.44 00                011703.00
IBR136  BD,CBERN4           -ERROR OCCURED                    12217.04 00                011703.40
IBR137  SX,$X1,IBR139       -HANG UP IF B ON NOT ZERO         11710.03 10                011704.00
        B,IBR138            -GO TO VALUE TEST                 11707.10 00                011704.40
IBRA17  XW,IBR139+%8¤.04,6,IBRA18   -COMMON XW                11710.04 00 000140.23 C6   011705.00
IBRA18  XW,IBR140+%8¤.04,%8¤37777,-1 -REFILL XW                11711.04 00 777777.77 FF   011706.00
IBR138  NOP,                                                    0.30 00                011707.00
        BD,CBERN6           -ERROR OCCURED                    12222.04 00                011707.40
IBR139  NOP,                                                    0.30 00                011710.00
        BD,CBERN7           -ERROR OCCURED                    12223.44 00                011710.40
IBR140  VF,%8¤777777.70     -EQUALS NOP,-.32                 777777.70+                  011711.00
        VF,%8¤777777.70     -EQUALS NOP,-.32                 777777.70+                  011711.40
IBR141  LX,$X1,IBRA19       -SET UP XW                        11722.02 10                011712.00
IBR142  CBRZ+,$X1,IBR150    -COUNT 6 TO 5, NO B OR REF.       11716.43 4E                011712.40
IBR143  CBRZ+,$X1,IBR151    -COUNT 5 TO 4, NO B OR REF.       11717.03 4E                011713.00
IBR144  CBRZ+,$X1,IBR152    -COUNT 4 TO 3, NO B OR REF.       11717.43 4E                011713.40
IBR145  CBRZ+,$X1,IBR153    -COUNT 2 TO 1, NO B OR REF.       11720.03 4E                011714.00
IBR146  CBRZ+,$X1,IBR154    -COUNT 2 TO 1, NO B OR REF.       11720.43 4E                011714.40
IBR147  SX,$X1,IBR156       -SX FOR VALUE TEST                11724.03 10                011715.00
IBR148  CBRZ+,$X1,IBR155    -SHOULD BRANCH + REFILL C TO 0    11721.03 4E                011715.40
IBR149  BD,CBERP5           -ERROR OCCURED                    12234.44 00                011716.00
IBR150  BD,CBERP            -ERROR OCCURED                    12225.04 00                011716.40
IBR151  BD,CBERP1           -ERROR OCCURED                    12226.44 00                011717.00
IBR152  BD,CBERP2           -ERROR OCCURED                    12230.04 00                011717.40
IBR153  BD,CBERP3           -ERROR OCCURED                    12231.44 00                011720.00
IBR154  BD,CBERP4           -ERROR OCCURED                    12233.04 00                011720.40
IBR155  SX,$X1,IBR157       -SX FOR REFILL TEST               11725.03 10                011721.00
        B,IBR156            -GO TO VALUE TEST                 11724.10 00                011721.40
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IBRA19  XW,IBR153+%8¤.04,6,IBRA20      -COMMON XW                          11720.04 00 000140.23 D3      011722.00
IBRA20  XW,IBR158+%8¤.04,%8¤37777,-1   -REFILL XW                         11726.04 00 777777.77 FF      011723.00
IBR156  NOP,                                                                 0.30 00                    011724.00
        BD,CBERP6                      -ERROR OCCURED                      12236.04 00                   011724.40
IBR157  NOP,                                                                 0.30 00                    011725.00
        BD,CBERP7                      -ERROR OCCURED                      12237.44 00                   011725.40
IBR158  VF,%8¤777777.70                -EQUALS NOP,-.32                   777777.70+                     011726.00
        VF,%8¤777777.70                -EQUALS NOP,-.32                   777777.70+                     011726.40
IBR159  LX,$X1,IBRA21                  -SET UP XW                          11737.02 10                   011727.00
IBR160  CBRZ-,$X1,IBR168               -COUNT 6 TO 5, NO B OR REF.         11733.43 CE                   011727.40
IBR161  CBRZ-,$X1,IBR169               -COUNT 5 TO 4, NO B OR REF.         11734.03 CE                   011730.00
IBR162  CBRZ-,$X1,IBR170               -COUNT 4 TO 3, NO B OR REF.         11734.43 CE                   011730.40
IBR163  CBRZ-,$X1,IBR171               -COUNT 3 TO 2, NO B OR REF.         11735.03 CE                   011731.00
IBR164  CBRZ-,$X1,IBR172               -COUNT 2 TO 1, NO B OR REF.         11735.43 CE                   011731.40
IBR165  SX,$X1,IBR174                  -SX FOR VALUE TEST                  11741.03 10                   011732.00
IBR166  CBRZ-,$X1,IBR173               -SHOULD BRANCH + REFILL C TO 0      11736.03 CE                   011732.40
IBR167  BD,CBERQ5                      -ERROR OCCURED                      12250.44 00                   011733.00
IBR168  BD,CBERQ                       -ERROR OCCURED                      12241.04 00                   011733.40
IBR169  BD,CBERQ1                      -ERROR OCCURED                      12242.44 00                   011734.00
IBR170  BD,CBERQ2                      -ERROR OCCURED                      12244.04 00                   011734.40
IBR171  BD,CBERQ3                      -ERROR OCCURED                      12245.44 00                   011735.00
IBR172  BD,CBERQ4                      -ERROR OCCURED                      12247.04 00                   011735.40
IBR173  SX,$X1,IBR175                  -SX FOR REFILL TEST                 11742.03 10                   011736.00
        B,IBR174                       -GO TO VALUE TEST                   11741.10 00                   011736.40
IBRA21  XW,IBR175+%8¤5.04,6,IBRA22     -COMMON XW                          11747.04 00 000140.23 E0      011737.00
IBRA22  XW,IBR176+%8¤.04,%8¤37777,-1   -REFILL XW                          11743.04 00 777777.77 FF      011740.00
IBR174  NOP,                                                                 0.30 00                    011741.00
        BD,CBERQ6                      -ERROR OCCURED                      12252.04 00                   011741.40
IBR175  NOP,                                                                 0.30 00                    011742.00
        BD,CBERQ7                      -ERROR OCCURED                      12253.44 00                   011742.40
IBR176  VF,%8¤777777.70                -EQUALS NOP,-.32                   777777.70+                     011743.00
        VF,%8¤777777.70                -EQUALS NOP,-.32                   777777.70+                     011743.40
IBR177  LX,$X1,IBRA23                  -SET UP XW                          11754.02 10                   011744.00
IBR178  CBRZH,$X1,IBR186               -COUNT 6 TO 5, NO B OR REF.         11750.42 CE                   011744.40
IBR179  CBRZH,$X1,IBR187               -COUNT 5 TO 4, NO B OR REF.         11751.02 CE                   011745.00
IBR180  CBRZH,$X1,IBR188               -COUNT 4 TO 3, NO B OR REF.         11751.42 CE                   011745.40
IBR181  CBRZH,$X1,IBR189               -COUNT 2 TO 1, NO B OR REF.         11752.02 CE                   011746.00
IBR182  CBRZH,$X1,IBR190               -COUNT 2 TO 1 NO B OR REF.          11752.42 CE                   011746.40
IBR183  SX,$X1,IBR192                  -SX FOR VALUE TEST                  11756.03 10                   011747.00
IBR184  CBRZH,$X1,IBR191               -SHOULD BRANCH + REFILL, C TO 0     11753.02 CE                   011747.40
IBR185  BD,CBERR5                      -ERROR OCCURED                      12264.44 00                   011750.00
IBR186  BD,CBERR                       -ERROR OCCURED                      12255.04 00                   011750.40
IBR187  BD,CBERR1                      -ERROR OCCURED                      12256.44 00                   011751.00
IBR188  BD,CBERR2                      -ERROR OCCURED                      12260.04 00                   011751.40
IBR189  BD,CBERR3                      -ERROR OCCURED                      12261.44 00                   011752.00
IBR190  BD,CBERR4                      -ERROR OCCURED                      12263.04 00                   011752.40
IBR191  SX,$X1,IBR193                  -SX FOR REFILL TEST                 11757.03 10                   011753.00
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        B,IBR192                        -GO TO VALUE TEST
IBRA23  XW,IBRA23+%8¤.44,6,IBRA24       -COMMON XW
IBRA24  XW,IBR194+%8¤.04,%8¤37777,-1    -REFILL XW
IBR192  NOP,
        BD,CBERR6                       -ERROR OCCURED
IBR193  NOP,
        BD,CBERR7                       -ERROR OCCURED
IBR194  VF,%8¤777777.70                 -EQUALS NOP,-.32
        VF,%8¤777777.70                 -EQUALS NOP,-.32
        B,$+1.0
        BD,LORE4
        SIC,SEN0+.32
                B,SSW
        BD,$+.32

        LX,$X13,IC250           -UPDATE CONTINUITY CHECK.
        V+,$X13,BIT3
        SX,$X13,IC250

        LX,$X13,IC250
        KV,$X13,ICK250
        SIC,SEN
        BZXE,SERS               -CONTINUITY ERROR.
        BD,154
        CNOP

IC250   XW,0,0,0                -CONTINUITY REG 1250.
ICK250  XW,%8¤740000.00,0,0
LORE    NOP,0.
        NOP,0.
LOREA   NOP,0.0
        BD,CBERE5
LOREB   NOP,0.0
        BD,CBERF5
LOREC   NOP,0.0
        BD,CBERG5
LORED   NOP,0.0
        BD,CBERH5
LOREE   NOP,0.0
        BD,CBERJ3
LOREF   NOP,0.0
        BD,CBERK3
LOREG   NOP,0.0
        BD,CBERK5
LOREH   NOP
        BD,CBERL3
LOREI   NOP,0.0
        BD,CBERL5
LOREJ   NOP,0.0
        BD,CBERM3
LOREK   NOP,0.0
        BD,CBERM5
LOREL   NOP,0.0
        BD,CBERN6
LOREM   NOP,0.0
        BD,CBERN7
LOREN   NOP,0.0
        BD,CBERP6
LOREO   NOP,0.0
        BD,CBERP7
LOREP   NOP,0.0
        BD,CBERQ6
```

```
11756.10 00                     011753.40
11754.44 00 000140.23 ED        011754.00
11760.04 00 777777.77 FF        011755.00
    0.30 00                     011756.00
12266.04 00                     011756.40
    0.30 00                     011757.00
12267.44 00                     011757.40
777777.70+                      011760.00
777777.70+                      011760.40
11762.10 00                     011761.00
11665.04 00                     011761.40
 1311.40 80                     011762.00
 1301.10 00                     011762.40
11763.44 00                     011763.00
-
11770.32 10                     011763.40
13057.32 B0                     011764.00
11770.33 10                     011764.40
-
11770.32 10                     011765.00
11771.32 90                     011765.40
 1310.00 80                     011766.00
 1304.32 C0                     011766.40
12271.44 00                     011767.00
    0.30 00                     011767.40
-
    0.00 00 000000.00 00        011770.00
740000.00 00 000000.00 00       011771.00
    0.30 00                     011772.00
    0.30 00                     011772.40
    0.30 00                     011773.00
12105.44 00                     011773.40
    0.30 00                     011774.00
12116.44 00                     011774.40
    0.30 00                     011775.00
12127.44 00                     011775.40
    0.30 00                     011776.00
12140.44 00                     011776.40
    0.30 00                     011777.00
12146.44 00                     011777.40
    0.30 00                     012000.00
12156.04 00                     012000.40
    0.30 00                     012001.00
12161.04 00                     012001.40
    0.30 00                     012002.00
12170.44 00                     012002.40
    0.30 00                     012003.00
12173.44 00                     012003.40
    0.30 00                     012004.00
12203.04 00                     012004.40
    0.30 00                     012005.00
12206.04 00                     012005.40
    0.30 00                     012006.00
12222.04 00                     012006.40
    0.30 00                     012007.00
12223.44 00                     012007.40
    0.30 00                     012010.00
12236.04 00                     012010.40
    0.30 00                     012011.00
12237.44 00                     012011.40
    0.30 00                     012012.00
12252.04 00                     012012.40
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LOREQ   NOP,0.0                                                          0.30 00         012013.00
                BD,CBERQ7                                            12253.44 00         012013.40
LORER   NOP,0.0                                                          0.30 00         012014.00
                BD,CBERR6                                            12266.04 00         012014.40
LORES   NOP,0.0                                                          0.30 00         012015.00
                BD,CBERR7                                            12267.44 00         012015.40
CBERA   SIC,SEN                                                       1310.00 80         012016.00
                B,SERS              -CB    IBR1        FAILED         1304.10 00         012016.40
        B,IBR2                                                       11434.10 00         012017.00
CBERA1  SIC,SEN                                                       1310.00 80         012017.40
                B,SERS              -CB    IBR2        FAILED         1304.10 00         012020.00
        B,IBR3                                                       11435.50 00         012020.40
CBERA2  SIC,SEN                                                       1310.00 80         012021.00
                B,SERS              -CB    IBR2        FAILED         1304.10 00         012021.40
        B,IBR3                                                       11435.50 00         012022.00
CBERA3  SIC,SEN                                                       1310.00 80         012022.40
                B,SERS              -CB    IBR3        FAILED         1304.10 00         012023.00
        B,IBR4                                                       11437.50 00         012023.40
CBERA4  SIC,SEN                                                       1310.00 80         012024.00
                B,SERS              -CB    IBR3        FAILED         1304.10 00         012024.40
        B,IBR4                                                       11437.50 00         012025.00
CBERA5  SIC,SEN                                                       1310.00 80         012025.40
                B,SERS              -CB    IBR3        FAILED         1304.10 00         012026.00
        B,IBR4                                                       11437.50 00         012026.40
CBERA6  SIC,SEN                                                       1310.00 80         012027.00
                B,SERS              -CB    IBR4        FAILED         1304.10 00         012027.40
        B,IBR9                                                       11445.10 00         012030.00
CBERA7  SIC,SEN                                                       1310.00 80         012030.40
                B,SERS              -CB    IBR1 TO 4   FAILED         1304.10 00         012031.00
        B,IBR9                                                       11445.10 00         012031.40
CBERB   SIC,SEN                                                       1310.00 80         012032.00
                B,SERS              -CB+   IBR11       FAILED         1304.10 00         012032.40
        B,IBR12                                                      11447.50 00         012033.00
CBERB1  SIC,SEN                                                       1310.00 80         012033.40
                B,SERS              -CB+   IBR12       FAILED         1304.10 00         012034.00
        B,IBR13                                                      11451.10 00         012034.40
```

CBERB2	SIC,SEN						1310.00 80	012035.00
		B,SERS	-CB+	IBR12		FAILED	1304.10 00	012035.40
	B,IBR13						11451.10 00	012036.00
CBERB3	SIC,SEN						1310.00 80	012036.40
		B,SERS	-CB+	IBR13		FAILED	1304.10 00	012037.00
	B,IBR14						11453.10 00	012037.40
CBERB4	SIC,SEN						1310.00 80	012040.00
		B,SERS	-CB+	IBR13		FAILED	1304.10 00	012040.40
	B,IBR14						11453.10 00	012041.00
CBERB5	SIC,SEN						1310.00 80	012041.40
		B,SERS	-CB+	IBR13		FAILED	1304.10 00	012042.00
	B,IBR14						11453.10 00	012042.40
CBERB6	SIC,SEN						1310.00 80	012043.00
		B,SERS	-CB+	IBR14		FAILED	1304.10 00	012043.40
	B,IBR19						11460.10 00	012044.00
CBERB7	SIC,SEN						1310.00 80	012044.40
		B,SERS	-CB+	IBR11	TO 14	FAILED	1304.10 00	012045.00
	B,IBR19						11460.10 00	012045.40
CBERC	SIC,SEN						1310.00 80	012046.00
		B,SERS	-CBH	IBR21		FAILED	1304.10 00	012046.40
	B,IBR22						11462.50 00	012047.00
CBERC1	SIC,SEN						1310.00 80	012047.40
		B,SERS	-CBH	IBR22		FAILED	1304.10 00	012050.00
	B,IBR23						11464.10 00	012050.40
CBERC2	SIC,SEN						1310.00 80	012051.00
		B,SERS	-CBH	IBR22		FAILED	1304.10 00	012051.40
	B,IBR23						11464.10 00	012052.00
CBERC3	SIC,SEN						1310.00 80	012052.40
		B,SERS	-CBH	IBR23		FAILED	1304.10 00	012053.00
	B,IBR24						11466.10 00	012053.40
CBERC4	SIC,SEN						1310.00 80	012054.00
		B,SERS	-CBH	IBR23		FAILED	1304.10 00	012054.40
	B,IBR24						11466.10 00	012055.00
CBERC5	SIC,SEN						1310.00 80	012055.40
		B,SERS	-CBH	IBR23		FAILED	1304.10 00	012056.00
	B,IBR24						11466.10 00	012056.40
CBERC6	SIC,SEN						1310.00 80	012057.00
		B,SERS	-CBH	IBR24		FAILED	1304.10 00	012057.40
	B,IBR29						11473.10 00	012060.00
CBERC7	SIC,SEN						1310.00 80	012060.40
		B,SERS	-CBH	IBR21	TO 24	FAILED	1304.10 00	012061.00
	B,IBR29						11473.10 00	012061.40
CBERD	SIC,SEN						1310.00 80	012062.00
		B,SERS	-CB-	IBR31		FAILED	1304.10 00	012062.40
	B,IBR32						11475.50 00	012063.00
CBERD1	SIC,SEN						1310.00 80	012063.40
		B,SERS	-CB-	IBR32		FAILED	1304.10 00	012064.00
	B,IBR33						11477.10 00	012064.40
CBERD2	SIC,SEN						1310.00 80	012065.00
		B,SERS	-CB-	IBR32		FAILED	1304.10 00	012065.40
	B,IBR33						11477.10 00	012066.00
CBERD3	SIC,SEN						1310.00 80	012066.40
		B,SERS	-CB-	IBR33		FAILED	1304.10 00	012067.00
	B,IBR34						11501.10 00	012067.40
CBERD4	SIC,SEN						1310.00 80	012070.00
		B,SERS	-CB-	IBR33		FAILED	1304.10 00	012070.40
	B,IBR34						11501.10 00	012071.00
CBERD5	SIC,SEN						1310.00 80	012071.40
		B,SERS	-CB-	IBR33		FAILED	1304.10 00	012072.00
	B,IBR34						11501.10 00	012072.40
CBERD6	SIC,SEN						1310.00 80	012073.00
		B,SERS	-CB-	IBR34		FAILED	1304.10 00	012073.40

```
        B,IBR39                                                11506.10 00        012074.00
CBERD7  SIC,SEN                                                 1310.00 80        012074.40
                 B,SERS           -CB-  IBR31 TO 34FAILED       1304.10 00        012075.00
        B,IBR39                                                11506.10 00        012075.40
CBERE   SIC,SEN                                                 1310.00 80        012076.00
                 B,SERS           -CBZ   IBR41       FAILED     1304.10 00        012076.40
        B,IBR42                                                11520.10 00        012077.00
CBERE1  SIC,SEN                                                 1310.00 80        012077.40
                 B,SERS           -CBZ   IBR42       FAILED     1304.10 00        012100.00
        B,IBR43                                                11520.50 00        012100.40
CBERE2  SIC,SEN                                                 1310.00 80        012101.00
                 B,SERS           -CBZ   IBR43       FAILED     1304.10 00        012101.40
        B,IBR44                                                11521.10 00        012102.00
CBERE3  SIC,SEN                                                 1310.00 80        012102.40
                 B,SERS           -CBZ   IBR44       FAILED     1304.10 00        012103.00
        B,IBR45                                                11521.50 00        012103.40
```

CBERE4	SIC,SEN					1310.00 80	012104.00
		B,SERS	-CBZ	IBR45	FAILED	1304.10 00	012104.40
	B,IBR51					11524.50 00	012105.00
CBERE5	SIC,SEN					1310.00 80	012105.40
		B,SERS	-CBZ	IBR41-45	FAILED	1304.10 00	012106.00
	B,IBR53					11530.10 00	012106.40
CBERF	SIC,SEN					1310.00 80	012107.00
		B,SERS	-CBZ+	IBR55	FAILED	1304.10 00	012107.40
	B,IBR56					11532.50 00	012110.00
CBERF1	SIC,SEN					1310.00 80	012110.40
		B,SERS	-CBZ+	IBR56	FAILED	1304.10 00	012111.00
	B,IBR57					11533.10 00	012111.40
CBERF2	SIC,SEN					1310.00 80	012112.00
		B,SERS	-CBZ+	IBR57	FAILED	1304.10 00	012112.40
	B,IBR58					11533.50 00	012113.00
CBERF3	SIC,SEN					1310.00 80	012113.40
		B,SERS	-CBZ+	IBR58	FAILED	1304.10 00	012114.00
	B,IBR59					11534.10 00	012114.40
CBERF4	SIC,SEN					1310.00 80	012115.00
		B,SERS	-CBZ+	IBR59	FAILED	1304.10 00	012115.40
	B,IBR65					11537.10 00	012116.00
CBERF5	SIC,SEN					1310.00 80	012116.40
		B,SERS	-CBZ+	IBR55-59	FAILED	1304.10 00	012117.00
	B,IBR67					11542.10 00	012117.40
CBERG	SIC,SEN					1310.00 80	012120.00
		B,SERS	-CBZ-	IBR69	FAILED	1304.10 00	012120.40
	B,IBR70					11544.10 00	012121.00
CBERG1	SIC,SEN					1310.00 80	012121.40
		B,SERS	-CBZ-	IBR70	FAILED	1304.10 00	012122.00
	B,IBR71					11544.50 00	012122.40
CBERG2	SIC,SEN					1310.00 80	012123.00
		B,SERS	-CBZ-	IBR71	FAILED	1304.10 00	012123.40
	B,IBR72					11545.10 00	012124.00
CBERG3	SIC,SEN					1310.00 80	012124.40
		B,SERS	-CBZ-	IBR72	FAILED	1304.10 00	012125.00
	B,IBR73					11545.50 00	012125.40
CBERG4	SIC,SEN					1310.00 80	012126.00
		B,SERS	-CBZ-	IBR73	FAILED	1304.10 00	012126.40
	B,IBR79					11550.50 00	012127.00
CBERG5	SIC,SEN					1310.00 80	012127.40
		B,SERS	-CBZ-	IBR69-73	FAILED	1304.10 00	012130.00
	B,IBR81					11554.10 00	012130.40
CBERH	SIC,SEN					1310.00 80	012131.00
		B,SERS	-CBZH	IBR88	FAILED	1304.10 00	012131.40
	B,IBR84					11556.10 00	012132.00
CBERH1	SIC,SEN					1310.00 80	012132.40
		B,SERS	-CBZH	IBR89	FAILED	1304.10 00	012133.00
	B,IBR85					11556.50 00	012133.40
CBERH2	SIC,SEN					1310.00 80	012134.00
		B,SERS	-CBZH	IBR90	FAILED	1304.10 00	012134.40
	B,IBR86					11557.10 00	012135.00
CBERH3	SIC,SEN					1310.00 80	012135.40
		B,SERS	-CBZH	IBR91	FAILED	1304.10 00	012136.00
	B,IBR87					11557.50 00	012136.40
CBERH4	SIC,SEN					1310.00 80	012137.00
		B,SERS	-CBZH	IBR92	FAILED	1304.10 00	012137.40
	B,IBR93					11563.10 00	012140.00
CBERH5	SIC,SEN					1310.00 80	012140.40
		B,SERS	-CBZH	IBR89-92	FAILED	1304.10 00	012141.00
	B,IBR95					11566.10 00	012141.40
CBERJ	SIC,SEN					1310.00 80	012142.00
		B,SERS	-CBR	IBR97	FAILED	1304.10 00	012142.40

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        B,IBR98                                                         11603.50 00            012143.00
CBERJ1  SIC,SEN                                                          1310.00 80            012143.40
                 B,SERS              -CBR    IBR98      FAILED           1304.10 00            012144.00
        B,IBR99                                                         11605.10 00            012144.40
CBERJ2  SIC,SEN                                                          1310.00 80            012145.00
                 B,SERS              -CBR    IBR98      FAILED           1304.10 00            012145.40
        B,IBR99                                                         11605.10 00            012146.00
```

CBERJ3	SIC,SEN					1310.00	80	012146.40
		B,SERS	-CBR	IBR97-99	FAILED	1304.10	00	012147.00
	B,IBR101					11613.10	00	012147.40
CBERJ4	SIC,SEN					1310.00	80	012150.00
		B,SERS	-CBR	IBR99	FAILED	1304.10	00	012150.40
	B,IBR101					11613.10	00	012151.00
CBERK	SIC,SEN					1310.00	80	012151.40
		B,SERS	-CBR+	IBR103	FAILED	1304.10	00	012152.00
	B,IBR104					11615.50	00	012152.40
CBERK1	SIC,SEN					1310.00	80	012153.00
		B,SERS	-CBR+	IBR104	FAILED	1304.10	00	012153.40
	B,IBR105					11617.10	00	012154.00
CBERK2	SIC,SEN					1310.00	80	012154.40
		B,SERS	-CBR+	IBR104	FAILED	1304.10	00	012155.00
	B,IBR105					11617.10	00	012155.40
CBERK3	SIC,SEN					1310.00	80	012156.00
		B,SERS	-CBR+	IBR103-104	FAILED	1304.10	00	012156.40
	B,IBR107					11626.10	00	012157.00
CBERK4	SIC,SEN					1310.00	80	012157.40
		B,SERS	-CBR+	IBR105	FAILED	1304.10	00	012160.00
	B,IBR107					11626.10	00	012160.40
CBERK5	SIC,SEN					1310.00	80	012161.00
		B,SERS	-CBR+	IBR103-105	FAILED	1304.10	00	012161.40
	B,IBR108					11630.10	00	012162.00
CBERK6	SIC,SEN					1310.00	80	012162.40
		B,SERS	-CBR+	IBR103-105	FAILED	1304.10	00	012163.00
	B,IBR108					11630.10	00	012163.40
CBERL	SIC,SEN					1310.00	80	012164.00
		B,SERS	-CBR-	IBR110	FAILED	1304.10	00	012164.40
	B,IBR111					11632.50	00	012165.00
CBERL1	SIC,SEN					1310.00	80	012165.40
		B,SERS	-CBR-	IBR111	FAILED	1304.10	00	012166.00
	B,IBR112					11634.10	00	012166.40
CBERL2	SIC,SEN					1310.00	80	012167.00
		B,SERS	-CBR-	IBR111	FAILED	1304.10	00	012167.40
	B,IBR112					11634.10	00	012170.00
CBERL3	SIC,SEN					1310.00	80	012170.40
		B,SERS	-CBR-	IBR110-111	FAILED	1304.10	00	012171.00
	B,IBR114					11642.10	00	012171.40
CBERL4	SIC,SEN					1310.00	80	012172.00
		B,SERS	-CBR-	IBR112	FAILED	1304.10	00	012172.40
	B,IBR114					11642.10	00	012173.00
CBERL5	SIC,SEN					1310.00	80	012173.40
		B,SERS	-CBR-	IBR110-112	FAILED	1304.10	00	012174.00
	B,IBR115					11644.10	00	012174.40
CBERL6	SIC,SEN					1310.00	80	012175.00
		B,SERS	-CBR-	IBR110-112	FAILED	1304.10	00	012175.40
	B,IBR115					11644.10	00	012176.00
CBERM	SIC,SEN					1310.00	80	012176.40
		B,SERS	-CBRH	IBR117	FAILED	1304.10	00	012177.00
	B,IBR118					11646.50	00	012177.40
CBERM1	SIC,SEN					1310.00	80	012200.00
		B,SERS	-CBRH	IBR118	FAILED	1304.10	00	012200.40
	B,IBR119					11650.10	00	012201.00
CBERM2	SIC,SEN					1310.00	80	012201.40
		B,SERS	-CBRH	IBR118	FAILED	1304.10	00	012202.00
	B,IBR119					11650.10	00	012202.40
CBERM3	SIC,SEN					1310.00	80	012203.00
		B,SERS	-CBRH	IBR117-118	FAILED	1304.10	00	012203.40
	B,IBR121					11656.10	00	012204.00

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CBERM4  SIC,SEN                                              1310.00 80       012204.40
                  B,SERS      -CBRH  IBR119      FAILED      1304.10 00       012205.00
        B,IBR121                                            11656.10 00       012205.40
CBERM5  SIC,SEN                                              1310.00 80       012206.00
                  B,SERS      -CBRH  IBR117-119  FAILED      1304.10 00       012206.40
        B,IBR122                                            11660.10 00       012207.00
CBERM6  SIC,SEN                                              1310.00 80       012207.40
                  B,SERS      -CBRH  IBR117-119  FAILED      1304.10 00       012210.00
        B,IBR122                                            11660.10 00       012210.40
CBERN   SIC,SEN                                              1310.00 80       012211.00
                  B,SERS      -CBRZ  IBR124      FAILED      1304.10 00       012211.40
        B,IBR125                                            11676.10 00       012212.00
CBERN1  SIC,SEN                                              1310.00 80       012212.40
                  B,SERS      -CBRZ  IBR125      FAILED      1304.10 00       012213.00
        B,IBR126                                            11676.50 00       012213.40
CBERN2  SIC,SEN                                              1310.00 80       012214.00
                  B,SERS      -CBRZ  IBR126      FAILED      1304.10 00       012214.40
        B,IBR127                                            11677.10 00       012215.00
CBERN3  SIC,SEN                                              1310.00 80       012215.40
                  B,SERS      -CBRZ  IBR127      FAILED      1304.10 00       012216.00
        B,IBR128                                            11677.50 00       012216.40
CBERN4  SIC,SEN                                              1310.00 80       012217.00
                  B,SERS      -CBRZ  IBR128      FAILED      1304.10 00       012217.40
        B,IBR129                                            11700.10 00       012220.00
CBERN5  SIC,SEN                                              1310.00 80       012220.40
                  B,SERS      -CBRZ  IBR130      FAILED      1304.10 00       012221.00
        B,IBR137                                            11704.10 00       012221.40
CBERN6  SIC,SEN                                              1310.00 80       012222.00
                  B,SERS      -CBRZ  IBR124-128  FAILED      1304.10 00       012222.40
        B,IBR139                                            11710.10 00       012223.00
CBERN7  SIC,SEN                                              1310.00 80       012223.40
                  B,SERS      -CBRZ  IBR124-130  FAILED      1304.10 00       012224.00
        B,IBR140                                            11711.10 00       012224.40
CBERP   SIC,SEN                                              1310.00 80       012225.00
                  B,SERS      -CBRZ+ IBR142      FAILED      1304.10 00       012225.40
        B,IBR143                                            11713.10 00       012226.00
CBERP1  SIC,SEN                                              1310.00 80       012226.40
                  B,SERS      -CBRZ+ IBR143      FAILED      1304.10 00       012227.00
        B,IBR144                                            11713.50 00       012227.40
CBERP2  SIC,SEN                                              1310.00 80       012230.00
                  B,SERS      -CBRZ+ IBR144      FAILED      1304.10 00       012230.40
        B,IBR145                                            11714.10 00       012231.00
CBERP3  SIC,SEN                                              1310.00 80       012231.40
                  B,SERS      -CBRZ+ IBR145      FAILED      1304.10 00       012232.00
        B,IBR146                                            11714.50 00       012232.40
CBERP4  SIC,SEN                                              1310.00 80       012233.00
                  B,SERS      -CBRZ+ IBR146      FAILED      1304.10 00       012233.40
        B,IBR147                                            11715.10 00       012234.00
CBERP5  SIC,SEN                                              1310.00 80       012234.40
                  B,SERS      -CBRZ+ IBR148      FAILED      1304.10 00       012235.00
        B,IBR155                                            11721.10 00       012235.40
CBERP6  SIC,SEN                                              1310.00 80       012236.00
                  B,SERS      -CBRZ+ IBR142-146  FAILED      1304.10 00       012236.40
        B,IBR157                                            11725.10 00       012237.00
CBERP7  SIC,SEN                                              1310.00 80       012237.40
                  B,SERS      -CBRZ+ IBR142-148  FAILED      1304.10 00       012240.00
        B,IBR158                                            11726.10 00       012240.40
CBERQ   SIC,SEN                                              1310.00 80       012241.00
                  B,SERS      -CBRZ- IBR160      FAILED      1304.10 00       012241.40
        B,IBR161                                            11730.10 00       012242.00
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CBERQ1  SIC,SEN
              B,SERS          -CBRZ- IBR161      FAILED
        B,IBR162
CBERQ2  SIC,SEN
              B,SERS          -CBRZ- IBR162      FAILED
        B,IBR163
CBERQ3  SIC,SEN
              B,SERS          -CBRZ- IBR163      FAILED
        B,IBR164
CBERQ4  SIC,SEN
              B,SERS          -CBRZ- IBR164      FAILED
        B,IBR165
CBERQ5  SIC,SEN
              B,SERS          -CBRZ- IBR166      FAILED
        B,IBR173
CBERQ6  SIC,SEN
              B,SERS          -CBRZ- IBR160-164  FAILED
        B,IBR175
CBERQ7  SIC,SEN
              B,SERS          -CBRZ- IBR160-166  FAILED
        B,IBR176
CBERR   SIC,SEN
              B,SERS          -CBRZH IBR178      FAILED
        B,IBR179
CBERR1  SIC,SEN
              B,SERS          -CBRZH IBR179      FAILED
        B,IBR180
CBERR2  SIC,SEN
              B,SERS          -CBRZH IBR180      FAILED
        B,IBR181
CBERR3  SIC,SEN
              B,SERS          -CBRZH IBR181      FAILED
        B,IBR182
CBERR4  SIC,SEN
              B,SERS          -CBRZH IBR182      FAILED
        B,IBR183
CBERR5  SIC,SEN
              B,SERS          -CBRZH IBR184      FAILED
        B,IBR191
CBERR6  SIC,SEN
              B,SERS          -CBRZH IBR178-182  FAILED
        B,IBR193
CBERR7  SIC,SEN
              B,SERS          -CBRZH IBR178-184  FAILED
        B,IBR194
        CNOP
```

```
1310.00 80      012242.40
1304.10 00      012243.00
11730.50 00     012243.40
1310.00 80      012244.00
1304.10 00      012244.40
11731.10 00     012245.00
1310.00 80      012245.40
1304.10 00      012246.00
11731.50 00     012246.40
1310.00 80      012247.00
1304.10 00      012247.40
11732.10 00     012250.00
1310.00 80      012250.40
1304.10 00      012251.00
11736.10 00     012251.40
1310.00 80      012252.00
1304.10 00      012252.40
11742.10 00     012253.00
1310.00 80      012253.40
1304.10 00      012254.00
11743.10 00     012254.40
1310.00 80      012255.00
1304.10 00      012255.40
11745.10 00     012256.00
1310.00 80      012256.40
1304.10 00      012257.00
11745.50 00     012257.40
1310.00 80      012260.00
1304.10 00      012260.40
11746.10 00     012261.00
1310.00 80      012261.40
1304.10 00      012262.00
11746.50 00     012262.40
1310.00 80      012263.00
1304.10 00      012263.40
11747.10 00     012264.00
1310.00 80      012264.40
1304.10 00      012265.00
11753.10 00     012265.40
1310.00 80      012266.00
1304.10 00      012266.40
11757.10 00     012267.00
1310.00 80      012267.40
1304.10 00      012270.00
11760.10 00     012270.40
```

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152     NOP
154     NOP                 -DUMMY PEOGRAM          0.30 00         012271.00
                                                    0.30 00         012271.40
```

```
                    ----1256---LVE AND LVS CHECK.
                                                                                -
                    -THIS TEST IS COMPOSED OF TWO MAJOR ROUTINES
                    -WHICH TEST THE ABOVE AS FOLLOWS,
                                                                                -
                              -TEST 1 CHECKS THAT LVS WILL
                                   -LOAD CORRECTLY FROM EACH IX,
                                   -AND THAT EACH IX REG CAN BE
                                   -LOADED WITH THE SOME OF ALL
                                   -THE OTHERS.
                                                                                -
                              -TEST 2 CHECKS THAT LVE WILL LOAD
                                   -CORRECTLY WITH 5 LEVELS, AND
                                   -UNDER ALL CONDITIONS.
                                                                                -
1256    LX,$X1,1561D          -UPDATE IDENT.                    12275.02 10     012272.00
        SX,$X1,DPET13                                            1437.03 10     012272.40
        SIC,RET                                                  1306.40 80     012273.00
              B,IDF1          -PRINT ID.                        1443.10 00     012273.40
        Z,IC256                                                 12774.22 00     012274.00
        BD,1561                                                 12276.04 00     012274.40
                                                                                -
        CNOP
1561D   %IQSZ¤DD%BU,64,8¤,1256     Z                                           012275.00
                                                                                -
1561    LX,$X0,BIT0           -TEST 1A, CHECK LVS, INDIVIDUAL SELN.  13054.00 10     012276.00
        LX,$X1,BIT1                                              13055.02 10     012276.40
        LX,$X2,BIT2                                              13056.04 10     012277.00
        LX,$X3,BIT3                                              13057.06 10     012277.40
        LX,$X4,BIT4                                              13060.10 10     012300.00
        LX,$X5,BIT5                                              13061.12 10     012300.40
        LX,$X6,BIT6                                              13062.14 10     012301.00
        LX,$X7,BIT7                                              13063.16 10     012301.40
        LX,$X8,BIT8                                              13064.20 10     012302.00
        LX,$X9,BIT9                                              13065.22 10     012302.40
        LX,$X10,BIT10                                            13066.24 10     012303.00
        LX,$X11,BIT11                                            13067.26 10     012303.40
        LX,$X12,BIT12                                            13070.30 10     012304.00
        LX,$X13,BIT13                                            13071.32 10     012304.40
        LX,$X14,BIT14                                            13072.34 10     012305.00
                                                                                -
        LVS,$X15,$X0                                            400000.37 0B     012305.40
        KV,$X15,BIT0                                             13054.36 90     012306.00
        SIC,SEN                                                   1310.00 80     012306.40
        BZXE,SERS             -LVS ADDRESSING OF IX 0 FAILS.      1304.32 C0     012307.00
                                                                                -
        LX,$X15,BIT15                                            13073.36 10     012307.40
        LVS,$X0,$X1                                             200000.01 0B     012310.00
        KV,$X0,BIT1                                              13055.00 90     012310.40
        SIC,SEN                                                   1310.00 80     012311.00
        BZXE,SERS             -LVS ADDRESSING OF IX 1 FAILS.      1304.32 C0     012311.40
                                                                                -
        LVS,$X0,$X2                                             100000.01 0B     012312.00
        KV,$X0,BIT2                                              13056.00 90     012312.40
        SIC,SEN                                                   1310.00 80     012313.00
        BZXE,SERS             -LVS ADDRESSING OF IX 2 FAILS.      1304.32 C0     012313.40
```

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LVS,$X0,$X3                                    40000.01 0B    012314.00
KV,$X0,BIT3                                    13057.00 90    012314.40
SIC,SEN                                         1310.00 80    012315.00
BZXE,SERS       -LVS ADDRESSING OF IX 3 FAILS.  1304.32 C0    012315.40
-
-
LVS,$X0,$X4                                    20000.01 0B    012316.00
KV,$X0,BIT4                                    13060.00 90    012316.40
SIC,SEN                                         1310.00 80    012317.00
BZXE,SERS       -LVS ADDRESSING OF IX 4 FAILS.  1304.32 C0    012317.40
-
LVS,$X0,$X5                                    10000.01 0B    012320.00
KV,$X0,BIT5                                    13061.00 90    012320.40
SIC,SEN                                         1310.00 80    012321.00
BZXE,SERS       -LVS ADDRESSING OF IX 5 FAILS.  1304.32 C0    012321.40
-
LVS,$X0,$X6                                     4000.01 0B    012322.00
KV,$X0,BIT6                                    13062.00 90    012322.40
SIC,SEN                                         1310.00 80    012323.00
BZXE,SERS       -LVS ADDRESSING OF IX 6 FAILS.  1304.32 C0    012323.40
-
LVS,$X0,$X7                                     2000.01 0B    012324.00
KV,$X0,BIT7                                    13063.00 90    012324.40
SIC,SEN                                         1310.00 80    012325.00
BZXE,SERS       -LVS ADDRESSING OF IX 7 FAILS.  1304.32 C0    012325.40
-
LVS,$X0,$X8                                     1000.01 0B    012326.00
KV,$X0,BIT8                                    13064.00 90    012326.40
SIC,SEN                                         1310.00 80    012327.00
BZXE,SERS       -LVS ADDRESSING OF IX 8 FAILS.  1304.32 C0    012327.40
-
LVS,$X0,$X9                                      400.01 0B    012330.00
KV,$X0,BIT9                                    13065.00 90    012330.40
SIC,SEN                                         1310.00 80    012331.00
BZXE,SERS       -LVS ADDRESSING OF IX 9 FAILS.  1304.32 C0    012331.40
-
LVS,$X0,$X10                                     200.01 0B    012332.00
KV,$X0,BIT10                                   13066.00 90    012332.40
SIC,SEN                                         1310.00 80    012333.00
BZXE,SERS       -LVS ADDRESSING OF IX 10 FAILS. 1304.32 C0    012333.40
```

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LVS,$X0,$X11                                          100.01 0B      012334.00
KV,$X0,BIT11                                        13067.00 90      012334.40
SIC,SEN                                               1310.00 80     012335.00
BZXE,SERS          -LVS ADDRESSING OF IX 11 FAILS.    1304.32 C0     012335.40
                                                                -
LVS,$X0,$X12                                           40.01 0B      012336.00
KV,$X0,BIT12                                        13070.00 90      012336.40
SIC,SEN                                               1310.00 80     012337.00
BZXE,SERS          -LVS ADDRESSING OF IX 12 FAILS.    1304.32 C0     012337.40
                                                                -
LVS,$X0,$X13                                           20.01 0B      012340.00
KV,$X0,BIT13                                        13071.00 90      012340.40
SIC,SEN                                               1310.00 80     012341.00
BZXE,SERS          -LVS ADDRESSING OF IX 13 FAILS.    1304.32 C0     012341.40
                                                                -
LVS,$X0,$X14                                           10.01 0B      012342.00
KV,$X0,BIT14                                        13072.00 90      012342.40
SIC,SEN                                               1310.00 80     012343.00
BZXE,SERS          -LVS ADDRESSING OF IX 14 FAILS.    1304.32 C0     012343.40
                                                                -
LVS,$X0,$X15                                            4.01 0B      012344.00
KV,$X0,BIT15                                        13073.00 90      012344.40
SIC,SEN                                               1310.00 80     012345.00
BZXE,SERS          -LVS ADDRESSING OF IX 15 FAILS     1304.32 C0     012345.40
                                                                -
B,$+1.0                                             12347.10 00      012346.00
BD,1561                                             12276.04 00      012346.40
SIC,SEN0+.32                                          1311.40 80     012347.00
B,SSW              -TO SSIP.                          1301.10 00     012347.40
BD,$+.32                                            12350.44 00      012350.00
                                                                -
LX,$X13,IC256      -UPDATE CONTINUITY CHECK.          12774.32 10      012350.40
V+,$X13,BIT0                                        13054.32 B0      012351.00
SX,$X13,IC256                                       12774.33 10      012351.40
```

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1562    LX,$X0,BIT0          -TEST 1B, LVS MULTIPLE SELN.          13054.00 10    012352.00
        LX,$X1,BIT1                                                13055.02 10    012352.40
        LX,$X2,BIT2                                                13056.04 10    012353.00
        LX,$X3,BIT3                                                13057.06 10    012353.40
        LX,$X4,BIT4                                                13060.10 10    012354.00
        LX,$X5,BIT5                                                13061.12 10    012354.40
        LX,$X6,BIT6                                                13062.14 10    012355.00
        LX,$X7,BIT7                                                13063.16 10    012355.40
        LX,$X8,BIT8                                                13064.20 10    012356.00
        LX,$X9,BIT9                                                13065.22 10    012356.40
        LX,$X10,BIT10                                              13066.24 10    012357.00
        LX,$X11,BIT11                                              13067.26 10    012357.40
        LX,$X12,BIT12                                              13070.30 10    012360.00
        LX,$X13,BIT13                                              13071.32 10    012360.40
        LX,$X14,BIT14                                              13072.34 10    012361.00
        LX,$X15,BIT15                                              13073.36 10    012361.40
        LVS,$X0,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.01 0B    012362.00
        KV,$X0,156K1                                               12776.00 90    012362.40
        SIC,SEN              -LVS IX 00 FRM ALL IX REGS FAILS.,     1310.00 80    012363.00
        BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE       1304.32 C0    012363.40
                             -IX REGS NOT INCLUDED IN SUM.
                                                                -
        LX,$X0,$X0                                                   20.00 10    012364.00
        SIC,SEN                                                    1310.00 80    012364.40
        BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.            1304.30 40    012365.00
                                                                -
        SR,$X0,$X0                                                   20.01 70    012365.40
        LX,$X0,$X0                                                   20.00 10    012366.00
        SIC,SEN                                                    1310.00 80    012366.40
        BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.           1304.31 40    012367.00
                                                                -
        LX,$X0,BIT0                                                13054.00 10    012367.40
                                                                -
        LVS,$X1,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.03 0B    012370.00
        KV,$X1,156K1                                               12776.02 90    012370.40
        SIC,SEN              -LVS IX 01 FRM ALL IX REGS FAILS.,     1310.00 80    012371.00
        BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE       1304.32 C0    012371.40
                             -IX REGS NOT INCLUDE IN SUM.
                                                                -
        LX,$X1,$X1                                                   21.02 10    012372.00
        SIC,SEN                                                    1310.00 80    012372.40
        BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.            1304.30 40    012373.00
                                                                -
        SR,$X1,$X1                                                   21.03 70    012373.40
        LX,$X1,$X1                                                   21.02 10    012374.00
        SIC,SEN                                                    1310.00 80    012374.40
        BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.           1304.31 40    012375.00
                                                                -
        LX,$X1,BIT1                                                13055.02 10    012375.40
```

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LVS,$X2,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.05 0B    012376.00
KV,$X2,156K1                                                    12776.04 90    012376.40
SIC,SEN             -LVS IX 02 FRM ALL IX REGS FAILS.,          1310.00 80     012377.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE            1304.32 C0     012377.40
                    -IX REGS NOT INCLUDED IN SUM.
LX,$X2,$X2                                                        22.04 10     012400.00
SIC,SEN                                                         1310.00 80     012400.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                  1304.30 40     012401.00
                                                                           -
SR,$X2,$X2                                                        22.05 70     012401.40
LX,$X2,$X2                                                        22.04 10     012402.00
SIC,SEN                                                         1310.00 80     012402.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                 1304.31 40     012403.00
LX,$X2,BIT2                                                     13056.04 10    012403.40
                                                                           -
LVS,$X3,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.07 0B    012404.00
KV,$X3,156K1                                                    12776.06 90    012404.40
SIC,SEN             -LVS IX 03 FRM ALL IX REGS FAILS.,          1310.00 80     012405.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE            1304.32 C0     012405.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                           -
LX,$X3,$X3                                                        23.06 10     012406.00
SIC,SEN                                                         1310.00 80     012406.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                  1304.30 40     012407.00
                                                                           -
SR,$X3,$X3                                                        23.07 70     012407.40
LX,$X3,$X3                                                        23.06 10     012410.00
SIC,SEN                                                         1310.00 80     012410.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                 1304.31 40     012411.00
                                                                           -
LX,$X3,BIT3                                                     13057.06 10    012411.40
                                                                           -
LVS,$X4,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.11 0B    012412.00
KV,$X4,156K1                                                    12776.10 90    012412.40
SIC,SEN             -LVS IX 04 FRM ALL IX REGS FAILS.,          1310.00 80     012413.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE            1304.32 C0     012413.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                           -
LX,$X4,$X4                                                        24.10 10     012414.00
SIC,SEN                                                         1310.00 80     012414.40
                                                                           -
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                  1304.30 40     012415.00
                                                                           -
SR,$X4,$X4                                                        24.11 70     012415.40
LX,$X4,$X4                                                        24.10 10     012416.00
SIC,SEN                                                         1310.00 80     012416.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                 1304.31 40     012417.00
                                                                           -
LX,$X4,BIT4                                                     13060.10 10    012417.40
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LVS,$X5,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.13 0B  012420.00
KV,$X5,156K1                                                    12776.12 90  012420.40
SIC,SEN             -LVS IX 05 FRM ALL IX REGS FAILS.,           1310.00 80  012421.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE             1304.32 C0  012421.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                          -
LX,$X5,$X5                                                         25.12 10  012422.00
SIC,SEN                                                          1310.00 80  012422.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                   1304.30 40  012423.00
                                                                          -
SR,$X5,$X5                                                         25.13 70  012423.40
LX,$X5,$X5                                                         25.12 10  012424.00
SIC,SEN                                                          1310.00 80  012424.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                  1304.31 40  012425.00
                                                                          -
LX,$X5,BIT5                                                      13061.12 10  012425.40
                                                                          -
LVS,$X6,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.15 0B  012426.00
KV,$X6,156K1                                                    12776.14 90  012426.40
SIC,SEN             -LVS IX 06 FRM ALL IX REGS FAILS.,           1310.00 80  012427.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE             1304.32 C0  012427.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                          -
LX,$X6,$X6                                                         26.14 10  012430.00
SIC,SEN                                                          1310.00 80  012430.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                   1304.30 40  012431.00
                                                                          -
SR,$X6,$X6                                                         26.15 70  012431.40
LX,$X6,$X6                                                         26.14 10  012432.00
SIC,SEN                                                          1310.00 80  012432.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                  1304.31 40  012433.00
                                                                          -
LX,$X6,BIT6                                                      13062.14 10  012433.40
                                                                          -
LVS,$X7,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.17 0B  012434.00
KV,$X7,156K1                                                    12776.16 90  012434.40
SIC,SEN             -LVS IX 07 FRM ALL IX REGS FAILS.,           1310.00 80  012435.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE             1304.32 C0  012435.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                          -
LX,$X7,$X7                                                         27.16 10  012436.00
SIC,SEN                                                          1310.00 80  012436.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                   1304.30 40  012437.00
                                                                          -
SR,$X7,$X7                                                         27.17 70  012437.40
LX,$X7,$X7                                                         27.16 10  012440.00
SIC,SEN                                                          1310.00 80  012440.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                  1304.31 40  012441.00
                                                                          -
LX,$X7,BIT7                                                      13063.16 10  012441.40
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LVS,$X8,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.21 0B      012442.00
KV,$X8,156K1                                                    12776.20 90      012442.40
SIC,SEN             -LVS IX 08 FRM ALL IX REGS FAILS.,           1310.00 80      012443.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE             1304.32 C0      012443.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                        -
LX,$X8,$X8                                                         30.20 10      012444.00
SIC,SEN                                                          1310.00 80      012444.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                   1304.30 40      012445.00
                                                                        -
SR,$X8,$X8                                                         30.21 70      012445.40
LX,$X8,$X8                                                         30.20 10      012446.00
SIC,SEN                                                          1310.00 80      012446.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                  1304.31 40      012447.00
                                                                        -
LX,$X8,BIT8                                                      13064.20 10      012447.40
                                                                        -
LVS,$X9,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15 777774.23 0B      012450.00
KV,$X9,156K1                                                    12776.22 90      012450.40
SIC,SEN             -LVS IX 09 FRM ALL IX REGS FAILS.,           1310.00 80      012451.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE             1304.32 C0      012451.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                        -
LX,$X9,$X9                                                         31.22 10      012452.00
SIC,SEN                                                          1310.00 80      012452.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                   1304.30 40      012453.00
                                                                        -
SR,$X9,$X9                                                         31.23 70      012453.40
LX,$X9,$X9                                                         31.22 10      012454.00
SIC,SEN                                                          1310.00 80      012454.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                  1304.31 40      012455.00
                                                                        -
LX,$X9,BIT9                                                      13065.22 10      012455.40
                                                                        -
LVS,$X10,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15777774.25 0B      012456.00
KV,$X10,156K1                                                   12776.24 90      012456.40
SIC,SEN             -LVS IX 10 FRM ALL IX REGS FAILS.,           1310.00 80      012457.00
BZXE,SERS           -BITS 0-15 OF IX WHICH ARE 0 ARE             1304.32 C0      012457.40
                    -IX REGS NOT INCLUDED IN SUM.
                                                                        -
LX,$X10,$X10                                                       32.24 10      012460.00
SIC,SEN                                                          1310.00 80      012460.40
BZXCZ,SERS          -LVS DESTROYS COUNT FIELD.                   1304.30 40      012461.00
                                                                        -
SR,$X10,$X10                                                       32.25 70      012461.40
LX,$X10,$X10                                                       32.24 10      012462.00
SIC,SEN                                                          1310.00 80      012462.40
BZXVZ,SERS          -LVS DESTROYS REFILL FIELD.                  1304.31 40      012463.00
                                                                        -
LX,$X10,BIT10                                                    13066.24 10      012463.40
```

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LVS,$X11,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15777774.27 0B      012464.00
KV,$X11,156K1                                                    12776.26 90      012464.40
SIC,SEN              -LVS IX 11 FRM ALL IX REGS FAILS.,          1310.00 80      012465.00
BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE            1304.32 C0      012465.40
                     -IX REGS NOT INCLUDED IN SUM.
                                                                      -
LX,$X11,$X11                                                       33.26 10      012466.00
SIC,SEN                                                          1310.00 80      012466.40
BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.                  1304.30 40      012467.00
                                                                      -
SR,$X11,$X11                                                       33.27 70      012467.40
LX,$X11,$X11                                                       33.26 10      012470.00
SIC,SEN                                                          1310.00 80      012470.40
BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.                 1304.31 40      012471.00
                                                                      -
LX,$X11,BIT11                                                    13067.26 10      012471.40
                                                                      -
LVS,$X12,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15777774.31 0B      012472.00
KV,$X12,156K1                                                    12776.30 90      012472.40
SIC,SEN              -LVS IX 12 FRM ALL IX REGS FAILS.,          1310.00 80      012473.00
BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE            1304.32 C0      012473.40
                     -IX REGS NOT INCLUDED IN SUM.
                                                                      -
LX,$X12,$X12                                                       34.30 10      012474.00
SIC,SEN                                                          1310.00 80      012474.40
BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.                  1304.30 40      012475.00
                                                                      -
SR,$X12,$X12                                                       34.31 70      012475.40
LX,$X12,$X12                                                       34.30 10      012476.00
SIC,SEN                                                          1310.00 80      012476.40
BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.                 1304.31 40      012477.00
                                                                      -
LX,$X12,BIT12                                                    13070.30 10      012477.40
                                                                      -
LVS,$X13,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15777774.33 0B      012500.00
KV,$X13,156K1                                                    12776.32 90      012500.40
SIC,SEN              -LVS IX 13 FRM ALL IX REGS FAILS.,          1310.00 80      012501.00
BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE            1304.32 C0      012501.40
                     -IX REGS NOT INCLUDED IN SUM.
                                                                      -
LX,$X13,$X13                                                       35.32 10      012502.00
SIC,SEN                                                          1310.00 80      012502.40
BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.                  1304.30 40      012503.00
                                                                      -
SR,$X13,$X13                                                       35.33 70      012503.40
LX,$X13,$X13                                                       35.32 10      012504.00
SIC,SEN                                                          1310.00 80      012504.40
BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.                 1304.31 40      012505.00
                                                                      -
LX,$X13,BIT13                                                    13071.32 10      012505.40
```

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LVS,$X14,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15777774.35 0B      012506.00
KV,$X14,156K1                                                          12776.34 90      012506.40
SIC,SEN              -LVS IX 14 FRM ALL IX REGS FAILS.,                 1310.00 80      012507.00
BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE                   1304.32 C0      012507.40
                     -IX REGS NOT INCLUDED IN SUM.
                                                                                -
LX,$X14,$X14                                                             36.34 10      012510.00
SIC,SEN                                                                1310.00 80      012510.40
BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.                        1304.30 40      012511.00
                                                                                -
SR,$X14,$X14                                                             36.35 70      012511.40
LX,$X14,$X14                                                             36.34 10      012512.00
SIC,SEN                                                                1310.00 80      012512.40
BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.                       1304.31 40      012513.00
                                                                                -
LX,$X14,BIT14                                                          13072.34 10      012513.40
                                                                                -
LVS,$X15,$0,$1,$2,$3,$4,$5,$6,$7,$8,$9,$10,$11,$12,$13,$14,$15777774.37 0B      012514.00
KV,$X15,156K1                                                          12776.36 90      012514.40
SIC,SEN              -LVS IX 15 FRM ALL IX REGS FAILS.,                 1310.00 80      012515.00
BZXE,SERS            -BITS 0-15 OF IX WHICH ARE 0 ARE                   1304.32 C0      012515.40
                     -IX REGS NOT INCLUDED IN SUM.
                                                                                -
LX,$X15,$X15                                                             37.36 10      012516.00
SIC,SEN                                                                1310.00 80      012516.40
BZXCZ,SERS           -LVS DESTROYS COUNT FIELD.                        1304.30 40      012517.00
                                                                                -
SR,$X15,$X15                                                             37.37 70      012517.40
LX,$X15,$X15                                                             37.36 10      012520.00
SIC,SEN                                                                1310.00 80      012520.40
BZXVZ,SERS           -LVS DESTROYS REFILL FIELD.                       1304.31 40      012521.00
                                                                                -
LX,$X15,BIT15                                                          13073.36 10      012521.40
                                                                                -
LX,$X1,1000          -CHK ZEROS IN 0-15 CLRS IX REG.                   13035.02 10      012522.00
Z,$X6                                                                    26.22 00      012522.40
SVA,$X6,$+.32                                                          12523.55 D0      012523.00
$LVS,$X1,0                                                            400000.03 0B      012523.40
LX,$X0,$X1                                                               21.00 10      012524.00
BXVZ,$+1.32                                                            12526.31 42      012524.40
SIC,SEN              -ZEROS IN 0-15 OF LVS FAILS TO                     1310.00 80      012525.00
B,SERS               -CLEAR SPECIFIED IX REG.                          1304.10 00      012525.40
                                                                                -
B,$+1.0                                                                12527.10 00      012526.00
BD,1562                                                                12352.04 00      012526.40
SIC,SEN0+.32                                                           1311.40 80      012527.00
B,SSW                -TO SSIP.                                         1301.10 00      012527.40
BD,$+.32                                                               12530.44 00      012530.00
                                                                                -
LX,$X13,1C256        -UPDATE CONTINUITY CHECK.                         12774.32 10      012530.40
V+,$X13,BIT1                                                           13055.32 B0      012531.00
SX,$X13,1C256                                                          12774.33 10      012531.40
```

```
1563    Z,$X0                   -TEST 2A, LVE SECOND LEVEL INST          20.22 00                  012532.00
        LVE,$X0,156K3           -IS NOT LVE, LOCATED IN 3 MEMS.       13000.01 B0                  012532.40
        LX,$X0,$X0                                                       20.00 10                  012533.00
        BZXVZ,$+2.0                                                   12535.71 40                  012533.40
        SIC,SEN                 -LVE TO A LV IN EXT MEM FAILS TO       1310.00 80                  012534.00
        B,SERS                  -LOAD ANY VALUE BITS.                  1304.10 00                  012534.40
        B,1564                                                        12537.10 00                  012535.00
                                                                                -
        KVI,$X0,156K2                                                 12777.01 04                  012535.40
        SIC,SEN                 -LVE TO A LV IN EXT MEM FAILS TO       1310.00 80                  012536.00
        BZXE,SERS               -LOAD CORRECT VALUE BITS.              1304.32 C0                  012536.40
                                                                                -
1564    Z,$X0                                                            20.22 00                  012537.00
        LX,$X1,156K3                                                  13000.02 10                  012537.40
        LVE,$X0,$X1                                                      21.01 B0                  012540.00
        LX,$X0,$X0                                                       20.00 10                  012540.40
        BZXVZ,$+2.0                                                   12543.31 40                  012541.00
        SIC,SEN                 -LVE TO A LV IN IX STG FAILS TO        1310.00 80                  012541.40
        B,SERS                  -LOAD ANY VALUE BITS.                  1304.10 00                  012542.00
        B,1565                                                        12544.50 00                  012542.40
                                                                                -
        KVI,$X0,156K2                                                 12777.01 04                  012543.00
        SIC,SEN                 -LVE TO A LV IN IX STG FAILS TO        1310.00 80                  012543.40
        BZXE,SERS               -LOAD CORRECT VALUE BITS.              1304.32 C0                  012544.00
                                                                                -
1565    Z,$X0                                                            20.22 00                  012544.40
        L%BU¤,156K3                                                   13000.00 80 000000.20 50     012545.00
        LVE,$X0,$R                                                       11.01 B0                  012546.00
        LX,$X0,$X0                                                       20.00 10                  012546.40
        BZXVZ,$+2.0                                                   12551.31 40                  012547.00
        SIC,SEN                 -LVE TO A LV IN RACC FAILS TO          1310.00 80                  012547.40
        B,SERS                  -LOAD ANY VALUE BITS.                  1304.10 00                  012550.00
        B,1566                                                        12552.50 00                  012550.40
                                                                                -
        KVI,$X0,156K2                                                 12777.01 04                  012551.00
        SIC,SEN                 -LVE TO A LV IN RACC FAILS TO          1310.00 80                  012551.40
        BZXE,SERS               -LOAD CORRECT VALUE BITS               1304.32 C0                  012552.00
                                                                                -
1566    B,$+1.0                                                       12553.50 00                  012552.40
        BD,1563                                                       12532.04 00                  012553.00
        SIC,SEN0+.32                                                   1311.40 80                  012553.40
        B,SSW                                                          1301.10 00                  012554.00
        BD,$+.32                                                      12555.04 00                  012554.40
                                                                                -
        LX,$X13,IC256           -UPDATE CONTINUITY CHECK.             12774.32 10                  012555.00
        V+,$X13,BIT2                                                  13056.32 B0                  012555.40
        SX,$X13,IC256                                                 12774.33 10                  012556.00
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1567    Z,$X0                   -TEST 2B, LVE SECOND LEVEL INST IS      20.22 00                012556.40
        LVE,$X0,156K4           -ANOTHER LVE REFERENCING EXT MEM.    13001.01 B0                012557.00
        LX,$X0,$X0                                                      20.00 10                012557.40
        BZXVZ,$+2.0                                                  12562.31 40                012560.00
        SIC,SEN                 -LVE TO AN LVE IN EXT MEM TO AN LV    1310.00 80                012560.40
        BZXE,SERS               -IN EXT MEM LOADS INCORRECTLY.        1304.32 C0                012561.00
        B,1568                                                       12563.50 00                012561.40
                                                                                -
        KVI,$X0,156K2                                                12777.01 04                012562.00
        SIC,SEN                 -LVE TO AN LVE IN EXT MEM TO AN LV    1310.00 80                012562.40
        BZXE,SERS               -IN EXT MEM LOADS INCORRECTLY.        1304.32 C0                012563.00
                                                                                -
1568    Z,$X0                                                           20.22 00                012563.40
        LX,$X1,156K3                                                 13000.02 10                012564.00
        LVE,$X0,$X1                                                     21.01 B0                012564.40
        LX,$X0,$X0                                                      20.00 10                012565.00
        BZXVZ,$+2.0                                                  12567.71 40                012565.40
        SIC,SEN                 -LVE TO AN LVE IN IX STG TO AN LV     1310.00 80                012566.00
        B,SERS                  -IN EXT MEM LOADS NO BITS             1304.10 00                012566.40
        B,1569                                                       12571.10 00                012567.00
                                                                                -
        KVI,$X0,156K2                                                12777.01 04                012567.40
        SIC,SEN                 -LVE TO AN LVE IN IX STG TO AN LV     1310.00 80                012570.00
        BZXE,SERS               -IN EXT MEM LOADS INCORRECTLY.        1304.32 C0                012570.40
                                                                                -
1569    Z,$X0                                                           20.22 00                012571.00
        L%BU⊓,156K3                                                  13000.00 80 000000.20 50   012571.40
        LVE,$X0,$R                                                      11.01 B0                012572.40
        LX,$X0,$X0                                                      20.00 10                012573.00
        BZXVZ,$+2.0                                                  12575.71 40                012573.40
        SIC,SEN                 -LVE TO AN LVE IN RACC TO AN LV       1310.00 80                012574.00
        B,SERS                  -IN EXT MEM LOADS NO BITS.            1304.10 00                012574.40
        B,15610                                                      12577.10 00                012575.00
                                                                                -
        KVI,$X0,156K2                                                12777.01 04                012575.40
        SIC,SEN                 -LVE TO AN LVE IN RACC TO AN LV       1310.00 80                012576.00
        BZXE,SERS               -IN EXT MEM LOADS INCORRECTLY.        1304.32 C0                012576.40
                                                                                -
15610   B,$+1.0                                                      12600.10 00                012577.00
        BD,1567                                                      12556.44 00                012577.40
        SIC,SEN0+.32                                                  1311.40 80                012600.00
        B,SSW                   -TO SSIP.                             1301.10 00                012600.40
        BD,$+.32                                                     12601.44 00                012601.00
                                                                                -
        LX,$X13,IC256           -UPDATE CONTINUITY CHECK.            12774.32 10                012601.40
        V+,$X13,BIT3                                                 13057.32 B0                012602.00
        SX,$X13,IC256                                                12774.33 10                012602.40
```

```
15611   Z,$X0                   -TEST 2C, LVE IN EXT TO LVE IN          20.22 00                    012603.00
        LX,$X1,156K5            -IX TO LV IN ACC, AND VICE VERSA.    13002.02 10                    012603.40
        L%BU¤,156K3                                                  13000.00 80 000000.20 50       012604.00
        LVE,$X0,$X1                                                     21.01 B0                    012605.00
        LX,$X0,$X0                                                      20.00 10                    012605.40
        BZXVZ,$+2.0                                                  12610.31 40                    012606.00
        SIC,SEN                 -LVE TO AN LVE IN IX STG TO AN LV IN  1310.00 80                    012606.40
        B,SERS                  -ACC LOADS NO BITS.                   1304.10 00                    012607.00
        B,15612                                                      12611.50 00                    012607.40
                                                                                -
        KVI,$X0,156K2                                                12777.01 04                    012610.00
        SIC,SEN                 -LVE TO AN LVE IN IX STG TO AN LV IN  1310.00 80                    012610.40
        BZXE,SERS               -ACC LOADS INCORRECTLY.               1304.32 C0                    012611.00
                                                                                -
15612   Z,$X0                                                           20.22 00                    012611.40
        L%BU¤,156K6                                                  13003.00 80 000000.20 50       012612.00
        LX,$X1,156K3                                                 13000.02 10                    012613.00
        LVE,$X0,$R                                                      11.01 B0                    012613.40
        LX,$X0,$X0                                                      20.00 10                    012614.00
        BZXVZ,$+2.0                                                  12616.71 40                    012614.40
        SIC,SEN                 -LVE TO AN LVE IN ACC TO AN LV IN     1310.00 80                    012615.00
        B,SERS                  -IX STG LOADS NO BITS.                1304.10 00                    012615.40
        B,15613                                                      12620.10 00                    012616.00
                                                                                -
        KVI,$X0,156K2                                                12777.01 04                    012616.40
        SIC,SEN                 -LVE TO AN LVE IN ACC TO AN LV IN     1310.00 80                    012617.00
        BZXE,SERS               -IX STG LOADS INCORRECTLY.            1304.32 C0                    012617.40
                                                                                -
15613   B,$+1.0                                                      12621.10 00                    012620.00
        BD,15611                                                     12603.04 00                    012620.40
        SIC,SEN0+.32                                                  1311.40 80                    012621.00
        B,SSW                   -TO SSIP                              1301.10 00                    012621.40
        BD,$+.32                                                     12622.44 00                    012622.00
                                                                                -
        LX,$X13,IC256           -UPDATE CONTINUITY CHECK.            12774.32 10                    012622.40
        V+,$X13,BIT4                                                 13060.32 B0                    012623.00
        SX,$X13,IC256                                                12774.33 10                    012623.40
```

```
15614   Z,$X0               -TEST 2D, CHECK LVE LOADS CORRECT          20.22 00    012624.00
        LVE,$X0,I56K7       -NUMBER OF BITS ACCORDING TO CLASS       13004.01 B0   012624.40
        KV,$X0,I56K7A       -OF SUBJECT INST, FULL WD VFL FIRST.     13005.00 90   012625.00
        SIC,SEN                                                       1310.00 80   012625.40
        BZXE,SERS           -SUBJ INST OF LVE WAS VFL, NOT ALL        1304.32 C0   012626.00
                            -BITS LOADED CORRECTLY.
                                                                  -
        Z,$X0               -DIR IX, LOAD 19 BITS.                     20.22 00    012626.40
        LVE,$X0,I56K8                                            13006.01 B0   012627.00
        KVI,$X0,I56K8+.32                                        13006.41 04   012627.40
        SIC,SEN             -SUBJ INST OF LVE WAS DIR IX, NOT ALL      1310.00 80   012630.00
        BZXE,SERS           -19 BITS LOADED CORRECTLY, OR EXTRAS.      1304.32 C0   012630.40
                                                                  -
        Z,$X0               -SUBJ INST IS IMMED IX.                    20.22 00    012631.00
        LVE,$X0,I56K9                                            13007.01 B0   012631.40
        KVI,$X0,I56K9+.32                                        13007.41 04   012632.00
        SIC,SEN             -SUBJ INST OF LVE WAS IM IX, NOT ALL       1310.00 80   012632.40
        BZXE,SERS           -OF, OR MORE THAN, 19 BITS LOADED OK.      1304.32 C0   012633.00
                                                                  -
        Z,$X0               -SUBJ INST IS MISC.                        20.22 00    012633.40
        LVE,$X0,I56K10                                           13010.01 B0   012634.00
        KVI,$X0,I56K9+.32                                        13007.41 04   012634.40
        SIC,SEN             -SUBJ INST OF LVE WAS MISC, NOT ALL        1310.00 80   012635.00
        BZXE,SERS           -OF, OR MORE THAN, 19 BITS LOADED.         1304.32 C0   012635.40
                                                                  -
        Z,$X0               -SUBJ INST IS BIND.                        20.22 00    012636.00
        LVE,$X0,I56K11                                           13011.01 B0   012636.40
        KVI,$X0,I56K11+.32                                       13011.41 04   012637.00
        SIC,SEN             -SUBJ INST OF LVE WAS MISC, NOT ALL        1310.00 80   012637.40
        BZXE,SERS           -OF, OR MORE THAN, 19 BITS LOADED.         1304.32 C0   012640.00
                                                                  -
        Z,$X0               -SUBJ INST IS CB.                          20.22 00    012640.40
        LVE,$X0,I56K12                                           13012.01 B0   012641.00
        KVI,$X0,I56K12+.32                                       13012.41 04   012641.40
        SIC,SEN             -SUBJ INST OF LVE WAS MISC, NOT ALL        1310.00 80   012642.00
        BZXE,SERS           -OF, OR MORE THAN, 19 BITS LOADED.         1304.32 C0   012642.40
                                                                  -
        Z,$X0               -SUBJ INST IS FP.                          20.22 00    012643.00
        LVE,$X0,I56K13                                           13013.01 B0   012643.40
        KVI,$X0,%8¤777777.00                                    777777.01 04   012644.00
        SIC,SEN             -SUBJ INST OF LVE WAS FP, NOT ALL          1310.00 80   012644.40
        BZXE,SERS           -OF, OR MORE THAN, 19 BITS LOADED.         1304.32 C0   012645.00
                                                                  -
        B,$+1.0                                                  12646.50 00   012645.40
        BD,I5614                                                 12624.04 00   012646.00
        SIC,SEN0+.32                                              1311.40 80   012646.40
        B,SSW               -TO SSIP.                             1301.10 00   012647.00
        BD,$+.32                                                 12650.04 00   012647.40
                                                                  -
        LX,$X13,IC256       -UPDATE CONTINUITY CHECK.             12774.32 10   012650.00
        V+,$X13,BIT5                                             13061.32 B0   012650.40
        SX,$X13,IC256                                            12774.33 10   012651.00
```

```
15615   Z,$X0                -TEST 2E, CHK SUBJ INST OF LVE          20.22 00                    012651.40
        Z,$R                 -IS NOT EXECUTED, SUBJ INST IX MOD      11.22 00                    012652.00
        LVE,$X0,156K14       -OCCURS BUT NOT PROG IX.             13014.01 B0                    012652.40
        L%BU¤,$R                                                     11.00 80 000000.20 50       012653.00
        SIC,SEN                                                    1310.00 80                    012654.00
        BZRZ,SERS            -SUBJ INST OF LVE GETS EXECUTED.      1304.34 C0                    012654.40
                                                                                -
        Z,$X0                -CHK INDEX MOD.                         20.22 00                    012655.00
        LX,$X1,156K15                                              13015.02 10                    012655.40
        LVE,$X0,156K16                                             13016.01 B0                    012656.00
        KV,$X0,156K15                                              13015.00 90                    012656.40
        SIC,SEN              -SUBJ INST OF LVE DOES NOT IX         1310.00 80                    012657.00
        BZXE,SERS            -MODIFY OK PRIOR TO LOADING.          1304.32 C0                    012657.40
                                                                                -
        Z,$X0                -CHK PROG IX IGNORED.                   20.22 00                    012660.00
        LX,$X1,156K17                                              13017.02 10                    012660.40
        LVE,$X0,156K18                                             13020.01 B0                    012661.00
        KV,$X1,156K17                                              13017.02 90                    012661.40
        SIC,SEN              -WHEN SUBJ INST OF LVE IS PROG IX     1310.00 80                    012662.00
        BZXE,SERS            -VFL,PROG IX MODIFICATION OCCURS.     1304.32 C0                    012662.40
                                                                                -
        KV,$X0,156K15                                              13015.00 90                    012663.00
        SIC,SEN              -SUBJ INST OF LVE IS PROG IX VFL, NOT 1310.00 80                    012663.40
        BZXE,SERS            -ALL OF BITS 0-23 LOADED.             1304.32 C0                    012664.00
                                                                                -
        Z,$X0                -CHK RH OF VFL FOR 19 BITS.             20.22 00                    012664.40
        Z,$X15                                                       37.22 00                    012665.00
        LVE,$X0,156K19+.32                                         13021.41 B0                    012665.40
        KVI,$X0,%8¤777777.40                                      777777.41 04                    012666.00
        SIC,SEN              -SUBJ INST OF LVE IS RH VFL, NOT ALL  1310.00 80                    012666.40
        BZXE,SERS            -OF, OR MORE THAN, BITS 0-18 LOADED.  1304.32 C0                    012667.00
                                                                                -
        Z,$X0                -CHK RHW OF SWAP FOR 18 BITS ONLY.      20.22 00                    012667.40
        Z,$X15                                                       37.22 00                    012670.00
        LVE,$X0,156K20+.32                                         13022.41 B0                    012670.40
        KVI,$X0,%8¤777777.00                                      777777.01 04                    012671.00
        SIC,SEN              -SUBJ INST OF LVE IS RH TRANS, NOT ALL 1310.00 80                   012671.40
        BZXE,SERS            -OF, OR MORE THAN, BITS 0-17 LOADED.  1304.32 C0                    012672.00
                                                                                -
        B,$+1.0                                                    12673.50 00                    012672.40
        BD,15615                                                   12651.44 00                    012673.00
        SIC,SEN0+.32                                                1311.40 80                    012673.40
        B,SSW                                                       1301.10 00                    012674.00
        BD,$+.32                                                   12675.04 00                    012674.40
                                                                                -
        LX,$X13,1C256        -UPDATE CONTINUITY CHECK.             12774.32 10                    012675.00
        V+,$X13,BIT6                                               13062.32 B0                    012675.40
        SX,$X13,1C256                                              12774.33 10                    012676.00
```

```
15616   Z,$X0           -TEST 2F, CHK SUCCESSIVE LVE LOADS      20.22 00                012676.40
        Z,$X1           -ONLY IX SPECIFIED BY FIRST LVE.        21.22 00                012677.00
        Z,$X2                                                   22.22 00                012677.40
        Z,$X3                                                   23.22 00                012700.00
        Z,$X4                                                   24.22 00                012700.40
        Z,$X5                                                   25.22 00                012701.00
        Z,$X6                                                   26.22 00                012701.40
        Z,$X7                                                   27.22 00                012702.00
        Z,$X8                                                   30.22 00                012702.40
        Z,$X9                                                   31.22 00                012703.00
        Z,$X10                                                  32.22 00                012703.40
        Z,$X11                                                  33.22 00                012704.00
        Z,$X12                                                  34.22 00                012704.40
        Z,$X13                                                  35.22 00                012705.00
        Z,$X14                                                  36.22 00                012705.40
        Z,$X15                                                  37.22 00                012706.00
                                                                -
        LVE,$X0,156K21  -CONSECUTIVE LVES TO LVI INST.      13023.01 B0                 012706.40
        L%BU¤,$X0                                              20.00 80 000000.20 50    012707.00
        SIC,SEN                                              1310.00 80                 012710.00
        BRZ,SERS        -NO BITS IN IX 0.                    1304.34 C2                 012710.40
                                                                -
        L%BU¤,$X1                                              21.00 80 000000.20 50    012711.00
        SIC,SEN                                              1310.00 80                 012712.00
        BZRZ,SERS       -ILLEGAL SELN OF IX 1.               1304.34 C0                 012712.40
                                                                -
        L%BU¤,$X2                                              22.00 80 000000.20 50    012713.00
        SIC,SEN                                              1310.00 80                 012714.00
        BZRZ,SERS       -ILLEGAL SELN OF IX 2.               1304.34 C0                 012714.40
                                                                -
        LVE,$X0,156K21+.32                                  13023.41 B0                 012715.00
        LVE,$X0,156K21+1.0                                  13024.01 B0                 012715.40
        L%BU¤,$X3                                              23.00 80 000000.20 50    012716.00
        SIC,SEN                                              1310.00 80                 012717.00
        BZRZ,SERS       -ILLEGAL SELN OF IX 3.               1304.34 C0                 012717.40
                                                                -
        LVE,$X0,156K21+1.32                                 13024.41 B0                 012720.00
        L%BU¤,$X4                                              24.00 80 000000.20 50    012720.40
        SIC,SEN                                              1310.00 80                 012721.40
        BZRZ,SERS       -ILLEGAL SELN OF IX 4.               1304.34 C0                 012722.00
                                                                -
        LVE,$X0,156K21+2.0                                  13025.01 B0                 012722.40
        L%BU¤,$X5                                              25.00 80 000000.20 50    012723.00
        SIC,SEN                                              1310.00 80                 012724.00
        BZRZ,SERS       -ILLEGAL SELN OF IX 5.               1304.34 C0                 012724.40
                                                                -
        LVE,$X0,156K21+2.32                                 13025.41 B0                 012725.00
        L%BU¤,$X6                                              26.00 80 000000.20 50    012725.40
        SIC,SEN                                              1310.00 80                 012726.40
        BZRZ,SERS       -ILLEGAL SELN OF IX 6.               1304.34 C0                 012727.00
                                                                -
        LVE,$X0,156K21+3.0                                  13026.01 B0                 012727.40
        L%BU¤,$X7                                              27.00 80 000000.20 50    012730.00
        SIC,SEN                                              1310.00 80                 012731.00
        BZRZ,SERS       -ILLEGAL SELN OF IX 7.               1304.34 C0                 012731.40
```

```
LVE,$X0,156K21+3.32
L%BU¤,$X8
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 8.

LVE,$X0,156K21+4.0
L%BU¤,$X9
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX9.

LVE,$X0,156K21+4.32
L%BU¤,$X10
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 10.

LVE,$X0,156K21+5.0
L%BU¤,$X11
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 11.

LVE,$X0,156K21+5.32
L%BU¤,$X12
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 12.

LVE,$X0,156K21+6.0
L%BU¤,$X13
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 13.

LVE,$X0,156K21+6.32
L%BU¤,$X14
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 14.

LVE,$X0,156K21+7.0
L%BU¤,$X15
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 15

Z,$X0
LVE,$X15,156K22
L%BU¤,$X0
SIC,SEN
BZRZ,SERS            -ILLEGAL SELN OF IX 0.

B,$+1.0
BD,15616
SIC,SEN0+.32
B,SSW                -TO SSIP.
BD,$+.32

LX,$X13,1C256        -UPDATE CONTINUITY CHECK.
V+,$X13,BIT7
SX,$X13,1C256

LX,$X13,1C256        -UPDATE CONTINUITY CHECK.
KV,$X13,1CK256
SIC,SEN
BZXE,SERS            -CONTINUITY ERROR.
LX,$X1,(8)103.0
KV,$X1,100LC
```

```
13026.41 B0                          012732.00
   30.00 80 000000.20 50             012732.40
 1310.00 80                          012733.40
 1304.34 C0                          012734.00
-
13027.01 B0                          012734.40
   31.00 80 000000.20 50             012735.00
 1310.00 80                          012736.00
 1304.34 C0                          012736.40
-
13027.41 B0                          012737.00
   32.00 80 000000.20 50             012737.40
 1310.00 80                          012740.40
 1304.34 C0                          012741.00
-
13030.01 B0                          012741.40
   33.00 80 000000.20 50             012742.00
 1310.00 80                          012743.00
 1304.34 C0                          012743.40
-
13030.41 B0                          012744.00
   34.00 80 000000.20 50             012744.40
 1310.00 80                          012745.40
 1304.34 C0                          012746.00
-
13031.01 B0                          012746.40
   35.00 80 000000.20 50             012747.00
 1310.00 80                          012750.00
 1304.34 C0                          012750.40
-
13031.41 B0                          012751.00
   36.00 80 000000.20 50             012751.40
 1310.00 80                          012752.40
 1304.34 C0                          012753.00
-
13032.01 B0                          012753.40
   37.00 80 000000.20 50             012754.00
 1310.00 80                          012755.00
 1304.34 C0                          012755.40
-
  20.22 00                           012756.00
13032.77 B0                          012756.40
   20.00 80 000000.20 50             012757.00
 1310.00 80                          012760.00
 1304.34 C0                          012760.40
-
12762.10 00                          012761.00
12676.44 00                          012761.40
 1311.40 80                          012762.00
 1301.10 00                          012762.40
12763.44 00                          012763.00
-
12774.32 10                          012763.40
13063.32 B0                          012764.00
12774.33 10                          012764.40
-
12774.32 10                          012765.00
12775.32 90                          012765.40
 1310.00 80                          012766.00
 1304.32 C0                          012766.40
  103.02 10                          012767.00
13033.02 90                          012767.40
```

```
        BZXE,%8¤34000.0       -LOOP                    34000.32 C0                   012770.00
        KC,$X1,100LC                                   13033.03 90                   012770.40
        BZXE,%8¤34000.0       -LOOP                    34000.32 C0                   012771.00
        SR,$X1,17.0                                       21.03 70                   012771.40
        KV,$X1,100LC+.32                               13033.42 90                   012772.00
        BZXE,%8¤34000.0       -LOOP                    34000.32 C0                   012772.40
        B,%8¤45000.0          -CONTINUE                45000.10 00                   012773.00
1C256   XW,0,0,0           -CONTINUITY REG 1256.          0.00 00 000000.00 00       012774.00
1CK256  XW,%8¤776000.00,0,0                           776000.00 00 000000.00 00      012775.00
```

```
         CNOP                    -CONSTANTS FOR I256
I56K1    XW,%8¤777774.00,0,0                          777774.00 00 000000.00 00     012776.00
I56K2    XW,%8¤162543.34,0,0                          162543.34 00 000000.00 00     012777.00
I56K3    LV,$X0,I56K2                                  12777.00 30                  013000.00
         NOP                                               0.30 00                  013000.40
I56K4    LVE,$X0,I56K3                                 13000.01 B0                  013001.00
         NOP                                               0.30 00                  013001.40
I56K5    LVE,$X0,$R                                       11.01 B0                  013002.00
         NOP                                               0.30 00                  013002.40
I56K6    LVE,$X0,$X1                                      21.01 B0                  013003.00
         NOP                                               0.30 00                  013003.40
I56K7    L%BU¤,I56K7+.63         -VFL                  13004.77 80 000000.20 50     013004.00
I56K7A   XW,I56K7+.63,0,0                              13004.77 00 000000.00 00     013005.00
I56K8    SV,$X15,$+.32           -DIR IX.              13006.77 30                  013006.00
         NOP                                               0.30 00                  013006.40
I56K9    LVI,$X15,$+.32          -IMMED IX.            13007.77 01                  013007.00
         NOP                                               0.30 00                  013007.40
I56K10   EXIC,I56K9+.32          -MISC.                13007.56 00                  013010.00
         NOP                                               0.30 00                  013010.40
I56K11   BZNM,$+.32              -BIND                 13011.77 C0                  013011.00
         NOP                                               0.30 00                  013011.40
I56K12   CB,$X15,$+.32                                 13012.76 48                  013012.00
         NOP                                               0.30 00                  013012.40
I56K13   %8¤DD%BU,64,8¤,17777777720000000000                17777777720000000000  013013.00
I56K14   L%BU¤,1000                                    13035.00 80 000000.20 50     013014.00
I56K15   XW,%8¤777777.77,0,0                          777777.77 00 000000.00 00     013015.00
I56K16   L%BU¤,0%$X1¤                                     0.00 81 000000.20 50     013016.00
I56K17   XW,%8¤000777.77,0,0                             777.77 00 000000.00 00     013017.00
I56K18   L%V+1¤%BU¤,%8¤777000.00%$X1¤                  777000.00 81 100000.20 50     013020.00
I56K19   XW,-0.0,%8¤037777,%8¤777777                       0.00 00 777777.77 FF     013021.00
I56K20   %8¤DD%BU,64,8¤,10037777767040                      0000000010037777767040  013022.00
I56K21   LVI,$X1,%8¤777777.40                          777777.43 01                 013023.00
         LVI,$X2,%8¤777777.40                          777777.45 01                 013023.40
         LVI,$X3,%8¤777777.40                          777777.47 01                 013024.00
         LVI,$X4,%8¤777777.40                          777777.51 01                 013024.40
         LVI,$X5,%8¤777777.40                          777777.53 01                 013025.00
         LVI,$X6,%8¤777777.40                          777777.55 01                 013025.40
         LVI,$X7,%8¤777777.40                          777777.57 01                 013026.00
         LVI,$X8,%8¤777777.40                          777777.61 01                 013026.40
         LVI,$X9,%8¤777777.40                          777777.63 01                 013027.00
         LVI,$X10,%8¤777777.40                         777777.65 01                 013027.40
         LVI,$X11,%8¤777777.40                         777777.67 01                 013030.00
         LVI,$X12,%8¤777777.40                         777777.71 01                 013030.40
         LVI,$X13,%8¤777777.40                         777777.73 01                 013031.00
         LVI,$X14,%8¤777777.40                         777777.75 01                 013031.40
         LVI,$X15,%8¤777777.40                         777777.77 01                 013032.00
I56K22   LVI,$X0,%8¤777777.40                          777777.41 01                 013032.40
         CNOP
                                 -COMMON CONSTANTS FOR FETCH ONLY
         -
SENO     SYN,SENO                                        1311.00+     +00000000
I00LC    %8¤DD%BU,64,8¤,0 000 011 770 025 700 000 000      0000011770025700000000  013033.00
I00Z     XW,0,0,0,0                      -ZERO INDX WD.      0.00 00 000000.00 00  013034.00
I000     %8¤DD%BU,64,8¤,17777777777777777777-INDX WD. OF ONES.  17777777777777777777  013035.00
I00VO    XW,%8¤-777777.77,0,0                         777777.77 80 000000.00 00     013036.00
I00CO    XW,0,%8¤777777,0                                  0.00 0F 777760.00 00     013037.00
         -
         DD%BU,64,8¤,0,0,0                                 0000000000000000000000  013040.00
                                                           0000000000000000000000  013041.00
                                                           0000000000000000000000  013042.00
         DD%BU,64,8¤,0,0,0                                 0000000000000000000000  013043.00
                                                           0000000000000000000000  013044.00
```

```
                                                              0000000000000000000000    013045.00
          DD%BU,64,8□,0,0,0                                   0000000000000000000000    013046.00
                                                              0000000000000000000000    013047.00
                                                              0000000000000000000000    013050.00
          DD%BU,64,8□,0,0,0                                   0000000000000000000000    013051.00
                                                              0000000000000000000000    013052.00
                                                              0000000000000000000000    013053.00
                                                        /
          -
BIT0      XW,%8□400000.00,0,0                           400000.00 00 000000.00 00       013054.00
BIT1      XW,%8□200000.00,0,0                           200000.00 00 000000.00 00       013055.00
BIT2      XW,%8□100000.00,0,0                           100000.00 00 000000.00 00       013056.00
BIT3      XW,%8□40000.00,0,0                             40000.00 00 000000.00 00       013057.00
BIT4      XW,%8□20000.00,0,0                             20000.00 00 000000.00 00       013060.00
BIT5      XW,%8□10000.00,0,0                             10000.00 00 000000.00 00       013061.00
BIT6      XW,%8□4000.00,0,0                               4000.00 00 000000.00 00       013062.00
BIT7      XW,%8□2000.00,0,0                               2000.00 00 000000.00 00       013063.00
BIT8      XW,%8□1000.00,0,0                               1000.00 00 000000.00 00       013064.00
BIT9      XW,%8□400.00,0,0                                 400.00 00 000000.00 00       013065.00
BIT10     XW,%8□200.00,0,0                                 200.00 00 000000.00 00       013066.00
BIT11     XW,%8□100.00,0,0                                 100.00 00 000000.00 00       013067.00
BIT12     XW,%8□40.00,0,0                                   40.00 00 000000.00 00       013070.00
BIT13     XW,%8□20.00,0,0                                   20.00 00 000000.00 00       013071.00
BIT14     XW,%8□10.00,0,0                                   10.00 00 000000.00 00       013072.00
BIT15     XW,%8□4.00,0,0                                     4.00 00 000000.00 00       013073.00
BIT16     XW,%8□2.00,0,0                                     2.00 00 000000.00 00       013074.00
BIT17     XW,%8□1.00,0,0                                     1.00 00 000000.00 00       013075.00
BIT18     XW,%8□.40,0,0                                      0.40 00 000000.00 00       013076.00
BIT19     XW,%8□.20,0,0                                      0.20 00 000000.00 00       013077.00
BIT20     XW,%8□.10,0,0                                      0.10 00 000000.00 00       013100.00
BIT21     XW,%8□0.04,0,0                                     0.04 00 000000.00 00       013101.00
BIT22     XW,%8□0.02,0,0                                     0.02 00 000000.00 00       013102.00
BIT23     XW,%8□0.01,0,0                                     0.01 00 000000.00 00       013103.00
BIT24     %8□DD%BU□,0 000 000 010 000 000 000 000            0000000010000000000000     013104.00
BIT25     XW,0,0,0,4                                         0.00 40 000000.00 00       013105.00
BIT26     XW,0,0,0,2                                         0.00 20 000000.00 00       013106.00
BIT27     XW,0,0,0,1                                         0.00 10 000000.00 00       013107.00
BIT28     XW,0,131072,0                                      0.00 08 000000.00 00       013110.00
BIT29     XW,0,65536,0                                       0.00 04 000000.00 00       013111.00
BIT30     XW,0,32768,0                                       0.00 02 000000.00 00       013112.00
BIT31     XW,0,16384,0                                       0.00 01 000000.00 00       013113.00
BIT32     XW,0,8192,0                                        0.00 00 400000.00 00       013114.00
BIT33     XW,0,4096,0                                        0.00 00 200000.00 00       013115.00
BIT34     XW,0,2048,0                                        0.00 00 100000.00 00       013116.00
BIT35     XW,0,1024,0                                        0.00 00 040000.00 00       013117.00
```

```
BIT36   XW,0,512,0          0.00 00 020000.00 00      013120.00
BIT37   XW,0,256,0          0.00 00 010000.00 00      013121.00
BIT38   XW,0,128,0          0.00 00 004000.00 00      013122.00
BIT39   XW,0,64,0           0.00 00 002000.00 00      013123.00
BIT40   XW,0,32,0           0.00 00 001000.00 00      013124.00
BIT41   XW,0,16,0           0.00 00 000400.00 00      013125.00
BIT42   XW,0,8,0            0.00 00 000200.00 00      013126.00
BIT43   XW,0,4,0            0.00 00 000100.00 00      013127.00
BIT44   XW,0,2,0            0.00 00 000040.00 00      013130.00
BIT45   XW,0,1,0            0.00 00 000020.00 00      013131.00
BIT46   XW,0,0,131072       0.00 00 000010.00 00      013132.00
BIT47   XW,0,0,65536        0.00 00 000004.00 00      013133.00
BIT48   XW,0,0,32768        0.00 00 000002.00 00      013134.00
BIT49   XW,0,0,16384        0.00 00 000001.00 00      013135.00
BIT50   XW,0,0,8192         0.00 00 000000.40 00      013136.00
BIT51   XW,0,0,4096         0.00 00 000000.20 00      013137.00
BIT52   XW,0,0,2048         0.00 00 000000.10 00      013140.00
BIT53   XW,0,0,1024         0.00 00 000000.04 00      013141.00
BIT54   XW,0,0,512          0.00 00 000000.02 00      013142.00
BIT55   XW,0,0,256          0.00 00 000000.01 00      013143.00
BIT56   XW,0,0,128          0.00 00 000000.00 80      013144.00
BIT57   XW,0,0,64           0.00 00 000000.00 40      013145.00
BIT58   XW,0,0,32           0.00 00 000000.00 20      013146.00
BIT59   XW,0,0,16           0.00 00 000000.00 10      013147.00
BIT60   XW,0,0,8            0.00 00 000000.00 08      013150.00
BIT61   XW,0,0,4            0.00 00 000000.00 04      013151.00
BIT62   XW,0,0,2            0.00 00 000000.00 02      013152.00
BIT63   XW,0,0,1            0.00 00 000000.00 01      013153.00
```

```
SSW      SYN,%8□1301.0
ERS      SYN,%8□1302.0
SERS     SYN,%8□1304.0
RET      SYN,%8□1306.40
RET1     SYN,%8□1307.0
RET2     SYN,%8□1307.40
SEN      SYN,%8□1310.0
SEN0     SYN,%8□1311.0
DPET13   SYN,%8□1437.0
INT      SYN,%8□1353.0
IDF1     SYN,%8□1443.0
IDF2     SYN,%8□1444.40
         END,%8□34000.0
```

```
1301.00+     +00000000
1302.00+     +00000000
1304.00+     +00000000
1306.40+     +00000000
1307.00+     +00000000
1307.40+     +00000000
1310.00+     +00000000
1311.00+     +00000000
1437.00+     +00000000
1353.00+     +00000000
1443.00+     +00000000
1444.40+     +00000000
34000.00                  013154.00
```