```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                      2
                               00000000  0000048F     3 FAC53TST START 0
                                                      4
                               00000000  00000001     5 START    EQU   *
                                                      6
                                                      7
                                                      8
                                                      9
                               00000000  00000001    10 R0       EQU   0
                               00000001  00000001    11 R1       EQU   1
                               00000002  00000001    12 R2       EQU   2
                               00000003  00000001    13 R3       EQU   3
                               00000004  00000001    14 R4       EQU   4
                               00000005  00000001    15 R5       EQU   5
                               00000006  00000001    16 R6       EQU   6
                               00000007  00000001    17 R7       EQU   7
                               00000008  00000001    18 R8       EQU   8
                               00000009  00000001    19 R9       EQU   9
                               0000000A  00000001    20 R10      EQU   10
                               0000000B  00000001    21 R11      EQU   11
                               0000000C  00000001    22 R12      EQU   12
                               0000000D  00000001    23 R13      EQU   13
                               0000000E  00000001    24 R14      EQU   14
                               0000000F  00000001    25 R15      EQU   15
                                                     26
                                                     27
                                                     28
                                                     29
00000000                       00000000             30          USING START,R0
                                                     31
                                                     32
                                                     33
00000000                       00000000  000001A0   34          ORG   START+X'1A0'                      z/Arch Restart PSW
000001A0  00000001 80000000                         35          DC    XL12'000000018000000000000000'
000001AC  00000200                                  36          DC    A(BEGIN)
                                                     37
                                                     38
                                                     39
000001B0                       000001B0  000001D0   40          ORG   START+X'1D0'                      z/Arch Program New PSW
000001D0  00000001 80000000                         41          DC    XL12'000000018000000000000000'
000001DC  00000372                                  42          DC    A(PROGCHK)
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                      44 ********************************************************************************
                                                      45 *                              TEST PROGRAM
                                                      46 ********************************************************************************
                                                      47
000001E0                        000001E0  00000200    48          ORG      START+X'200'    START OF TEST PROGRAM
                                                      49
00000200  EB02 0430 0004                  00000430    50 BEGIN    LMG      R0,R2,TESTVALS Load test registers
                                                      51
00000206  B904 0030                                   52          LGR      R3,R0
0000020A  B904 0040                                   53          LGR      R4,R0
0000020E  B904 0050                                   54          LGR      R5,R0
00000212  B904 0060                                   55          LGR      R6,R0
00000216  B904 0070                                   56          LGR      R7,R0
0000021A  B904 0080                                   57          LGR      R8,R0
0000021E  B904 0090                                   58          LGR      R9,R0
00000222  B904 00A0                                   59          LGR      R10,R0
00000226  B904 00B0                                   60          LGR      R11,R0
0000022A  B904 00C0                                   61          LGR      R12,R0
0000022E  B904 00D0                                   62          LGR      R13,R0
00000232  B904 00E0                                   63          LGR      R14,R0
00000236  B904 00F0                                   64          LGR      R15,R0
                                                      65
                                                      66
                                                      67
                                                      68 *-------------------------------------------------------------------------
                                                      69 *        LOAD AND ZERO RIGHTMOST BYTE (64)
                                                      70 *-------------------------------------------------------------------------
                                                      71
0000023A  E330 0438 002A                  00000438    72          LZRG     R3,ONES         E3r00aaa002A
00000240  E330 0448 0021                  00000448    73          CLG      R3,LZRB64       Correct value loaded?
00000246  A784 0004                       0000024E    74          JE       *+8             Yes, continue on to next test
0000024A  A7F5 0092                       0000036E    75          JAS      R15,FAILURE     No, abort
                                                      76
                                                      77 *-------------------------------------------------------------------------
                                                      78 *        LOAD AND ZERO RIGHTMOST BYTE (32)
                                                      79 *-------------------------------------------------------------------------
                                                      80
0000024E  E340 0438 003B                  00000438    81          LZRF     R4,ONES         E3r00aaa003B
00000254  E340 0458 0021                  00000458    82          CLG      R4,LZRB32       Correct value loaded?
0000025A  A784 0004                       00000262    83          JE       *+8             Yes, continue on to next test
0000025E  A7F5 0088                       0000036E    84          JAS      R15,FAILURE     No, abort
                                                      85
                                                      86 *-------------------------------------------------------------------------
                                                      87 *        LOAD LOGICAL AND ZERO RIGHTMOST BYTE (64 <- 32)
                                                      88 *-------------------------------------------------------------------------
                                                      89
00000262  E350 0438 003A                  00000438    90          LLZRGF   R5,ONES         E3r00aaa003A
00000268  E350 0450 0021                  00000450    91          CLG      R5,LZRB64L      Correct value loaded?
0000026E  A784 0004                       00000276    92          JE       *+8             Yes, continue on to next test
00000272  A7F5 007E                       0000036E    93          JAS      R15,FAILURE     No, abort
```

```
  LOC        OBJECT CODE       ADDR1     ADDR2     STMT
                                                     95 *------------------------------------------------------------------------
                                                     96 *        Initialize condition code...
                                                     97 *------------------------------------------------------------------------
                                                     98
00000276  B902 0000                                  99          LTGR     R0,R0           Set condition code 0  (i.e. '8')
                                                    100
                                                    101 *------------------------------------------------------------------------
                                                    102 *        LOAD HALFWORD HIGH IMMEDIATE ON CONDITION (32 <- 16)
                                                    103 *------------------------------------------------------------------------
                                                    104
0000027A  EC67 FFFF 004E                            105          LOCHHI   R6,-1,7         ECrmiiii004E
00000280  E360 0430 0021              00000430      106          CLG      R6,ZEROS        Correct value loaded?
00000286  A784 0004                   0000028E      107          JE       *+8             Yes, continue on to next test
0000028A  A7F5 0072                   0000036E      108          JAS      R15,FAILURE     No, abort
                                                    109
0000028E  EC68 FFFF 004E                            110          LOCHHI   R6,-1,8         ECrmiiii004E
00000294  E360 0460 0021              00000460      111          CLG      R6,LOC32H       Correct value loaded?
0000029A  A784 0004                   000002A2      112          JE       *+8             Yes, continue on to next test
0000029E  A7F5 0068                   0000036E      113          JAS      R15,FAILURE     No, abort
                                                    114
                                                    115 *------------------------------------------------------------------------
                                                    116 *        LOAD HALFWORD IMMEDIATE ON CONDITION (32 <- 16)
                                                    117 *------------------------------------------------------------------------
                                                    118
000002A2  EC77 FFFF 0042                            119          LOCHI    R7,-1,7         ECrmiiii0042
000002A8  E370 0430 0021              00000430      120          CLG      R7,ZEROS        Correct value loaded?
000002AE  A784 0004                   000002B6      121          JE       *+8             Yes, continue on to next test
000002B2  A7F5 005E                   0000036E      122          JAS      R15,FAILURE     No, abort
                                                    123
000002B6  EC78 FFFF 0042                            124          LOCHI    R7,-1,8         ECrmiiii0042
000002BC  E370 0468 0021              00000468      125          CLG      R7,LOC32        Correct value loaded?
000002C2  A784 0004                   000002CA      126          JE       *+8             Yes, continue on to next test
000002C6  A7F5 0054                   0000036E      127          JAS      R15,FAILURE     No, abort
                                                    128
                                                    129 *------------------------------------------------------------------------
                                                    130 *        LOAD HALFWORD IMMEDIATE ON CONDITION (64 <- 16)
                                                    131 *------------------------------------------------------------------------
                                                    132
000002CA  EC87 FFFF 0046                            133          LOCGHI   R8,-1,7         ECrmiiii0046
000002D0  E380 0430 0021              00000430      134          CLG      R8,ZEROS        Correct value loaded?
000002D6  A784 0004                   000002DE      135          JE       *+8             Yes, continue on to next test
000002DA  A7F5 004A                   0000036E      136          JAS      R15,FAILURE     No, abort
                                                    137
000002DE  EC88 FFFF 0046                            138          LOCGHI   R8,-1,8         ECrmiiii0046
000002E4  E380 0470 0021              00000470      139          CLG      R8,LOC64        Correct value loaded?
000002EA  A784 0004                   000002F2      140          JE       *+8             Yes, continue on to next test
000002EE  A7F5 0040                   0000036E      141          JAS      R15,FAILURE     No, abort
```

```
 LOC        OBJECT CODE       ADDR1     ADDR2     STMT

                                                   143 *------------------------------------------------------------------------
                                                   144 *        LOAD HIGH ON CONDITION (32)
                                                   145 *------------------------------------------------------------------------
                                                   146
000002F2  B9E0 7091                                147          LOCFHR   R9,R1,7         B9E0m0xy
000002F6  E390 0430 0021              00000430     148          CLG      R9,ZEROS        Correct value loaded?
000002FC  A784 0004                   00000304     149          JE       *+8             Yes, continue on to next test
00000300  A7F5 0037                   0000036E     150          JAS      R15,FAILURE     No, abort
                                                   151
00000304  B9E0 8091                                152          LOCFHR   R9,R1,8         B9E0m0xy
00000308  E390 0478 0021              00000478     153          CLG      R9,LOC3211S     Correct value loaded?
0000030E  A784 0004                   00000316     154          JE       *+8             Yes, continue on to next test
00000312  A7F5 002E                   0000036E     155          JAS      R15,FAILURE     No, abort
                                                   156
                                                   157 *------------------------------------------------------------------------
                                                   158 *        LOAD HIGH ON CONDITION (32)
                                                   159 *------------------------------------------------------------------------
                                                   160
00000316  EBA7 0438 00E0              00000438     161          LOCFH    R10,ONES,7      EBrm0aaa00E0
0000031C  E3A0 0430 0021              00000430     162          CLG      R10,ZEROS       Correct value loaded?
00000322  A784 0004                   0000032A     163          JE       *+8             Yes, continue on to next test
00000326  A7F5 0024                   0000036E     164          JAS      R15,FAILURE     No, abort
                                                   165
0000032A  EBA8 0438 00E0              00000438     166          LOCFH    R10,ONES,8      EBrm0aaa00E0
00000330  E3A0 0478 0021              00000478     167          CLG      R10,LOC3211S    Correct value loaded?
00000336  A784 0004                   0000033E     168          JE       *+8             Yes, continue on to next test
0000033A  A7F5 001A                   0000036E     169          JAS      R15,FAILURE     No, abort
                                                   170
                                                   171 *------------------------------------------------------------------------
                                                   172 *        STORE HIGH ON CONDITION
                                                   173 *------------------------------------------------------------------------
                                                   174
0000033E  EB17 0480 00E1              00000480     175          STOCFH   R1,STOCFH,7     EBrm0aaa00E1
00000344  E320 0480 0021              00000480     176          CLG      R2,STOCFH       Correct value stored?
0000034A  A784 0004                   00000352     177          JE       *+8             Yes, continue on to next test
0000034E  A7F5 0010                   0000036E     178          JAS      R15,FAILURE     No, abort
                                                   179
                                                   180
00000352  EB18 0480 00E1              00000480     181          STOCFH   R1,STOCFH,8     EBrm0aaa00E1
00000358  D507 0480 0488    00000480  00000488     182          CLC      STOCFH,STOCFH1F Correct value stored?
0000035E  A784 0004                   00000366     183          JE       *+8             Yes, continue on to next test
00000362  A7F5 0006                   0000036E     184          JAS      R15,FAILURE     No, abort
```

```
 LOC        OBJECT CODE       ADDR1     ADDR2    STMT
                                                   186 *-------------------------------------------------------------------
                                                   187 *                  SUCCESSFUL END OF TEST
                                                   188 *-------------------------------------------------------------------
                                                   189
00000366  A7F4 0002                  0000036A     190          J        SUCCESS         SUCCESSFUL END OF TEST
                                                   191
                                                   192
                                                   193
                                                   194
                                                   195 ********************************************************************
                                                   196 *                        WORKING STORAGE
                                                   197 ********************************************************************
                                                   198
0000036A  B2B2 0400                  00000400     199 SUCCESS  LPSWE    GOODPSW         Load test completed successfully PSW
0000036E  B2B2 0410                  00000410     200 FAILURE  LPSWE    BADPSW          Load the test FAILED somewhere!! PSW
00000372  B2B2 0420                  00000420     201 PROGCHK  LPSWE    DEADBEEF        Load "A PROGRAM-CHECK OCCURRED!" PSW
                                                   202
                                                   203
00000376                      00000376  00000400   204          ORG    START+X'400'
                                                   205
                                                   206
00000400  00020001 80000000                        207 GOODPSW  DC     XL8'0002000180000000'
00000408  00000000 00000000                        208          DC     XL4'00000000',A(X'00000000')
                                                   209
                                                   210
00000410  00020001 80000000                        211 BADPSW   DC     XL8'0002000180000000'
00000418  00000000 00000BAD                        212          DC     XL4'00000000',A(X'00000BAD')
                                                   213
                                                   214
00000420  00020001 80000000                        215 DEADBEEF DC     XL8'0002000180000000'
00000428  00000000 DEADBEEF                        216          DC     XL4'00000000',A(X'DEADBEEF')
                                                   217
                                                   218
                                                   219
                                                   220
                              00000430  00000001   221 TESTVALS EQU    *
00000430  00000000 00000000                        222 ZEROS    DC     XL8'0000000000000000'
00000438  11111111 11111111                        223 ONES     DC     XL8'1111111111111111'
00000440  FFFFFFFF FFFFFFFF                        224 HEXFFS   DC     XL8'FFFFFFFFFFFFFFFF'
                                                   225
                                                   226
00000448  11111111 11111100                        227 LZRB64   DC     XL8'1111111111111100'
00000450  00000000 11111100                        228 LZRB64L  DC     XL8'0000000011111100'
00000458  00000000 11111100                        229 LZRB32   DC     XL8'0000000011111100'
00000460  FFFFFFFF 00000000                        230 LOC32H   DC     XL8'FFFFFFFF00000000'
00000468  00000000 FFFFFFFF                        231 LOC32    DC     XL8'00000000FFFFFFFF'
00000470  FFFFFFFF FFFFFFFF                        232 LOC64    DC     XL8'FFFFFFFFFFFFFFFF'
00000478  11111111 00000000                        233 LOC3211S DC     XL8'1111111100000000'
00000480  FFFFFFFF FFFFFFFF                        234 STOCFH   DC     XL8'FFFFFFFFFFFFFFFF'
00000488  11111111 FFFFFFFF                        235 STOCFH1F DC     XL8'11111111FFFFFFFF'
                                                   236
                                                   237
```

```
  LOC         OBJECT CODE       ADDR1     ADDR2     STMT

                                                      238
                                                      239          END
```

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
BADPSW	X	000410	8	211	200
BEGIN	I	000200	6	50	36
DEADBEEF	X	000420	8	215	201
FAC53TST	J	000000	1168	3	
FAILURE	I	00036E	4	200	75 84 93 108 113 122 127 136 141 150 155 164 169 178 184
GOODPSW	X	000400	8	207	199
HEXFFS	X	000440	8	224	
IMAGE	1	000000	1168	0	
LOC32	X	000468	8	231	125
LOC3211S	X	000478	8	233	153 167
LOC32H	X	000460	8	230	111
LOC64	X	000470	8	232	139
LZRB32	X	000458	8	229	82
LZRB64	X	000448	8	227	73
LZRB64L	X	000450	8	228	91
ONES	X	000438	8	223	72 81 90 161 166
PROGCHK	I	000372	4	201	42
R0	U	000000	1	10	30 50 52 53 54 55 56 57 58 59 60 61 62 63 64 99
R1	U	000001	1	11	147 152 175 181
R10	U	00000A	1	20	59 161 162 166 167
R11	U	00000B	1	21	60
R12	U	00000C	1	22	61
R13	U	00000D	1	23	62
R14	U	00000E	1	24	63
R15	U	00000F	1	25	64 75 84 93 108 113 122 127 136 141 150 155 164 169 178 184
R2	U	000002	1	12	50 176
R3	U	000003	1	13	52 72 73
R4	U	000004	1	14	53 81 82
R5	U	000005	1	15	54 90 91
R6	U	000006	1	16	55 105 106 110 111
R7	U	000007	1	17	56 119 120 124 125
R8	U	000008	1	18	57 133 134 138 139
R9	U	000009	1	19	58 147 148 152 153
START	U	000000	1	5	34 40 48 204 30
STOCFH	X	000480	8	234	175 176 181 182
STOCFH1F	X	000488	8	235	182
SUCCESS	I	00036A	4	199	190
TESTVALS	U	000430	1	221	50
ZEROS	X	000430	8	222	106 120 134 148 162

MACRO DEFN REFERENCES

No defined macros

```
   DESC      SYMBOL    SIZE     POS       ADDR

Entry: 0

Image       IMAGE     1168   000-48F   000-48F
  Region              1168   000-48F   000-48F
    CSECT   FAC53TST  1168   000-48F   000-48F
```

STMT FILE NAME

1 c:\Users\Fish\Documents\Visual Studio 2008\Projects\MyProjects\ASMA-0\FAC53\FAC53.asm

** NO ERRORS FOUND **