```
CLEAR STORAGE 1     ,008015,022026,030037,044,049,053053N000000N00001026                                    1
CLEAR STORAGE 2     L068116,105106,110117B101/I9I#071029C029056B026/B001/0991,001/001117I0?                 2
BOOTSTRAP           ,008015,022029,036040,047054,061068,072/061039             ,0010011040                  3

                         FORTRAN COMPILER -- PHASES 00-02                                          PAGE    1

 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

 101                JOB   FORTRAN COMPILER -- PHASES 00-02
 102                CTL   6611
 103         *
 104         * SNAPSHOT, SYSTEM MONITOR, AND LOADER PHASE.
 105         *
 106         * READ AND STORE THE SOURCE PROGRAM, IN REVERSE ORDER, STARTING
 107         * AT THE TOP OF CORE, WITH BLANKS REMOVED EXCEPT WITHIN
 108         * HOLLERITH FIELDS IN FORMAT STATEMENTS.  EACH STATEMENT BEGINS
 109         * WITH 000.  FORMAT STATEMENTS THEN HAVE F, WHILE OTHERS HAVE R.
 110         * THEN THE LABEL, IF ANY, FOLLOWED BY A COLON.  THE END OF EACH
 111         * STATEMENT IS MARKED BY A GROUP MARK WITH A WORD MARK.  AFTER
 112         * THE LAST CARD, A STOP STATEMENT IS INSERTED.
 113         *
 114                ORG   81                                                                 0081
 115     86         DC    @      @                                                6  0086                      4
 116     89  X1     DCW   @000@                                                   3  0089                      4
 117         XXXXX1 EQU   X1     FOR USE IN SFX REGIONS                              0089
 118     91         DC    @00@                                                    2  0091                      4
 119     94  X2     DCW   @000@                                                   3  0094                      4
 120         XXXXX2 EQU   X2     FOR USE IN SFX REGIONS                              0094
 121     96         DC    @00@                                                    2  0096                      4
 122     99  X3     DCW   @000@                                                   3  0099                      4
 123         XXXXX3 EQU   X3     FOR USE IN SFX REGIONS                              0099
 124    104         DC    @0    @                                                 5  0104                      4
 125    110  PHASID DCW   @LOADER@  PHASE ID, FOR SNAPSHOT                        6  0110                      4
 126    111         DCW   #1  WM CLEARED IF DO STATEMENT APPEARS                  1  0111                      5
 127    112         DCW   #1  WM CLEARED IF DO STATEMENT APPEARS                  1  0112                      5
 128    113         DCW   #1  WM CLEARED IF DO STATEMENT APPEARS                  1  0113                      5
 129    114         DCW   #1  WM CLEARED WHEN AN I/O LIST OF DO IS PROCESSED      1  0114                      5
 130    115         DCW   #1  WM CLEARED IF I/O LIST AND NOT LIMITED FORMAT       1  0115                      5
 131    116  SUBSCR DCW   #1  WM CLEARED IF SUBSCRIPT CODE NEEDED                 1  0116                      5
 132    117  SERIES DCW   #1  NEED SERIES ROUTINE IF NO WM                        1  0117                      5
 133    118  SINCOS DCW   #1  SAW SINF OR COSF IF NO WM                           1  0118                      6
 134    119  LOGF   DCW   #1  SAW LOGF IF NO WM                                   1  0119                      6
 135    120  EXPF   DCW   #1  SAW EXPF IF NO WM                                   1  0120                      6
 136    121         DCW   #1  SAW ATANF IF NO WM                                  1  0121                      6
 137    122  SAWABS DCW   #1  SAW ABSF IF NO WM                                   1  0122                      6
 138    123  SAWNEG DCW   #1  SAW NEGATION OPERATOR (UNARY MINUS) IF NO WM        1  0123                      6
 139    124  XFIXF  DCW   #1  SAW XFIXF IF NO WM                                  1  0124                      6
 140    125  FLOATF DCW   #1  SAW FLOATF IF NO WM                                 1  0125                      7
 141    126         DCW   #1  SAW SQRTF IF NO WM                                  1  0126                      7
 142    127         DCW   #1  SAW USER FUNCTION R IF NO WM                        1  0127                      7
 143    128         DCW   #1  SAW USER FUNCTION U IF NO WM                        1  0128                      7
 144    129         DCW   #1  SAW USER FUNCTION P IF NO WM                        1  0129                      7
 145    130         DCW   #1  SAW USER FUNCTION W IF NO WM                        1  0130                      7
 146    131         DCW   #1  SAW USER FUNCTION Y IF NO WM                        1  0131                      7
 147    132         DCW   #1  SAW USER FUNCTION Z IF NO WM                        1  0132                      8
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 SEQ PG LIN  LABEL  OP    OPERANDS                                                SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

 148    133         DCW   #1  SAW USER FUNCTION J IF NO WM                           1  0133                      8
 149    134         DCW   #1  SAW USER FUNCTION K IF NO WM                           1  0134                      8
 150    135         DCW   #1  SAW USER FUNCTION L IF NO WM                           1  0135                      8
 151    136         DCW   #1  SAW USER FUNCTION M IF NO WM                           1  0136                      8
 152    137         DCW   #1  SAW USER FUNCTION D IF NO WM                           1  0137                      8
 153    138         DCW   #1  SAW USER FUNCTION H IF NO WM                           1  0138                      8
 154    139         DCW   #1  SAW XLINKF IF NO WM                                    1  0139                      9
 155    142  NEGAR2 DCW   #3  LOOKS LIKE NEGARY -- SEE PHASE 20                      3  0142                      9
 156    145  TBLBOT DCW   #3  ONE BELOW NUMBERS, FORMATS, I/O LISTS                   3  0145                      9
 157    148  SEQTAB DCW   #3  BOTTOM OF SEQUENCE NUMBER TABLE - 2                    3  0148                      9
 158    151  DOCNT  DCW   #3  COUNT OF DO STATEMENTS                                 3  0151                      9
 159    154  BOTFMT DCW   #3  BOTTOM OF FORMAT STRINGS OR NUMBER TABLE - 1           3  0154                      9
 160    157  NEGAR3 DCW   #3  LOOKS LIKE NEGARY -- SEE PHASE 20                      3  0157                      9
 161    160  ARYSIZ DCW   #3  TOTAL ARRAY SIZE & 2                                   3  0160                     10
 162    163  NEGARY DCW   #3  16000 - ARYSIZ                                         3  0163                     10
 163    180         DC    #17                                                      17  0180                     10
 164    183  NSTMTS DCW   #3  NUMBER OF STATEMENTS, INCLUDING GENERATED STOP       3  0183                     10
 165    184  GLOBER DC    #1  GLOBAL ERROR FLAG -- WM MEANS ERROR                   1  0184                     10
 166    185  GOTXL  DCW   #1  XLINKF WAS REFERENCED IF NO WM                       1  0185                     10
 167    188  RELTAB DCW   #3  RELOCATABLE FUNCTION TABLE ENTRY ADDRESSES           3  0188                     10
 168    191  SUBENT DCW   #3  ENTRY TO SUBSCRIPT ROUTINE                           3  0191                     10
 169    194  ARYTOP DCW   #3  TOP OF ARRAYS IN OBJECT CODE                         3  0194                     10
 170    195         DC    #1                                                       1  0195                     10
 171    199         DCW   @V3M0@                                                   4  0199                     11
 172                ORG   333                                                           0333
 173          *
 174          * SNAPSHOT ROUTINE
 175          *
 176                SFX   S
 177    333  SNAPSH SBR   EXIT&3                                                S   4  0333  H 567              12   567
 178    337         SBR   SXX&6                                                 S   4  0337  H 408              12   408
 179    341         MCW   KZ3,ADR5-2  START FIVE-DIGIT ADDRESS AT ZERO          S   7  0341  M 661 656          12   661      656
 180    348         MCW   XXXXX3,SX3&6                                         S   7  0348  M 099 415          12   099      415
 181    355         MCW   XXXXX1,SX1&6                                         S   7  0355  M 089 422          12   089      422
 182    362         SBR   XXXXX1,1                                             S   7  0362  H 089 001          12   089      001
 183    369         SBR   XXXXX3,202                                           S   7  0369  H 099 202          13   099      202
 184    376         CS    332                                                   S   4  0376  / 332              13   332
 185    380         CS                                                          S   1  0380  /                  13
 186    381         MCW   PHASID,210                                           S   7  0381  M 110 210          13   110      210
 187    388         BSS   SKIP,F                                               S   5  0388  B 621 F            13   621
 188          *
 189          * PRINT A HEADER
 190          *
 191    393         CC    1                                                     S   2  0393  F 1                13
 192    395         MCW   XXXXX2,250                                            S   7  0395  M 094 250          13   094      250
 193    402  SXX    SBR   216,0       RETURN ADDRESS WAS STORED IN B            S   7  0402  H 216 000          14   216      000
 194    409  SX3    SBR   256,0       X3 WAS STORED IN B                        S   7  0409  H 256 000          14   256      000
 195    416  SX1    SBR   244,0       X1 WAS STORED IN B                        S   7  0416  H 244 000          14   244      000
 196    423         W                                                           S   1  0423  2                  14
 197    424         CC    K                                                     S   2  0424  F K                14
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 SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

 198    426         ZA    KP2,W2A                                          S   7  0426  ? 662 664           14   662     664
 199    433  CLEARH CS    332                                              S   4  0433  / 332               14   332
 200    437         CS                                                     S   1  0437  /                   15
 201    438         CC    J                                                S   2  0438  F J                 15
 202    440         MCW   ADR5,306    FIVE-DIGIT ADDRESS                  S   7  0440  M 658 306           15   658     306
 203    447         MCW                                                    S   1  0447  M                   15
 204    448         SBR   LOOP&6                                           S   4  0448  H 465               15   465
 205    452         MCW   K9,W2B-1                                        S   7  0452  M 665 668           15   665     668
 206    459  LOOP   MCW   W2B-1,000                                        S   7  0459  M 668 000           15   668     000
 207    466         MCW   DOTS                                            S   4  0466  M 651               16   651
 208    470         SBR   LOOP&6                                           S   4  0470  H 465               16   465
 209    474         A     KM10,W2B    ADD I0 = -10                        S   7  0474  A 667 669           16   667     669
 210    481         BWZ   LOOP,W2B-1,2  NO ZONE IN COUNTER HIGH DIGIT?    S   8  0481  V 459 668 2         16   459     668
 211    489         A     KP1,ADR5-2  BUMP HUNDREDS DIGIT OF ADDRESS      S   7  0489  A 670 656           16   670     656
 212    496         W                                                      S   1  0496  2                   16
 213    497  GET    SW    0&X3        MOVE DATA AND WM TO PRINT AREA      S   4  0497  , 0?0               16   000+3
 214    501         MCW   0&X1,0&X3                                        S   7  0501  M 0|0 0?0           17   000+1   000+3
 215    508         BW    DOWM,0&X1   SKIP CLEARING PRINT AREA WM          S   8  0508  V 520 0|0 1         17   520     000+1
 216    516         CW    0&X3                                             S   4  0516  ) 0?0               17   000+3
 217    520  DOWM   C     XXXXX1,TOPCOR  DONE?                            S   7  0520  C 089 688           17   089     688
 218    527         BU    CONT        NO                                  S   5  0527  B 568 /             17   568
 219    532         W                                                      S   1  0532  2                   17
 220    533         WM                                                     S   2  0533  2 )                 17
 221    535  RX1    MCW   SX1&6,XXXXX1   RESTORE INDEX REGS               S   7  0535  M 422 089           18   422     089
 222    542         MCW   SX3&6,XXXXX3                                     S   7  0542  M 415 099           18   415     099
 223    549         CS    332                                              S   4  0549  / 332               18   332
 224    553         CS                                                     S   1  0553  /                   18
 225    554         BSS   HALT,G                                          S   5  0554  B 563 G             18   563
 226    559         B     EXIT                                             S   4  0559  B 564               18   564
 227    563  HALT   H                                                      S   1  0563  .                   18
 228    564  EXIT   B     0-0                                              S   4  0564  B 000               19   000
 229    568  CONT   SBR   XXXXX1,1&X1                                      S   7  0568  H 089 0|1           19   089     001+1
 230    575         BCE   BUMP3,XXXXX3-2,2                                S   8  0575  B 632 097 2         19   632     097
 231    583         SBR   XXXXX3,201                                      S   7  0583  H 099 201           19   099     201
 232    590         W                                                      S   1  0590  2                   19
 233    591         WM                                                     S   2  0591  2 )                 19
 234    593         A     KP1,W2A                                          S   7  0593  A 670 664           19   670     664
 235    600         C     W2A,KP15                                         S   7  0600  C 664 672           20   664     672
 236    607         BU    CLEARH                                           S   5  0607  B 433 /             20   433
 237    612         S     W2A                                              S   4  0612  S 664               20   664
 238    616         CCB   CLEARH,1                                        S   5  0616  F 433 1             20   433
 239    621  SKIP   MCW   XQTD,220                                        S   7  0621  M 680 220           20   680     220
 240    628         W     RX1                                              S   4  0628  2 535               20   535
 241    632  BUMP3  A     KP1,XXXXX3                                       S   7  0632  A 670 099           20   670     099
 242    639         B     GET                                              S   4  0639  B 497               21   497
 243    651  DOTS   DCW   @9........@                                      S   9  0651                      21
 244    653         DCW   @9-@                                            S   2  0653                      21
 245    658  ADR5   DCW   00000      FIVE DIGIT ADDRESS                    S   5  0658                      21
 246    661  KZ3    DCW   000                                              S   3  0661                      21
 247    662  KP2    DCW   &2                                               S   1  0662                      21
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
 248    664  W2A    DCW   #2                                                 S  2  0664                      21
 249    665  K9     DCW   9                                                  S  1  0665                      22
 250    667  KM10   DCW   @I0@                                               S  2  0667                      22
 251    669  W2B    DCW   #2                                                 S  2  0669                      22
 252    670  KP1    DCW   &1                                                 S  1  0670                      22
 253    672  KP15   DCW   &15                                                S  2  0672                      22
 254    680  XQTD   DCW   @EXECUTED@                                         S  8  0680                      22
 255                SFX             END OF SNAPSHOT ROUTINE
 256         *
 257         * STORAGE FOR PARAMETER CARD
 258         *
 259                DA    1X19                                                  0681   0699                  22
 260    685  PWORD        5   THE WORD PARAM                                   0685               SBFLD
 261    688  TOPCOR       8   TOP CORE ADDRESS FROM PARAM CARD                  0688               SBFLD
 262    690  IMOD         10  INTEGER MODULUS -- NUMBER OF DIGITS               0690               SBFLD
 263    692  MANTIS       12  FLOATING POINT MANTISSA DIGITS                    0692               SBFLD
 264    693  CONDNS       13  P FOR CONDENSED DECK                              0693               SBFLD
 265    694  SNAPSW       14  S FOR SNAPSHOT                                    0694               SBFLD
 266    695  C1410        15  T IF RUN ON 1410 IN 1401 COMPATIBILITY MODE       0695               SBFLD
 267    696  FMTSW        16  X FOR NO FORMAT, L FOR LIMITED FORMAT             0696               SBFLD
 268         *                BLANK FOR ORDINARY, A FOR A CONVERSION
 269    699  PARAM        19  PARAMETER CARD IS STORED HERE                     0699               SBFLD
 270         *
 271         * LOAD NEXT OVERLAY
 272         *
 273                SFX   L
 274    700  LOADNX MCW   CLRBOT-2,K999-2  SET CLEAR END HIGH DIGIT           L  7  0700  M 831 828          23   831     828
 275    707  CLEARL CS    0-0                                                 L  4  0707  / 000              23   000
 276    711         SBR   CLEARL&3                                           L  4  0711  H 710              23   710
 277    715         C     CLEARL&3,K999                                      L  7  0715  C 710 830          23   710     830
 278    722         BU    CLEARL                                             L  5  0722  B 707 /            23   707
 279    727         SW    CLRWM&4                                            L  4  0727  , 758              23   758
 280    731         MCW   CLEARL&3,CLRWM&6                                   L  7  0731  M 710 760          23   710     760
 281    738         CW    CLRWM&4                                            L  4  0738  ) 758              24   758
 282    742  CLRL   C     CLRWM&6,CLRBOT                                     L  7  0742  C 760 833          24   760     833
 283    749         BE    CDOVLY     LOAD THE OVERLAY                        L  5  0749  B 769 S            24   769
 284    754  CLRWM  LCA   BLANK,0    CLEAR WITH BLANK AND WORD MARK          L  7  0754  L 834 000          24   834     000
 285    761         SBR   CLRWM&6                                           L  4  0761  H 760              24   760
 286    765         B     CLRL                                               L  4  0765  B 742              24   742
 287    769  CDOVLY R     40         CARD OVERLAY UNLESS NOP                 L  4  0769  1 040              24   040
 288    773  RDAGIN MCW   EINIT,ECOUNT  INITIALIZE ERROR COUNT              L  7  0773  M 835 837          25   835     837
 289    780  TPREAD RTW   1,BEGIN1   LOAD OVERLAY FROM TAPE                  L  8  0780  L %U1 838 R       25   %U1     838
 290    788         BER   TPERR      ERROR?                                  L  5  0788  B 797 L          25   797
 291    793         B     BEGIN1     NO, RUN THE OVERLAY                     L  4  0793  B 838            25   838
 292    797  TPERR  BSP   1                                                  L  5  0797  U %U1 B          25   %U1
 293    802         S     ONE,ECOUNT                                         L  7  0802  S 836 837          25   836     837
 294    809         BWZ   TPREAD,ECOUNT,B  STILL POSITIVE?                  L  8  0809  V 780 837 B       26   780     837
 295    817         H     3333,3333  TOO MANY TAPE ERRORS                    L  7  0817  . C33 C33         26  3333    3333
 296    824         B     RDAGIN     READ AGAIN                              L  4  0824  B 773            26   773
 297    830  K999   DSA   999                                                L  3  0830  999              26   999
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
298    833  CLRBOT DCW   #3         ADDRESS TO CLEAR DOWN TO        L   3  0833                     26
299    834  BLANK  DCW   #1                                         L   1  0834                     26
300    835  EINIT  DCW   &9         INITIAL ERROR COUNT             L   1  0835                     26
301    836  ONE    DCW   &1                                         L   1  0836                     27
302    837  ECOUNT DCW   #1                                         L   1  0837                     27
303                SFX             END OF LOAD NEXT OVERLAY ROUTINE
304         *
305         * START HERE
306         *
307    838  BEGIN1 BCE   CARD,1,    BEING LOADED FROM CARDS?            8  0838  B 853 001          27   853     001
308    846         MCW   NOP1,CDOVLY  TURN OFF CARD OVERLAY            7  0846  M 871 769          27   871     769
309         CARD   SBR   CLRBOT,BEGIN1                                7  0853  H 833 838          27   833     838
310                SBR   CLEARL&3,GMWM1                               7  0860  H 710 900          27   710     900
311                B     LOADNX                                      4  0867  B 700              27   700
312         NOP1   NOP                                               1  0871  N                  28
313                ORG   *&X00                                             0900
314         GMWM1  DCW   @}@                                         1  0900            GMARK   29
315                EX    BEGIN1                                           B 838              30   838
316         *
317         * READ AND CHECK PARAMETER CARD
318         *
319                ORG   BEGIN1                                           0838
320    853  BEGIN2 CS    80                                          4  0838  / 080              33   080
321    857         SW    1,GM                                        7  0842  , 001 N14          33   001    2514
322    864         SW    81,84                                       7  0849  , 081 084          33   081     084
323    871         CS    332                                         4  0856  / 332              33   332
324    875         CS                                                1  0860  /                  33
325    876         R               READ PARAMETER CARD               1  0861  1                  33
326    877         LCA   19,PARAM  SAVE IT                           7  0862  L 019 699          33   019     699
327    884         C     PARAM-14,KPARAM  IS IT A PARAMETER CARD?    7  0869  C 685 N39          34   685    2539
328    891         BU    NOPARM    NO, ANNOUNCE ERROR                5  0876  B L09 /            34  2309
329    896         SW    73        SET WORD MARKS FOR                4  0881  , 073              34   073
330    900         SW    6,7         FORTRAN MARGINS                 7  0885  , 006 007          34   006     007
331    907         SW    TOPCOR-2                                    4  0892  , 686              34   686
332    911         MCW   80,PWORD                                    7  0896  M 080 685          34   080     685
333         *
334         * DETERMINE THIS MACHINE'S CORE SIZE, COMPARE IT TO
335         * SIZE ON PARAMETER CARD
336         *
337    918         CS    0-0                                         4  0903  / 000              34   000
338    922         SBR   CORSIZ                                      4  0907  H N42              35  2542
339    926         MCW   TOPCOR,TOCONV                               7  0911  M 688 N45          35   688    2545
340    933         B     ADCONV    COVERT TOPCOR TO FIVE DIGITS      4  0918  B Y61              35  1861
341    937         MCW   CONVTD,TOP5                                 7  0922  M N50 O38          35  2550    2638
342    944         MCW   CORSIZ,TOCONV                               7  0929  M N42 N45          35  2542    2545
343    951         B     ADCONV    CONVERT CORSIZ TO FIVE DIGITS     4  0936  B Y61              35  1861
344    955         MCW   CONVTD,COR5                                 7  0940  M N50 O33          36  2550    2633
345    962         A     KP1,TOP5  TOP ADDR + 1 = SIZE               7  0947  A N51 O38          36  2551    2638
346    969         A     KP1,COR5  COR ADDR + 1 = SIZE               7  0954  A N51 O33          36  2551    2633
347    976         CS    332                                         4  0961  / 332              36   332
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
348    980         CS                                                        1  0965  /                   36
349    981         CC    1                                                   2  0966  F 1                 36
350    983         CS    332                                                 4  0968  / 332               36   332
351    987         CS                                                        1  0972  /                   37
352    988         MCW   STMSG,228  START FORTRAN COMPILATION MSG           7  0973  M N79 228           37  2579     228
353    995         W                                                         1  0980  2                   37
354    996         CC    J                                                   2  0981  F J                 37
355    998         MCW   TOP5,231                                           7  0983  M O38 231           37  2638     231
356  1 005         MCW   SPSIZE     SPECIFIED SIZE                         4  0990  M O05               37  2605
357  1 009         W                                                         1  0994  2                   37
358  1 010         CS    235                                                 4  0995  / 235               38   235
359  1 014         MCW   COR5,228                                            7  0999  M O33 228           38  2633     228
360  1 021         MCW   ACTSIZ     ACTUAL SIZE                            4  1006  M O28               38  2628
361  1 025         BCE   BIGNUF,C1410,T  COMPILING FOR 1410 COMPATIBILITY?  8  1010  B |81 695 T         38  1081     695
362  1 033         W                                                         1  1018  2                   38
363  1 034         C     COR5,TOP5                                           7  1019  C O33 O38           38  2633    2638
364  1 041         BH    PSGTM       PRINT SPEC SIZE GT MACH SIZE            5  1026  B |62 U             38  1062
365  1 046         C     TOP5,K3900  COMPARE TOP TO 3900                     7  1031  C O38 O43           39  2638    2643
366  1 053         BL    BIGNUF                                              5  1038  B |81 T             39  1081
367  1 058         CC    J                                                   2  1043  F J                 39
368  1 060         CS    332                                                 4  1045  / 332               39   332
369  1 064         CS                                                        1  1049  /                   39
370  1 065         MCW   SIZERR,218  MACHINE SIZE ERROR                     7  1050  M O61 218           39  2661     218
371  1 072         W                                                         1  1057  2                   39
372  1 073         B     USEACT                                              4  1058  B |74               40  1074
373  1 077  PSGTM  MCW   SGTM,267  SPEC. SIZE GT MACH. SIZE MSG             7  1062  M P07 267           40  2707     267
374  1 084         MCW   SGTM2     REST OF THE MESSAGE                       4  1069  M P28               40  2728
375  1 088         W                                                         1  1073  2                   40
376  1 089  USEACT MCW   CORSIZ,TOPCOR  USE ACTUAL SIZE                     7  1074  M N42 688           40  2542     688
377  1 096  BIGNUF MCW   TOPCOR,CLEARD&3                                     7  1081  M 688 |91           40   688    1091
378         *
379         * CLEAR FROM TOP OF THIS MACHINE'S MEMORY DOWN TO DOWNTO
380         *
381  1 103  CLEARD CS    0-0                                                 4  1088  / 000               40   000
382  1 107         SBR   CLEARD&3                                            4  1092  H |91               41  1091
383  1 111         C     CLEARD&3,DOWNTO                                     7  1096  C |91 P31           41  1091    2731
384  1 118         BU    CLEARD                                              5  1103  B |88 /             41  1088
385         *
386  1 123         R                                                         1  1108  1                   41
387  1 124         MZ    *-6,AZONE  SET A ZONE AFTER CARD STORAGE AREA       7  1109  Y /09 M86           41  1109    2486
388  1 131         MZ    *-6,INTRST&7   SET A ZONE IN BCE D-MODIFIER          7  1116  Y /16 W92           41  1116    1692
389  1 138         MZ    *-6,BLNKOK&7     ,,                               7  1123  Y /23 Z65           41  1123    1965
390  1 145         MZ    *-6,INTCHR-1   ADD A ZONE TO INTERESTING CHARS      7  1130  Y /30 L72           42  1130    2372
391  1 152         MCW   PREFIX,CARD1-1  SET DEFAULT PREFIX                  7  1137  M N18 M13           42  2518    2413
392  1 159         MCW   TOPCOR,*&4                                          7  1144  M 688 /54           42   688    1154
393  1 166         CW    0-0                                                 4  1151  ) 000               42   000
394  1 170         SBR   MVCHAR&6                                           4  1155  H T55               42  1355
395         *
396         * PROCESS NEXT CARD
397         *
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SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
398  1 174  RDLOOP BW    MOVECD,FLAG                                        8  1159  V /96 Q13 1         42  1196    2813
399  1 182         BCE   DONE,1,:                                          8  1167  B !55 001 :         43  2055     001
400          *
401          * NO SYSTEM AFTER END CARD
402          *
403  1 190  NOSYS  CC    1                                                  2  1175  F 1                 43
404  1 192         CS    332                                                4  1177  / 332               43   332
405  1 196         CS                                                       1  1181  /                   43
406  1 197         MCW   MSG1,270                                           7  1182  M P72 270           43  2772     270
407  1 204         W                                                        1  1189  2                   43
408  1 205         CC    1                                                  2  1190  F 1                 43
409  1 207  HALT1  H     HALT1                                              4  1192  . /92               44  1192
410          *
411          * MOVE CARD TO SAVE AREA
412          *
413  1 211  MOVECD MCW   72,CARD72  MOVE CARD TO SAVE AREA                  7  1196  M 072 M85           44   072    2485
414  1 218         MCW                                                      1  1203  M                   44
415  1 219         MCW                                                      1  1204  M                   44
416  1 220         BCE   DONE,CARD1,:                                       8  1205  B !55 M14 :         44  2055    2414
417  1 228  C12T   BIN   PRTHDG,  UNCONDITIONAL AT FIRST, BECOMES BCV       5  1213  B K52               44  2252
418  1 233  AFTHDG CS    300                                                4  1218  / 300               44   300
419  1 237         CS                                                       1  1222  /                   45
420  1 238         MCW   72,283   MOVE CARD TO PRINT AREA                  7  1223  M 072 283           45   072     283
421  1 245         MCW   6,215                                             7  1230  M 006 215           45   006     215
422  1 252         BCE   LSTCMT,CARD1,C    PRINT NOW IF COMMENT           8  1237  B L43 M14 C         45  2343    2414
423  1 260  CRD1SW B     NOTCNT  BECOMES NOP AFTER FIRST CARD               4  1245  B V31               45  1531
424  1 264         BCE   NOTCNT,CARD6,0                                    8  1249  B V31 M19 0         45  1531    2419
425  1 272         BCE   NOTCNT,CARD6,                                     8  1257  B V31 M19           46  1531    2419
426          *
427          * CONTINUATION CARD
428          *
429  1 280         A     KP1,CNTCNT        BUMP CONTINUATION COUNT        7  1265  A N51 Q09           46  2551    2809
430  1 287         BCE   CNTOK,CNTCNT-1,0  NINE OR FEWER?                 8  1272  B S87 Q08 0         46  1287    2808
431  1 295         MCW   CNTMSG,300        PUT ERROR MSG IN PRINT AREA    7  1280  M P87 300           46  2787     300
432  1 302  CNTOK  W                 LIST THE CARD                        1  1287  2                   46
433  1 303         MCW   CARD7A,SVCHAR&3   SET SAVE CHAR ADDR TO COL 7     7  1288  M M91 S98           46  2491    1298
434          *
435          * PROCESS THE CARD (NOTCNT COMES BACK HERE)
436          *
437  1 310  SVCHAR MCW   0-0,CHAR          SAVE A CHARACTER               7  1295  M 000 Q16           47   000    2816
438  1 317         SW    SVCHAR&1                                         4  1302  , S96               47  1296
439  1 321         A     K1,SVCHAR&3       BUMP ADDR OF CHAR TO SAVE      7  1306  A M95 S98           47  2495    1298
440  1 328         CW    SVCHAR&1                                         4  1313  ) S96               47  1296
441  1 332  CRD2SW NOP   BLNKOK            BRANCH IF COPYING EVERYTHING   4  1317  N Z58               47  1958
442  1 336         BCE   SVCHAR,CHAR,      SKIP BLANKS                    8  1321  B S95 Q16           47  1295    2816
443  1 344         MCW   CHAR,*&8                                         7  1329  M Q16 T43           48  2816    1343
444  1 351         BCE   INTRST,INTCHR,0                                  8  1336  B W85 L73 0         48  1685    2373
445                CHAIN 5                                                                  MACRO
446                BCE                                                    1  1344  B           GEN     48
447                BCE                                                    1  1345  B           GEN     48
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
448                 BCE                                                     1  1346  B           GEN     48
449                 BCE                                                     1  1347  B           GEN     48
450                 BCE                                                     1  1348  B           GEN     48
451  1 364  MVCHAR  MCW   CHAR,0                                           7  1349  M Q16 000           49  2816     000
452  1 371          SBR   MVCHAR&6                                        4  1356  H T55               49  1355
453  1 375  BUMPNS  A     KP1,NCHAR        BUMP CHARACTER COUNTER         7  1360  A N51 P92           49  2551    2792
454  1 382          C     MVCHAR&6,BOTCOR  CORE FULL OF SOURCE CODE?      7  1367  C T55 P95           49  1355    2795
455  1 389          BE    BIGSRC                                          5  1374  B K18 S             49  2218
456  1 394  CRD3SW  BCE   HOLLER,CHAR,H                                   8  1379  B X36 Q16 H         49  1736    2816
457  1 402  CRD4SW  NOP   BRANCH,CRD3SW                                   7  1387  N P96 T79           50  2796    1379
458          *
459  1 409  TEST7   C     SVCHAR&3,CARD7A  AT COLUMN 7?                   7  1394  C S98 M91           50  1298    2491
460  1 416  CRD5SW  BU    SVCHAR                                          5  1401  B S95 /             50  1295
461  1 421          SW    MVCHAR&4                                        4  1406  , T53               50  1353
462  1 425  CRD6SW  MCW   MVCHAR&6,X2                                     7  1410  M T55 094           50  1355     094
463  1 432          CW    MVCHAR&4                                        4  1417  ) T53               50  1353
464  1 436          MCW   NOP2,CRD6SW                                    7  1421  M N13 U10           51  2513    1410
465  1 443          MCW   NOP2,CRD5SW                                    7  1428  M N13 U01           51  2513    1401
466  1 450          A     K10,COLCNT                                      7  1435  A N21 M88           51  2521    2488
467  1 457          BCE   COL3,COLCNT-1,5    THREE COLUMNS DONE?          8  1442  B W54 M87 5         51  1654    2487
468  1 465          SW    FLAG                                            4  1450  , Q13               51  2813
469  1 469          BWZ   SVCHAR,COLCNT-1,2  MORE THAN SEVEN COLUMNS DONE? 8  1454  V S95 M87 2         52  1295    2487
470  1 477          MCW   BRNCH2,CRD5SW                                   7  1462  M M96 U01           52  2496    1401
471  1 484          MCW   0&X2,WORK7                                      7  1469  M 0!0 N05           52   000+2  2505
472  1 491          C     KFMT,WORK7  FORMAT% ?                           7  1476  C N12 N05           52  2512    2505
473  1 498          BU    SVCHAR                                          5  1483  B S95 /             52  1295
474          *
475          * PROCESS A FORMAT STATEMENT
476          *
477  1 503          MCW   BRANCH,CRD3SW                                   7  1488  M P96 T79           53  2796    1379
478  1 510          MCW   0&X3,WORK6                                      7  1495  M 0?0 Q02           53   000+3  2802
479  1 517          MCW   KF,WORK6-3                                     7  1502  M Q03 P99           53  2803    2799
480  1 524          MCW   WORK6,0&X3                                     7  1509  M Q02 0?0           53  2802     000+3
481  1 531          B     SVCHAR                                          4  1516  B S95               53  1295
482          *
483  1 535  SLASH   MCW   KAT,CHAR   CONVERT SLASH TO AT-SIGN            7  1520  M Q04 Q16           53  2804    2816
484  1 542          B     MVCHAR                                          4  1527  B T49               54  1349
485          *
486          * NOT A CONTINUATION CARD
487          *
488  1 546  NOTCNT  MCW   NOP,CRD1SW                                     7  1531  M N34 S45           54  2534    1245
489  1 553          A     KP1,NSTMT                                       7  1538  A N51 Q07           54  2551    2807
490  1 560          MCW   NOP,CRD3SW                                     7  1545  M N34 T79           54  2534    1379
491  1 567          MCW   NOP,CRD4SW                                     7  1552  M N34 T87           54  2534    1387
492  1 574          MCW   5,211      MOVE LABEL TO PRINT AREA            7  1559  M 005 211           54   005     211
493  1 581          S     CNTCNT     CLEAR CONTINUATION COUNT            4  1566  S Q09               55  2809
494  1 585          MCW   NOP,CRD2SW                                     7  1570  M N34 T17           55  2534    1317
495  1 592          MCS   NSTMT,203  MOVE STATEMENT COUNT TO PRINT AREA  7  1577  Z Q07 203           55  2807     203
496  1 599          W                                                     1  1584  2                   55
497  1 600          SW    MVCHAR&4                                        4  1585  , T53               55  1353
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
498  1 604          MCW   MVCHAR&6,MVCHR2&6                                   7  1589  M T55 W13           55  1355    1613
499  1 611          CW    MVCHAR&4                                            4  1596  ) T53               55  1353
500  1 615          MCW   MOVE,CRD6SW                                        7  1600  M N22 U10           56  2522    1410
501  1 622  MVCHR2  LCA   GM,0                                               7  1607  L N14 000           56  2514     000
502  1 629          SBR   X3         SAVE ADDRESS OF FIRST CHAR STORED       4  1614  H 099               56   099
503  1 633          SBR   MVCHAR&6                                           4  1618  H T55               56  1355
504  1 637          MCW   COLON,CARD6  COLON AFTER LABEL, IF ANY             7  1622  M N19 M19           56  2519    2419
505  1 644          MCW   BRNCH2,CRD5SW                                      7  1629  M M96 U01           56  2496    1401
506  1 651          MCW   K20,COLCNT   INITIALIZE COLUMN COUNTER             7  1636  M M98 M88           57  2498    2488
507  1 658          MCW   SAVE2A,SVCHAR&3                                    7  1643  M M94 S98           57  2494    1298
508  1 665          B     SVCHAR                                             4  1650  B S95               57  1295
509            *
510  1 669  COL3    C     0&X2,KEND  END CARD?                               7  1654  C 0!0 Q12           57   000+2  2812
511  1 676          BU    SVCHAR                                             5  1661  B S95 /             57  1295
512  1 681          CW    FLAG                                               4  1666  ) Q13               57  2813
513  1 685          B     SVCHAR                                             4  1670  B S95               57  1295
514            *
515  1 689  AT      MCW   KMINUS,CHAR  CONVERT AT SIGN TO MINUS              7  1674  M Q14 Q16           58  2814    2816
516  1 696          B     MVCHAR                                             4  1681  B T49               58  1349
517            *
518            * SAW AN INTERESTING CHARACTER
519            *
520  1 700  INTRST BCE   TESTLC,CHAR,    TEST FOR A ZONE                    8  1685  B L58 Q16           58  2358    2816
521  1 708          BCE   TESTLC,CHAR,|   RECORD MARK                       8  1693  B L58 Q16 |         58  2358    2816
522  1 716          BCE   SLASH,CHAR,/                                      8  1701  B V20 Q16 /         58  1520    2816
523  1 724          BCE   AT,CHAR,@                                          8  1709  B W74 Q16 @         59  1674    2816
524  1 732          MCW   KSTAR,300                                         7  1717  M Q15 300           59  2815     300
525  1 739          MCW   PROCD                                              4  1724  M N33               59  2533
526  1 743          MCW   CHAR                                               4  1728  M Q16               59  2816
527  1 747          B     MVCHAR                                             4  1732  B T49               59  1349
528            *
529            * CHARACTER IS H, PROBABLY HOLLERITH
530            *
531  1 751  HOLLER MCW   MVCHAR&6,X1                                         7  1736  M T55 089           59  1355     089
532  1 758          MCW   NOP,CRD3SW                                        7  1743  M N34 T79           60  2534    1379
533  1 765          MCW   NOP,CRD4SW                                        7  1750  M N34 T87           60  2534    1387
534  1 772          MCW   BRANCH,CRD2SW                                     7  1757  M P96 T17           60  2796    1317
535  1 779          MCW   4&X1,HCOUNT  REMEMBER, SOURCE IS STORED BACKWARD   7  1764  M 0|4 Q19           60   004+1  2819
536  1 786          BCE   AT2,HCOUNT-1,@                                     8  1771  B X87 Q18 @         60  1787    2818
537  1 794          BWZ   NZHM1,HCOUNT-1,2                                  8  1779  V Y02 Q18 2         61  1802    2818
538  1 802  AT2     MCW   HCOUNT-2,HCOUNT  ONE DIGIT OF HOLLERITH COIUNT     7  1787  M Q17 Q19           61  2817    2819
539  1 809          MCW   KZ2                                                4  1794  M Q21               61  2821
540  1 813          B     TEST7                                              4  1798  B T94               61  1394
541            *
542            * NO ZONE AT HCOUNT-1
543            *
544  1 817  NZHM1   BCE   AT3,HCOUNT,@                                       8  1802  B Y18 Q19 @         61  1818    2819
545  1 825          BWZ   NZH,HCOUNT,2                                      8  1810  V Y36 Q19 2         61  1836    2819
546  1 833  AT3     MCW   HCOUNT-2,HCOUNT                                   7  1818  M Q17 Q19           62  2817    2819
547  1 840          MCW   KZ1,HCOUNT-2                                      7  1825  M Q22 Q17           62  2822    2817
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
548  1 847         B     TEST7                                         4  1832  B T94               62  1394
549          *
550          * NO ZONE AT HCOUNT.  REVERSE THE DIGITS
551          *
552  1 851  NZH    MCW   HCOUNT,WORKH1                                 7  1836  M Q19 Q23           62  2819    2823
553  1 858         MCW   HCOUNT-2,HCOUNT                              7  1843  M Q17 Q19           62  2817    2819
554  1 865         MCW   WORKH1,HCOUNT-2                              7  1850  M Q23 Q17           62  2823    2817
555  1 872         B     TEST7                                         4  1857  B T94               63  1394
556          *
557          * CONVERT ADDRESS TO FIVE DIGITS
558          *
559                SFX   C
560  1 876  ADCONV SBR   EXIT&3                                   C     4  1861  H Z57               63  1957
561  1 880         S     CNVW2A                                    C     4  1865  S Q25               63  2825
562  1 884         S     CNVW2B                                    C     4  1869  S Q27               63  2827
563  1 888         MZ    TOCONV,CNVW2A-1                           C     7  1873  Y N45 Q24           63  2545    2824
564  1 895         MZ    TOCONV-2,CNVW2B-1                         C     7  1880  Y N43 Q26           63  2543    2826
565  1 902  LOOP1  BWZ   LOOP2,CNVW2B-1,2                          C     8  1887  V Z06 Q26 2         63  1906    2826
566  1 910         A     CNVKA0,CNVW2B                             C     7  1895  A Q29 Q27           64  2829    2827
567  1 917         B     LOOP1                                     C     4  1902  B Y87               64  1887
568  1 921  LOOP2  BWZ   LP2X,CNVW2A-1,2                          C     8  1906  V Z25 Q24 2         64  1925    2824
569  1 929         A     CNVKQ4,CNVW2A                             C     7  1914  A Q31 Q25           64  2831    2825
570  1 936         B     LOOP2                                     C     4  1921  B Z06               64  1906
571  1 940  LP2X   A     CNVW2B-1,CNVW2A                           C     7  1925  A Q26 Q25           64  2826    2825
572  1 947         MCW   TOCONV,CONVTD                            C     7  1932  M N45 N50           65  2545    2550
573  1 954         MCW   CNVW2A                                   C     4  1939  M Q25               65  2825
574  1 958         ZA    CONVTD                                    C     4  1943  ? N50               65  2550
575  1 962         MZ    *-4,CONVTD  CLEAR ZONE IN OUTPUT          C     7  1947  Y Z49 N50           65  1949    2550
576  1 969  EXIT   B     0-0                                       C     4  1954  B 000               65   000
577                SFX
578          *
579  1 973  BLNKOK BCE   TESTLC,CHAR,   TEST FOR A ZONE                8  1958  B L58 Q16           65  2358    2816
580  1 981         S     KP1,HCOUNT                                    7  1966  S N51 Q19           66  2551    2819
581  1 988         C     HCOUNT,PZE  HOLLERITH COUNT DOWN TO ZERO?     7  1973  C Q19 Q34           66  2819    2834
582  1 995         BU    MVCHAR      NOPE, JUST MOVE THE CHARACTER     5  1980  B T49 /             66  1349
583  2 000         MCW   MOVE2,CRD4SW                                 7  1985  M Q35 T87           66  2835    1387
584  2 007         MCW   NOP2,CRD2SW                                 7  1992  M N13 T17           66  2513    1317
585  2 014         MCW   SVCHAR&3,X1                                 7  1999  M S98 089           67  1298     089
586  2 021         C     0&X1,COMMA                                  7  2006  C 0|0 Q36           67   000+1  2836
587  2 028         BE    MVCHAR                                      5  2013  B T49 S             67  1349
588  2 033         MCW   MVCHAR&6,*&7                               7  2018  M T55 !31           67  1355    2031
589  2 040         MCW   0,0                                       7  2025  M 000 000           67   000     000
590  2 047         MCW   COMMA                                     4  2032  M Q36               67  2836
591  2 051         SBR   MVCHAR&6                                  4  2036  H T55               68  1355
592  2 055         A     KP1,NCHAR                                 7  2040  A N51 P92           68  2551    2792
593  2 062         B     BUMPNS                                    4  2047  B T60               68  1360
594  2 066         B     MVCHAR                                    4  2051  B T49               68  1349
595          *
596          * FINISHED READING THE SOURCE DECK
597          *
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 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

 598  2 070  DONE   MCW   MVCHAR&6,X1                                          7  2055  M T55 089           68  1355     089
 599  2 077         LCA   GM,0&X1                                             7  2062  L N14 0|0           68  2514     000+1
 600  2 084         SBR   X1                                                  4  2069  H 089               68   089
 601  2 088         CC    1                                                   2  2073  F 1                 69
 602  2 090         CS    332                                                 4  2075  / 332               69   332
 603  2 094         CS                                                        1  2079  /                   69
 604  2 095         MCS   NCHAR,205                                           7  2080  Z P92 205           69  2792     205
 605  2 102         MCW   MSGCHR,222                                          7  2087  M Q52 222           69  2852     222
 606  2 109         W                                                         1  2094  2                   69
 607  2 110         CC    J                                                   2  2095  F J                 69
 608  2 112         MCW   NSTMT,NSTMTS                                       7  2097  M Q07 183           70  2807     183
 609  2 119         LCA   STOP,0&X1                                           7  2104  L Q63 0|0           70  2863     000+1
 610  2 126         SBR   X1                                                  4  2111  H 089               70   089
 611  2 130         SW    2&X1                                                4  2115  , 0|2               70   002+1
 612  2 134         A     KP1,NSTMTS                                          7  2119  A N51 183           70  2551     183
 613  2 141         BCE   NOTBIG,3000,                                        8  2126  B J38 ?00           70  2138    3000
 614  2 149         B     BIGSRC                                              4  2134  B K18               71  2218
 615  2 153  NOTBIG SBR   CLEARL&3,2999                                       7  2138  H 710 R99           71   710    2999
 616  2 160         SBR   CLRBOT,BEGIN2  CHANGE ADDRESS TO CLEAR DOWN TO      7  2145  H 833 838           71   833     838
 617  2 167         BSS   SNAPSH,C                                            5  2152  B 333 C             71   333
 618  2 172         LCA   SCANR1,PHASID  SCANNER                            7  2157  L Q70 110           71  2870     110
 619  2 179         CS    80         GET                                      4  2164  / 080               71   080
 620  2 183         SW    1,40         READY                                  7  2168  , 001 040           72   001     040
 621  2 190         SW    47,54          FOR                                  7  2175  , 047 054           72   047     054
 622  2 197         SW    61,68            CARD                               7  2182  , 061 068           72   061     068
 623  2 204         SW    72                 OVERLAY                          4  2189  , 072               72   072
 624  2 208         BCE   LOADNX,CDOVLY,N  RUNNING FROM TAPE?                 8  2193  B 700 769 N         72   700     769
 625  2 216         R                                                         1  2201  1                   72
 626  2 217         C     7,SCANR2                                            7  2202  C 007 Q77           73   007    2877
 627  2 224         BE    LOADNX                                              5  2209  B 700 S             73   700
 628  2 229         B     NOSYS                                               4  2214  B /75               73  1175
 629         *
 630         * SOURCE PROGRAM TOO BIG
 631         *
 632  2 233  BIGSRC CS    332                                                 4  2218  / 332               73   332
 633  2 237         CS                                                        1  2222  /                   73
 634  2 238         CC    1                                                   2  2223  F 1                 73
 635  2 240         MCW   MSG2,270                                            7  2225  M R13 270           73  2913     270
 636  2 247         W                                                         1  2232  2                   74
 637  2 248         CC    1                                                   2  2233  F 1                 74
 638  2 250         BCE   HALT2,CDOVLY,1  RUNNING FROM CARDS?                 8  2235  B K48 769 1         74  2248     769
 639  2 258         RWD   1            NO, REWIND THE TAPE                    5  2243  U %U1 R             74   %U1
 640  2 263  HALT2  H     HALT2                                               4  2248  . K48               74  2248
 641         *
 642         * PRINT LISTING PAGE HEADING
 643         *
 644  2 267  PRTHDG CC    1                                                   2  2252  F 1                 74
 645  2 269         MCW   KAT,C12T&4  CHANGE TO BCV                           7  2254  M Q04 S17           74  2804    1217
 646  2 276         CS    299                                                 4  2261  / 299               75   299
 647  2 280         A     K1,PAGNUM                                           7  2265  A M95 R16           75  2495    2916
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
648  2 287         MCS   PAGNUM,299                                   7  2272  Z R16 299           75  2916     299
649  2 294         MCW   KPAGE,295                                    7  2279  M R24 295           75  2924     295
650  2 301         MCW   80                                          4  2286  M 080               75   080
651  2 305         W                                                 1  2290  2                   75
652  2 306         CS    299                                         4  2291  / 299               75   299
653  2 310         MCW   PAGHDG,234                                  7  2295  M M08 234           76  2408     234
654  2 317         W                                                 1  2302  2                   76
655  2 318         CC    J                                           2  2303  F J                 76
656  2 320         B     AFTHDG                                      4  2305  B S18               76  1218
657          *
658          * NO PARAMETER CARD
659          *
660  2 324  NOPARM CC    1                                           2  2309  F 1                 76
661  2 326         CS    332                                         4  2311  / 332               76   332
662  2 330         CS                                                1  2315  /                   76
663  2 331         MCW   MSG3,270                                    7  2316  M R53 270           77  2953     270
664  2 338         W                                                 1  2323  2                   77
665  2 339         CC    1                                           2  2324  F 1                 77
666  2 341         BCE   HALT3,CDOVLY,1  RUNNING FROM CARDS?        8  2326  B L39 769 1         77  2339     769
667  2 349         RWD   1             NO, REWIND THE TAPE         5  2334  U %U1 R             77   %U1
668  2 354  HALT3  H     HALT3                                       4  2339  . L39               77  2339
669          *
670          * LIST COMMENT CARD
671          *
672  2 358  LSTCMT MCW   FINAL,203                                   7  2343  M R56 203           77  2956     203
673  2 365         MCW   5,211                                       7  2350  M 005 211           78   005     211
674  2 372         W                                                 1  2357  2                   78
675  2 373  TESTLC BLC   DONE                                       5  2358  B !55 A             78  2055
676  2 378         R                                                 1  2363  1                   78
677  2 379         B     RDLOOP                                      4  2364  B /59               78  1159
678          *
679  2 388  INTCHR DCW   @$@/|  @  INTERESTING CHARACTERS           6  2373                      78
680  2 423  PAGHDG DCW   @ SEQ   STMNT      FORTRAN STATEMENT@     35  2408                      79
681          *
682          * CARD SAVE AREA
683          *
684                 DA    1X78                                          2409   2486             79
685          SAVE2         2                                             2410             SBFLD
686          CARD1         6                                             2414             SBFLD
687          CARD6         11                                            2419             SBFLD
688          CARD7         12                                            2420             SBFLD
689          CARD72        77                                            2485             SBFLD
690          AZONE         78                                            2486             SBFLD
691          *
692          * CONSTANTS AND WORK AREAS
693          *
694  2 503  COLCNT DCW   #2                                          2  2488                      80
695  2 506  CARD7A DSA   CARD7  ADDRESS OF COLUMN 7 IN SAVE AREA    3  2491  M20                 80  2420
696  2 509  SAVE2A DSA   SAVE2                                      3  2494  M10                 80  2410
697  2 510  K1     DCW   1                                         1  2495                      80
```

```
 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
 698  2 511  BRNCH2 DC    @B@                                                  1  2496                        80
 699  2 513  K20    DC    20                                                   2  2498                        80
 700  2 520  WORK7  DCW   #7                                                   7  2505                        80
 701  2 527  KFMT   DCW   @%TAMROF@  'FORMAT%' SPELLED BACKWARD               7  2512                        80
 702  2 528  NOP2   DC    @N@                                                  1  2513                        80
 703  2 529  GM     DC    @}@                                                  1  2514              GMARK     80
 704  2 533  PREFIX DCW   @000R@     DEFAULT STATEMENT PREFIX -- ARITHMETIC   4  2518                        80
 705  2 534  COLON  DCW   @:@                                                  1  2519                        81
 706  2 536  K10    DCW   10                                                   2  2521                        81
 707  2 537  MOVE   DC    @M@                                                  1  2522                        81
 708  2 548  PROCD  DCW   @ PROCESSED @                                      11  2533                        81
 709  2 549  NOP    NOP                                                       1  2534  N                     81
 710  2 554  KPARAM DCW   @PARAM@                                             5  2539                        81
 711  2 557  CORSIZ DCW   #3         ACTUAL MACHINE SIZE (TOP ADDR)           3  2542                        81
 712  2 560  TOCONV DCW   #3         ADDRESS TO BE CONVERTED TO FIVE DIGITS   3  2545                        81
 713  2 565  CONVTD DCW   #5         ADDRESS CONVERTED TO FIVE DIGITS         5  2550                        82
 714  2 566  KP1    DCW   &1                                                  1  2551                        82
 715  2 594  STMSG  DCW   @START OF FORTRAN COMPILATION@                     28  2579                        82
 716  2 620  SPSIZE DCW   @MACHINE SIZE SPECIFIED IS @                       26  2605                        83
 717  2 643  ACTSIZ DCW   @ACTUAL MACHINE SIZE IS @                          23  2628                        84
 718  2 648  COR5   DCW   #5         CORSIZ AS FIVE DIGITS                    5  2633                        84
 719  2 653  TOP5   DCW   #5         TOPCOR AS FIVE DIGITS                    5  2638                        84
 720  2 658  K3900  DCW   03900                                               5  2643                        84
 721  2 676  SIZERR DCW   @MACHINE SIZE ERROR@                              18  2661                        85
 722  2 722  SGTM   DCW   @SPECIFIED IS GREATER THAN ACTUAL MACHINE SIZE.@   46  2707                        87
 723  2 743  SGTM2  DCW   @ERROR - MACHINE SIZE @                           21  2728                        87
 724  2 746  DOWNTO DSA   2999                          DCW  @R99@            3  2731  R99                   87  2999
 725  2 787  MSG1   DCW   @MESSAGE 1-SYSTEM DOES NOT FOLLOW END CARD@       41  2772                        89
 726  2 802  CNTMSG DCW   @CONTINUE CD ERR@                                  15  2787                        89
 727  2 807  NCHAR  DCW   #5         NUMBER OF CHARACTERS                     5  2792                        89
 728  2 810  BOTCOR DSA   3000       BOTTOM OF SPACE TO STORE PROGRAM         3  2795  ?00                   89  3000
 729  2 811  BRANCH DCW   @B@                                                 1  2796                        89
 730  2 817  WORK6  DCW   #6                                                  6  2802                        90
 731  2 818  KF     DCW   @F@                                                 1  2803                        90
 732  2 819  KAT    DCW   @@@                                                 1  2804                        90
 733  2 822  NSTMT  DCW   #3         NUMBER OF STATEMENTS                     3  2807                        90
 734  2 824  CNTCNT DCW   #2         COUNT OF CONTINUATION CARDS              2  2809                        90
 735  2 827  KEND   DCW   @DNE@      END SPELLED BACKWARD                     3  2812                        90
 736  2 828  FLAG   DCW   #1         WORD MARK IS A FLAG                      1  2813                        90
 737  2 829  KMINUS DCW   @-@                                                 1  2814                        91
 738  2 830  KSTAR  DCW   @*@                                                 1  2815                        91
 739  2 831  CHAR   DCW   #1         CHARACTER FROM INPUT                     1  2816                        91
 740  2 834  HCOUNT DCW   #3         HOLLERITH COUNT                          3  2819                        91
 741  2 836  KZ2    DCW   00         TWO ZEROS                                2  2821                        91
 742  2 837  KZ1    DCW   0                                                   1  2822                        91
 743  2 838  WORKH1 DCW   #1         WORK SPACE FOR HOLLERITH COUNT           1  2823                        91
 744  2 840  CNVW2A DCW   #2         WORK SPACE FOR ADDRESS CONVERSION        2  2825                        92
 745  2 842  CNVW2B DCW   #2         WORK SPACE FOR ADDRESS CONVERSION        2  2827                        92
 746  2 844  CNVKA0 DCW   @A0@       CONSTANT FOR ADDRESS CONVERSION          2  2829                        92
 747  2 846  CNVKQ4 DCW   @?4@       CONSTANT FOR ADDRESS CONVERSION          2  2831                        92
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
748  2 849  PZE    DCW   &000       PLUS ZERO                           3  2834                      92
749  2 850  MOVE2  MCW                                                 1  2835  M                   92
750  2 851  COMMA  DCW   @,@                                           1  2836                      92
751  2 867  MSGCHR DCW   @INPUT CHARACTERS@                           16  2852                      93
752  2 878  STOP   DCW   @ }POTS:R000@  STOP SPELLED BACKWARD, ETC.   11  2863                      93
753  2 885  SCANR1 DCW   @SCANNER@                                     7  2870                      93
754  2 892  SCANR2 DCW   @SCANNER@                                     7  2877                      94
755  2 928  MSG2   DCW   @MESSAGE 2 - OBJECT PROGRAM TOO LARGE@      36  2913                      95
756  2 931  PAGNUM DCW   #3                                            3  2916                      95
757  2 939  KPAGE  DCW   @   PAGE @                                    8  2924                      96
758  2 968  MSG3   DCW   @MESSAGE 3 - NO PARAMETER CARD@             29  2953                      96
759  2 971  FINAL  DCW   #3                                            3  2956                      97
760            ORG   2999                                                    2999
761  2 999  GMWM   DCW   @}@                                           1  2999              GMARK   98
762            EX    BEGIN2                                                 B 838                   99   838
763            END                                                          / 838 080                    838
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ACTSIZ	2628: 0	ADCONV	1861: 0	ADR5 S	0658: 0	AFTHDG	1218: 0	ARYSIZ	0160: 0	ARYTOP	0194: 0
AT	1674: 0	AT2	1787: 0	AT3	1818: 0	AZONE	2486: 0	BEGIN1	0838: 0	BEGIN2	0838: 0
BIGNUF	1081: 0	BIGSRC	2218: 0	BLANKL	0834: 0	BLNKOK	1958: 0	BOTCOR	2795: 0	BOTFMT	0154: 0
BRANCH	2796: 0	BRNCH2	2496: 0	BUMP3S	0632: 0	BUMPNS	1360: 0	C12T	1213: 0	C1410	0695: 0
CARD	0853: 0	CARD1	2414: 0	CARD6	2419: 0	CARD7	2420: 0	CARD72	2485: 0	CARD7A	2491: 0
CDOVLY	0769: 0	CHAR	2816: 0	CLEARD	1088: 0	CLEARH	0433: 0	CLEARL	0707: 0	CLRBOT	0833: 0
CLRL L	0742: 0	CLRWML	0754: 0	CNTCNT	2809: 0	CNTMSG	2787: 0	CNTOK	1287: 0	CNVKA0	2829: 0
CNVKQ4	2831: 0	CNVW2A	2825: 0	CNVW2B	2827: 0	COL3	1654: 0	COLCNT	2488: 0	COLON	2519: 0
COMMA	2836: 0	CONDNS	0693: 0	CONT S	0568: 0	CONVTD	2550: 0	COR5	2633: 0	CORSIZ	2542: 0
CRD1SW	1245: 0	CRD2SW	1317: 0	CRD3SW	1379: 0	CRD4SW	1387: 0	CRD5SW	1401: 0	CRD6SW	1410: 0
DOCNT	0151: 0	DONE	2055: 0	DOTS S	0651: 0	DOWM S	0520: 0	DOWNTO	2731: 0	ECOUNT	0837: 0
EINITL	0835: 0	EXIT C	1954: 0	EXIT S	0564: 0	EXPF	0120: 0	FINAL	2956: 0	FLAG	2813: 0
FLOATF	0125: 0	FMTSW	0696: 0	GET S	0497: 0	GLOBER	0184: 0	GM	2514: 0	GMWM	2999: 0
GMWM1	0900: 0	GOTXL	0185: 0	HALT S	0563: 0	HALT1	1192: 0	HALT2	2248: 0	HALT3	2339: 0
HCOUNT	2819: 0	HOLLER	1736: 0	IMOD	0690: 0	INTCHR	2373: 0	INTRST	1685: 0	K1	2495: 0
K10	2521: 0	K20	2498: 0	K3900	2643: 0	K9 S	0665: 0	K999 L	0830: 0	KAT	2804: 0
KEND	2812: 0	KF	2803: 0	KFMT	2512: 0	KM10 S	0667: 0	KMINUS	2814: 0	KP1	2551: 0
KP1 S	0670: 0	KP15 S	0672: 0	KP2 S	0662: 0	KPAGE	2924: 0	KPARAM	2539: 0	KSTAR	2815: 0
KZ1	2822: 0	KZ2	2821: 0	KZ3 S	0661: 0	LOADNX	0700: 0	LOGF	0119: 0	LOOP S	0459: 0
LOOP1C	1887: 0	LOOP2C	1906: 0	LP2X C	1925: 0	LSTCMT	2343: 0	MANTIS	0692: 0	MOVE	2522: 0
MOVE2	2835: 0	MOVECD	1196: 0	MSG1	2772: 0	MSG2	2913: 0	MSG3	2953: 0	MSGCHR	2852: 0
MVCHAR	1349: 0	MVCHR2	1607: 0	NCHAR	2792: 0	NEGAR2	0142: 0	NEGAR3	0157: 0	NEGARY	0163: 0
NOP	2534: 0	NOP1	0871: 0	NOP2	2513: 0	NOPARM	2309: 0	NOSYS	1175: 0	NOTBIG	2138: 0
NOTCNT	1531: 0	NSTMT	2807: 0	NSTMTS	0183: 0	NZH	1836: 0	NZHM1	1802: 0	ONE L	0836: 0
PAGHDG	2408: 0	PAGNUM	2916: 0	PARAM	0699: 0	PHASID	0110: 0	PREFIX	2518: 0	PROCD	2533: 0
PRTHDG	2252: 0	PSGTM	1062: 0	PWORD	0685: 0	PZE	2834: 0	RDAGIN	0773: 0	RDLOOP	1159: 0
RELTAB	0188: 0	RX1 S	0535: 0	SAVE2	2410: 0	SAVE2A	2494: 0	SAWABS	0122: 0	SAWNEG	0123: 0
SCANR1	2870: 0	SCANR2	2877: 0	SEQTAB	0148: 0	SERIES	0117: 0	SGTM	2707: 0	SGTM2	2728: 0
SINCOS	0118: 0	SIZERR	2661: 0	SKIP S	0621: 0	SLASH	1520: 0	SNAPSH	0333: 0	SNAPSW	0694: 0
SPSIZE	2605: 0	STMSG	2579: 0	STOP	2863: 0	SUBENT	0191: 0	SUBSCR	0116: 0	SVCHAR	1295: 0
SX1 S	0416: 0	SX3 S	0409: 0	SXX S	0402: 0	TBLBOT	0145: 0	TEST7	1394: 0	TESTLC	2358: 0
TOCONV	2545: 0	TOP5	2638: 0	TOPCOR	0688: 0	TPERRL	0797: 0	TPREAD	0780: 0	USEACT	1074: 0
W2A S	0664: 0	W2B S	0669: 0	WORK6	2802: 0	WORK7	2505: 0	WORKH1	2823: 0	X1	0089: 0
X2	0094: 0	X3	0099: 0	XFIXF	0124: 0	XQTD S	0680: 0	XXXXX1	0089: 0	XXXXX2	0094: 0
XXXXX3	0099: 0										

UNREFERENCED SYMBOLS

ARYSIZ ARYTOP BOTFMT CONDNS DOCNT EXPF FLOATF FMTSW GLOBER GMWM GOTXL IMOD LOGF MANTIS NEGAR2 NEGAR3 NEGARY
RELTAB SAWABS SAWNEG SEQTAB SERIES SINCOS SNAPSW SUBENT SUBSCR TBLBOT XFIXF