```
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

                          AUTOCODER-PASS 5-PROCESS LABELS-INITL-VERSION 3            3751L               PAGE    1

 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

 101  1 01   000    JOB   AUTOCODER-PASS 5-PROCESS LABELS-INITL-VERSION 3
 102  1 02          CTL   63011
 103  1 03   *
 104  1 04   * EQUATES USED BY PROGRAM
 105  1 05   *
 106  1 06   INITAP EQU   %U0                                                  %U0
 107  1 07   SYSTPE EQU   %U1                                                  %U1
 108  1 08   SAVETP EQU   %U4                                                  %U4
 109  1 09   CINPUT EQU   %U5                                                  %U5
 110  1 10   COUTPT EQU   %U6                                                  %U6
 111  1 11   DOUTPT EQU   %U5                                                  %U5
 112  1 12   DINPUT EQU   %U6                                                  %U6
 113  1 13   TABLE  EQU   2409                                                 2409
 114  1 14   ADDLO  EQU   TABLE-006&X2                                         2403 X
 115  1 15   SYMHO  EQU   TABLE-005&X2                                         2404 X
 116  1 16   ADDHO  EQU   TABLE-009&X2                                         2400 X
 117  1 17   LBLREF EQU   TABLE-008&X2                                         2401 X
 118  1 18   SYMBOL EQU   TABLE&X2                                             2409 X
 119  1 19   CARD   EQU   0                                                    0000
 120  1 20   STAOP  EQU   CARD&001                                             0001
 121  1 21   STLABL EQU   CARD&002                                             0002
 122  1 22   STADDR EQU   CARD&003                                             0003
 123  1 23   STBOP  EQU   CARD&004                                             0004
 124  1 24   COUNT  EQU   CARD&007                                             0007
 125  1 25   LABEL  EQU   CARD&013                                             0013
 126  1 26   AOPER  EQU   CARD&022                                             0022
 127  1 27   AOPADJ EQU   CARD&026                                             0026
 128  1 28   AINDEX EQU   CARD&027                                             0027
 129  1 29   ORGADD EQU   CARD&032                                             0032
 130  1 30   CNVLAB EQU   CARD&056                                             0056
 131  1 31   LABADD EQU   CARD&061                                             0061
 132  1 32   SUPADD EQU   CARD&066                                             0066
 133  1 33   AOP    EQU   CARD&070                                             0070
 134  1 34   TYPE   EQU   CARD&075                                             0075
 135  1 35   AOPHO  EQU   CARD&017                                             0017
 136  1 36   LBLHO  EQU   CARD&008                                             0008
 137  1 37   HOADD  EQU   CARD&057                                             0057
 138  1 38   TPAREA EQU   3918                                                 3918
 139  1 39   INPUT  EQU   TPAREA-001&X3                                        3917 X
 140  1 40   LIMIT  EQU   TPAREA&13                                            3931
 141  1 41   XXXX   EQU   0                                                    0000
 142  1 42   GPMRK3 EQU   3998                                                 3998
 143  1 43   LIBRN  EQU   0                                                    0000
 144  1 44   *
 145  1 45   *
 146  1 46   * GET, PUT, REDUNDANCY &
 147  1 47   * CROSSOVER ROUTINES COMMON

                          AUTOCODER-PASS 5-PROCESS LABELS-INITL-VERSION 3            3751L               PAGE    2

 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

 148  1 48   * TO BOTH PASSES
 149  1 49   *
 150  1 50   *
 151  1 51          ORG   ENDOFC&1                                                    1925
 152  1 52   *
 153  1 53   * GET & PUT
 154  1 54   *
 155  1 55   GET    C     BLKCT,KBLKNG                                      7  1925  C L30 L26            4
 156  1 56          BE    WRITE                                             5  1932  B X67 S              4
 157  1 57   NXTREC A     &80,BLKCT                                         7  1937  A L36 L30            4
 158  1 58          MCW   BLKCT,XR3                                         7  1944  M L30 099            4
 159  1 59   MOVEIN MCW   INPUT,CARD&80                                     7  1951  M IA7 080            4
 160  1 60          CHAIN 9                                                                   MACRO
 161                MCW                                                   1  1958  M                GEN    4
 162                MCW                                                   1  1959  M                GEN    4
 163                MCW                                                   1  1960  M                GEN    5
 164                MCW                                                   1  1961  M                GEN    5
 165                MCW                                                   1  1962  M                GEN    5
 166                MCW                                                   1  1963  M                GEN    5
 167                MCW                                                   1  1964  M                GEN    5
 168                MCW                                                   1  1965  M                GEN    5
 169                MCW                                                   1  1966  M                GEN    5
 170  1 61          S     XR3&001                                           4  1967  S 100                   6
 171  1 62          S                                                       1  1971  S                       6
 172  1 63          S                                                       1  1972  S                       6
 173  1 64          B     ANAL                                              4  1973  B 114                   6
 174  1 65   PUT    MCW   BLKCT,XR3                                         7  1977  M L30 099               6
 175  1 66          MCW   CARD&80,INPUT                                     7  1984  M 080 IA7               6
 176  1 67          CHAIN 9                                                                   MACRO
 177                MCW                                                   1  1991  M                GEN    6
 178                MCW                                                   1  1992  M                GEN    7
 179                MCW                                                   1  1993  M                GEN    7
 180                MCW                                                   1  1994  M                GEN    7
 181                MCW                                                   1  1995  M                GEN    7
 182                MCW                                                   1  1996  M                GEN    7
 183                MCW                                                   1  1997  M                GEN    7
 184                MCW                                                   1  1998  M                GEN    7
 185                MCW                                                   1  1999  M                GEN    8
 186  1 68          B     GET                                               4  2000  B Z25                   8
 187  1 69   *
 188  1 70   *TAPE REDUNDANCY ROUTINE
 189  1 71   *
 190  1 72   TPERR  SBR   XR1                                               4  2004  H 089                   8
 191  1 73          SBR   REDXT&3                                           4  2008  H !76                   8
 192  1 74          MZ    &9,XR1                                            7  2012  Y L37 089               8
 193  1 75          MCW   4000-10&X1,TPINST&7                             7  2019  M IZ0 !67               8
 194  1 76          MN    TPINST&3,BSP1&3                                   7  2026  D !63 !43               8
 195  1 77          MCW   TPINST&7,INST2&7                                  7  2033  M !67 J76               9
 196  1 78   BSP1   BSP   INITAP                                           5  2040  U %U0 B                 9
 197  1 79          BCE   WRTRED,TPINST&7,W                                 8  2045  B J49 !67 W             9
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SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD

198  1 80          MCW   &9,READCT#1                               7  2053  M L37 L38            9
199  1 81   TPINST RT    INITAP,XXXX                               8  2060  M %U0 000 R          9
200  1 82          BER   RDRERR                                    5  2068  B !77 L             10
201  1 83   REDXT  B     XXXX                                      4  2073  B 000               10
202  1 84   RDRERR MN    TPINST&3,BSP2&3                           7  2077  D !63 !87           10
203  1 85   BSP2   BSP   INITAP                                    5  2084  U %U0 B             10
204  1 86          S     &1,READCT                                 7  2089  S L39 L38           10
205  1 87          BWZ   TPINST,READCT,B                           8  2096  V !60 L38 B         10
206  1 88          MN    TPINST&3,TPHALT&6                         7  2104  D !63 J17           11
207  1 89   TPHALT H     XXXX,590                                  7  2111  . 000 590           11
208  1 90          MCW   TPINST&7,*&8                              7  2118  M !67 J32           11
209  1 91          RT    INITAP,XXXX                               8  2125  M %U0 000 R         11
210  1 92          BSS   BSP1,E                                    5  2133  B !40 E             11
211  1 93   TPHLT3 H     XXXX,511                                  7  2138  . 000 511           12
212  1 94          B     REDXT                                     4  2145  B !73               12
213  1 95   WRTRED SKP   SYSTPE                                    5  2149  U %U1 E             12
214  1 96          BCE   SUBCTR,WRTCTR-1,5                         8  2154  B J86 L40 5         12
215  1 97          A     &1,WRTCTR#2                               7  2162  A L39 L41           12
216  1 98   INST2  WT    INITAP,XXXX                               8  2169  M %U0 000 W         12
217  1 99          BER   BSP1                                      5  2177  B !40 L             13
218  2 00          B     REDXT                                     4  2182  B !73               13
219  2 01   SUBCTR S     WRTCTR                                    4  2186  S L41               13
220  2 02          MN    TPINST&3,*&7                              7  2190  D !63 K03           13
221  2 03   TPHLT2 H     XXXX,560                                  7  2197  . 000 560           13
222  2 04          B     INST2                                     4  2204  B J69               13
223  2 05   *
224  2 06   * CHECK FOR SHORT RECORDS
225  2 07   *
226  2 08   CHKLGT SBR   XR1                                       4  2208  H 089               13
227  2 09          SBR   LGTXT&3                                   4  2212  H K46               14
228  2 10          MZ    &9,XR1                                    7  2216  Y L37 089           14
229  2 11   LGTCK  BCE   4000-12&X1,LIMIT,}                        8  2223  B IY8 I31 } GMARK   14
230  2 12          CHAIN 12                                                                    MACRO
231                BCE                                             1  2231  B             GEN   14
232                BCE                                             1  2232  B             GEN   14
233                BCE                                             1  2233  B             GEN   14
234                BCE                                             1  2234  B             GEN   14
235                BCE                                             1  2235  B             GEN   15
236                BCE                                             1  2236  B             GEN   15
237                BCE                                             1  2237  B             GEN   15
238                BCE                                             1  2238  B             GEN   15
239                BCE                                             1  2239  B             GEN   15
240                BCE                                             1  2240  B             GEN   15
241                BCE                                             1  2241  B             GEN   15
242                BCE                                             1  2242  B             GEN   16
243  2 13   LGTXT  B     XXXX                                      4  2243  B 000               16
244  2 14   *
245  2 15   * CROSSOVER, C TO D
246  2 16   *
247  2 17   RDPSSD RTW   SYSTPE,1                                  8  2247  L %U1 001 R         16
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SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD

248  2 18          NOP   XXXX                                      4  2255  N 000               16
249  2 19          BER   TPERR                                     5  2259  B !04 L             16
250  2 20          CW    ENDOFD                                    4  2264  ) Y68               16
251  2 21          B     PASSD                                     4  2268  B S90               16
252  2 22   *
253  2 23   * CROSSOVER, D TO C
254  2 24   *
255  2 25   RDPSSC RTW   COUTPT,1                                  8  2272  L %U6 001 R         17
256  2 26          NOP   XXXX                                      4  2280  N 000               17
257  2 27          BER   TPERR                                     5  2284  B !04 L             17
258  2 28          CW    ENDOFC                                    4  2289  ) Z24               17
259  2 29          B     CLRTAB                                    4  2293  B Y13               17
260  2 30   *
261  2 31   * COMMON CONSTANTS
262  2 32   *
263  2 33   CLRMAX DCW   @I97@                                     3  2299                      17
264  2 34   CLRMIN DSA   TABLE-010                                 3  2302  L99                 17
265  2 35   FNCTN  DCW   @      @                                  6  2308                      18
266  2 36   TABMAX DCW   @V00@                                     3  2311                      18
267  2 37   MAXADD DCW   @   @                                     3  2314                      18
268  2 38   TABLSZ DCW   &0150                                     4  2318                      18
269  2 39   MAXSER DCW   @    @                                    4  2322                      18
270  2 40   SFXCTR DCW   @ @                                       1  2323                      18
271  2 41   KBLKNG DCW   @080@                                     3  2326                      18
272  2 42   BUMPOP DCW   @#@                                       1  2327                      19
273  2 43   HOLDA  DCW   &0000                                     4  2331                      19
274  2 44   BLKCT  EQU   HOLDA-1                                      2330
275  2 45   TPAD   DSA   TPAREA                                    3  2334  I18                 19
276  2 46          LTORG *                                                  2335
                   DCW   &80                                       2  2336              LIT   19
                   DCW   &9                                        1  2337              LIT   19
               READCT DCW   #01                                    1  2338              AREA  19
                   DCW   &1                                        1  2339              LIT   19
               WRTCTR DCW   #02                                    2  2341              AREA  20
277  2 47   *
278  2 48   * PROTECTED CONSTANTS
279  2 49   *
280  2 50   FACTOR EQU   TABLE-021                                     2388
281  2 51   MACHSZ EQU   TABLE-020                                     2389
282  2 52   TOTLAB EQU   TABLE-016                                     2393
283  2 53   UNPRSW EQU   TABLE-015                                     2394
284  2 54   PROCSW EQU   TABLE-014                                     2395
285  2 55   SERCHS EQU   TABLE-010                                     2399
286  2 56   *
287  2 57   * INITIALIZE PASS C ONE TIME
288  2 58   *
289  2 59          ORG   TABLE-009                                          2400
290  2 60          RWD   SAVETP                                    5  2400  U %U4 R             21
291  2 61          RWD   CINPUT                                    5  2405  U %U5 R             21
292  2 62          RWD   COUTPT                                    5  2410  U %U6 R             21
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

293  2 63           CS    3999                                        4  2415  / I99              21
294  2 64           SW    GRPMRK                                      4  2419  , Q66              21
295  2 65           LCA   @00@,PROCSW                                7  2423  L Q68 L95          21
296  2 66           LCA   &0150,SERCHS                               7  2430  L Q72 L99          21
297  2 67           LCA   @0015@,FACTOR                              7  2437  L Q76 L88          22
298  2 68           RTW   SYSTPE,1                                   8  2444  L %U1 001 R        22
299  2 69           NOP   XXXX                                        4  2452  N 000              22
300  2 70           BER   TPERR                                       5  2456  B !04 L            22
301  2 71           CW    ENDINT                                      4  2461  ) R01              22
302  2 72   *
303  2 73   * SET I/O GROUP MARK
304  2 74   *
305  2 75           MCW   MACHSZ,KEEP1#001                           7  2465  M L89 Q77          22
306  2 76           A     &3,KEEP1                                    7  2472  A Q78 Q77          23
307  2 77           MN    KEEP1,*&004                                 7  2479  D Q77 M89          23
308  2 78           MZ    ZONE2,*&007                                 7  2486  Y 109 M99          23
309  2 79   SETIO   LCA   GRPMRK,GPMRK3                              7  2493  L Q66 I98          23
310  2 80           BWZ   SETBMP,SETIO&006,2                         8  2500  V P18 M99 2        23
311  2 81           CS    4799                                        4  2508  / 79Z              24
312  2 82           CS    4399                                        4  2512  / 39Z              24
313  2 83           MCW   @#@,BUMP                                   7  2516  M Q79 W81          24
314  2 84           BCE   SET8K,MACHSZ,4                              8  2523  B O20 L89 4        24
315  2 85   *
316  2 86   * 12K CONSTANTS
317  2 87   *
318  2 88           MCW   BLKG12,KBLKNG                              7  2531  M Q52 L26          24
319  2 89           MCW   TBSZ12,TABLSZ                              7  2538  M Q56 L18          24
320  2 90           MCW   TBLM12,TABMAX                             7  2545  M Q59 L11          25
321  2 91           MCW   TPAD12,TPAD                                7  2552  M Q62 L34          25
322  2 92           MCW   MDTP12,MDTP#003                            7  2559  M Q65 Q82          25
323  2 93           A     &72,FACTOR                                  7  2566  A Q84 L88          25
324  2 94           BCE   SETTP,MACHSZ,5                              8  2573  B O62 L89 5        25
325  2 95   *
326  2 96   * 16K CONSTANTS
327  2 97   *
328  2 98           A     &400,TABLSZ                                 7  2581  A Q87 L18          26
329  2 99           A     &40,FACTOR                                  7  2588  A Q89 L88          26
330  3 00           MZ    ABBIT,TABMAX                                7  2595  Y 113 L11          26
331  3 01           MZ    ABBIT,TPAD                                  7  2602  Y 113 L34          26
332  3 02           MZ    ABBIT,MDTP                                  7  2609  Y 113 Q82          26
333  3 03           B     SETTP                                       4  2616  B O62              26
334  3 04   *
335  3 05   * 8K CONSTANTS
336  3 06   *
337  3 07   SET8K   MCW   BLKG8K,KBLKNG                             7  2620  M Q36 L26          27
338  3 08           MCW   TBSZ8K,TABLSZ                             7  2627  M Q40 L18          27
339  3 09           MCW   TBLM8K,TABMAX                             7  2634  M Q43 L11          27
340  3 10           MCW   TPAD8K,TPAD                                7  2641  M Q46 L34          27
341  3 11           MCW   MDTP8K,MDTP                                7  2648  M Q49 Q82          27
342  3 12           A     &36,FACTOR                                  7  2655  A Q91 L88          28
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

343  3 13   SETTP   MZ    TPAD,CLRMAX                                 7  2662  Y L34 K99          28
344  3 14           MCW   MDTP,MOVEIN&003                            7  2669  M Q82 Z54          28
345  3 15           MCW   MDTP,PUT&013                               7  2676  M Q82 Z90          28
346  3 16           MCW   TPAD,WRITE&006                             7  2683  M L34 X73          28
347  3 17           MCW   TPAD,READ&010                              7  2690  M L34 X98          29
348  3 18           MCW   TPAD,LIMAD#3                               7  2697  M L34 Q94          29
349  3 19           MA    &13,LIMAD                ??? &013 ???      7  2704  # Q96 Q94          29
350  3 20           MCW   LIMAD,LGTCK&6                             7  2711  M Q94 K29          29
351  3 21   SETBMP  MCW   BUMP,BUMPOP                               7  2718  M W81 L27          29
352  3 22           LCA   GRPMRK,ENDOFC                             7  2725  L Q66 Z24          30
353  3 23   *
354  3 24   * WRITE PASS C CHECKPOINT ON 6
355  3 25   *
356  3 26           CS    80                                          4  2732  / 080              30
357  3 27           SW    CARD&001,CARD&006                           7  2736  , 001 006          30
358  3 28           SW    CARD&017,CARD&024                           7  2743  , 017 024          30
359  3 29           SW    CARD&028,CARD&035                           7  2750  , 028 035          30
360  3 30           SW    CARD&057,CARD&062                           7  2757  , 057 062          30
361  3 31           SW    CARD&068,CARD&071                           7  2764  , 068 071          31
362  3 32           WTW   COUTPT,1                                   8  2771  L %U6 001 W        31
363  3 33           NOP   XXXX                                        4  2779  N 000              31
364  3 34           BER   TPERR                                       5  2783  B !04 L            31
365  3 35           CW    ENDOFC,GRPMRK                               7  2788  ) Z24 Q66          31
366  3 36           C     TOTLAB,TABLSZ                               7  2795  C L93 L18          31
367  3 37           MCW   TABLSZ,SERCHS                              7  2802  M L18 L99          32
368  3 38           S     TOTLAB                                      4  2809  S L93              32
369  3 39           BE    CLRTAB                                      5  2813  B Y13 S            32
370  3 40           BH    CLRTAB                                      5  2818  B Y13 U            32
371  3 41           MCW   &0009,SERCHS                               7  2823  M R00 L99          32
372  3 42           B     CLRTAB                                      4  2830  B Y13              32
373  3 43   BLKG8K  DCW   @400@                                       3  2836                     32
374  3 44   TBSZ8K  DCW   &0510                                       4  2840                     33
375  3 45   TBLM8K  DSA   5100                                        3  2843  /0'                33
376  3 46   TPAD8K  DSA   7598                                        3  2846  E9Y                33
377  3 47   MDTP8K  DSA   7597&X3                                    3  2849  EIX                33
378  3 48   BLKG12  DCW   @800@                                      3  2852                     33
379  3 49   TBSZ12  DCW   &0870                                       4  2856                     33
380  3 50   TBLM12  DSA   8700                                       3  2859  70!                33
381  3 51   TPAD12  DSA   11198                                      3  2862  A9Q                34
382  3 52   MDTP12  DSA   11197&X3                                   3  2865  AIP                34
383  3 53   GRPMRK  DC    @}@                                         1  2866             GMARK   34
384  3 54           LTORG *                                                  2867
                    DCW   @00@                                       2  2868             LIT     34
                    DCW   &0150                                      4  2872             LIT     34
                    DCW   @0015@                                     4  2876             LIT     34
               KEEP1  DCW   #01                                      1  2877             AREA    34
                    DCW   &3                                         1  2878             LIT     34
                    DCW   @#@                                        1  2879             LIT     35
               MDTP   DCW   #03                                      3  2882             AREA    35
                    DCW   &72                                        2  2884             LIT     35
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

                   DCW   &400                                        3  2887              LIT     35
                   DCW   &40                                         2  2889              LIT     35
                   DCW   &36                                         2  2891              LIT     35
            LIMAD  DCW   #03                                         3  2894              AREA    35
                   DCW   &13                                         2  2896              LIT     36
                   DCW   &0009                                       4  2900              LIT     36
385  3 55   ENDINT DCW   @}@                                        1  2901              GMARK   36
386  3 56          XFR   LIBRN                                             B 000               37
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

387  3 57          JOB   AUTOCODER-PASS 5 MAIN LINE          -VERSION 3
388  3 58   *
389  3 59   * PASS C-LOAD SYMBOL TABLE& SET ADDRESSES
390  3 60   *
391  3 61   ZONE   EQU   113                                            0113
392  3 62   113    DCW   @2SKB@                                      4  0113                    40
393  3 63   ZONE2  EQU   109                                            0109
394  3 64   109    DCW   @2SKB@                                      4  0109                    41
395  3 65   ABBIT  EQU   ZONE                                           0113
396  3 66   BBIT   EQU   ZONE-001                                      0112
397  3 67   ABIT   EQU   ZONE-002                                      0111
398  3 68   NOBIT  EQU   ZONE-003                                      0110
399  3 69   XR1    EQU   89                                             0089
400  3 70   89     DCW   @000@                                       3  0089                    42
401  3 71   XR2    EQU   94                                             0094
402  3 72   94     DCW   @000@                                       3  0094                    43
403  3 73   XR3    EQU   99                                             0099
404  3 74   99     DCW   @000@                                       3  0099                    44
405  3 75          ORG   ZONE&001                                                0114
406  3 76   *
407  3 77   * DETERMINE RECORD TYPE
408  3 78   *
409  3 79   ANAL   BM    PUT,CARD&005                               8  0114  V Z77 005 K       45
410  3 80          BCE   PUT,TYPE,%                                8  0122  B Z77 075 %       45
411  3 81          BCE   INSTR,TYPE,                                8  0130  B 219 075         45
412  3 82          MN    TYPE,XR2                                   7  0138  D 075 094         45
413  3 83          BCE   DA,XR2,0                                   8  0145  B 871 094 0       45
414  3 84          MCW   @0@,INDFTR                                 7  0153  M Y92 Y69         46
415  3 85          MCW   @0@,DASW                                   7  0160  M Y92 Y68         46
416  3 86          A     XR2                                        4  0167  A 094             46
417  3 87          A     XR2                                        4  0171  A 094             46
418  3 88          B     *&001&X2                                   4  0175  B 1P9             46
419  3 89          NOP   XXXX                                       4  0179  N 000             46
420  3 90          B     CONST                                      4  0183  B 260             46
421  3 91          B     CONST                                      4  0187  B 260             47
422  3 92          B     EXEND                                      4  0191  B 973             47
423  3 93          B     SFX                                        4  0195  B 992             47
424  3 94          B     PUT                                        4  0199  B Z77             47
425  3 95          B     ORG                                        4  0203  B 376             47
426  3 96          B     DS                                         4  0207  B 295             47
427  3 97          B     PUT                                        4  0211  B Z77             47
428  3 98          B     PUT                                        4  0215  B Z77             48
429  3 99   *
430  4 00   * PROCESS INSTRUCTIONS
431  4 01   *
432  4 02   INSTR  MCW   @0@,INDFTR                                 7  0219  M Y92 Y69         48
433  4 03          B     PRCADD                                     4  0226  B '03             48
434  4 04          B     PROCLB                                     4  0230  B /09             48
435  4 05          BWZ   PUT,STADDR,2                               8  0234  V Z77 003 2       48
436  4 06          A     COUNT,NOWCTR                               7  0242  A 007 Y48         48
```

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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
437  4 07          S     @1@,NOWCTR                                     7  0249  S Y93 Y48           49
438  4 08          B     PUT                                            4  0256  B Z77               49
439  4 09   *
440  4 10   * PROCESS CONSTANTS & DCW
441  4 11   *
442  4 12   CONST  BCE   PRCAST,AOPHO,*                                 8  0260  B 283 017 *         49
443  4 13          MCW   @1@,ACTSW                                      7  0268  M Y93 Y67           49
444  4 14          B     PROCLB                                         4  0275  B /09               49
445  4 15          B     PUT                                            4  0279  B Z77               49
446  4 16   *
447  4 17   * CONSTANTDS WITH ASTERISK ADDRESS
448  4 18   *
449  4 19   PRCAST B     PRCADD                                         4  0283  B '03               49
450  4 20          B     PROCLB                                         4  0287  B /09               50
451  4 21          B     PUT                                            4  0291  B Z77               50
452  4 22   *
453  4 23   * PROCESS DS & EQUATES
454  4 24   *
455  4 25   DS     BCE   PROCTU,AOPHO,%                                 8  0295  B 361 017 %         50
456  4 26          A     AINDEX,INDFTR                                  7  0303  A 027 Y69           50
457  4 27          BCE   CONST,AOPHO,*                                  8  0310  B 260 017 *         50
458  4 28          BWZ   CONST,AOPHO,2                                  8  0318  V 260 017 2         50
459  4 29          BWZ   *&5,STAOP,2                                    8  0326  V 338 001 2         51
460  4 30          B     CONST                                          4  0334  B 260               51
461  4 31   *
462  4 32   * EQUATE
463  4 33   *
464  4 34          B     SETAOP                                         4  0338  B U35               51
465  4 35          MCW   DSAPUT,LABRTN&003                              7  0342  M Y72 S97           51
466  4 36          BWZ   UNPROC,STAOP,2                                 8  0349  V /81 001 2         51
467  4 37          B     CONST                                          4  0357  B 260               51
468  4 38   *
469  4 39   * DS OF INPUT DEVICE
470  4 40   *
471  4 41   PROCTU MCW   AOPER-003,LABADD-001                           7  0361  M 019 060           52
472  4 42          MCW   @0@                                            4  0368  M Y92               52
473  4 43          B     CONST                                          4  0372  B 260               52
474  4 44   *
475  4 45   * PROCESS ORIGIN & LITERAL ORIGIN
476  4 46   *
477  4 47   ORG    BWZ   SETHGH,CARD&033,B                              8  0376  V 405 033 B         52
478  4 48          ZA    LABADD,ORGADD                                  7  0384  ? 061 032           52
479  4 49          A     @1@,ORGADD                                     7  0391  A Y93 032           52
480  4 50          MZ    ABBIT,CARD&033                                 7  0398  Y 113 033           53
481  4 51   SETHGH BCE   ORGSAV,MAXSW,1                                 8  0405  B 432 Y60 1         53
482  4 52          C     NOWCTR,HGHCTR                                  7  0413  C Y48 Y58           53
483  4 53          BH    ORGSAV                                         5  0420  B 432 U             53
484  4 54          ZA    NOWCTR,HGHCTR                                  7  0425  ? Y48 Y58           53
485  4 55   *
486  4 56   * PROCESS SAVE COUNTER OF ORIGIN
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
487  4 57   *
488  4 58   ORGSAV BCE   AOPOR,LBLHO,                                  8  0432  B 536 008           54
489  4 59          MCW   @0050@,XR1                                     7  0440  M Y96 089           54
490  4 60          MCW   &AOPOR,LABRTN&003                              7  0447  M Y99 S97           54
491  4 61          BWZ   *&005,STLABL,2                                 8  0454  V 466 002 2         54
492  4 62          B     AOPOR                                          4  0462  B 536               54
493  4 63          BCE   STRSAV,SUPADD,                                 8  0466  B 502 066           55
494  4 64   BTOLAB B     DOLABL                                         4  0474  B T58               55
495  4 65          B     SEARCH                                         4  0478  B W29               55
496  4 66          BCE   STORE,DBLSW,1                                  8  0482  B S69 Y64 1         55
497  4 67          BCE   STORE,SPCSW,0                                  8  0490  B S69 Y63 0         55
498  4 68          B     UNPROC                                         4  0498  B /81               55
499  4 69   STRSAV BCE   UNPROC,ADDRSW,1                                8  0502  B /81 Y59 1         56
500  4 70          BCE   UNPROC,LITRSW,1                                8  0510  B /81 Y61 1         56
501  4 71          MCW   NOWCTR,SUPADD                                  7  0518  M Y48 066           56
502  4 72          A     @1@,SUPADD                                     7  0525  A Y93 066           56
503  4 73          B     BTOLAB                                         4  0532  B 474               56
504  4 74   *
505  4 75   * PROCESS A OPERAND OF ORIGIN
506  4 76   *
507  4 77   AOPOR  BWZ   *&005,STAOP,2                                  8  0536  V 548 001 2         57
508  4 78          B     ACTUAL                                         4  0544  B 761               57
509  4 79          BCE   ASTRSK,AOPHO,*                                 8  0548  B 708 017 *         57
510  4 80          MCW   @0@,LITRSW                                     7  0556  M Y92 Y61           57
511  4 81          S     NOWCTR                                         4  0563  S Y48               57
512  4 82          BCE   BLKAOP,AOPHO,                                 8  0567  B 735 017           57
513  4 83   *
514  4 84   * SYMBOLIC ORIGIN
515  4 85   *
516  4 86          MCW   @0@,ORGSW                                      7  0575  M Y92 Y66           58
517  4 87          S     XR1&001                                        4  0582  S 090               58
518  4 88          B     SETAOP                                         4  0586  B U35               58
519  4 89          BCE   SETORG,ORGSW,1                                 8  0590  B 609 Y66 1         58
520  4 90   SETSWS MCW   @11@,MAXSW                                    7  0598  M Z01 Y60           58
521  4 91          B     SCNTB&7                                        4  0605  B 813               58
522  4 92   SETORG MCW   LABADD,ORGCTR                                 7  0609  M 061 Y53           59
523  4 93   RSTSWA MCW   @0@,ADDRSW                                    7  0616  M Y92 Y59           59
524  4 94          BCE   *&005,AOPADJ-002,X                            8  0623  B 635 024 X         59
525  4 95          B     AOPOUT                                         4  0631  B 669               59
526  4 96   *
527  4 97   * ADJUSTMENT OF X00
528  4 98   *
529  4 99          BCE   NXTCNT,AOPHO,*                                 8  0635  B 655 017 *         59
530  5 00          C     ORGCTR,&00                                     7  0643  C Y53 Z03           60
531  5 01          BE    AOPOUT                                         5  0650  B 669 S             60
532  5 02   NXTCNT MCW   &00,ORGCTR                                     7  0655  M Z03 Y53           60
533  5 03          A     @1@,ORGCTR-002                                 7  0662  A Y93 Y51           60
534  5 04   AOPOUT A     ORGCTR,ORGADD                                  7  0669  A Y53 032           60
535  5 05          ZA    ORGCTR,LABADD                                  7  0676  ? Y53 061           61
536  5 06          ZA    ORGADD,NOWCTR                                  7  0683  ? 032 Y48           61
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
537  5 07          S     @1@,NOWCTR                                    7  0690  S Y93 Y48           61
538  5 08          MZ    ABBIT,STAOP                                   7  0697  Y 113 001           61
539  5 09          B     PUT                                           4  0704  B Z77               61
540  5 10  *
541  5 11  * ORIGIN ASTERISK
542  5 12  *
543  5 13  ASTRSK BCE   PUT,ADDRSW,1                                   8  0708  B Z77 Y59 1         62
544  5 14          BCE   SETSWS,LITRSW,1                               8  0716  B 598 Y61 1         62
545  5 15          MCW   NOWCTR,ORGCTR                                 7  0724  M Y48 Y53           62
546  5 16          B     RSTSWA                                        4  0731  B 616               62
547  5 17  *
548  5 18  * ORIGIN MAXIMUM
549  5 19  *
550  5 20  BLKAOP BCE   SETSWS,MAXSW,1                                8  0735  B 598 Y60 1         62
551  5 21          MCW   HGHCTR,ORGCTR                                 7  0743  M Y58 Y53           63
552  5 22          A     @1@,ORGCTR                                    7  0750  A Y93 Y53           63
553  5 23          B     RSTSWA                                        4  0757  B 616               63
554  5 24  *
555  5 25  * ORIGIN ACTUAL OR PROCESSED
556  5 26  *
557  5 27  ACTUAL ZA    ORGADD,NOWCTR                                 7  0761  ? 032 Y48           63
558  5 28          S     @1@,NOWCTR                                    7  0768  S Y93 Y48           63
559  5 29          BCE   TSTX00,AOPHO,*                               8  0775  B 821 017 *         64
560  5 30          MCW   @0@,LITRSW                                    7  0783  M Y92 Y61           64
561  5 31          BWZ   SCNTB,AOPHO,2                                 8  0790  V 806 017 2         64
562  5 32          BWZ   SETORG,STAOP,K                                8  0798  V 609 001 K         64
563  5 33  SCNTB   MCW   @0@,ADDRSW                                   7  0806  M Y92 Y59           64
564  5 34          S     ORGCTR                                        4  0813  S Y53               65
565  5 35          B     PUT                                           4  0817  B Z77               65
566  5 36  TSTX00 BCE   PUT,AOPADJ-002,X                             8  0821  B Z77 024 X         65
567  5 37          BWZ   PUT,CARD&034,B                               8  0829  V Z77 034 B         65
568  5 38          A     ORGCTR,ORGADD                                 7  0837  A Y53 032           65
569  5 39          BCE   PUT,ADDRSW,1                                 8  0844  B Z77 Y59 1         65
570  5 40          BCE   PUT,LITRSW,1                                 8  0852  B Z77 Y61 1         66
571  5 41          MZ    ABBIT,CARD&34                                 7  0860  Y 113 034           66
572  5 42          B     ACTUAL                                        4  0867  B 761               66
573  5 43  *
574  5 44  * PROCESS DA STATEMENTS
575  5 45  *
576  5 46  DA      BCE   ORIGDA,TYPE,0                                 8  0871  B 926 075 0         66
577  5 47          BCE   TSTRPT,ACTSW,1                               8  0879  B 910 Y67 1         66
578  5 48  BTOADD C     LABADD,SUPADD                                 7  0887  C 061 066           67
579  5 49          BL    *&8                                           5  0894  B 906 T             67
580  5 50          MCW   @005@,XR3                                     7  0899  M Y96 099           67
581  5 51          B     PRCADD                                        4  0906  B '03               67
582  5 52  TSTRPT BCE   PUT,TYPE,'                                    8  0910  B Z77 075 '         67
583  5 53          B     PROCLB                                        4  0918  B /09               67
584  5 54          B     PUT                                           4  0922  B Z77               67
585  5 55  *
586  5 56  * DA HEADER
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
587  5 57  *
588  5 58  ORIGDA MCW   @0@,INDFTR                                   7  0926  M Y92 Y69           68
589  5 59          A     AINDEX,INDFTR                                 7  0933  A 027 Y69           68
590  5 60          MCW   @1@,DASW                                      7  0940  M Y93 Y68           68
591  5 61          MCW   @0@,ACTSW                                     7  0947  M Y92 Y67           68
592  5 62          BCE   BTOADD,AOPHO,*                               8  0954  B 887 017 *         68
593  5 63          MCW   @1@,ACTSW                                     7  0962  M Y93 Y67           69
594  5 64          B     TSTRPT                                        4  0969  B 910               69
595  5 65  *
596  5 66  * ??? MISSING FROM LISTING IN CE MANUAL ***
597  5 67  * ??? MISSING FROM LISTING IN CE MANUAL ***
598  5 68  EXEND  BWZ   PUT,TYPE,B                                    8  0973  V Z77 075 B         69
599  5 69          MCW   @B@,BRANCH                                    7  0981  M Z04 X84           69
600  5 70          B     WRITE                                         4  0988  B X67               69
601  5 71  *
602  5 72  * PROCESS SUFFIX
603  5 73  *
604  5 74  SFX     MCW   AOPHO,SFXCTR                                  7  0992  M 017 L23           69
605  5 75          B     PUT                                           4  0999  B Z77               70
606  5 76  *
607  5 77  * PROCESS ADDRESSES
608  5 78  *
609  5 79  PRCADD SBR   ADDRTN&003                                    4  1003  H '89               70
610  5 80          MCW   @0@,ACTSW                                     7  1007  M Y92 Y67           70
611  5 81          BWZ   LITTST,STLABL,K                               8  1014  V '90 002 K         70
612  5 82  TSTADD BWZ   ADDRTN,STADDR,B                               8  1022  V '86 003 B         70
613  5 83          BCE   ADDRTN,ADDRSW,1                               8  1030  B '86 Y59 1         70
614  5 84          A     ORGCTR,LABADD                                 7  1038  A Y53 061           71
615  5 85          A     ORGCTR,SUPADD                                 7  1045  A Y53 066           71
616  5 86          C     NOWCTR,LABADD&X3                              7  1052  C Y48 0F1           71
617  5 87          BL    *&008                                         5  1059  B '71 T             71
618  5 88          ZA    LABADD&X3,NOWCTR                              7  1064  ? 0F1 Y48           71
619  5 89          BCE   ADDRTN,LITRSW,1                             8  1071  B '86 Y61 1         72
620  5 90          MZ    ABBIT,STADDR                                  7  1079  Y 113 003           72
621  5 91  ADDRTN B     XXXX                                          4  1086  B 000               72
622  5 92  LITTST MCW   DSAPUT,LABRTN&003                            7  1090  M Y72 S97           72
623  5 93          BCE   LITRAL,TYPE,/                               8  1097  B T25 075 /         72
624  5 94          B     TSTADD                                        4  1105  B '22               72
625  5 95  *
626  5 96  * PROCESS LABEL
627  5 97  *
628  5 98  PROCLB SBR   LABRTN&003                                    4  1109  H S97               73
629  5 99          BWZ   *&005,STLABL,2                              8  1113  V /25 002 2         73
630  6 00          B     LABRTN                                        4  1121  B S94               73
631  6 01          BCE   MRKPRC,LBLHO,                               8  1125  B S80 008           73
632  6 02          BCE   BTOLBL,ACTSW,1                              8  1133  B /57 Y67 1         73
633  6 03          BCE   TSTDBL,LITRSW,1                             8  1141  B S07 Y61 1         74
634  6 04          BCE   TSTDBL,ADDRSW,1                             8  1149  B S07 Y59 1         74
635  6 05  BTOLBL B     DOLABL                                        4  1157  B T58               74
636  6 06          B     SEARCH                                        4  1161  B W29               74
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

637  6 07          BCE   DBLDEF,DBLSW,1                              8  1165  B S98 Y64 1         74
638  6 08          BCE   STORE,SPCSW,0                               8  1173  B S69 Y63 0         75
639  6 09   *
640  6 10   * UNPROCESSED LABEL
641  6 11   *
642  6 12   UNPROC MCW   @1@,UNPRSW                                  7  1181  M Y93 L94           75
643  6 13          A     @1@,TOTLAB                                  7  1188  A Y93 L93           75
644  6 14          BCE   SETSWL,TYPE,/                               8  1195  B S50 075 /         75
645  6 15          B     LABRTN                                      4  1203  B S94               75
646  6 16   *
647  6 17   * SEARCH TABLE FOR DBL DEF LITERAL
648  6 18   *
649  6 19   TSTDBL BCE   UNPROC,LBLHO,$                              8  1207  B /81 008 $         76
650  6 20          B     DOLABL                                      4  1215  B T58               76
651  6 21          B     SEARCH                                      4  1219  B W29               76
652  6 22          BCE   UNPROC,DBLSW,0                             8  1223  B /81 Y64 0         76
653  6 23          BCE   UNPROC,ADDHO,                               8  1231  B /81 M!0           76
654  6 24          MZ    BBIT,STLABL                                 7  1239  Y 112 002           76
655  6 25          B     LABRTN                                      4  1246  B S94               77
656  6 26   *
657  6 27   * UNPROCESSED LABEL OF LITERAL
658  6 28   *
659  6 29   SETSWL BCE   LABRTN,LBLHO,$                              8  1250  B S94 008 $         77
660  6 30          MCW   @11@,LITRSW                                 7  1258  M Z01 Y61           77
661  6 31          B     LABRTN                                      4  1265  B S94               77
662  6 32   *
663  6 33   * STORE LABEL IN TABLE
664  6 34   *
665  6 35   STORE  LCA   FNCTN,SYMBOL                                7  1269  L L08 M!9           77
666  6 36          LCA   HOLDAD                                      4  1276  L Z12               77
667  6 37   MRKPRC MZ    ABBIT,STLABL                                7  1280  Y 113 002           78
668  6 38          MCW   @1@,PROCSW                                 7  1287  M Y93 L95           78
669  6 39   LABRTN B     XXXX                                        4  1294  B 000               78
670  6 40   *
671  6 41   * DOUBLY DEFINED LABEL
672  6 42   *
673  6 43   DBLDEF BCE   STORE,ADDHO,                                8  1298  B S69 M!0           78
674  6 44          MZ    BBIT,STLABL                                 7  1306  Y 112 002           78
675  6 45          BCE   LITRAL,TYPE,/                               8  1313  B T25 075 /         79
676  6 46          B     LABRTN                                      4  1321  B S94               79
677  6 47   *
678  6 48   * DOUBLE DEFINED LITERAL
679  6 49   *
680  6 50   LITRAL BWZ   LABRTN,STBOP,B                              8  1325  V S94 004 B         79
681  6 51          MCW   @%@,TYPE                                    7  1333  M Z05 075           79
682  6 52          S     COUNT,ORGCTR                                7  1340  S 007 Y53           79
683  6 53          S     COUNT,NOWCTR                                7  1347  S 007 Y48           80
684  6 54          B     LABRTN                                      4  1354  B S94               80
685  6 55   *
686  6 56   * SET UP LABEL & ADDRESS
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

687  6 57   * FOR TABLE SEARCH
688  6 58   *
689  6 59   DOLABL SBR   DOLABR&003                                  4  1358  H U34               80
690  6 60          MCW   LABEL,FNCTN                                 7  1362  M 013 L08           80
691  6 61          MCW   CNVLAB,ARGUMT#3                            7  1369  M 056 Z08           80
692  6 62   SETFUN BCE   *&5,FNCTN,                                  8  1376  B T88 L08           80
693  6 63          B     *&8                                         4  1384  B T95               81
694  6 64          MCW   SFXCTR,FNCTN                                7  1388  M L23 L08           81
695  6 65          MCW   LABADD&X1,HOLDAD#004                       7  1395  M 0W1 Z12           81
696  6 66          BCE   DOINDX,HOADD&X1,0                           8  1402  B U17 0V7 0         81
697  6 67          MZ    ABIT,HOLDAD-003                             7  1410  Y 111 Z09           81
698  6 68   DOINDX MN    INDFTR,*&004                                7  1417  D Y69 U27           82
699  6 69          MZ    ZONE,HOLDAD-001                             7  1424  Y 113 Z11           82
700  6 70   DOLABR B     XXXX                                        4  1431  B 000               82
701  6 71   *
702  6 72   * PROCESS A OPERAND OF ORIGIN & EQUATE
703  6 73   *
704  6 74   SETAOP SBR   AOPRTN&003                                  4  1435  H U87               82
705  6 75          MCW   &BRSRH,DOLABR&003                           7  1439  M Z15 U34           82
706  6 76          MCW   AOPER,FNCTN                                 7  1446  M 022 L08           82
707  6 77          MCW   AOP,ARGUMT                                  7  1453  M 070 Z08           83
708  6 78          B     SETFUN                                      4  1460  B T76               83
709  6 79   BRSRH  B     SEARCH                                      4  1464  B W29               83
710  6 80          BCE   ADDBNK,DBLSW,1                             8  1468  B V03 Y64 1         83
711  6 81          BCE   STRBNK,SPCSW,0                             8  1476  B U88 Y63 0         83
712  6 82   AOPRTN B     XXXX                                        4  1484  B 000               83
713  6 83   *
714  6 84   * LABEL NOT IN TABLE, STORE
715  6 85   * WITH BLANK ADDRESS
716  6 86   *
717  6 87   STRBNK LCA   FNCTN,SYMBOL                                7  1488  L L08 M!9           84
718  6 88          LCA   @    @                                      4  1495  L Z19               84
719  6 89          B     AOPRTN                                      4  1499  B U84               84
720  6 90   *
721  6 91   * RETRIEVE VALUE FROM TABLE
722  6 92   *
723  6 93   ADDBNK BCE   AOPRTN,ADDHO,                               8  1503  B U84 M!0           84
724  6 94          MCW   @1@,ORGSW                                   7  1511  M Y93 Y66           84
725  6 95          BWZ   *&5,LBLREF,2                                8  1518  V V30 M!1 2         84
726  6 96          B     *&8                                         4  1526  B V37               85
727  6 97          MZ    ABIT,LBLREF                                 7  1530  Y 111 M!1           85
728  6 98          MCW   ADDLO,LABADD                                7  1537  M M!3 061           85
729  6 99          BCE   AOPROC,LABADD-3,%                          8  1544  B W18 058 %         85
730  7 00          BWZ   *&008,LABADD-003,2                         8  1552  V V67 058 2         85
731  7 01          MCW   @1@,HOADD                                   7  1560  M Y93 057           86
732  7 02          BCE   AOPRTN,TYPE,O                              8  1567  B U84 075 O         86
733  7 03   *
734  7 04   * ADD CHARACTER ADJUSTMENT FOR EQUATE
735  7 05   *
736  7 06          MZ    LABADD-001,SAVEZN#001                       7  1575  Y 060 Z20           86
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
737  7 07          A     AOPADJ,LABADD                                7  1582  A 026 061           86
738  7 08          MZ    SAVEZN,LABADD-001                            7  1589  Y Z20 060           86
739  7 09          BCE   AOPROC,AINDEX,                               8  1596  B W18 027           87
740  7 10          MN    INDFTR,*&004                                 7  1604  D Y69 W14           87
741  7 11          MZ    ZONE,LABADD-001                              7  1611  Y 113 060           87
742  7 12  AOPROC MZ    ABBIT,STAOP                                  7  1618  Y 113 001           87
743  7 13          B     AOPRTN                                       4  1625  B U84               87
744  7 14  *
745  7 15  * TABLE SEARCH
746  7 16  *
747  7 17  SEARCH SBR   RETURN&003                                   4  1629  H X66               87
748  7 18         MCW   DBLSW&001,DBLSW                              7  1633  M Y65 Y64           88
749  7 19         MCW   TABMAX,MAXADD                               7  1640  M L11 L14           88
750  7 20         MCW   ARGUMT,XR2                                   7  1647  M Z08 094           88
751  7 21         MCW   SERCHS,MAXSER                                7  1654  M L99 L22           88
752  7 22  TBLSRH C     FNCTN,SYMBOL                                 7  1661  C L08 M!9           88
753  7 23         BE    SETDBL                                       5  1668  B X45 S             89
754  7 24         BCE   RETURN,SYMHO,                               8  1673  B X63 M!4           89
755  7 25  BUMP   A     @010@,XR2                                    7  1681  A Z23 094           89
756  7 26         S     @1@,MAXSER                                   7  1688  S Y93 L22           89
757  7 27         BM    SETSPC,MAXSER                                8  1695  V X56 L22 K         89
758  7 28         C     XR2,MAXADD                                   7  1703  C 094 L14           90
759  7 29         BU    TBLSRH                                       5  1710  B W61 /             90
760  7 30         BCE   SETSPC,WRAPSW,1                             8  1715  B X56 Y62 1         90
761  7 31         MCW   @1@,WRAPSW                                  7  1723  M Y93 Y62           90
762  7 32         MCW   ARGUMT,MAXADD                               7  1730  M Z08 L14           90
763  7 33         S     XR2&001                                      4  1737  S 095               90
764  7 34         B     TBLSRH                                       4  1741  B W61               91
765  7 35  *
766  7 36  * LABEL IN TABLE
767  7 37  *
768  7 38  SETDBL MCW   @1@,DBLSW                                   7  1745  M Y93 Y64           91
769  7 39         B     RETURN                                       4  1752  B X63               91
770  7 40  *
771  7 41  * SPACE AVAILABLE
772  7 42  *
773  7 43  SETSPC MCW   @1@,SPCSW                                   7  1756  M Y93 Y63           91
774  7 44  RETURN B     XXXX                                         4  1763  B 000               91
775  7 45  *
776  7 46  * INPUT/OUTPUT - PASS C
777  7 47  *
778  7 48  WRITE  WT    COUTPT,TPAREA                                8  1767  M %U6 I18 W         91
779  7 49         NOP   XXXX                                         4  1775  N 000               91
780  7 50         BER   TPERR                                        5  1779  B !04 L             92
781  7 51  BRANCH NOP   FINAL                                       4  1784  N Y73               92
782  7 52  READ   S     HOLDA                                        4  1788  S L31               92
783  7 53         RT    CINPUT,TPAREA                                8  1792  M %U5 I18 R         92
784  7 54         B     CHKLGT                                       4  1800  B K08               92
785  7 55         BER   TPERR                                        5  1804  B !04 L             92
786  7 56         B     NXTREC                                       4  1809  B Z37               92
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
787  7 57  *
788  7 58  * CLEAR TABLE AREA
789  7 59  *
790  7 60  CLRTAB MCW   CLRMAX,CLEAR&003                           7  1813  M K99 Y23           93
791  7 61  CLEAR  CS    XXXX                                         4  1820  / 000               93
792  7 62         SBR   CLEAR&003                                   4  1824  H Y23               93
793  7 63         C     CLEAR&003,CLRMIN                             7  1828  C Y23 L02           93
794  7 64         BU    CLEAR                                        5  1835  B Y20 /             93
795  7 65         B     READ                                         4  1840  B X88               93
796  7 66  NOWCTR DCW   &00000                                      5  1848                      93
797  7 67  ORGCTR DCW   &00000                                      5  1853                      94
798  7 68  HGHCTR DCW   &00000                                      5  1858                      94
799  7 69  ADDRSW DCW   @0@                                        1  1859                      94
800  7 70  MAXSW  DC    @0@                                        1  1860                      94
801  7 71  LITRSW DC    @0@                                        1  1861                      94
802  7 72  WRAPSW DCW   @0@                                        1  1862                      94
803  7 73  SPCSW  DC    @0@                                        1  1863                      94
804  7 74  DBLSW  DC    @0@                                        1  1864                      94
805  7 75         DC    @0@                                        1  1865                      94
806  7 76  ORGSW  DCW   @0@                                        1  1866                      94
807  7 77  ACTSW  DCW   @0@                                        1  1867                      94
808  7 78  DASW   DCW   @0@                                        1  1868                      94
809  7 79  INDFTR DCW   @0@                                        1  1869                      95
810  7 80  DSAPUT DSA   PUT                                        3  1872  Z77                 95
811  7 81  *
812  7 82  * END OF PASS C, GET PASS D
813  7 83  *
814  7 84  FINAL  WTM   COUTPT                                      5  1873  U %U6 M             95
815  7 85         RWD   CINPUT                                      5  1878  U %U5 R             95
816  7 86         RWD   COUTPT                                      5  1883  U %U6 R             95
817  7 87         B     RDPSSD                                      4  1888  B K47               95
818  7 88         LTORG *                                                  1892
                  DCW   @0@                                        1  1892              LIT     95
                  DCW   @1@                                        1  1893              LIT     96
                  DCW   @005@                                      3  1896              LIT     96
                  DCW   &AOPOR                                     3  1899  536         ADCON   96
                  DCW   @11@                                       2  1901              LIT     96
                  DCW   &00                                        2  1903              LIT     96
                  DCW   @B@                                        1  1904              LIT     96
                  DCW   @%@                                        1  1905              LIT     96
           ARGUMT DCW   #03                                        3  1908              AREA    97
           HOLDAD DCW   #04                                        4  1912              AREA    97
                  DCW   &BRSRH                                     3  1915  U64         ADCON   97
                  DCW   @    @                                     4  1919              LIT     97
           SAVEZN DCW   #01                                        1  1920              AREA    97
                  DCW   @010@                                      3  1923              LIT     97
819  7 89  ENDOFC DCW   @}@                                        1  1924              GMARK   97
820  7 90         XFR   LIBRN                                             B 000               98
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SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD

821  7 91          JOB   AUTOCODER-PASS 6-PROCESS OPERANDS  -VERSION 3
822  7 92   *
823  7 93   91     DCW   @00000@                                    5  0091                    101
824  7 94   96     DCW   @00000@                                    5  0096                    101
825  7 95   101    DCW   @00000@                                    5  0101                    101
826  7 96   109    DCW   @2SKB@                                     4  0109                    102
827  7 97   113    DCW   @2SKB@                                     4  0113                    102
828  7 98          ORG   ZONE&001                                              0114
829  7 99   *
830  8 00   * DETERMINE RECORD TYPE
831  8 01   *
832  8 02          MCW   @0@,ASTRSW                                7  0114  M U32 U18         102
833  8 03          BM    PUT,CARD&005                              8  0121  V Z77 005 K       102
834  8 04          BCE   PUT,TYPE,%                                8  0129  B Z77 075 %       102
835  8 05          MN    TYPE,TYPEA#001                            7  0137  D 075 U33         102
836  8 06          BCE   PRINST,TYPEA,                            8  0144  B 196 U33         103
837  8 07          BCE   PRDSA,TYPEA,2                           8  0152  B 318 U33 2       103
838  8 08          BCE   PROEND,TYPEA,3                          8  0160  B 446 U33 3       103
839  8 09          BCE   PROSFX,TYPEA,4                          8  0168  B S79 U33 4       103
840  8 10          BCE   ORGEQU,TYPEA,6                          8  0176  B 489 U33 6       104
841  8 11          BCE   ORGEQU,TYPEA,7                          8  0184  B 489 U33 7       104
842  8 12          B     PUT                                     4  0192  B Z77             104
843  8 13   *
844  8 14   * PROCESS INSTRUCTIONS
845  8 15   *
846  8 16   PRINST BWZ   SETAST,STADDR,2                         8  0196  V 208 003 2       104
847  8 17          B     LOADDR                                  4  0204  B 215             104
848  8 18   SETAST MCW   @1@,ASTRSW                              7  0208  M U34 U18         104
849  8 19   *
850  8 20   * SET ASTERISK ADDRESS
851  8 21   *
852  8 22   LOADDR ZA    LABADD,ASTADD#005                       7  0215  ? 061 U39         105
853  8 23          A     COUNT,ASTADD                            7  0222  A 007 U39         105
854  8 24          S     @1@,ASTADD                              7  0229  S U34 U39         105
855  8 25   *
856  8 26   * TEST FOR A OPERAND
857  8 27   *
858  8 28          BCE   PUT,COUNT,1                             8  0236  B Z77 007 1       105
859  8 29          BCE   PUT,COUNT,2                             8  0244  B Z77 007 2       105
860  8 30          BWZ   *&005,STAOP,2                           8  0252  V 264 001 2       106
861  8 31          B     SEEBOP                                  4  0260  B 268             106
862  8 32          B     PROCOP                                  4  0264  B 578             106
863  8 33   *
864  8 34   * TEST FOR B OPERAND
865  8 35   *
866  8 36   SEEBOP BCE   PUT,COUNT,4                             8  0268  B Z77 007 4       106
867  8 37          BCE   PUT,COUNT,5                             8  0276  B Z77 007 5       106
868  8 38          BWZ   *&005,STBOP,2                           8  0284  V 296 004 2       107
869  8 39          B     PUT                                     4  0292  B Z77             107
870  8 40          MCW   @003@,XR3                               7  0296  M U42 099         107
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SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD

871  8 41          MCW   @011@,XR1                               7  0303  M U45 089         107
872  8 42          B     PROCOP                                  4  0310  B 578             107
873  8 43          B     PUT                                     4  0314  B Z77             107
874  8 44   *
875  8 45   * PROCESS DSA AND ADCON
876  8 46   *
877  8 47   PRDSA  BWZ   *&005,STADDR,2                          8  0318  V 330 003 2       108
878  8 48          B     TSTPRC                                  4  0326  B 434             108
879  8 49          MCW   @1@,ASTRSW                              7  0330  M U34 U18         108
880  8 50   SETDSA ZA    LABADD,ASTADD                           7  0337  ? 061 U39         108
881  8 51          MCW   @003@,XR3                               7  0344  M U42 099         108
882  8 52          MCW   @011@,XR1                               7  0351  M U45 089         109
883  8 53          BWZ   *&005,STBOP,2                           8  0358  V 370 004 2       109
884  8 54          B     PUT                                     4  0366  B Z77             109
885  8 55          B     PROCOP                                  4  0370  B 578             109
886  8 56          BWZ   PUT,STBOP,2                           8  0374  V Z77 004 2       109
887  8 57          BCE   CMP16K,AINDEX,-                        8  0382  B 409 027 -       109
888  8 58   COMPRS MCW   &PUT,OPRTN&3                           7  0390  M U48 /78         110
889  8 59          BCE   PUT,AOP&1,%                             8  0397  B Z77 071 %       110
890  8 60          B     CNVTO3                                  4  0405  B '94             110
891  8 61   *
892  8 62   * GET 16000 COMPLEMENT
893  8 63   *
894  8 64   CMP16K MCW   &16000,FNCTN-001                        7  0409  M U53 L07         110
895  8 65          S     HOLDAR,FNCTN-001                        7  0416  S U58 L07         110
896  8 66          ZA    FNCTN-001,HOLDAR#005                    7  0423  ? L07 U58         111
897  8 67          B     COMPRS                                  4  0430  B 390             111
898  8 68   TSTPRC BWZ   SETDSA,STBOP,2                         8  0434  V 337 004 2       111
899  8 69          B     PUT                                     4  0442  B Z77             111
900  8 70   *
901  8 71   * PROCESS EX & END
902  8 72   *
903  8 73   PROEND S     ASTADD                                  4  0446  S U39             111
904  8 74          BWZ   *&005,STAOP,2                           8  0450  V 462 001 2       111
905  8 75          B     *&005                                   4  0458  B 466             111
906  8 76          B     PROCOP                                  4  0462  B 578             112
907  8 77          BCE   ENDOPN,TYPE,3                           8  0466  B 478 075 3       112
908  8 78          B     PUT                                     4  0474  B Z77             112
909  8 79   ENDOPN MCW   @B@,BRNCH2                             7  0478  M U59 X84         112
910  8 80          B     PUT                                     4  0485  B Z77             112
911  8 81   *
912  8 82   * PROCESS ORIGIN & EQUATE
913  8 83   *
914  8 84   ORGEQU BWZ   *&005,STAOP,2                          8  0489  V 501 001 2       112
915  8 85          B     ORGOUT                                  4  0497  B 574             112
916  8 86          BCE   ORGOUT,AOPHO,                           8  0501  B 574 017         113
917  8 87          BWZ   ORGOUT,AOPHO,2                          8  0509  V 574 017 2       113
918  8 88          BCE   ORGOUT,AOPHO,*                         8  0517  B 574 017 *       113
919  8 89          BCE   ORGOUT,AOPHO,%                         8  0525  B 574 017 %       113
920  8 90          B     PROCOP                                  4  0533  B 578             113
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
 921  8 91          BWZ   ORGOUT,STAOP,2                              8  0537  V 574 001 2        114
 922  8 92          MCW   @0@,ITERSW                                  7  0545  M U32 U28          114
 923  8 93          BCE   *&008,TYPEA,7                               8  0552  B 567 U33 7        114
 924  8 94          MZ    BBIT,STAOP                                  7  0560  Y 112 001          114
 925  8 95          MCW   HOLDAR,LABADD                               7  0567  M U58 061          114
 926  8 96   ORGOUT B     PUT                                         4  0574  B Z77              115
 927  8 97   *
 928  8 98   * PROCESS OPERAND SUB-ROUTINE
 929  8 99   *
 930  9 00   PROCOP SBR   OPRTN&003                                   4  0578  H /78              115
 931  9 01          BWZ   *&005,STAOP&X3,2                            8  0582  V 594 0?1 2        115
 932  9 02          B     OPRTN                                       4  0590  B /75              115
 933  9 03          BCE   SETZRO,AOPHO&X1,                           8  0594  B 942 0/7          115
 934  9 04          BCE   PERCNT,AOPHO&X1,%                          8  0602  B 950 0/7 %        115
 935  9 05          BWZ   FLOAT,AOPHO&X1,2                           8  0610  V S21 0/7 2        116
 936  9 06          BCE   PROAST,AOPHO&X1,*                         8  0618  B /90 0/7 *        116
 937  9 07   *
 938  9 08   * CONVERT SYMBOL TO TABLE ADDRESS
 939  9 09   *
 940  9 10   CNVSYM BCE   *&005,AOP-002&X3,                          8  0626  B 638 0F8          116
 941  9 11          B     SETSYM                                      4  0634  B 804              116
 942  9 12          MCW   AOPER&X1,W6AREA#006                         7  0638  M 0S2 U65          116
 943  9 13          BCE   *&5,W6AREA,                                8  0645  B 657 U65          117
 944  9 14          B     *&8                                         4  0653  B 664              117
 945  9 15          MCW   SFXCTR,W6AREA                              7  0657  M L23 U65          117
 946  9 16          ZA    &2,HOLD2#002                                7  0664  ? U66 U68          117
 947  9 17          ZA    W6AREA-2,HOLD4#004                          7  0671  ? U63 U72          117
 948  9 18          A     W6AREA,HOLD4                                7  0678  A U65 U72          118
 949  9 19          A     W6AREA,HOLD4-002                            7  0685  A U65 U70          118
 950  9 20          MZ    NOBIT,HOLD4                                 7  0692  Y 110 U72          118
 951  9 21          ZA    FACTOR,HOLD7                                7  0699  ? L88 U26          118
 952  9 22   MPYLP  MN    HOLD7,HOLD1                                 7  0706  D U26 U27          118
 953  9 23          ZA                                                1  0713  ?                  118
 954  9 24   MULT   BCE   NXTDGT,HOLD1,?                             8  0714  B 740 U27 ?        119
 955  9 25          A     HOLD4,HOLD7-002                             7  0722  A U72 U24          119
 956  9 26          S     &1,HOLD1                                    7  0729  S U73 U27          119
 957  9 27          B     MULT                                        4  0736  B 714              119
 958  9 28   NXTDGT S     &1,HOLD2                                    7  0740  S U73 U68          119
 959  9 29          BWZ   MPYLP,HOLD2,B                              8  0747  V 706 U68 B        120
 960  9 30          MCW   @000@,AOP&X3                               7  0755  M U76 0G0          120
 961  9 31          BAV   *&001                                       5  0762  B 767 Z            120
 962  9 32   LOOP1  A     &96,HOLD7-005                               7  0767  A U78 U21          120
 963  9 33          BAV   LOOP1                                       5  0774  B 767 Z            120
 964  9 34          MZ    HOLD7-006,AOP&X3                            7  0779  Y U20 0G0          120
 965  9 35          MCW   HOLD7-003                                   4  0786  M U23              121
 966  9 36          MN    HOLD7-005,*&004                             7  0790  D U21 800          121
 967  9 37          MZ    ZONE2,AOP-002&X3                            7  0797  Y 109 0F8          121
 968  9 38   *
 969  9 39   * SYMBOLIC OPERAND
 970  9 40   *
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
 971  9 41   SETSYM MCW   AOPER&X1,FNCTN                            7  0804  M 0S2 L08          121
 972  9 42          BCE   *&005,FNCTN,                               8  0811  B 823 L08          121
 973  9 43          B     *&008                                       4  0819  B 830              121
 974  9 44          MCW   SFXCTR,FNCTN                              7  0823  M L23 L08          122
 975  9 45          MCW   TABMAX,MAXADD                             7  0830  M L11 L14          122
 976  9 46          MCW   @0@,SWICH1                                7  0837  M U32 U19          122
 977  9 47          MCW   AOP&X3,XR2                                 7  0844  M 0G0 094          122
 978  9 48          MCW   SERCHS,MAXSER                             7  0851  M L99 L22          122
 979  9 49   *
 980  9 50   * TABLE SEARCH
 981  9 51   *
 982  9 52   SRHLOP C     FNCTN,SYMBOL                                7  0858  C L08 M!9          123
 983  9 53          BE    RECALL                                      5  0865  B 980 S            123
 984  9 54          BCE   UNDEF,SYMHO,                               8  0870  B 961 M!4          123
 985  9 55   BUMPER A     @0100,XR2                                   7  0878  A U81 094          123
 986  9 56          S     @1@,MAXSER                                  7  0885  S U34 L22          123
 987  9 57          BM    UNDEF,MAXSER                                8  0892  V 961 L22 K        124
 988  9 58          C     XR2,MAXADD                                  7  0900  C 094 L14          124
 989  9 59          BU    SRHLOP                                      5  0907  B 858 /            124
 990  9 60          BCE   UNDEF,SWICH1,1                             8  0912  B 961 U19 1        124
 991  9 61          MCW   @1@,SWICH1                                 7  0920  M U34 U19          124
 992  9 62          MCW   AOP&X3,MAXADD                             7  0927  M 0G0 L14          125
 993  9 63          S     XR2&001                                     4  0934  S 095              125
 994  9 64          B     SRHLOP                                      4  0938  B 858              125
 995  9 65   *
 996  9 66   * BLANK OPERAND
 997  9 67   *
 998  9 68   SETZRO S     HOLDAR                                      4  0942  S U58              125
 999  9 69          B     CHRADJ                                      4  0946  B '49              125
1000  9 70   *
1001  9 71   * PERCENT OPERAND
1002  9 72   *
1003  9 73   PERCNT MCW   AOPER-003&X1,AOP&X3                         7  0950  M 0/9 0G0          125
1004  9 74          B     MARK                                        4  0957  B /68              125
1005  9 75   *
1006  9 76   * UNDEFINED OPERAND
1007  9 77   *
1008  9 78   UNDEF  BCE   OPRTN,ITERSW,0                              8  0961  B /75 U28 0        126
1009  9 79          MCW   @###@,AOP&X3                               7  0969  M U84 0G0          126
1010  9 80          B     OPRTN                                       4  0976  B /75              126
1011  9 81   *
1012  9 82   * RETRIEVE VALUE FROM TABLE
1013  9 83   *
1014  9 84   RECALL BCE   UNDEF,ADDHO,                               8  0980  B 961 M!0          126
1015  9 85          BWZ   *&5,LBLREF,2                               8  0988  V '00 M!1 2        126
1016  9 86          B     *&8                                         4  0996  B '07              126
1017  9 87          MZ    ABIT,LBLREF                                 7  1000  Y 111 M!1          127
1018  9 88          MCW   ADDLO,HOLDAR                               7  1007  M M!3 U58          127
1019  9 89          MCW   @0@                                        4  1014  M U32              127
1020  9 90          BCE   IOADD,HOLDAR-003,%                         8  1018  B /79 U55 %        127
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 SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1021  9 91          BWZ   *&008,HOLDAR-003,2                          8  1026  V '41 U55 2        127
1022  9 92          MCW   @1@,HOLDAR-4                                7  1034  M U34 U54          128
1023  9 93          BCE   TSTCNV,TYPEA,6                             8  1041  B '78 U33 6        128
1024  9 94  *
1025  9 95  * ADD CHARACTER ADJUSTMENT
1026  9 96  *
1027  9 97  CHRADJ MZ    HOLDAR-001,HOLDZN#001                       7  1049  Y U57 U85          128
1028  9 98          BCE   TSTCNV,AOPADJ-002&X1,X                     8  1056  B '78 0S4 X        128
1029  9 99          A     AOPADJ&X1,HOLDAR                          7  1064  A 0S6 U58          128
1030 10 00          MZ    HOLDZN,HOLDAR-001                         7  1071  Y U85 U57          129
1031 10 01  TSTCNV BM    MARK,TYPE                                   8  1078  V /68 075 K        129
1032 10 02          BCE   MARK,TYPEA,2                              8  1086  B /68 U33 2        129
1033 10 03  *
1034 10 04  * CONVERT FIVE DIGIT ADDRESS TO THREE DIGIT ADDR
1035 10 05  *
1036 10 06  CNVTO3 BAV   *&001                                       5  1094  B '99 Z            129
1037 10 07          A     @96@,HOLDAR-003                           7  1099  A U87 U55          129
1038 10 08          BAV   CNVTO3&005                                5  1106  B '99 Z            130
1039 10 09          MZ    HOLDAR-004,HOLDAR                         7  1111  Y U54 U58          130
1040 10 10          MN    HOLDAR-003,*&004                          7  1118  D U55 /28          130
1041 10 11          MZ    ZONE2,HOLDAR-002                          7  1125  Y 109 U56          130
1042 10 12          MZ    HOLDZN,HOLDAR-001                         7  1132  Y U85 U57          130
1043 10 13          BCE   STRADD,AINDEX&X1,                         8  1139  B /61 0S7          131
1044 10 14          MN    AINDEX&X1,*&004                           7  1147  D 0S7 /57          131
1045 10 15          MZ    ZONE,HOLDAR-001                           7  1154  Y 113 U57          131
1046 10 16  STRADD MCW   HOLDAR,AOP&X3                             7  1161  M U58 0G0          131
1047 10 17  *
1048 10 18  * MARK OPERAND PROCESSING
1049 10 19  *
1050 10 20  MARK   MZ    ABBIT,STAOP&X3                            7  1168  Y 113 0?1          131
1051 10 21  OPRTN  B     XXXX                                      4  1175  B 000              132
1052 10 22  *
1053 10 23  * I/O ADDRESS IN TABLE
1054 10 24  *
1055 10 25  IOADD  MCW   HOLDAR-001,AOP&X3                          7  1179  M U57 0G0          132
1056 10 26          B     MARK                                      4  1186  B /68              132
1057 10 27  *
1058 10 28  * ASTERISK OPERAND
1059 10 29  *
1060 10 30  PROAST BCE   *&5,AOPER&X1,                              8  1190  B S02 0S2          132
1061 10 31          B     CNVSYM                                    4  1198  B 626              132
1062 10 32          BCE   OPRTN,ASTRSW,1                            8  1202  B /75 U18 1        132
1063 10 33          MCW   ASTADD,HOLDAR                            7  1210  M U39 U58          133
1064 10 34          B     CHRADJ                                    4  1217  B '49              133
1065 10 35  *
1066 10 36  * ACTUAL OPERAND - FLOAT TO 5 DIGITS
1067 10 37  *
1068 10 38  FLOAT  BCE   CNVSYM,AOPHO&X1,#                          8  1221  B 626 0/7 #        133
1069 10 39          BCE   CNVSYM,AOPHO&X1,@                         8  1229  B 626 0/7 @        133
1070 10 40          BWZ   *&005,AOPER-004&X1,2                      8  1237  V S49 0/8 2        133
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 SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1071 10 41          B     CNVSYM                                    4  1245  B 626              133
1072 10 42          ZA    AOPER-001&X1,HOLDAR                       7  1249  ? 0S1 U58          134
1073 10 43  REFLOT BCE   *&005,HOLDAR,&                            8  1256  B S68 U58 &        134
1074 10 44          B     CHRADJ                                    4  1264  B '49              134
1075 10 45          ZA    HOLDAR-001,HOLDAR                         7  1268  ? U57 U58          134
1076 10 46          B     REFLOT                                    4  1275  B S56              134
1077 10 47  *
1078 10 48  * PROCESS SUFFIX
1079 10 49  *
1080 10 50  PROSFX MCW   AOPHO,SFXCTR                               7  1279  M 017 L23          134
1081 10 51          B     PUT                                       4  1286  B Z77              135
1082 10 52  *
1083 10 53  * INITIALIZE PASS D
1084 10 54  *
1085 10 55  PASSD  SW    GRPMK2-1                                   4  1290  , U30              135
1086 10 56          RTW   DINPUT,BYPRD                              8  1294  L %U6 U29 R        135
1087 10 57          CW    GRPMK2-1                                  4  1302  ) U30              135
1088 10 58          CS    CARD&80                                   4  1306  / 080              135
1089 10 59          SW    CARD&001,CARD&006                         7  1310  , 001 006          135
1090 10 60          SW    CARD&017,CARD&024                         7  1317  , 017 024          135
1091 10 61          SW    CARD&028,CARD&035                         7  1324  , 028 035          136
1092 10 62          SW    CARD&057,CARD&062                         7  1331  , 057 062          136
1093 10 63          SW    CARD&068,CARD&071                         7  1338  , 068 071          136
1094 10 64          MCW   BUMPOP,BUMPER                            7  1345  M L27 878          136
1095 10 65          MCW   @6@,TPHALT&4                              7  1352  M U88 J15          136
1096 10 66          MCW   @6@,TPHLT2&4                              7  1359  M U88 K01          137
1097 10 67          MCW   @6@,TPHLT3&4                              7  1366  M U88 J42          137
1098 10 68          MCW   TPAD,WRITE2&006                           7  1373  M L34 X73          137
1099 10 69          MCW   TPAD,READ2&010                            7  1380  M L34 X98          137
1100 10 70          MCW   @ @,SFXCTR                               7  1387  M U89 L23          137
1101 10 71  *
1102 10 72  * TEST LAST ITERATION
1103 10 73  *
1104 10 74          BCE   LSTITR,PROCSW,0                           8  1394  B U07 L95 0        138
1105 10 75          BCE                                             1  1402  B                  138
1106 10 76          B     READ2                                     4  1403  B X88              138
1107 10 77  LSTITR MCW   @1@,ITERSW                                7  1407  M U34 U28          138
1108 10 78          B     READ2                                     4  1414  B X88              138
1109 10 79  ASTRSW DCW   0                                         1  1418                     138
1110 10 80  SWICH1 DCW   @0@                                       1  1419                     138
1111 10 81  HOLD7  DCW   @       @                                 7  1426                     139
1112 10 82  HOLD1  DCW   &0                                        1  1427                     139
1113 10 83  ITERSW DCW   @0@                                       1  1428                     139
1114 10 84  BYPRD  DCW   @ @                                       1  1429                     139
1115 10 85  GRPMK2 DC    @} @                                      2  1431                     139
1116 10 86  SSOP   EQU   1900                                        1900
1117 10 87          LTORG *                                                1432
                    DCW   @0@                                       1  1432          LIT    139
             TYPEA  DCW   #01                                       1  1433          AREA   139
                    DCW   @1@                                       1  1434          LIT    139
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 SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

             ASTADD DCW   #05                                          5  1439              AREA   140
                    DCW   @003@                                       3  1442              LIT    140
                    DCW   @011@                                       3  1445              LIT    140
                    DCW   &PUT                                        3  1448  Z77         ADCON  140
                    DCW   &16000                                      5  1453              LIT    140
             HOLDAR DCW   #05                                         5  1458              AREA   140
                    DCW   @B@                                         1  1459              LIT    140
             W6AREA DCW   #06                                         6  1465              AREA   141
                    DCW   &2                                          1  1466              LIT    141
             HOLD2  DCW   #02                                         2  1468              AREA   141
             HOLD4  DCW   #04                                         4  1472              AREA   141
                    DCW   &1                                          1  1473              LIT    141
                    DCW   @000@                                       3  1476              LIT    141
                    DCW   &96                                         2  1478              LIT    141
                    DCW   @010@                                       3  1481              LIT    142
                    DCW   @###@                                       3  1484              LIT    142
             HOLDZN DCW   #01                                         1  1485              AREA   142
                    DCW   @96@                                        2  1487              LIT    142
                    DCW   @6@                                         1  1488              LIT    142
                    DCW   @ @                                         1  1489              LIT    142
1118 10 88   *
1119 10 89   * INPUT/OUTPUT - PASS D
1120 10 90   *
1121 10 91          ORG   WRITE                                                 1767
1122 10 92   WRITE2 WT    DOUTPT,TPAREA                                8  1767  M %U5 I18 W       143
1123 10 93          NOP   XXXX                                         4  1775  N 000             143
1124 10 94          BER   TPERR                                        5  1779  B !04 L           143
1125 10 95   BRNCH2 NOP   FINALD                                      4  1784  N Y13             143
1126 10 96   READ2  S     HOLDA                                      4  1788  S L31             143
1127 10 97          RT    DINPUT,TPAREA                              8  1792  M %U6 I18 R       143
1128 10 98          B     CHKLGT                                     4  1800  B K08             143
1129 10 99          BER   TPERR                                      5  1804  B !04 L           144
1130 11 00          B     NXTRECD                                    4  1809  B Z37             144
1131 11 01   *
1132 11 02   FINALD WTM   DOUTPT                                     5  1813  U %U5 M           144
1133 11 03          RWD   DINPUT                                     5  1818  U %U6 R           144
1134 11 04          RWD   DOUTPT                                     5  1823  U %U5 R           144
1135 11 05          RTW   SYSTPE,333                                 8  1828  L %U1 333 R       144
1136 11 06          NOP   XXXX                                       4  1836  N 000             144
1137 11 07          BER   TPERR                                      5  1840  B !04 L           145
1138 11 08          CW    ENDOVL                                     4  1845  ) S45             145
1139 11 09          MCW   BUMPOP,TSTLST                              7  1849  M L27 474         145
1140 11 10          MCW   BUMPOP,NOT                                 7  1856  M L27 726         145
1141 11 11          B     TSTREF                                     4  1863  B 333             145
1142 11 12          DCW   @ @                                        1  1867                    145
1143 11 13   ENDOFD DCW   @)@                                        1  1868              GMARK 145
1144 11 14          EX    LIBRN                                            B 000             146
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 SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1145 11 15          JOB   AUTOCODER-PASS 6 PRINT SYMBOL TABLE  -VERSION 3
1146 11 16   *
1147 11 17          ORG   333                                                   0333
1148 11 18   *
1149 11 19   * END OF PASS D
1150 11 20   *
1151 11 21   * PRINT LIST OF UNREFERENCED LABELS
1152 11 22   *
1153 11 23   TSTREF CS    0332                                       4  0333  / 332             149
1154 11 24          CS                                               1  0337  /                 149
1155 11 25          S     XR3&1                                      4  0338  S 100             149
1156 11 26          S                                                1  0342  S                 149
1157 11 27          S                                                1  0343  S                 149
1158 11 28          SW    HEADSW#001                                 4  0344  , /80             149
1159 11 29   NXTLBL BCE   TSTLST,SYMHO,                             8  0348  B 474 M!4         149
1160 11 30          BCE   TSTLST,ADDHO,                              8  0356  B 474 M!0         150
1161 11 31          BCE   LOZNG,SYMHO,)                              8  0364  B 530 M!4 )       150
1162 11 32          C     SYMHO,@A@                                  7  0372  C M!4 /81         150
1163 11 33          BH    DOREF                                      5  0379  B 441 U           150
1164 11 34          C     SYMHO,@Z@                                  7  0384  C M!4 /82         150
1165 11 35          BL    DOREF                                      5  0391  B 441 T           151
1166 11 36          MN    SYMHO,XR3                                  7  0396  D M!4 099         151
1167 11 37          BWZ   SWTAB,SYMHO,B                              8  0403  V 433 M!4 B       151
1168 11 38          A     @0100,XR3                                  7  0411  A /85 099         151
1169 11 39          BM    SWTAB,SYMHO                                8  0418  V 433 M!4 K       151
1170 11 40          A     @0100,XR3                                  7  0426  A /85 099         152
1171 11 41   SWTAB  SW    SORTAB&X3                                  4  0433  , /D8             152
1172 11 42          S     XR3&2                                      4  0437  S 101             152
1173 11 43   DOREF  BWZ   *&5,LBLREF,2                               8  0441  V 453 M!1 2       152
1174 11 44          B     TSTLST                                     4  0449  B 474             152
1175 11 45          BW    NEWPGE,HEADSW                              8  0453  V 502 /80 1       152
1176 11 46   DONEXT CW    HEADSW                                     4  0461  ) /80             152
1177 11 47          B     PRINT                                      4  0465  B 538             153
1178 11 48          W                                                1  0469  2                 153
1179 11 49          CS    216                                        4  0470  / 216             153
1180 11 50   TSTLST A     @0100,XR2                                  7  0474  A /85 094         153
1181 11 51          C     XR2,TABMAX                                 7  0481  C 094 L11         153
1182 11 52          BE    DUMP                                       5  0488  B 646 S           153
1183 11 53          BCV   NEWPGE                                     5  0493  B 502 @           153
1184 11 54          B     NXTLBL                                     4  0498  B 348             154
1185 11 55   NEWPGE CC    1                                          2  0502  F 1               154
1186 11 56          MCW   @UNREFERENCED LABELS@,219                  7  0504  M S04 219         154
1187 11 57          CC    T                                          2  0511  F T               154
1188 11 58          W                                                1  0513  2                 154
1189 11 59          CS    0219                                       4  0514  / 219             154
1190 11 60          BW    DONEXT,HEADSW                              8  0518  V 461 /80 1       154
1191 11 61          B     NXTLBL                                     4  0526  B 348             155
1192 11 62   LOZNG  SW    LIST-1                                     4  0530  , /78             155
1193 11 63          B     DOREF                                      4  0534  B 441             155
1194 11 64   *
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 SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1195 11 65   * PRINT SUBROUTINE FOR UNREFERENCED LABELS & SYMBOL TABBLE
1196 11 66   *
1197 11 67   PRINT   SBR   PRTXT&3                                      4  0538  H 634             155
1198 11 68           MCW   SYMBOL,206&X1                               7  0542  M M!9 2'6         155
1199 11 69           BCE   DOIO,ADDHO,%                                8  0549  B 635 M!0 %       155
1200 11 70           MN    ADDLO,212&X1                                7  0557  D M!3 2/2         155
1201 11 71           MN                                                1  0564  D                 156
1202 11 72           MN                                                1  0565  D                 156
1203 11 73           MN                                                1  0566  D                 156
1204 11 74           BWZ   *&8,ADDHO,2                                 8  0567  V 582 M!0 2       156
1205 11 75           MCW   @1@,208&X1                                  7  0575  M S05 2'8         156
1206 11 76           BWZ   PRTXT,ADDLO-1,2                            8  0582  V 631 M!2 2       156
1207 11 77           MN    @1@,215&X1                                  7  0590  D S05 2/5         156
1208 11 78           MCW   @&X@                                        4  0597  M S07             157
1209 11 79           BWZ   PRTXT,ADDLO-1,S                            8  0601  V 631 M!2 S       157
1210 11 80           MN    @2@,215&X1                                  7  0609  D S08 2/5         157
1211 11 81           BWZ   PRTXT,ADDLO-1,K                            8  0616  V 631 M!2 K       157
1212 11 82           MN    @3@,215&X1                                  7  0624  D S09 2/5         157
1213 11 83   PRTXT   B     XXXX                                        4  0631  B 000             157
1214 11 84   DOIO    MCW   ADDLO,212&X1                                7  0635  M M!3 2/2         158
1215 11 85           B     PRTXT                                       4  0642  B 631             158
1216 11 86   *
1217 11 87   * PRINT SYMBOL TABLE
1218 11 88   *
1219 11 89   DUMP    B     NXTPGE                                      4  0646  B 859             158
1220 11 90           S     XR3&1                                       4  0650  S 100             158
1221 11 91           S                                                 1  0654  S                 158
1222 11 92           S                                                 1  0655  S                 158
1223 11 93   NXTCTR  SW    ENDSW#1                                     4  0656  , S10             158
1224 11 94           BW    SCAN,SORTAB&1&X3                            8  0660  V 687 /D9 1       159
1225 11 95   BMPXR3  BCE   TSTEOJ,SORTAB&1&X3,@                       8  0668  B 888 /D9 @       159
1226 11 96           A     &1,XR3                                      7  0676  A S11 099         159
1227 11 97           B     NXTCTR                                      4  0683  B 656             159
1228 11 98   SCAN    BCE   BMPXR3,SORTAB&1&X3,!                       8  0687  B 668 /D9 !       159
1229 11 99           BCE   BMPXR3,SORTAB&1&X3,'                       8  0695  B 668 /D9 '       160
1230 12 00           BCE   BMPXR3,SORTAB&1&X3,/                       8  0703  B 668 /D9 /       160
1231 12 01           MCW   SORTAB&1&X3,TSTLBL&7                       7  0711  M /D9 725         160
1232 12 02   TSTLBL  BCE   DOPNT,SYMHO,X                              8  0718  B 777 M!4 X       160
1233 12 03   NOT     A     @010@,XR2                                   7  0726  A /85 094         160
1234 12 04           C     XR2,TABMAX                                  7  0733  C 094 L11         161
1235 12 05           BU    TSTLBL                                      5  0740  B 718 /           161
1236 12 06           S     XR2&1                                       4  0745  S 095             161
1237 12 07           S                                                 1  0749  S                 161
1238 12 08           A     &1,XR3                                      7  0750  A S11 099         161
1239 12 09           CW    ENDSW                                       4  0757  ) S10             161
1240 12 10           BW    PNTSYM,PNTSW                                8  0761  V 812 S18 1       161
1241 12 11           SW    PNTSW                                       4  0769  , S18             162
1242 12 12           B     TSTESW                                      4  0773  B 847             162
1243 12 13   DOPNT   BCE   NOT,ADDHO,                                 8  0777  B 726 M!0         162
1244 12 14           B     PRINT                                       4  0785  B 538             162
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 SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1245 12 15           SW    PNTSW                                       4  0789  , S18             162
1246 12 16           A     @016@,XR1                                   7  0793  A S14 089         162
1247 12 17           C     XR1,@128@                                   7  0800  C 089 S17         162
1248 12 18           BU    NOT                                         5  0807  B 726 /           163
1249 12 19   PNTSYM  W                                                 1  0812  2                 163
1250 12 20           CW    PNTSW#1                                     4  0813  ) S18             163
1251 12 21           CS    332                                         4  0817  / 332             163
1252 12 22           CS                                                1  0821  /                 163
1253 12 23           S     XR1&1                                       4  0822  S 090             163
1254 12 24           BW    *&9,ENDSW                                   8  0826  V 842 S10 1       163
1255 12 25           BCE   TSTEOJ,SORTAB&1&X3,@                       8  0834  B 888 /D9 @       164
1256 12 26           BCV   NXTPGE                                      5  0842  B 859 @           164
1257 12 27   TSTESW  BW    NOT,ENDSW                                   8  0847  V 726 S10 1       164
1258 12 28           B     NXTCTR                                      4  0855  B 656             164
1259 12 29   NXTPGE  SBR   PGXT&3                                      4  0859  H 887             164
1260 12 30           CS    332                                         4  0863  / 332             164
1261 12 31           CS                                                1  0867  /                 164
1262 12 32           CC    1                                           2  0868  F 1               165
1263 12 33           MCW   @SYMBOL TABLE@,212                         7  0870  M S30 212         165
1264 12 34           W                                                 1  0877  2                 165
1265 12 35           CC    K                                           2  0878  F K               165
1266 12 36           CS    212                                         4  0880  / 212             165
1267 12 37   PGXT    B     XXXX                                        4  0884  B 000             165
1268 12 38   TSTEOJ  BW    *&3,HEADSW                                  8  0888  V 898 /80 1       165
1269 12 39           CC    1                                           2  0896  F 1               166
1270 12 391          CS    332                                         4  0898  / 332             166
1271 12 392          CHAIN 3                                                                 MACRO
1272                 CS                                                1  0902  /           GEN   166
1273                 CS                                                1  0903  /           GEN   166
1274                 CS                                                1  0904  /           GEN   166
1275 12 40           BCE   EOJOB,ITERSW,1                              8  0905  B 997 U28 1       166
1276 12 41   *
1277 12 42   * GET PASS C
1278 12 43   *
1279 12 44           BSP   SYSTPE                                      5  0913  U %U1 B           166
1280 12 45           BSP   SYSTPE                                      5  0918  U %U1 B           167
1281 12 46           MCW   @5@,TPHALT&4                               7  0923  M S31 J15         167
1282 12 47           MCW   @5@,TPHLT2&4                               7  0930  M S31 K01         167
1283 12 48           MCW   @5@,TPHLT3&4                               7  0937  M S31 J42         167
1284 12 49           MCW   @00@,PROCSW                               7  0944  M S33 L95         167
1285 12 50           MCW   @ @,SFXCTR                                 7  0951  M S34 L23         168
1286 12 51   *
1287 12 52   * SET NUMBER OF SEEKS FOR TABLE SEARCH
1288 12 53   *
1289 12 54           C     TOTLAB,TABLSZ                               7  0958  C L93 L18         168
1290 12 55           MCW   TABLSZ,SERCHS                               7  0965  M L18 L99         168
1291 12 56           S     TOTLAB                                      4  0972  S L93             168
1292 12 57           BE    RDPSSC                                      5  0976  B K72 S           168
1293 12 58           BH    RDPSSC                                      5  0981  B K72 U           168
1294 12 59           MCW   &0009,SERCHS                                7  0986  M S38 L99         169
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| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1295 | 12 | 60 | | B | RDPSSC | | 4 | 0993 | B K72 | | 169 |
| 1296 | 12 | 61 | * | | | | | | | | |
| 1297 | 12 | 62 | * LAST ITERATION, GET PASS C | | | | | | | | |
| 1298 | 12 | 63 | * | | | | | | | | |
| 1299 | 12 | 64 | EOJOB | CW | GRPMK2-1 | | 4 | 0997 | ) U30 | | 169 |
| 1300 | 12 | 65 | | CS | 3999 | | 4 | 1001 | / I99 | | 169 |
| 1301 | 12 | 66 | | BCE | READE,MACHSZ,3 | | 8 | 1005 | B '44 L89 3 | | 169 |
| 1302 | 12 | 67 | | CS | 4799 | | 4 | 1013 | / 79Z | | 169 |
| 1303 | 12 | 68 | | CHAIN | 7 | | | | | MACRO | |
| 1304 | | | | CS | | | 1 | 1017 | / | GEN | 169 |
| 1305 | | | | CS | | | 1 | 1018 | / | GEN | 170 |
| 1306 | | | | CS | | | 1 | 1019 | / | GEN | 170 |
| 1307 | | | | CS | | | 1 | 1020 | / | GEN | 170 |
| 1308 | | | | CS | | | 1 | 1021 | / | GEN | 170 |
| 1309 | | | | CS | | | 1 | 1022 | / | GEN | 170 |
| 1310 | | | | CS | | | 1 | 1023 | / | GEN | 170 |
| 1311 | 12 | 681 | CLR | CS | 3999 | | 4 | 1024 | / I99 | | 170 |
| 1312 | 12 | 682 | | SBR | CLR&3 | | 4 | 1028 | H '27 | | 171 |
| 1313 | 12 | 683 | | C | CLR&3,&SSOP-1 | | 7 | 1032 | C '27 S41 | | 171 |
| 1314 | 12 | 684 | | BU | CLR | | 5 | 1039 | B '24 / | | 171 |
| 1315 | 12 | 69 | READE | RTW | SYSTPE,SSOP | | 8 | 1044 | L %U1 Z00 R | | 171 |
| 1316 | 12 | 70 | | BER | SYSERR | | 5 | 1052 | B '68 L | | 171 |
| 1317 | 12 | 71 | GOTOE | MCW | @N@,SSOP | | 7 | 1057 | M S42 Z00 | | 171 |
| 1318 | 12 | 72 | | B | SSOP&1 | | 4 | 1064 | B Z01 | | 172 |
| 1319 | 12 | 73 | SYSERR | MCW | &9,RDCT#1 | | 7 | 1068 | M S43 S44 | | 172 |
| 1320 | 12 | 74 | | BSP | SYSTPE | | 5 | 1075 | U %U1 B | | 172 |
| 1321 | 12 | 75 | RETRY | RTW | SYSTPE,SSOP | | 8 | 1080 | L %U1 Z00 R | | 172 |
| 1322 | 12 | 76 | | BER | AGAIN | | 5 | 1088 | B '97 L | | 172 |
| 1323 | 12 | 77 | | B | GOTOE | | 4 | 1093 | B '57 | | 172 |
| 1324 | 12 | 78 | AGAIN | BSP | SYSTPE | | 5 | 1097 | U %U1 B | | 172 |
| 1325 | 12 | 79 | | S | @1@,RDCT | | 7 | 1102 | S S05 S44 | | 173 |
| 1326 | 12 | 80 | | BWZ | RETRY,RDCT,B | | 8 | 1109 | V '80 S44 B | | 173 |
| 1327 | 12 | 81 | | H | XXXX,691 | | 7 | 1117 | . 000 691 | | 173 |
| 1328 | 12 | 82 | | RTW | SYSTPE,SSOP | | 8 | 1124 | L %U1 Z00 R | | 173 |
| 1329 | 12 | 83 | | BSS | SYSERR,E | | 5 | 1132 | B '68 E | | 173 |
| 1330 | 12 | 84 | | H | XXXX,612 | | 7 | 1137 | . 000 612 | | 174 |
| 1331 | 12 | 85 | | B | GOTOE | | 4 | 1144 | B '57 | | 174 |
| 1332 | 12 | 86 | LIST | DCW | @ ABCDEFGHI!JKLMNOPQR'/STUVWXYZ)@@ | | 32 | 1179 | | | 175 |
| 1333 | 12 | 87 | SORTAB | EQU | LIST-31 | | | 1148 | | | |
| 1334 | 12 | 88 | | LTORG | * | | | | 1180 | | |
| | | | HEADSW | DCW | #01 | | 1 | 1180 | | AREA | 175 |
| | | | | DCW | @A@ | | 1 | 1181 | | LIT | 175 |
| | | | | DCW | @Z@ | | 1 | 1182 | | LIT | 175 |
| | | | | DCW | @010@ | | 3 | 1185 | | LIT | 175 |
| | | | | DCW | @UNREFERENCED LABELS@ | | 19 | 1204 | | LIT | 176 |
| | | | | DCW | @1@ | | 1 | 1205 | | LIT | 176 |
| | | | | DCW | @&X@ | | 2 | 1207 | | LIT | 176 |
| | | | | DCW | @2@ | | 1 | 1208 | | LIT | 176 |
| | | | | DCW | @3@ | | 1 | 1209 | | LIT | 176 |
| | | | ENDSW | DCW | #01 | | 1 | 1210 | | AREA | 176 |



| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | DCW | &1 | | 1 | 1211 | | LIT | 176 |
| | | | | DCW | @016@ | | 3 | 1214 | | LIT | 177 |
| | | | | DCW | @128@ | | 3 | 1217 | | LIT | 177 |
| | | | PNTSW | DCW | #01 | | 1 | 1218 | | AREA | 177 |
| | | | | DCW | @SYMBOL TABLE@ | | 12 | 1230 | | LIT | 177 |
| | | | | DCW | @5@ | | 1 | 1231 | | LIT | 177 |
| | | | | DCW | @00@ | | 2 | 1233 | | LIT | 177 |
| | | | | DCW | @ @ | | 1 | 1234 | | LIT | 177 |
| | | | | DCW | &0009 | | 4 | 1238 | | LIT | 178 |
| | | | | DCW | &SSOP-1 | | 3 | 1241 | Y99 | ADCON | 178 |
| | | | | DCW | @N@ | | 1 | 1242 | | LIT | 178 |
| | | | | DCW | &9 | | 1 | 1243 | | LIT | 178 |
| | | | RDCT | DCW | #01 | | 1 | 1244 | | AREA | 178 |
| 1335 | 12 | 89 | ENDOVL | DCW | @}@ | | 1 | 1245 | | GMARK | 178 |
| 1336 | 12 | 90 | | EX | LIBRN | | | | B 000 | | 179 |
| 1337 | 12 | 91 | | END | LIBRN | | | | / 000 080 | | |

| SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABBIT | 113 | ABIT | 111 | ACTSW | 1867 | ACTUAL | 761 | ADDBNK | 1503 | ADDHO | 2400+X2 | ADDLO | 2403+X2 |
| ADDRSW | 1859 | ADDRTN | 1086 | AGAIN | 1097 | AINDEX | 27 | ANAL | 114 | AOP | 70 | AOPADJ | 26 |
| AOPER | 22 | AOPHO | 17 | AOPOR | 536 | AOPOUT | 669 | AOPROC | 1618 | AOPRTN | 1484 | ARGUMT | 1908 |
| ASTADD | 1439 | ASTRSK | 708 | ASTRSW | 1418 | BBIT | 112 | BLKAOP | 735 | BLKCT | 2330 | BLKG12 | 2852 |
| BLKG8K | 2836 | BMPXR3 | 668 | BRANCH | 1784 | BRNCH2 | 1784 | BRSRH | 1464 | BSP1 | 2040 | BSP2 | 2084 |
| BTOADD | 887 | BTOLAB | 474 | BTOLBL | 1157 | BUMP | 1681 | BUMPER | 878 | BUMPOP | 2327 | BYPRD | 1429 |
| CARD | 0 | CHKLGT | 2208 | CHRADJ | 1049 | CINPUT | %U5 | CLEAR | 1820 | CLR | 1024 | CLRMAX | 2299 |
| CLRMIN | 2302 | CLRTAB | 1813 | CMP16K | 409 | CNVLAB | 56 | CNVSYM | 626 | CNVTO3 | 1094 | COMPRS | 390 |
| CONST | 260 | COUNT | 7 | COUTPT | %U6 | DA | 871 | DASW | 1868 | DBLDEF | 1298 | DBLSW | 1864 |
| DINPUT | %U6 | DOINDX | 1417 | DOIO | 635 | DOLABL | 1358 | DOLABR | 1431 | DONEXT | 461 | DOPNT | 777 |
| DOREF | 441 | DOUTPT | %U5 | DS | 295 | DSAPUT | 1872 | DUMP | 646 | ENDINT | 2901 | ENDOFC | 1924 |
| ENDOFD | 1868 | ENDOPN | 478 | ENDOVL | 1245 | ENDSW | 1210 | EOJOB | 997 | EXEND | 973 | FACTOR | 2388 |
| FINAL | 1873 | FINALD | 1813 | FLOAT | 1221 | FNCTN | 2308 | GET | 1925 | GOTOE | 1057 | GPMRK3 | 3998 |
| GRPMK2 | 1431 | GRPMRK | 2866 | HEADSW | 1180 | HGHCTR | 1858 | HOADD | 57 | HOLD1 | 1427 | HOLD2 | 1468 |
| HOLD4 | 1472 | HOLD7 | 1426 | HOLDA | 2331 | HOLDAD | 1912 | HOLDAR | 1458 | HOLDZN | 1485 | INDFTR | 1869 |
| INITAP | %U0 | INPUT | 3917+X3 | INST2 | 2169 | INSTR | 219 | IOADD | 1179 | ITERSW | 1428 | KBLKNG | 2326 |
| KEEP1 | 2877 | LABADD | 61 | LABEL | 13 | LABRTN | 1294 | LBLHO | 8 | LBLREF | 2401+X2 | LGTCK | 2223 |
| LGTXT | 2243 | LIBRN | 0 | LIMAD | 2894 | LIMIT | 3931 | LIST | 1179 | LITRAL | 1325 | LITRSW | 1861 |
| LITTST | 1090 | LOADDR | 215 | LOOP1 | 767 | LOZNG | 530 | LSTITR | 1407 | MACHSZ | 2389 | MARK | 1168 |
| MAXADD | 2314 | MAXSER | 2322 | MAXSW | 1860 | MDTP | 2882 | MDTP12 | 2865 | MDTP8K | 2849 | MOVEIN | 1951 |
| MPYLP | 706 | MRKPRC | 1280 | MULT | 714 | NEWPGE | 502 | NOBIT | 110 | NOT | 726 | NOWCTR | 1848 |
| NXTCNT | 655 | NXTCTR | 656 | NXTDGT | 740 | NXTLBL | 348 | NXTPGE | 859 | NXTREC | 1937 | OPRTN | 1175 |
| ORG | 376 | ORGADD | 32 | ORGCTR | 1853 | ORGEQU | 489 | ORGOUT | 574 | ORGSAV | 432 | ORGSW | 1866 |
| ORIGDA | 926 | PASSD | 1290 | PERCNT | 950 | PGXT | 884 | PNTSW | 1218 | PNTSYM | 812 | PRCADD | 1003 |
| PRCAST | 283 | PRDSA | 318 | PRINST | 196 | PRINT | 538 | PROAST | 1190 | PROCLB | 1109 | PROCOP | 578 |
| PROCSW | 2395 | PROCTU | 361 | PROEND | 446 | PROSFX | 1279 | PRTXT | 631 | PUT | 1977 | RDCT | 1244 |
| RDPSSC | 2272 | RDPSSD | 2247 | RDRERR | 2077 | READ | 1788 | READ2 | 1788 | READCT | 2338 | READE | 1044 |
| RECALL | 980 | REDXT | 2073 | REFLOT | 1256 | RETRY | 1080 | RETURN | 1763 | RSTSWA | 616 | SAVETP | %U4 |
| SAVEZN | 1920 | SCAN | 687 | SCNTB | 806 | SEARCH | 1629 | SEEBOP | 268 | SERCHS | 2399 | SET8K | 2620 |
| SETAOP | 1435 | SETAST | 208 | SETBMP | 2718 | SETDBL | 1745 | SETDSA | 337 | SETFUN | 1376 | SETHGH | 405 |
| SETIO | 2493 | SETORG | 609 | SETSPC | 1756 | SETSWL | 1250 | SETSWS | 598 | SETSYM | 804 | SETTP | 2662 |
| SETZRO | 942 | SFX | 992 | SFXCTR | 2323 | SORTAB | 1148 | SPCSW | 1863 | SRHLOP | 858 | SSOP | 1900 |
| STADDR | 3 | STAOP | 1 | STBOP | 4 | STLABL | 2 | STORE | 1269 | STRADD | 1161 | STRBNK | 1488 |
| STRSAV | 502 | SUBCTR | 2186 | SUPADD | 66 | SWICH1 | 1419 | SWTAB | 433 | SYMBOL | 2409+X2 | SYMHO | 2404+X2 |
| SYSERR | 1068 | SYSTPE | %U1 | TABLE | 2409 | TABLSZ | 2318 | TABMAX | 2311 | TBLM12 | 2859 | TBLM8K | 2843 |
| TBLSRH | 1661 | TBSZ12 | 2856 | TBSZ8K | 2840 | TOTLAB | 2393 | TPAD | 2334 | TPAD12 | 2862 | TPAD8K | 2846 |
| TPAREA | 3918 | TPERR | 2004 | TPHALT | 2111 | TPHLT2 | 2197 | TPHLT3 | 2138 | TPINST | 2060 | TSTADD | 1022 |
| TSTCNV | 1078 | TSTDBL | 1207 | TSTEOJ | 888 | TSTESW | 847 | TSTLBL | 718 | TSTLST | 474 | TSTPRC | 434 |
| TSTREF | 333 | TSTRPT | 910 | TSTX00 | 821 | TYPE | 75 | TYPEA | 1433 | UNDEF | 961 | UNPROC | 1181 |
| UNPRSW | 2394 | W6AREA | 1465 | WRAPSW | 1862 | WRITE | 1767 | WRITE2 | 1767 | WRTCTR | 2341 | WRTRED | 2149 |
| XR1 | 89 | XR2 | 94 | XR3 | 99 | XXXX | 0 | ZONE | 113 | ZONE2 | 109 | | |