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

101                JOB   FORTRAN COMPILER -- RESORT 3 PHASE -- PHASE 49
102                CTL   6611
103         *
104         * THE SOURCE PROGRAM IS RESORTED BACK TO ITS ORIGINAL ORDER.
105         * THE STATEMENT NUMBER TABLE IS FILLED WITH THE CURRENT LOCATION
106         * OF EACH STATEMENT.
107         *
108         * ON ENTRY X3 IS AT THE BOTTOM ENTRY IN  THE SORT TABLE AND
109         * X2 IS ONE ABOVE THE COLON THAT MARKS THE TOP OF THE SORT TABLE.
110         *
111         X1     EQU   89                                                      0089
112         X2     EQU   94                                                      0094
113         X3     EQU   99                                                      0099
114         *
115         * STUFF IN THE RESIDENT AREA
116         *
117         SEQTAB EQU   148  BOTTOM OF SEQUENCE NUMBER TABLE - 2               0148
118         TOPCOR EQU   688  TOP CORE ADDRESS FROM PARAM CARD                  0688
119         *
120                EXT00   SNAPSH, LOADNX, CDOVLY                                                MACRO
121         SNAPSH EQU   333                                                     0333             GEN
122         PHASLD EQU   381                                                     0381             GEN
123         SNAPEX EQU   564                                                     0564             GEN
124         LOADNX EQU   700   CARD OVERLAY UNLESS NOP                         0700             GEN
125         CDOVLY EQU   700   1 IF LOADING FROM CARDS, N IF FROM TAPE         0700             GEN
126         TPREAD EQU   704   LOAD OVERLAY FROM TAPE                          0704             GEN
127         TPERR  EQU   728                                                     0728             GEN
128         *
129                SFX   <
130                EXT47                                                                          MACRO
131         TOPA   EQU   841   TABBOT PLUS 3 X NUMBER OF STATEMENTS          <  0841             GEN
132         SX3A   EQU   844   USED ONLY IN PHASE 48 AND 49                  <  0844             GEN
133         TABBOT EQU   847   BOTTOM OF RESORT TABLE                        <  0847             GEN
134         NEXT   EQU   850   USED ONLY IN PHASE 49                         <  0850             GEN
135         SX2    EQU   853   USED ONLY IN PHASE 48 AND 49                  <  0853             GEN
136         SX3B   EQU   856                                                 <  0856             GEN
137         W3     EQU   859   USED ONLY IN PHASE 48 AND 49                  <  0859             GEN
138         TOPC   EQU   862   TABBOT PLUS 3 X NUMBER OF STATEMENTS PLUS 1  <  0862             GEN
139         SEQNO  EQU   865   USED ONLY IN PHASE 48 AND 49                  <  0865             GEN
140         TOPC5  EQU   870   TOPC AS FIVE DIGITS                           <  0870             GEN
141         TIMES6 EQU   875   DOCNT TIMES 6                                <  0875             GEN
142         W5     EQU   880   USED ONLY IN PHASE 49                         <  0880             GEN
143         TOPB   EQU   883   TABBOT PLUS 3 X NUMBER OF STATEMENTS PLUS 1  <  0883             GEN
144         FLAG   EQU   884   USED ONLY IN PHASE 48 AND 49                  <  0884             GEN
145         ADR5B  EQU   891                                                 <  0891             GEN
146         ADR5   EQU   896                                                 <  0896             GEN
147         CONV53 EQU   929                                                 <  0929             GEN
148         CONV35 EQU   969                                                 <  0969             GEN
149         FINDGM EQU   1052                                                <  1052             GEN
150         TOOBIG EQU   1092                                                <  1092             GEN
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SEQ PG LIN  LABEL   OP    OPERANDS                                                SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

151         BEGN47  EQU   1175                                                     <      1175              GEN
152         * COPE WITH SUFFIX PROBLEMS -- SFX GOES IN SIXTH CHARACTER BUT A
153         * LABEL CANNOT CONTAIN MORE THAN ONE BLANK
154         SX2...  EQU   SX2                                                      <      0853
155         W3....  EQU   W3                                                       <      0859
156         W5....  EQU   W5                                                       <      0880
157                 SFX
158         SX1     EQU   SX3A <  SX3A IN PREVIOUS PHASE                                 0844
159         SX3A    EQU   SX2...  SX2 IN PREVIOUS PHASE                                 0853
160         SX3     EQU   SX3B <  SX3B IN PREVIOUS PHASE                                0856
161         W3      EQU   W3....                                                        0859
162         W5      EQU   W5....                                                        0880
163         *
164         SORTAB  EQU   TABEL  SORT TABLE                                             2499
165         *
166         PHAS49  LDPH  RESORT TRI,LOADAD,BEGN49,,,49                                       MACRO
            * PHAZ   LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]                 GEN
            *       XFR  PHASZ     PROHIBITED IN A MACRO                                     GEN
            *                                                                               GEN
            * LOAD A BLOCK                                                                  GEN
            *                                                                               GEN
167         )6J003  EQU   110  PHASE ID                                                 0110              GEN
168         )6K003  EQU   700  LOAD NEXT PHASE                                          0700              GEN
169         )6L003  EQU   704  TAPE READ INSTRUCTION                                    0704              GEN
170         )6M003  EQU   728  TAPE ERROR HANDLER                                       0728              GEN
            *                                                                               GEN
171                 ORG   201                                                                 0201
172         PHAS49  EQU   *&1                                                           0201              GEN
173                 LCA   )9J003,)6J003                                              7  0201  L 253 110   GEN      1   253     110
174                 BCE   )6K003,)6K003,1      Q: LOADING FROM CARDS?                8  0208  B 700 700 1 GEN      1   700     700
175                 BCE   )6K003,)6L003&4,0    Q: LOADING FROM AUTOCODER TAPE?       8  0216  B 700 708 0 GEN      1   700     708
176                 RTW   1,LOADAD             READ THE BLOCK                        8  0224  L %U1 /75 R GEN      1   %U1    1175
177                 BER   )6M003               Q: TAPE ERROR?                        5  0232  B 728 L     GEN      1   728
178                 CS    BEGN49,)9R003        ENTER THE BLOCK                       7  0237  / /75 257   GEN      2  1175     257
179         )9J003  DCW   @RESORT TRI@          PHASE ID                             10  0253              GEN      2
180                 DC    #1                                                        1  0254              GEN      2
181                 DC    @49@          PHASE NUMBER                                2  0256              GEN      2
182         )9R003  DCW   @}@                                                       1  0257              GEN      2
183                 XFR   PHAS49                                                           B 201                3   201
184         *
185                 ORG   BEGN47                                                            1175
186         LOADAD  EQU   *&1                                                           1175
187   1 175 BEGN49  SW    GM                                                        4  1175  , M57               4  2457
188                 CS    299  LOADING FROM CARDS OR AUTOCODER DOESN'T CLEAR       4  1179  / 299               4   299
189   1 446         LCA   K000,208  MOVED HERE FROM PHASE 47                      7  1183  L M37 208           4  2437     208
190   1 179         B     *&8                                                       4  1190  B S01               4  1201
191   1 183 LOOP    SBR   X3,0-0                                                   7  1194  H 099 000           4   099     000
192   1 190         SBR   NEXT <                                                   4  1201  H 850               4   850
193   1 194 MIDDLE  BCE   EMPTY,0&X3,                                             8  1205  B Z27 0?0           4  1927     000+3
194   1 202         SBR   LOOP&6,3&X3                                             7  1213  H S00 0?3           5  1200     003+3
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SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

195  1 209          MN    0&X3                                                 4  1220  D 0?0               5   000+3
196  1 213          SAR   *&7                                                  4  1224  Q S34               5  1234
197  1 217          BWZ   INDIR,0-0,S                                         8  1228  V Y23 000 S         5  1823     000
198  1 225          MCW   0&X3,X1                                             7  1236  M 0?0 089           5   000+3   089
199  1 232  INDIRB  SBR   TOPC <,0&X3                                         7  1243  H 862 0?0           5   862     000+3
200  1 239  INNER   MCW   X1,SX1A                                             7  1250  M 089 M44           6   089    2444
201  1 246          MCW   X1,X3                                              7  1257  M 089 099           6   089     099
202  1 253          B     FINDGM  GET ADDRESS & 1 OF GM ABOVE STATEMENT        4  1264  B |52               6  1052
203  1 257          MCW   X3,ADR5 <                                          7  1268  M 099 896           6   099     896
204  1 264          B     CONV35                                             4  1275  B 969               6   969
205  1 268          MCW   ADR5B<,W5    ADDRESS &1 OF GM ABOVE STATEMENT      7  1279  M 891 880           6   891     880
206  1 275          A     K1,W5                                              7  1286  A M45 880           7  2445     880
207  1 282          MCW   SX1A,ADR5 <  ADDRESS OF STATEMENT                  7  1293  M M44 896           7  2444     896
208  1 289          B     CONV35                                             4  1300  B 969               7   969
209  1 293          MCW   ADR5B<,W5B                                         7  1304  M 891 M39           7   891    2439
210  1 300          S     W5B,W5     LENGTH OF STATEMENT                     7  1311  S M39 880           7  2439     880
211  1 307          MCW   X2,ADR5 <                                          7  1318  M 094 896           7   094     896
212  1 314          B     CONV35                                             4  1325  B 969               8   969
213  1 318          MCW   ADR5B<,TOPC5<  TOP OF TABLE & 2                    7  1329  M 891 870           8   891     870
214  1 325          B     TEST                                               4  1336  B Y87               8  1887
215  1 329          BL    MOVED1                                             5  1340  B Z68 T             8  1968
216  1 334  NEWSTM  MCW   SX1A,X1                                            7  1345  M M44 089           8  2444     089
217  1 341          BCE   *&12,F1,1                                          8  1352  B T71 M40 1         8  1371    2440
218  1 349          A     K1,208                                             7  1360  A M45 208           9  2445     208
219  1 356          B     REPORT                                             4  1367  B V38               9  1538
220             *
221  1 360          MCW   K0,F1                                             7  1371  M M46 M40           9  2446    2440
222  1 367          MCW   X3,SX3B&6                                          7  1378  M 099 V37           9   099    1537
223  1 374          MCW   3&X1,X3                                           7  1385  M 0|3 099           9   003+1   099
224  1 381          MCW   0&X3,X3                                           7  1392  M 0?0 099           9   000+3   099
225  1 388          SBR   3&X1,4&X3                                         7  1399  H 0|3 0?4          10   003+1   004+3
226  1 395          MA    W3,3&X1                                            7  1406  # 859 0|3          10   859     003+1
227  1 402          MCW   X1,SX1B                                           7  1413  M 089 M49          10   089    2449
228  1 409  DEZONE  MZ    *-4,9&X3                                           7  1420  Y U22 0?9          10  1422     009+3
229  1 416          MZ    *-4,12&X3                                          7  1427  Y U29 0A2          10  1429     012+3
230  1 423          MZ    *-4,15&X3                                          7  1434  Y U36 0A5          11  1436     015+3
231  1 430          MZ    *-4,18&X3                                          7  1441  Y U43 0A8          11  1443     018+3
232  1 437          BCE   DEZONX,22&X3,                                      8  1448  B U95 0B2          11  1495     022+3
233  1 445          MCW   22&X3,X1                                           7  1456  M 0B2 089          11   022+3   089
234  1 452          MCW   0&X1,22&X3                                         7  1463  M 0|0 0B2          11   000+1   022+3
235  1 459          MA    K004,22&X3                                         7  1470  # M52 0B2          12  2452     022+3
236  1 466          MA    W3,22&X3                                           7  1477  # 859 0B2          12   859     022+3
237  1 473          MCW   0&X1,X3                                           7  1484  M 0|0 099          12   000+1   099
238  1 480          B     DEZONE                                             4  1491  B U20              12  1420
239  1 484  DEZONX  SBR   22&X3,4&X2                                         7  1495  H 0B2 0!4          12   022+3   004+2
240  1 491          MA    W3,22&X3                                           7  1502  # 859 0B2          12   859     022+3
241  1 498          MCW   SX1B,X1                                           7  1509  M M49 089          13  2449     089
242  1 505          BCE   *&8,0&X1,B                                         8  1516  B V31 0|0 B        13  1531     000+1
243  1 513          SBR   3&X1,918  ???                                      7  1524  H 0|3 918          13   003+1   918
244  1 520  SX3B    SBR   X3,0-0                                            7  1531  H 099 000          13   099     000
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

245  1 527  REPORT MCW   W3,227                                              7  1538  M 859 227           13   859     227
246  1 534         MA    X2,227                                             7  1545  # 094 227           14   094     227
247  1 541         MCW   227,X3                                             7  1552  M 227 099           14   227     099
248  1 548         MCW   X3,ADR5 <                                         7  1559  M 099 896           14   099     896
249  1 555         B     CONV35  CONVERT ADR5 < TO ADR5B<                   4  1566  B 969               14   969
250  1 559         MCS   ADR5B<,244                                        7  1570  Z 891 244           14   891     244
251  1 566         MCW   X3,256                                            7  1577  M 099 256           14   099     256
252  1 573         MA    K004,256                                           7  1584  # M52 256           15  2452     256
253  1 580         W                                                        1  1591  2                   15
254  1 581         BCV   *&5                                               5  1592  B W01 @             15  1601
255  1 586         B     *&3                                                4  1597  B W03               15  1603
256  1 590         CC    1                                                  2  1601  F 1                 15
257  1 592         MCW   X2,LINK2&6                                        7  1603  M 094 X12           15   094    1712
258  1 599         BCE   ENDSTM,0&X1,}  GM                                 8  1610  B W65 0|0 } GMARK   15  1665     000+1
259  1 607         MN    0&X2                                               4  1618  D 0!0               16   000+2
260  1 611         SAR   X2                                                 4  1622  Q 094               16   094
261  1 615  MORE   MCM   0&X1                                               4  1626  P 0|0               16   000+1
262  1 619         SAR   NEWX1&6                                            4  1630  Q W52               16  1652
263  1 623         MCM   0&X1,1&X2  MOVE CODE DOWN                         7  1634  P 0|0 0!1           16   000+1   001+2
264  1 630         MN                                                       1  1641  D                   16
265  1 631         SBR   X2                                                 4  1642  H 094               16   094
266  1 635  NEWX1  SBR   X1,0-0                                            7  1646  H 089 000           17   089     000
267  1 642         BCE   MORE,0&X2,|                                       8  1653  B W26 0!0 |         17  1626     000+2
268  1 650         B     *&15                                       V3M4    4  1661  B W79               17  1679
269  1 654  ENDSTM SBR   X1,1&X1                                     V3M4    7  1665  H 089 0|1           17   089     001+1
270  1 661         MCW   BRANCH,SWITCH                              V3M4    7  1672  M M53 X20           17  2453    1720
271  1 668         BWZ   *&5,0&X1,2                                 V3M4    8  1679  V W91 0|0 2         18  1691     000+1
272  1 676         B     LINK1                                      V3M4    4  1687  B W99               18  1699
273  1 680         BWZ   MARK,2&X1,2                                V3M4    8  1691  V X13 0|2 2         18  1713     002+1
274  1 688  LINK1  MCW   2&X1,X3   PREFIX IS ADDR OF STATEMENT NUMBER        7  1699  M 0|2 099           18   002+1   099
275  1 695  LINK2  SBR   0&X3,0-0  START OF STATEMENT TO STMT NUM TBL        7  1706  H 0?0 000           18   000+3   000
276  1 702  MARK   MCW   COLON,0&X1                                         7  1713  M M54 0|0           19  2454     000+1
277  1 709  SWITCH NOP   ENDST2                                            4  1720  N X72               19  1772
278  1 713         MN    0&X1                                               4  1724  D 0|0               19   000+1
279  1 717         MN                                                       1  1728  D                   19
280  1 718         SAR   X1                                                 4  1729  Q 089               19   089
281  1 722         MN    0&X2                                               4  1733  D 0!0               19   000+2
282  1 726         SAR   *&7                                                4  1737  Q X47               19  1747
283  1 730  SETWMS LCA   0&X1,0&X2  SET WORD MARKS IN MOVED-DOWN CODE       7  1741  L 0|0 0!0           20   000+1   000+2
284  1 737         SBR   *-4                                                4  1748  H X47               20  1747
285  1 741         C     0&X1                                               4  1752  C 0|0               20   000+1
286  1 745         SAR   X1                                                 4  1756  Q 089               20   089
287  1 749         BCE   *&5,0&X1,}  GM                                    8  1760  B X72 0|0 } GMARK   20  1772     000+1
288  1 757         B     SETWMS                                             4  1768  B X41               20  1741
289         *
290  1 761  ENDST2 MCW   NOP,SWITCH                                        7  1772  M M55 X20           20  2455    1720
291  1 768         C     NEXT <,TOPA <                                      7  1779  C 850 841           21   850     841
292  1 775         BU    CONTIN                                             5  1786  B Y11 /             21  1811
293         *
294  1 780  DONE   LCA   COLON,0&X2                                         7  1791  L M54 0!0           21  2454     000+2
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SEQ PG LIN  LABEL   OP    OPERANDS                                              SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

295  1 787          SBR   X3                                                      4  1798  H 099              21   099
296  1 791          BSS   SNAPSH,C                                                5  1802  B 333 C            21   333
297  1 810          B     LOADNX                                                  4  1807  B 700              21   700
298          *
299  1 814  CONTIN  BCE   INDIR2,FLAG <,1                                         8  1811  B Y55 884 1        22  1855     884
300  1 822          B     LOOP                                                    4  1819  B /94              22  1194
301          *
302          * SORT TABLE ENTRY IS THE ADDRESS OF ANOTHER ONE
303          *
304  1 826  INDIR   MCW   0&X3,X3                                                 7  1823  M 0?0 099          22   000+3   099
305  1 833          MCW   0&X3,X1                                                 7  1830  M 0?0 089          22   000+3   089
306  1 840          SBR   NEWX3&3,3&X3                                            7  1837  H Y65 0?3          22  1865     003+3
307  1 847          MCW   K1,FLAG <                                              7  1844  M M45 884          23  2445     884
308  1 854          B     INDIRB                                                  4  1851  B S43              23  1243
309          *
310  1 858  INDIR2  MCW   K0,FLAG <                                              7  1855  M M46 884          23  2446     884
311  1 865  NEWX3   MCW   0-0,X1                                                 7  1862  M 000 089          23   000     089
312  1 872          MCW   NEWX3&3,TOPC <                                         7  1869  M Y65 862          23  1865     862
313  1 879          MCW   K1,F1                                                   7  1876  M M45 M40          23  2445    2440
314  1 886          B     INNER                                                   4  1883  B S50              24  1250
315          *
316  1 890  TEST    SBR   TESTX&3                                                4  1887  H Z26              24  1926
317  1 894          MCW   SX3,ADR5 <                                            7  1891  M 856 896          24   856     896
318  1 901          B     CONV35  CONVERT ADR5 < TO ADR5B<                        4  1898  B 969              24   969
319  1 905          MCW   ADR5B<,TIMES6                                         7  1902  M 891 875          24   891     875
320  1 912          S     TOPC5<,TIMES6                                           7  1909  S 870 875          24   870     875
321  1 919          C     W5,TIMES6                                               7  1916  C 880 875          25   880     875
322  1 926  TESTX   B     0-0                                                     4  1923  B 000              25   000
323          *
324          * EMPTY CELL IN SORT TABLE
325          *
326  1 930  EMPTY   A     K1,208                                                  7  1927  A M45 208          25  2445     208
327  1 937          C     NEXT <,TOPA <                                           7  1934  C 850 841          25   850     841
328  1 944          BE    DONE                                                    5  1941  B X91 S            25  1791
329  1 949          SBR   X3,3&X3                                                 7  1946  H 099 0?3          25   099     003+3
330  1 956          SBR   NEXT <                                                 4  1953  H 850              26   850
331  1 960          B     MIDDLE                                                  4  1957  B S05              26  1205
332          *
333  1 964  MOVED   SBR   SX3,2&X3                                               7  1961  H 856 0?2          26   856     002+3
334  1 971  MOVED1  MCW   SX3,X3                                                 7  1968  M 856 099          26   856     099
335  1 978          SBR   X3,2&X3                                                 7  1975  H 099 0?2          26   099     002+3
336  1 985          B     FINDGM                                                  4  1982  B |52              26  1052
337  1 989          BCE   MOVED,0&X3,:  COLON MEANS STATEMENT ALREADY MOVED      8  1986  B Z61 0?0 :        27  1961     000+3
338  1 997          B     TEST                                                    4  1994  B Y87              27  1887
339  2 001          BL    *&5                                                     5  1998  B !07 T            27  2007
340  2 006          B     NEWSTM                                                  4  2003  B T45              27  1345
341          *
342  2 010          SBR   SX2A&6,0&X2                                           7  2007  H M16 0!0          27  2416     000+2
343  2 017  TSTTOP  C     X3,TOPCOR                                               7  2014  C 099 688          27   099     688
344  2 024          BE    ATTOP                                                   5  2021  B !41 S            28  2041
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

345  2 029          SBR   X1,3&X3                                     7  2026  H 089 0?3           28   089     003+3
346  2 036          BCE   NEXTAB,0&X1,}  GM                           8  2033  B !54 0|0 } GMARK   28  2054     000+1
347  2 044  ATTOP   B     TEST                                        4  2041  B Y87               28  1887
348  2 048          BL    TOOBIG                                      5  2045  B |92 T             28  1092
349  2 053          B     SX2A                                        4  2050  B M10               28  2410
350  2 057  NEXTAB SBR   X3,4&X3                                     7  2054  H 099 0?4           29   099     004+3
351  2 064  NEXTB1 B     FINDGM                                      4  2061  B |52               29  1052
352  2 068          C     0&X3,COLON                                  7  2065  C 0?0 M54           29   000+3  2454
353  2 075          BU    TSTTOP                                      5  2072  B !14 /             29  2014
354  2 080          SBR   NEXTX1&6,0&X3                              7  2077  H J43 0?0           29  2143     000+3
355  2 087          SBR   SX3A,2&X3                                   7  2084  H 853 0?2           29   853     002+3
356  2 094          SBR   X3,3&X3                                     7  2091  H 099 0?3           30   099     003+3
357  2 101  LOOP2   LCA   0&X1,0&X3                                  7  2098  L 0|0 0?0           30   000+1   000+3
358  2 108          SAR   X1                                          4  2105  Q 089               30   089
359  2 112          C     0&X3                                        4  2109  C 0?0               30   000+3
360  2 116          SAR   X3                                          4  2113  Q 099               30   099
361  2 120          BCE   *&5,0&X1,}  GM                            8  2117  B J29 0|0 } GMARK   30  2129     000+1
362  2 128          B     LOOP2                                       4  2125  B !98               30  2098
363  2 132          MN    0&X1                                        4  2129  D 0|0               31   000+1
364  2 136          SAR   SX1                                         4  2133  Q 844               31   844
365  2 140  NEXTX1 SBR   X1,0-0                                      7  2137  H 089 000           31   089     000
366  2 147          BWZ   *&5,1&X1,S                                 8  2144  V J56 0|1 S         31  2156     001+1
367  2 155          B     *&8                                         4  2152  B J63               31  2163
368  2 159          MCW   K1,F2                                      7  2156  M M45 M41           31  2445    2441
369  2 166          BWZ   *&5,0&X1,2                                 8  2163  V J75 0|0 2         32  2175     000+1
370  2 174          B     *&9                                         4  2171  B J83               32  2183
371  2 178          BWZ   *&19,2&X1,2                               8  2175  V K01 0|2 2         32  2201     002+1
372  2 186          MCW   2&X1,X1                                    7  2183  M 0|2 089           32   002+1   089
373  2 193          MCW   0&X1,X2                                    7  2190  M 0|0 094           32   000+1   094
374  2 200          B     *&8                                         4  2197  B K08               32  2208
375  2 204          MCW   2&X1,X2                                    7  2201  M 0|2 094           33   002+1   094
376  2 211          SBR   SEQNO<,0&X2                               7  2208  H 865 0!0           33   865     000+2
377  2 218          SBR   *&14                                        4  2215  H K32               33  2232
378  2 222          MZ    X2ZONE,*&6                                  7  2219  Y M56 K31           33  2456    2231
379  2 229          SBR   X2,0-0                                     7  2226  H 094 000           33   094     000
380  2 236          MCW   SEQNO<,*&14                                7  2233  M 865 K53           33   865    2253
381  2 243          MZ    X2ZONE,*&6                                  7  2240  Y M56 K52           34  2456    2252
382  2 250          SBR   X2,0-0                                     7  2247  H 094 000           34   094     000
383  2 257          BWZ   *&12,SORTAB-1&X2,S                        8  2254  V K73 MR8 S         34  2273    2498+2
384  2 265          SBR   SORTAB&X2,1&X3                            7  2262  H MR9 0?1           34  2499+2   001+3
385  2 272          B     SKIP2                                       4  2269  B L13               34  2313
386  2 276          MCW   SORTAB&X2,X1                              7  2273  M MR9 089           35  2499+2   089
387  2 283          BCE   *&12,F2,1                                   8  2280  B K99 M41 1         35  2299    2441
388  2 291          SBR   3&X1,1&X3                                  7  2288  H 0|3 0?1           35   003+1   001+3
389  2 298          B     *&15                                        4  2295  B L13               35  2313
390  2 302          SBR   0&X1,1&X3                                  7  2299  H 0|0 0?1           35   000+1   001+3
391  2 309          MCW   K0,F2                                      7  2306  M M46 M41           36  2446    2441
392  2 316  SKIP2   C     SX1,SX3                                     7  2313  C 844 856           36   844     856
393  2 323          BE    LOOP2X                                      5  2320  B L53 S             36  2353
394  2 328          MCW   SX1,X1                                     7  2325  M 844 089           36   844     089
```

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

395  2 335          MN    0&X3                                          4  2332  D 0?0               36   000+3
396  2 339          MN                                                  1  2336  D                   36
397  2 340          MN                                                  1  2337  D                   36
398  2 341          SAR   NEXTX1&6                                      4  2338  Q J43               37  2143
399  2 345          SBR   X1,1&X1                                       7  2342  H 089 0|1           37   089     001+1
400  2 352          B     LOOP2                                         4  2349  B !98               37  2098
401  2 356  LOOP2X  LCA   GM,0&X3                                       7  2353  L M57 0?0           37  2457     000+3
402  2 363          SBR   SX3                                           4  2360  H 856               37   856
403  2 367          C     SEQTAB,SX3A                                   7  2364  C 148 853           37   148     853
404  2 374          BE    ATBOT                                         5  2371  B M01 S             37  2401
405  2 379          MCW   SX3A,X3                                       7  2376  M 853 099           38   853     099
406  2 386          SBR   X1,1&X3                                       7  2383  H 089 0?1           38   089     001+3
407  2 393          SBR   X3,2&X3                                       7  2390  H 099 0?2           38   099     002+3
408  2 400          B     NEXTB1                                        4  2397  B !61               38  2061
409          *
410          * AT BOTTOM OF SORT TABLE
411          *
412  2 404  ATBOT   B     TEST                                          4  2401  B Y87               38  1887
413  2 408          BL    TOOBIG                                        5  2405  B |92 T             38  1092
414  2 413  SX2A    SBR   X2,0-0                                       7  2410  H 094 000           39   094     000
415  2 420          MCW   TOPC <,X3                                     7  2417  M 862 099           39   862     099
416  2 427          MCW   0&X3,SX1A                                     7  2424  M 0?0 M44           39   000+3  2444
417  2 434          B     NEWSTM                                        4  2431  B T45               39  1345
418          *
419          * DATA
420          *
421  2 442  W5B     DCW   00000                                         5  2439                      39
422          K000    EQU   W5B-2  MOVED HERE FROM PHASE 47                2437
423  2 443  F1      DCW   0                                             1  2440                      39
424  2 444  F2      DCW   0                                             1  2441                      39
425  2 447  SX1A    DCW   #3                                            3  2444                      40
426  2 448  K1      DCW   1                                             1  2445                      40
427  2 449  K0      DCW   0                                             1  2446                      40
428  2 452  SX1B    DCW   #3                                            3  2449                      40
429  2 455  K004    DSA   4                                           3  2452  004                 40   004
430  2 456  BRANCH  B                                                 1  2453  B                   40
431  2 457  COLON   DCW   @:@                                         1  2454                      40
432  2 458  NOP     NOP                                               1  2455  N                   41
433  2 467  X2ZONE  DCW   @R@                                         1  2456                      41
434  2 468  GM      DC    @}@                                         1  2457            GMARK     41
435  2 469  GMWM    DCW   @}@                                         1  2458            GMARK     41
436                 ORG   *&X00                                             2500
437 *        TABEL   EQU   *                                                2499
438                 XFR   BEGN49                                            B /75               42  1175
439          CLRME   CLRA  BEGN49,GMWM                                                 MACRO
             *       CLRA  CLRBOT,CLRTOP[,ORG,GMWMAD]                                  GEN
             *                                                                         GEN
             * CLEAR CORE AFTER A PHASE USING THE CLRTOP ADDRESS                       GEN
             *                                                                         GEN
440                 ORG   201                                               0201
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
            *                                                                       GEN
            * CLEAR DOWN TO CLRBOT & X00 THE EASY WAY                               GEN
            *                                                                       GEN
441         CLRME   EQU   *&1                                            0201       GEN
442         )0J004  CS    GMWM         CLEAR FROM CLRTOP                4  0201  / M58       GEN     43  2458
443                 SBR   )0J004&3                                       4  0205  H 204       GEN     43   204
444                 SBR   )0L004&6                                       4  0209  H 250       GEN     43   250
445                 C     )0J004&3,)0M004   DOWN TO CLRBOT & X00?       7  0213  C 204 261   GEN     43   204     261
446                 BU    )0J004                                         5  0220  B 201 /     GEN     43   201
            *                                                                       GEN
            * NOW CLEAR DOWN TO CLRBOT THE HARD WAY                                GEN
            *                                                                       GEN
447         )0K004  C     )0L004&6,)0N004                                7  0225  C 250 264   GEN     43   250     264
448                 BU    )0L004                                         5  0232  B 244 /     GEN     43   244
449                 CS    LOADNX,)0Q004  LOAD THE NEXT BLOCK AT 1        7  0237  / 700 271   GEN     44   700     271
450         )0L004  LCA   )0P004,0-0     CLEAR WITH BLANK AND WORD MARK 7  0244  L 265 000   GEN     44   265     000
451                 SBR   )0L004&6                                       4  0251  H 250       GEN     44   250
452                 B     )0K004                                         4  0255  B 225       GEN     44   225
453         )0M004  DSA   )0R004         CLRBOT & X00 - 1               3  0261  /99         GEN     44  1199
454         )0N004  DSA   BEGN49         CLRBOT                         3  0264  /75         GEN     44  1175
455         )0P004  DCW   #1                                            1  0265              GEN     44
456                 DC    @CLRA @     IDENTIFY IN A DECK, TAPE, OR DUMP 5  0270              GEN     44
457         )0Q004  DCW   @}@                                           1  0271              GEN     45
458                 ORG   BEGN49&X00                                              1200
459         )0R004  EQU   *           CLRBOT & X00 - 1                     1199              GEN
460                 XFR   CLRME                                                   B 201               46   201
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J004	0201: 0	)0K004	0225: 0	)0L004	0244: 0	)0M004	0261: 0	)0N004	0264: 0	)0P004	0265: 0
)0Q004	0271: 0	)0R004	1199: 0	)6J003	0110: 0	)6K003	0700: 0	)6L003	0704: 0	)6M003	0728: 0
)9J003	0253: 0	)9R003	0257: 0	ADR5 <	0896: 0	ADR5B<	0891: 0	ATBOT	2401: 0	ATTOP	2041: 0
BEGN47	1175: 0	BEGN49	1175: 0	BRANCH	2453: 0	CDOVLY	0700: 0	CLRME	0201: 0	COLON	2454: 0
CONTIN	1811: 0	CONV35	0969: 0	CONV53	0929: 0	DEZONE	1420: 0	DEZONX	1495: 0	DONE	1791: 0
EMPTY	1927: 0	ENDST2	1772: 0	ENDSTM	1665: 0	F1	2440: 0	F2	2441: 0	FINDGM	1052: 0
FLAG <	0884: 0	GM	2457: 0	GMWM	2458: 0	INDIR	1823: 0	INDIR2	1855: 0	INDIRB	1243: 0
INNER	1250: 0	K0	2446: 0	K000	2437: 0	K004	2452: 0	K1	2445: 0	LINK1	1699: 0
LINK2	1706: 0	LOADAD	1175: 0	LOADNX	0700: 0	LOOP	1194: 0	LOOP2	2098: 0	LOOP2X	2353: 0
MARK	1713: 0	MIDDLE	1205: 0	MORE	1626: 0	MOVED	1961: 0	MOVED1	1968: 0	NEWSTM	1345: 0
NEWX1	1646: 0	NEWX3	1862: 0	NEXT <	0850: 0	NEXTAB	2054: 0	NEXTB1	2061: 0	NEXTX1	2137: 0
NOP	2455: 0	PHAS49	0201: 0	PHASLD	0381: 0	REPORT	1538: 0	SEQNO<	0865: 0	SEQTAB	0148: 0
SETWMS	1741: 0	SKIP2	2313: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	SORTAB	2499: 0	SWITCH	1720: 0
SX1	0844: 0	SX1A	2444: 0	SX1B	2449: 0	SX2 <	0853: 0	SX2...	0853: 0	SX2A	2410: 0
SX3	0856: 0	SX3A	0853: 0	SX3A <	0844: 0	SX3B	1531: 0	SX3B <	0856: 0	TABBOT	0847: 0
TABEL	2499: 0	TEST	1887: 0	TESTX	1923: 0	TIMES6	0875: 0	TOOBIG	1092: 0	TOPA <	0841: 0
TOPB <	0883: 0	TOPC <	0862: 0	TOPC5<	0870: 0	TOPCOR	0688: 0	TPERR	0728: 0	TPREAD	0704: 0
TSTTOP	2014: 0	W3	0859: 0	W3 <	0859: 0	W3....	0859: 0	W5	0880: 0	W5 <	0880: 0
W5....	0880: 0	W5B	2439: 0	X1	0089: 0	X2	0094: 0	X2ZONE	2456: 0	X3	0099: 0

UNREFERENCED SYMBOLS

CDOVLY CONV53 PHASLD SNAPEX TABBOT TOPB < TPERR TPREAD