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

101               JOB   FORTRAN COMPILER -- I/O PHASE TWO -- PHASE 39
102               CTL   6611
103         *
104         * IN-LINE INSTRUCTIONS ARE GENERATED FOR EXECUTING END FILE,
105         * REWIND AND BACKSPACE STATEMENTS.
106         *
107         X1     EQU   89                                                      0089
108         X2     EQU   94                                                      0094
109         X3     EQU   99                                                      0099
110         *
111         * STUFF IN THE RESIDENT AREA
112         *
113         GLOBER EQU   184  GLOBAL ERROR FLAG -- WM MEANS ERROR               0184
114         *
115                EXT00   SNAPSH, LOADNX, CDOVLY                                        MACRO
116         SNAPSH EQU   333                                                     0333     GEN
117         PHASLD EQU   381                                                     0381     GEN
118         SNAPEX EQU   564                                                     0564     GEN
119         LOADNX EQU   700   CARD OVERLAY UNLESS NOP                         0700     GEN
120         CDOVLY EQU   700   1 IF LOADING FROM CARDS, N IF FROM TAPE         0700     GEN
121         TPREAD EQU   704   LOAD OVERLAY FROM TAPE                          0704     GEN
122         TPERR  EQU   728                                                     0728     GEN
123         *
124                EXT03   START, TOP OF PHASE 3                                  MACRO
125         BEGIN3 EQU   838                                                     0838     GEN
126         TOP3   EQU   2600                                                    2600     GEN
127         *
128         110    DCW   @I/O TWO@                                          7  0110                1
129         094    DCW   000                                                3  0094                2
130         096    DC    00                                                 2  0096                2
131         *
132         PHAS39 LDPH  I/O TWO,LOADAD,LOOP,,,39                                 MACRO
            * PHAZ   LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]    GEN
            *        XFR  PHASZ     PROHIBITED IN A MACRO                        GEN
            *                                                                    GEN
            * LOAD A BLOCK                                                      GEN
            *                                                                    GEN
133         )6J003 EQU   110  PHASE ID                                          0110     GEN
134         )6K003 EQU   700  LOAD NEXT PHASE                                   0700     GEN
135         )6L003 EQU   704  TAPE READ INSTRUCTION                             0704     GEN
136         )6M003 EQU   728  TAPE ERROR HANDLER                                0728     GEN
            *                                                                    GEN
137                ORG   201                                                        0201
138         PHAS39 BSS   )8J003,G                                           5  0201  B 257 G     GEN      3   257
139                NOP     TO PATCH IN TRAPS FOR DEBUGGING                  1  0206  N           GEN      3
140         )0J003 EQU   *&1                                                    0207               GEN
141                LCA   )9J003,)6J003                                       7  0207  L 279 110   GEN      3   279     110
142                BCE   )1J003,)6K003,1    Q: LOADING FROM CARDS?           8  0214  B 250 700 1 GEN      3   250     700
143                BCE   )1J003,)6L003&4,0  Q: LOADING FROM AUTOCODER TAPE?   8  0222  B 250 708 0 GEN      3   250     708
144                RTW   1,LOADAD           READ THE BLOCK                   8  0230  L %U1 838 R GEN      3   %U1     838
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

145            BER   )6M003            Q: TAPE ERROR?                     5  0238  B 728 L     GEN      4   728
146            CS    LOOP,)9R003      ENTER THE BLOCK                     7  0243  / 838 283   GEN      4   838     283
147        )1J003 CS    )6K003,)9R003      LOAD CARDS OR AUTOCODER TAPE    7  0250  / 700 283   GEN      4   700     283
148        )8J003 SW    )9R003                                             4  0257  , 283       GEN      4   283
149            MU    %T0,)8K003,W                                         8  0261  M %T0 273 W GEN      4   %T0     273
150            H     )0J003                                               4  0269  . 207       GEN      4   207
151        )8K003 EQU   *&1                                                  0273              GEN
152        )9J003 DCW   @I/O TWO@          PHASE ID                       7  0279              GEN      5
153            DCW   #1                                                   1  0280              GEN      5
154            DC    @39@          PHASE NUMBER                         2  0282              GEN      5
155        )9R003 DCW   @}@                                                1  0283              GEN      5
156            XFR   PHAS39                                                     B 201                  6   201
157        *
158            ORG   BEGIN3                                                     0838
159        LOADAD EQU   *&1          LOAD ADDRESS                           0838
160    838 LOOP   BCE   DONE,0&X1,                                         8  0838  B 870 0|0           7   870     000+1
161    846        MCW   0&X1,CODSEQ                                        7  0846  M 0|0 S11           7   000+1   1211
162    853        MCW   CODSEQ-3,*&8                                       7  0853  M S08 867           7  1208     867
163    860        BCE   IOSTMT,CODES,0  INTERESTING STATEMENT?             8  0860  B 874 S14 0         7   874    1214
164    868        B                                                        1  0868  B                   7
165    869        B                                                        1  0869  B                   7
166    870 DONE   B     LOADNX                                             4  0870  B 700               7   700
167        *
168        * STATEMENT IS BACKSPACE, ENDFILE OR REWIND
169        *
170    893 IOSTMT MCW   KB,IOINST      ASSUME BACKSPACE                    7  0874  M S15 S07           8  1215    1207
171    900        MCW   KLESS,2&X1                                         7  0881  M S16 0|2           8  1216     002+1
172    907        SBR   TSTLES&6,2&X1                                      7  0888  H /04 0|2           8  1104     002+1
173    914        BCE   MOVEUP,CODSEQ-3,B  BACKSPACE?                     8  0895  B 925 S08 B         8   925    1208
174    922        MCW   KR,IOINST      ASSUME REWIND                      7  0903  M S17 S07           8  1217    1207
175    929        BCE   MOVEUP,CODSEQ-3,Z  REWIND?                       8  0910  B 925 S08 Z         9   925    1208
176    937        MCW   KM,IOINST      MUST BE ENDFILE                    7  0918  M S18 S07           9  1218    1207
177    944 MOVEUP LCA   0&X1,0&X3                                          7  0925  L 0|0 0?0           9   000+1   000+3
178    951        SAR   X1                                                4  0932  Q 089               9   089
179    955        C     0&X3                                              4  0936  C 0?0               9   000+3
180    959        SAR   X3                                                4  0940  Q 099               9   099
181    963        LCA   1&X1,2&X3                                         7  0944  L 0|1 0?2          10   001+1   002+3
182    970        SBR   X3                                                4  0951  H 099              10   099
183    974        BWZ   *&5,CODSEQ,2                                      8  0955  V 967 S11 2        10   967    1211
184    982        B     *&9                                               4  0963  B 975              10   975
185    986        BWZ   *&15,CODSEQ-2,2                                   8  0967  V 989 S09 2        10   989    1209
186    994        MCW   CODSEQ,X2      ZONE IN CODSEQ HIGH OR LOW         7  0975  M S11 094          10  1211     094
187  1 001        MCW   0&X2,CODSEQ      MEANS IT'S AN ADDRESS            7  0982  M 0!0 S11          11   000+2  1211
188  1 008        BCE   SYNTAX,0&X1,}                                     8  0989  B /40 0|0 } GMARK  11  1140     000+1
189  1 016        MN    0&X1                                              4  0997  D 0|0              11   000+1
190  1 020        SAR   X2                                                4  1001  Q 094              11   094
191  1 024        BCE   UNITK,0&X2,}   UNIT NUMBER IS A CONSTANT          8  1005  B /85 0!0 } GMARK  11  1185     000+2
192  1 032 UVAR   MCW   K0,IOINST-1                                        7  1013  M S19 S06          11  1219    1206
193  1 039        MCW   0&X1,MVUNIT&3                                     7  1020  M 0|0 /99          12   000+1  1199
194  1 046        MCW   MN,MVUNIT                                         7  1027  M S20 /96          12  1220    1196
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

195  1 053         MZ    *-4,MVUNIT&2   CLOBBER TYPE TAG                     7  1034  Y |36 /98           12  1036    1198
196  1 060         CW    FLAG                                               4  1041  ) S21               12  1221
197  1 064  GOTU   C     0&X1                                               4  1045  C 0|0               12   000+1
198  1 068         SAR   X1                                                 4  1049  Q 089               12   089
199  1 072         LCA   IOINST,0&X3    LOAD CU INSTRUCTION                7  1053  L S07 0?0           13  1207     000+3
200  1 079         SBR   X3                                                 4  1060  H 099               13   099
201  1 083         BW    CONST,FLAG     UNIT NUMBER IS A CONSTANT          8  1064  V |87 S21 1         13  1087    1221
202  1 091         SW    FLAG                                               4  1072  , S21               13  1221
203  1 095         LCA   MVUNIT&6,0&X3  LOAD MOVE UNIT NUMBER INSTR         7  1076  L S02 0?0           13  1202     000+3
204  1 102         SBR   X3                                                 4  1083  H 099               13   099
205  1 106  CONST  LCA   1&X1,0&X3                                          7  1087  L 0|1 0?0           14   001+1   000+3
206  1 113         SBR   X3                                                 4  1094  H 099               14   099
207  1 117  TSTLES BCE   LOOP,0,<  NOT TOO BIG IF LESS-THAN NOT CLOBBERED   8  1098  B 838 000 <         14   838     000
208  1 125         CS    332                                                4  1106  / 332               14   332
209  1 129         CS                                                       1  1110  /                   14
210  1 130         CC    1                                                  2  1111  F 1                 14
211  1 132         MCW   ERROR2,270                                         7  1113  M S57 270           14  1257     270
212  1 139         W                                                        1  1120  2                   15
213  1 140         CC    1                                                  2  1121  F 1                 15
214  1 142         BCE   HALT,CDOVLY,1                                     8  1123  B /36 700 1         15  1136     700
215  1 150         RWD   1                                                  5  1131  U %U1 R             15   %U1
216  1 155  HALT   H     HALT                                               4  1136  . /36               15  1136
217  1 159  SYNTAX CS    332                                                4  1140  / 332               15   332
218  1 163         CS                                                       1  1144  /                   15
219  1 164         SW    GLOBER                                             4  1145  , 184               16   184
220  1 168         MN    CODSEQ,245                                         7  1149  D S11 245           16  1211     245
221  1 175         MN                                                       1  1156  D                   16
222  1 176         MN                                                       1  1157  D                   16
223  1 177         MCW   ERR33                                             4  1158  M S99               16  1299
224  1 181         W                                                        1  1162  2                   16
225  1 182         BCV   *&5                                               5  1163  B /72 @             16  1172
226  1 187         B     *&3                                                4  1168  B /74               17  1174
227  1 191         CC    1                                                  2  1172  F 1                 17
228  1 193         MCW   K0,IOINST-1                                        7  1174  M S19 S06           17  1219    1206
229  1 200         B     UVAR                                               4  1181  B |13               17  1013
230           *
231           * UNIT NUMBER IS A CONSTANT
232           *
233  1 204  UNITK  MN    0&X1,IOINST-1                                      7  1185  D 0|0 S06           17   000+1  1206
234  1 211         B     GOTU                                               4  1192  B |45               17  1045
235           *
236           * DATA
237           *
238  1 215  MVUNIT MCW   5777&X1,4&X3                                       7  1196  M XXX 0?4           17  5777+1   004+3
239  1 226  IOINST DCW   @U%U0X@                                           5  1207                      18
240  1 230  CODSEQ DCW   #4  STATEMENT CODE AND SEQUENCE NUMBER             4  1211                      18
241  1 233  CODES  DCW   @BZN@  BACKSPACE, REWIND, ENDFILE STATEMENT CODES  3  1214                      18
242  1 239  KB     DCW   @B@                                                1  1215                      18
243  1 240  KLESS  DCW   @<@  CORE IS NOT FULL YET SENTINEL                 1  1216                      18
244  1 241  KR     DCW   @R@                                                1  1217                      18
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SEQ PG LIN  LABEL   OP    OPERANDS                                              SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
245  1 242  KM      DCW   @M@                                                     1  1218                      18
246  1 243  K0      DCW   @0@                                                     1  1219                      19
247  1 244  MN      MN                                                            1  1220  D                   19
248  1 245  FLAG    DCW   #1  NO WM MEANS UNIT IS VARIABLE, WM MEANS CONST       1  1221                      19
249  1 281  ERROR2  DCW   @MESSAGE 2 - OBJECT PROGRAM TOO LARGE@                 36  1257                      19
250  1 323  ERR33   DCW   @ERROR 33 - NO TAPE UNIT NUMBER, STATEMENT @          42  1299                      22
251  1 324  GMWM    DCW   @}@                                                     1  1300              GMARK   22
252                 XFR   LOOP                                                          B 838               23   838
253          CLRME  CLRA  LOADAD,GMWM,C                                                                MACRO
             *      CLRA  CLRBOT,CLRTOP[,SS,HERE,GWMAD]                                                GEN
             *                                                                                         GEN
             * CLEAR CORE AFTER A PHASE USING THE CLRTOP ADDRESS                                       GEN
             *                                                                                         GEN
254                 ORG   201                                                           0201
             *                                                                                         GEN
             * CLEAR DOWN TO CLRBOT & X00 THE EASY WAY                                                 GEN
             *                                                                                         GEN
255          CLRME  EQU   *&1                                                      0201                GEN
256                 BSS   SNAPSH,C                                                5  0201  B 333 C      GEN      24   333
257          )0J004 CS    GMWM         CLEAR FROM CLRTOP                           4  0206  / T00        GEN      24  1300
258                 SBR   )0J004&3                                                4  0210  H 209        GEN      24   209
259                 SBR   )0L004&6                                                4  0214  H 255        GEN      24   255
260                 C     )0J004&3,)0M004   DOWN TO CLRBOT & X00?                 7  0218  C 209 266    GEN      24   209      266
261                 BU    )0J004                                                  5  0225  B 206 /      GEN      24   206
             *                                                                                         GEN
             * NOW CLEAR DOWN TO CLRBOT THE HARD WAY                                                   GEN
             *                                                                                         GEN
262          )0K004 C     )0L004&6,)0N004                                         7  0230  C 255 269    GEN      24   255      269
263                 BU    )0L004                                                  5  0237  B 249 /      GEN      25   249
264                 CS    LOADNX,)0Q004  LOAD THE NEXT BLOCK AT 1                 7  0242  / 700 276    GEN      25   700      276
265          )0L004 LCA   )0P004,0-0     CLEAR WITH BLANK AND WORD MARK          7  0249  L 270 000    GEN      25   270      000
266                 SBR   )0L004&6                                                4  0256  H 255        GEN      25   255
267                 B     )0K004                                                  4  0260  B 230        GEN      25   230
268          )0M004 DSA   )0R004         CLRBOT & X00 - 1                        3  0266  899          GEN      25   899
269          )0N004 DSA   LOADAD         CLRBOT                                  3  0269  838          GEN      25   838
270          )0P004 DCW   #1                                                      1  0270               GEN      26
271                 DC    @CLRA @     IDENTIFY IN A DECK, TAPE, OR DUMP          5  0275               GEN      26
272          )0Q004 DCW   @}@                                                     1  0276               GEN      26
273                 ORG   LOADAD&X00                                                    0900
274          )0R004 EQU   *           CLRBOT & X00 - 1                              0899               GEN
275                 XFR   CLRME                                                         B 201                 27   201
```

| SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| )0J003 | 0207: 0 | )0J004 | 0206: 0 | )0K004 | 0230: 0 | )0L004 | 0249: 0 | )0M004 | 0266: 0 | )0N004 | 0269: 0 |
| )0P004 | 0270: 0 | )0Q004 | 0276: 0 | )0R004 | 0899: 0 | )1J003 | 0250: 0 | )6J003 | 0110: 0 | )6K003 | 0700: 0 |
| )6L003 | 0704: 0 | )6M003 | 0728: 0 | )8J003 | 0257: 0 | )8K003 | 0273: 0 | )9J003 | 0279: 0 | )9R003 | 0283: 0 |
| BEGIN3 | 0838: 0 | CDOVLY | 0700: 0 | CLRME | 0201: 0 | CODES | 1214: 0 | CODSEQ | 1211: 0 | CONST | 1087: 0 |
| DONE | 0870: 0 | ERR33 | 1299: 0 | ERROR2 | 1257: 0 | FLAG | 1221: 0 | GLOBER | 0184: 0 | GMWM | 1300: 0 |
| GOTU | 1045: 0 | HALT | 1136: 0 | IOINST | 1207: 0 | IOSTMT | 0874: 0 | K0 | 1219: 0 | KB | 1215: 0 |
| KLESS | 1216: 0 | KM | 1218: 0 | KR | 1217: 0 | LOADAD | 0838: 0 | LOADNX | 0700: 0 | LOOP | 0838: 0 |
| MN | 1220: 0 | MOVEUP | 0925: 0 | MVUNIT | 1196: 0 | PHAS39 | 0201: 0 | PHASLD | 0381: 0 | SNAPEX | 0564: 0 |
| SNAPSH | 0333: 0 | SYNTAX | 1140: 0 | TOP3 | 2600: 0 | TPERR | 0728: 0 | TPREAD | 0704: 0 | TSTLES | 1098: 0 |
| UNITK | 1185: 0 | UVAR | 1013: 0 | X1 | 0089: 0 | X2 | 0094: 0 | X3 | 0099: 0 | | |

UNREFERENCED SYMBOLS

PHASLD SNAPEX TOP3 TPERR TPREAD