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

101                JOB   FORTRAN COMPILER -- GOTO PHASE -- PHASE 41
102                CTL   6611
103         *
104         * AN UNCONDITIONAL BRANCH INSTRUCTION IS GENERATED IN-LINE
105         * IN PLACE OF THE ORIGINAL STATEMENT
106         *
107         X1     EQU   89                                                        0089
108         X3     EQU   99                                                        0099
109         *
110         * STUFF IN THE RESIDENT AREA
111         *
112         *
113                EXT00   SNAPSH, LOADNX, CDOVLY                                          MACRO
114         SNAPSH EQU   333                                                       0333     GEN
115         PHASLD EQU   381                                                       0381     GEN
116         SNAPEX EQU   564                                                       0564     GEN
117         LOADNX EQU   700   CARD OVERLAY UNLESS NOP                           0700     GEN
118         CDOVLY EQU   700   1 IF LOADING FROM CARDS, N IF FROM TAPE           0700     GEN
119         TPREAD EQU   704   LOAD OVERLAY FROM TAPE                            0704     GEN
120         TPERR  EQU   728                                                       0728     GEN
121         *
122                EXT03   START, TOP OF PHASE 3                                    MACRO
123         BEGIN3 EQU   838                                                       0838     GEN
124         TOP3   EQU   2600                                                      2600     GEN
125         *
126         PHAS41 LDPH  GOTO,LOADAD,LOOP,,,41                                      MACRO
            * PHAZ   LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]        GEN
            *        XFR  PHASZ     PROHIBITED IN A MACRO                           GEN
            *                                                                       GEN
            * LOAD A BLOCK                                                         GEN
            *                                                                       GEN
127         )6J003 EQU   110  PHASE ID                                            0110     GEN
128         )6K003 EQU   700  LOAD NEXT PHASE                                     0700     GEN
129         )6L003 EQU   704  TAPE READ INSTRUCTION                               0704     GEN
130         )6M003 EQU   728  TAPE ERROR HANDLER                                  0728     GEN
            *                                                                       GEN
131                ORG   201                                                            0201
132         PHAS41 EQU   *&1                                                       0201     GEN
133                LCA   )9J003,)6J003                                       7  0201  L 247 110   GEN      1   247     110
134                BCE   )6K003,)6K003,1      Q: LOADING FROM CARDS?         8  0208  B 700 700 1 GEN      1   700     700
135                BCE   )6K003,)6L003&4,0    Q: LOADING FROM AUTOCODER TAPE? 8  0216  B 700 708 0 GEN      1   700     708
136                RTW   1,LOADAD             READ THE BLOCK                 8  0224  L %U1 838 R GEN      1   %U1     838
137                BER   )6M003               Q: TAPE ERROR?                 5  0232  B 728 L     GEN      1   728
138                CS    LOOP,)9R003        ENTER THE BLOCK                  7  0237  / 838 251   GEN      2   838     251
139         )9J003 DCW   @GOTO@          PHASE ID                           4  0247              GEN      2
140                DC    #1                                                 1  0248              GEN      2
141                DC    @41@          PHASE NUMBER                         2  0250              GEN      2
142         )9R003 DCW   @}@                                                1  0251              GEN      2
143                XFR   PHAS41                                                  B 201             3   201
144         *
```

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

145             ORG   BEGIN3                                                  0838
146         LOADAD EQU   *&1          LOAD ADDRESS                        0838
147    838  LOOP   BCE   DONE,0&X1,                                    8   0838  B 861 0|0           4   861     000+1
148    846         MCW   0&X1,CODSEQ                                   7   0846  M 0|0 948           4   000+1   948
149    853         BCE   GOTO,CODSEQ-3,G  GOTO STATEMENT?             8   0853  B 870 945 G         4   870     945
150    861  DONE   BSS   SNAPSH,C                                     5   0861  B 333 C             4   333
151    880         B     LOADNX                                      4   0866  B 700               4   700
152         *
153    884  GOTO   LCA   0&X1,0&X3  SEQNO, CODE, GMWM                 7   0870  L 0|0 0?0           4   000+1   000+3
154    891         SAR   X1                                          4   0877  Q 089               5   089
155    895         C     0&X3                                        4   0881  C 0?0               5   000+3
156    899         SAR   X3                                          4   0885  Q 099               5   099
157    903         LCA   1&X3,2&X3  MOVE GMWM UP                     7   0889  L 0?1 0?2           5   001+3   002+3
158    910         SBR   X3                                          4   0896  H 099               5   099
159    914         LCA   0&X1,0&X3  MOVE LABEL UP                    7   0900  L 0|0 0?0           5   000+1   000+3
160    921         SAR   X1                                          4   0907  Q 089               5   089
161    925         C     0&X3                                        4   0911  C 0?0               6   000+3
162    929         SAR   X3                                          4   0915  Q 099               6   099
163    933         MCW   BRANCH,1&X3  REPLACE GMWM BY BRANCH         7   0919  M 949 0?1           6   949     001+3
164    940         LCA   1&X1           WITH THE GMWM BELOW IT      4   0926  L 0|1               6   001+1
165    944         SBR   X3                                          4   0930  H 099               6   099
166    948         MZ    X2ZONE,4&X3                                 7   0934  Y 950 0?4           6   950     004+3
167    955         B     LOOP                                        4   0941  B 838               6   838
168         *
169         * DATA
170         *
171    962  CODSEQ DCW   #4  STATEMENT CODE AND SEQUENCE NUMBER      4   0948                      7
172    973  BRANCH B                                                 1   0949  B                   7
173    974  X2ZONE DCW   @K@                                         1   0950                      7
174    975  GMWM   DCW   @}@                                         1   0951              GMARK   7
175             XFR   LOOP                                                  B 838               8   838
176         CLRME  CLRA  LOOP,GMWM                                                 MACRO
            *      CLRA  CLRBOT,CLRTOP[,ORG,GMWMAD]                                GEN
            *                                                                     GEN
            * CLEAR CORE AFTER A PHASE USING THE CLRTOP ADDRESS                   GEN
            *                                                                     GEN
177             ORG   201                                                   0201
            *                                                                     GEN
            * CLEAR DOWN TO CLRBOT & X00 THE EASY WAY                           GEN
            *                                                                     GEN
178         CLRME  EQU   *&1                                         0201       GEN
179         )0J004 CS    GMWM         CLEAR FROM CLRTOP              4   0201  / 951       GEN     9   951
180                SBR   )0J004&3                                    4   0205  H 204       GEN     9   204
181                SBR   )0L004&6                                    4   0209  H 250       GEN     9   250
182                C     )0J004&3,)0M004   DOWN TO CLRBOT & X00?     7   0213  C 204 261   GEN     9   204     261
183                BU    )0J004                                      5   0220  B 201 /     GEN     9   201
            *                                                                     GEN
            * NOW CLEAR DOWN TO CLRBOT THE HARD WAY                             GEN
            *                                                                     GEN
184         )0K004 C     )0L004&6,)0N004                             7   0225  C 250 264   GEN     9   250     264
```

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

185                 BU    )0L004                                            5  0232  B 244 /     GEN      9   244
186                 CS    LOADNX,)0Q004  LOAD THE NEXT BLOCK AT 1           7  0237  / 700 271   GEN     10   700     271
187         )0L004  LCA   )0P004,0-0     CLEAR WITH BLANK AND WORD MARK     7  0244  L 265 000   GEN     10   265     000
188                 SBR   )0L004&6                                           4  0251  H 250       GEN     10   250
189                 B     )0K004                                            4  0255  B 225       GEN     10   225
190         )0M004  DSA   )0R004         CLRBOT & X00 - 1                  3  0261  899         GEN     10   899
191         )0N004  DSA   LOOP          CLRBOT                            3  0264  838         GEN     10   838
192         )0P004  DCW   #1                                               1  0265              GEN     10
193                 DC    @CLRA @     IDENTIFY IN A DECK, TAPE, OR DUMP     5  0270              GEN     10
194         )0Q004  DCW   @}@                                              1  0271              GEN     11
195                 ORG   LOOP&X00                                                  0900
196         )0R004  EQU   *           CLRBOT & X00 - 1                        0899              GEN
197                 XFR   CLRME                                                     B 201               12   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	0899: 0	)6J003	0110: 0	)6K003	0700: 0	)6L003	0704: 0	)6M003	0728: 0
)9J003	0247: 0	)9R003	0251: 0	BEGIN3	0838: 0	BRANCH	0949: 0	CDOVLY	0700: 0	CLRME	0201: 0
CODSEQ	0948: 0	DONE	0861: 0	GMWM	0951: 0	GOTO	0870: 0	LOADAD	0838: 0	LOADNX	0700: 0
LOOP	0838: 0	PHAS41	0201: 0	PHASLD	0381: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	TOP3	2600: 0
TPERR	0728: 0	TPREAD	0704: 0	X1	0089: 0	X2ZONE	0950: 0	X3	0099: 0		

UNREFERENCED SYMBOLS

CDOVLY PHASLD SNAPEX TOP3 TPERR TPREAD