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

101               JOB   FORTRAN COMPILER -- RESORT 1 PHASE -- PHASE 47
102               CTL   6611
103         *
104         * EXTERNALLY REFERENCED SYMBOLS ARE MARKED WITH ASTERISK IN COLUMN 1.
105         *
106         * AN AREA IS MADE AVAILABLE FOR A TABLE TO ASSIST IN RESORTING
107         * THE STATEMENTS INTO THEIR ORIGINAL ORDER.
108         *
109         X1     EQU   89                                                        0089
110         X2     EQU   94                                                        0094
111         X3     EQU   99                                                        0099
112         *
113         * STUFF IN THE RESIDENT AREA
114         *
115         DOCNT  EQU   151  COUNT OF DO STATEMENTS                              0151
116         NSTMTS EQU   183  NUMBER OF STATEMENTS, INCLUDING GENERATED STOP      0183
117         *
118               EXT00   SNAPSH, LOADNX, CDOVLY                                            MACRO
119         SNAPSH EQU   333                                                      0333        GEN
120         PHASLD EQU   381                                                      0381        GEN
121         SNAPEX EQU   564                                                      0564        GEN
122         LOADNX EQU   700   CARD OVERLAY UNLESS NOP                          0700        GEN
123         CDOVLY EQU   700   1 IF LOADING FROM CARDS, N IF FROM TAPE          0700        GEN
124         TPREAD EQU   704   LOAD OVERLAY FROM TAPE                           0704        GEN
125         TPERR  EQU   728                                                      0728        GEN
126         *
127               EXT03   START, TOP OF PHASE 3                                       MACRO
128         BEGIN3 EQU   838                                                      0838        GEN
129         TOP3   EQU   2600                                                     2600        GEN
130               EXT49   STUFF IN RESORT THREE PHASE -- 49                            MACRO
131         TABEL  EQU   2499                                                     2499        GEN
132         *
133         SORTAB EQU   TABEL  SORT TABLE                                        2499
134         *
135         PHAS47 LDPH  RESORT ONE,LOADAD,BEGN47,,,47                                MACRO
            * PHAZ   LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]      GEN
            *        XFR  PHASZ     PROHIBITED IN A MACRO                         GEN
            *                                                                     GEN
            * LOAD A BLOCK                                                       GEN
            *                                                                     GEN
136         )6J004 EQU   110  PHASE ID                                           0110        GEN
137         )6K004 EQU   700  LOAD NEXT PHASE                                    0700        GEN
138         )6L004 EQU   704  TAPE READ INSTRUCTION                              0704        GEN
139         )6M004 EQU   728  TAPE ERROR HANDLER                                 0728        GEN
            *                                                                     GEN
140               ORG   201                                                            0201
141         PHAS47 EQU   *&1                                                      0201        GEN
142               LCA   )9J004,)6J004                                       7     0201  L 253 110   GEN      1   253     110
143               BCE   )6K004,)6K004,1      Q: LOADING FROM CARDS?         8     0208  B 700 700 1 GEN      1   700     700
144               BCE   )6K004,)6L004&4,0    Q: LOADING FROM AUTOCODER TAPE? 8     0216  B 700 708 0 GEN      1   700     708
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SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

145            RTW   1,LOADAD            READ THE BLOCK                    8  0224  L %U1 838 R GEN      1   %U1     838
146            BER   )6M004              Q: TAPE ERROR?                    5  0232  B 728 L     GEN      1   728
147            CS    BEGN47,)9R004       ENTER THE BLOCK                   7  0237  / /75 257   GEN      2  1175     257
148        )9J004 DCW   @RESORT ONE@          PHASE ID                   10  0253              GEN      2
149            DC    #1                                                    1  0254              GEN      2
150            DC    @47@          PHASE NUMBER                            2  0256              GEN      2
151        )9R004 DCW   @}@                                                 1  0257              GEN      2
152            XFR   PHAS47                                                      B 201             3   201
153        *
154            ORG   BEGIN3                                                      0838
155        LOADAD EQU   *&1          LOAD ADDRESS                             0838
156    838 W1     DCW   0                                                     1  0838                       4
157 *  841 TOPA   DCW   000  TABBOT PLUS 3 X NUMBER OF STATEMENTS             3  0841                       4
158 *  844 SX3A   DCW   000  USED ONLY IN PHASE 48 AND 49                    3  0844                       4
159 *  847 TABBOT DCW   000  BOTTOM OF RESORT TABLE                          3  0847                       4
160 *  850 NEXT   DCW   000  USED ONLY IN PHASE 49                          3  0850                       4
161 *  853 SX2    DCW   000  USED ONLY IN PHASE 48 AND 49                   3  0853                       4
162 *  856 SX3B   DCW   000                                                 3  0856                       4
163 *  859 W3     DCW   000  USED ONLY IN PHASE 48 AND 49                   3  0859                       5
164 *  862 TOPC   DCW   000  TABBOT PLUS 3 X NUMBER OF STATEMENTS PLUS 1    3  0862                       5
165 *  865 SEQNO  DCW   000  USED ONLY IN PHASE 48 AND 49                   3  0865                       5
166 *  870 TOPC5  DCW   00000  TOPC AS FIVE DIGITS                          5  0870                       5
167 *  875 TIMES6 DCW   00000  DOCNT TIMES 6                                5  0875                       5
168 *  880 W5     DCW   00000  USED ONLY IN PHASE 49                       5  0880                       5
169 *  883 TOPB   DCW   000  TABBOT PLUS 3 X NUMBER OF STATEMENTS PLUS 1    3  0883                       5
170 *  884 FLAG   DCW   0    USED ONLY IN PHASE 48 AND 49                   1  0884                       6
171    886 ZONTST DCW   99   FOR TESTING ZONES                              2  0886                       6
172 *  891 ADR5B  DCW   #5                                                  5  0891                       6
173 *  896 ADR5   DCW   #5                                                  5  0896                       6
174    898 ZONES  DCW   @99@                                                2  0898                       6
175    900        DCW   @Z9@                                                2  0900                       6
176    902        DCW   @R9@                                                2  0902                       6
177    904        DCW   @I9@                                                2  0904                       7
178    906        DCW   @9Z@                                                2  0906                       7
179    908        DCW   @ZZ@                                                2  0908                       7
180    910        DCW   @RZ@                                                2  0910                       7
181    912        DCW   @IZ@                                                2  0912                       7
182    914        DCW   @9R@                                                2  0914                       7
183    916        DCW   @ZR@                                                2  0916                       7
184    918        DCW   @RR@                                                2  0918                       8
185    920        DCW   @IR@                                                2  0920                       8
186    922        DCW   @9I@                                                2  0922                       8
187    924        DCW   @ZI@                                                2  0924                       8
188    926        DCW   @RI@                                                2  0926                       8
189    928        DCW   @II@                                                2  0928                       8
190        *
191        * CONVERT FIVE-DIGIT ADDRESS IN ADR5 TO MACHINE FORM
192        *
193 *  929 CONV53 SBR   CONV5X&3                                            4  0929  H 968               8   968
194    933        ZA    ADR5-3,X1                                           7  0933  ? 893 089           9   893     089
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SEQ PG LIN  LABEL   OP    OPERANDS                                                SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

195    940          MZ    NOZONE,X1                                                7  0940  Y /26 089            9  1126     089
196    947          A     X1                                                       4  0947  A 089                9   089
197    951          MZ    ZONES-1&X1,ADR5-2                                        7  0951  Y 8Z7 894            9   897+1   894
198    958          MZ    ZONES&X1,ADR5                                            7  0958  Y 8Z8 896            9   898+1   896
199    965  CONV5X  B     0-0                                                      4  0965  B 000                9   000
200         *
201         * CONVERT THREE-CHARACTER ADDRESS IN ADR5 TO FIVE DIGITS IN ADR5B
202         *
203 *  969  CONV35  SBR   CONV3X&3                                                  4  0969  H |24               10  1024
204    973          MCW   K5B,ADR5B                                                7  0973  M /31 891           10  1131     891
205    980          MN    ADR5,ADR5B                                               7  0980  D 896 891           10   896     891
206    987          MN                                                             1  0987  D                   10
207    988          MN                                                             1  0988  D                   10
208    989          MZ    ADR5,ZONTST                                              7  0989  Y 896 886           10   896     886
209    996          MZ    ADR5-2,ZONTST-1                                          7  0996  Y 894 885           10   894     885
210  1 003          MCW   AZONES,*&11                                              7  1003  M /34 |20           11  1134    1020
211  1 010          S     ADR5                                                     4  1010  S 896               11   896
212  1 014  TSTZON  C     ZONTST,0-0                                               7  1014  C 886 000           11   886     000
213  1 021  CONV3X  BE    0-0                                                      5  1021  B 000 S             11   000
214  1 026          A     K1,ADR5B-3                                               7  1026  A /35 888           11  1135     888
215  1 033          SW    TSTZON&4                                                 4  1033  , |18               11  1018
216  1 037          A     K002,TSTZON&6                                            7  1037  A /38 |20           12  1138    1020
217  1 044          CW    TSTZON&4                                                 4  1044  ) |18               12  1018
218  1 048          B     TSTZON                                                   4  1048  B |14               12  1014
219         *
220         * FIND NEXT HIGHER GMWM.  LEAVE ITS ADDRESS & 1 IN X3.
221         *
222 *1 052  FINDGM  SBR   FINDGX&3                                                4  1052  H |91               12  1091
223  1 056          MN    0&X3                                                     4  1056  D 0?0               12   000+3
224  1 060          SAR   X3                                                       4  1060  Q 099               12   099
225  1 064  MORE    MCM   1&X3                                                     4  1064  P 0?1               12   001+3
226  1 068          MN                                                             1  1068  D                   13
227  1 069          SBR   X3                                                       4  1069  H 099               13   099
228  1 073          BCE   MORE,0&X3,|                                            8  1073  B |64 0?0 |          13  1064     000+3
229  1 081          SBR   X3,1&X3                                                 7  1081  H 099 0?1           13   099     001+3
230  1 088  FINDGX  B     0-0                                                      4  1088  B 000               13   000
231         *
232         * PROGRAM IS TOO BIG
233         *
234 *1 092  TOOBIG  CS    332                                                      4  1092  / 332               13   332
235  1 096          CS                                                             1  1096  /                   13
236  1 097          CC    1                                                        2  1097  F 1                 14
237  1 099          MCW   ERROR2,270                                               7  1099  M /74 270           14  1174     270
238  1 106          W                                                              1  1106  2                   14
239  1 107          CC    1                                                        2  1107  F 1                 14
240  1 109          BCE   HALT,CDOVLY,1                                          8  1109  B /22 700 1         14  1122     700
241  1 117          RWD   1                                                        5  1117  U %U1 R             14   %U1
242  1 122  HALT    H     HALT                                                     4  1122  . /22               14  1122
243         *
244  1 126  NOZONE  DCW   #1                                                       1  1126                      15
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

245  1 131  K5B     DCW   #5                                          5  1131                      15
246  1 134  AZONES  DSA   ZONES                                     3  1134  898                 15   898
247  1 135  K1      DCW   1                                         1  1135                      15
248  1 138  K002    DCW   002                                       3  1138                      15
249  1 174  ERROR2  DCW   @MESSAGE 2 - OBJECT PROGRAM TOO LARGE@   36  1174                      16
250          *
251 *1 175  BEGN47  SBR   SX3B,0&X3                                  7  1175  H 856 0?0           17   856     000+3
252  1 182          SBR   X1,SORTAB                                  7  1182  H 089 M99           17   089    2499
253  1 189          SBR   TABBOT  BOTTOM OF CODE IN LOW CORE         4  1189  H 847               17   847
254  1 193          MCW   NSTMTS,*&14                               7  1193  M 183 S13           17   183    1213
255  1 200          MZ    X1ZONE,*&6                                7  1200  Y U84 S12           17  1484    1212
256  1 207  NSX3    SBR   X1,0    COMPUTE                           7  1207  H 089 000           17   089     000
257  1 214          A     K1A,W1    TABBOT PLUS                     7  1214  A U85 838           18  1485     838
258  1 221          C     W1,K3       NUMBER OF STATEMENTS          7  1221  C 838 U86           18   838    1486
259  1 228          BH    NSX3          TIMES 3                     5  1228  B S07 U             18  1207
260  1 233          SBR   TOPA,0&X1                                 7  1233  H 841 0|0           18   841     000+1
261  1 240          SBR   TOPB,1&X1                                 7  1240  H 883 0|1           18   883     001+1
262  1 247          MCW   KB,W1                                     7  1247  M U87 838           19  1487     838
263  1 254          BCE   *&5,DOCNT,                                8  1254  B S66 151           19  1266     151
264  1 262          B     HAVE                                      4  1262  B S92               19  1292
265  1 266          SBR   TOPC,1&X1                                 7  1266  H 862 0|1           19   862     001+1
266  1 273          SBR   ADR5                                      4  1273  H 896               19   896
267  1 277          B     CONV35                                    4  1277  B 969               19   969
268  1 281          MCW   ADR5B,TOPC5                              7  1281  M 891 870           20   891     870
269  1 288          B     NOT                                       4  1288  B T61               20  1361
270  1 292  HAVE    MCW   DOCNT,TIMES6                             7  1292  M 151 875           20   151     875
271  1 299          A     TIMES6                                    4  1299  A 875               20   875
272  1 303          A     TIMES6                                    4  1303  A 875               20   875
273  1 307          A     DOCNT                                     4  1307  A 151               20   151
274  1 311          A     DOCNT,TIMES6                              7  1311  A 151 875           20   151     875
275  1 318          SBR   ADR5,1&X1                                 7  1318  H 896 0|1           21   896     001+1
276  1 325          B     CONV35                                    4  1325  B 969               21   969
277  1 329          MCW   ADR5B,TOPC5                              7  1329  M 891 870           21   891     870
278  1 336          A     TIMES6,TOPC5                              7  1336  A 875 870           21   875     870
279  1 343          MCW   TOPC5,ADR5                               7  1343  M 870 896           21   870     896
280  1 350          B     CONV53                                    4  1350  B 929               21   929
281  1 354          MCW   ADR5,TOPC                                 7  1354  M 896 862           22   896     862
282  1 361  NOT     MCW   SX3B,ADR5                                7  1361  M 856 896           22   856     896
283  1 368          B     CONV35                                    4  1368  B 969               22   969
284  1 372          MCW   ADR5B,W5                                  7  1372  M 891 880           22   891     880
285  1 379          C     TOPC5,W5                                  7  1379  C 870 880           22   870     880
286  1 386          BH    *&5                                       5  1386  B T95 U             22  1395
287  1 391          B     TOOBIG                                    4  1391  B |92               23  1092
288  1 395          CC    1                                         2  1395  F 1                 23
289  1 397          CS    332                                       4  1397  / 332               23   332
290  1 401          CS                                              1  1401  /                   23
291  1 402          MCW   STRTNG,243                                7  1402  M V17 243           23  1517     243
292  1 409          W                                               1  1409  2                   23
293  1 410          CC    K                                         2  1410  F K                 23
294  1 412          CS    332                                       4  1412  / 332               24   332
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```
SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

295  1 416         CS                                                       1  1416  /                   24
296  1 417         MCW   SEQ,208                                           7  1417  M V20 208           24  1520     208
297  1 424         MCW   STRTA,242                                         7  1424  M V36 242           24  1536     242
298  1 431         MCW   DISPLA,256                                       7  1431  M V43 256           24  1543     256
299  1 438         W                                                        1  1438  2                   24
300  1 439         CC    J                                                  2  1439  F J                 24
301  1 441         CS    332                                              4  1441  / 332               25   332
302  1 445         CS                                                       1  1445  /                   25
303  1 446  *         LCA  K000,208  MOVED TO PHASE 49 BECAUSE LDPH CLOBBERS IT
304  1 453         MCW   SX3B,X1                                           7  1446  M 856 089           25   856     089
305  1 460         SBR   X1,2&X1                                          7  1453  H 089 0|2           25   089     002+1
306  1 467         SBR   X3                                               4  1460  H 099               25   099
307  1 471         B     FINDGM                                           4  1464  B |52               25  1052
308  1 475         MCW   X3,X2                                           7  1468  M 099 094           25   099     094
309  1 482         BSS   SNAPSH,C                                        5  1475  B 333 C             26   333
310  1 519         B     LOADNX                                           4  1480  B 700               26   700
311          *
312          * DATA
313          *
314  1 523  X1ZONE DCW   @Z@                                             1  1484                      26
315  1 524  K1A    DCW   1                                                1  1485                      26
316  1 525  K3     DCW   3                                                1  1486                      26
317  1 526  KB     DCW   #1                                               1  1487                      26
318  1 556  STRTNG DCW   @STARTING ADDRESS OF STATEMENTS@                30  1517                      27
319  1 559  SEQ    DCW   @SEQ@                                            3  1520                      27
320  1 575  STRTA  DCW   @STARTING ADDRESS@                             16  1536                      28
321  1 582  DISPLA DCW   @DISPLAY@                                        7  1543                      28
322  1 585  * K000    DCW  000  MOVED TO PHASE 49
323  1 594  GMWM   DCW   @}@                                             1  1544            GMARK     28
324                EX    BEGN47                                                 B /75                 29  1175
325          CLRME  CLRA  BEGN47,GMWM                                                    MACRO
             *      CLRA  CLRBOT,CLRTOP[,ORG,GMWMAD]                                     GEN
             *                                                                           GEN
             * CLEAR CORE AFTER A PHASE USING THE CLRTOP ADDRESS                         GEN
             *                                                                           GEN
326                ORG   201                                                      0201
             *                                                                           GEN
             * CLEAR DOWN TO CLRBOT & X00 THE EASY WAY                                   GEN
             *                                                                           GEN
327          CLRME  EQU   *&1                                                 0201       GEN
328          )0J005 CS    GMWM         CLEAR FROM CLRTOP                      4  0201  / V44       GEN     30  1544
329                 SBR   )0J005&3                                           4  0205  H 204       GEN     30   204
330                 SBR   )0L005&6                                           4  0209  H 250       GEN     30   250
331                 C     )0J005&3,)0M005   DOWN TO CLRBOT & X00?           7  0213  C 204 261   GEN     30   204     261
332                 BU    )0J005                                           5  0220  B 201 /     GEN     30   201
             *                                                                           GEN
             * NOW CLEAR DOWN TO CLRBOT THE HARD WAY                                     GEN
             *                                                                           GEN
333          )0K005 C     )0L005&6,)0N005                                  7  0225  C 250 264   GEN     30   250     264
334                 BU    )0L005                                           5  0232  B 244 /     GEN     30   244
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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR

335                 CS    LOADNX,)0Q005  LOAD THE NEXT BLOCK AT 1          7  0237  / 700 271   GEN     31   700     271
336         )0L005  LCA   )0P005,0-0     CLEAR WITH BLANK AND WORD MARK    7  0244  L 265 000   GEN     31   265     000
337                 SBR   )0L005&6                                         4  0251  H 250       GEN     31   250
338                 B     )0K005                                          4  0255  B 225       GEN     31   225
339         )0M005  DSA   )0R005         CLRBOT & X00 - 1                3  0261  /99         GEN     31  1199
340         )0N005  DSA   BEGN47         CLRBOT                          3  0264  /75         GEN     31  1175
341         )0P005  DCW   #1                                            1  0265              GEN     31
342                 DC    @CLRA @     IDENTIFY IN A DECK, TAPE, OR DUMP 5  0270              GEN     31
343         )0Q005  DCW   @}@                                           1  0271              GEN     32
344                 ORG   BEGN47&X00                                                1200
345         )0R005  EQU   *           CLRBOT & X00 - 1                      1199              GEN
346                 XFR   CLRME                                                   B 201               33   201
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J005	0201: 0	)0K005	0225: 0	)0L005	0244: 0	)0M005	0261: 0	)0N005	0264: 0	)0P005	0265: 0
)0Q005	0271: 0	)0R005	1199: 0	)6J004	0110: 0	)6K004	0700: 0	)6L004	0704: 0	)6M004	0728: 0
)9J004	0253: 0	)9R004	0257: 0	ADR5	0896: 0	ADR5B	0891: 0	AZONES	1134: 0	BEGIN3	0838: 0
BEGN47	1175: 0	CDOVLY	0700: 0	CLRME	0201: 0	CONV35	0969: 0	CONV3X	1021: 0	CONV53	0929: 0
CONV5X	0965: 0	DISPLA	1543: 0	DOCNT	0151: 0	ERROR2	1174: 0	FINDGM	1052: 0	FINDGX	1088: 0
FLAG	0884: 0	GMWM	1544: 0	HALT	1122: 0	HAVE	1292: 0	K002	1138: 0	K1	1135: 0
K1A	1485: 0	K3	1486: 0	K5B	1131: 0	KB	1487: 0	LOADAD	0838: 0	LOADNX	0700: 0
MORE	1064: 0	NEXT	0850: 0	NOT	1361: 0	NOZONE	1126: 0	NSTMTS	0183: 0	NSX3	1207: 0
PHAS47	0201: 0	PHASLD	0381: 0	SEQ	1520: 0	SEQNO	0865: 0	SNAPEX	0564: 0	SNAPSH	0333: 0
SORTAB	2499: 0	STRTA	1536: 0	STRTNG	1517: 0	SX2	0853: 0	SX3A	0844: 0	SX3B	0856: 0
TABBOT	0847: 0	TABEL	2499: 0	TIMES6	0875: 0	TOOBIG	1092: 0	TOP3	2600: 0	TOPA	0841: 0
TOPB	0883: 0	TOPC	0862: 0	TOPC5	0870: 0	TPERR	0728: 0	TPREAD	0704: 0	TSTZON	1014: 0
W1	0838: 0	W3	0859: 0	W5	0880: 0	X1	0089: 0	X1ZONE	1484: 0	X2	0094: 0
X3	0099: 0	ZONES	0898: 0	ZONTST	0886: 0						

UNREFERENCED SYMBOLS

FLAG NEXT PHASLD SEQNO SNAPEX SX2 SX3A TOP3 TPERR TPREAD W3