```
CLEAR STORAGE 1     ,008015,022026,030037,044,049,053053N000000N00001026                                    1
CLEAR STORAGE 2     L068116,105106,110117B101/I9I#071029C029056B026/B001/0991,001/001117I0?                  2
BOOTSTRAP           ,008015,022029,036040,047054,061068,072/061039              ,0010011040                  3

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

 101                JOB   FORTRAN COMPILER -- INPUT/OUTPUT ONE -- PHASE 32
 102                CTL   6611
 103         *
 104         * THE LINKAGE TO THE OBJECT FORMAT ROUTINE FROM THE INPUT-OUTPUT
 105         * STATEMENTS IS GENERATED IN-LINE.
 106         *
 107         * ON ENTRY, X1 IS THE TOP OF STATEMENTS, AND X3 IS ONE BELOW
 108         * THE LABEL TABLE AT THE TOP OF CORE.
 109         *
 110         X1     EQU   89                                                      0089
 111         X2     EQU   94                                                      0094
 112         X3     EQU   99                                                      0099
 113         *
 114         * STUFF IN THE RESIDENT AREA
 115         *
 116         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                       0110
 117         GLOBER EQU   184  GLOBAL ERROR FLAG -- WM MEANS ERROR                0184
 118         SNAPSH EQU   333  CORE DUMP SNAPSHOT                                 0333
 119         LOADNX EQU   700  LOAD NEXT OVERLAY                                  0700
 120         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                      0707
 121         CDOVLY EQU   769  1 IF RUNNING FROM CARDS, N IF FROM TAPE            0769
 122         *
 123         BOTFMT EQU   154  BOTTOM OF FORMAT STRINGS OR NUMBER TABLE - 1       0154
 124         *
 125                ORG   838                                                            0838
 126    838  BEGINN SW    GM                                                   4  0838  , W27                4
 127    842  LOOP   BCE   OTHER,0&X1,                                          8  0842  B 886 0|0            4
 128    850         LCA   0&X1,CODADR                                          7  0850  L 0|0 W49            4
 129    857         CW    FLAG                                                 4  0857  ) X57                4
 130    861         SW    CODADR-3                                             4  0861  , W46                4
 131    865         MCW   CODADR-3,*&8                                         7  0865  M W46 879            4
 132    872         BCE   INTRST,STMTS,0                                       8  0872  B |12 W56 0          5
 133    880         CHAIN 6                                                                        MACRO
 134                BCE                                                        1  0880  B           GEN      5
 135                BCE                                                        1  0881  B           GEN      5
 136                BCE                                                        1  0882  B           GEN      5
 137                BCE                                                        1  0883  B           GEN      5
 138                BCE                                                        1  0884  B           GEN      5
 139                BCE                                                        1  0885  B           GEN      5
 140         *
 141         * CLEAR FROM 0&X3 DOWN TO TOP OF CODE & X00
 142         *
 143    886  OTHER  SBR   X1,1&X1                                              7  0886  H 089 0|1            6
 144    893         MZ    X3,K999X3                                            7  0893  Y 099 W16            6
 145    900         MZ                                                         1  0900  Y                    6
 146    901         MCW                                                        1  0901  M                    6
 147    902         MZ    X1,K999X1                                            7  0902  Y 089 W19            6
```

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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
148    909         MZ                                                1  0909  Y                    6
149    910         MCW                                               1  0910  M                    6
150    911         C     K999X3,K999X1                               7  0911  C W16 W19            7
151    918         BE    CLRX                                        5  0918  B 943 S              7
152    923  CLRL   CS    0&X3                                        4  0923  / 0?0                7
153    927         SBR   CLRL&3                                     4  0927  H 926                7
154    931         C     CLRL&3,K999X1                               7  0931  C 926 W19            7
155    938         BU    CLRL                                        5  0938  B 923 /              7
156    943  CLRX   MCW   K999X1,X2                                   7  0943  M W19 094            7
157         *
158         * CLEAR FROM TOP OF CODE & X00 DOWN TO TOP OF CODE
159         *
160    950  CLRL2  C     X2,X1                                       7  0950  C 094 089            8
161    957         BE    CLRX2                                       5  0957  B 981 S              8
162    962         LCA   KB1,0&X2                                    7  0962  L X11 0!0            8
163    969         CW    0&X2                                        4  0969  ) 0!0                8
164    973         SAR   X2                                          4  0973  Q 094                8
165    977         B     CLRL2                                       4  0977  B 950                8
166         *
167         * LOAD NEXT OVERLAY
168         *
169    981  CLRX2  MN    0&X1                                        4  0981  D 0|0                8
170    985         SAR   X1                                          4  0985  Q 089                9
171    989         BSS   SNAPSH,C                                    5  0989  B 333 C              9
172    994         SBR   CLEARL&3,GMWM                               7  0994  H 710 X58            9
173  1 001         LCA   ARITH1,PHASID                               7  1001  L W65 110            9
174  1 008         B     LOADNX                                      4  1008  B 700                9
175         *
176         * INTERESTING STATEMENT -- ONE CONTAINING A FORMAT REFERENCE
177         *
178  1 012  INTRST SW    CODADR-2                                    4  1012  , W47                9
179  1 016         MCW   KLESS,2&X1                                  7  1016  M W66 0|2            9
180  1 023         SBR   CHECK&6,2&X1                               7  1023  H T55 0|2           10
181  1 030         C     0&X1  GET TO TOP                            4  1030  C 0|0               10
182  1 034         SAR   X1      OF STATEMENT BODY                   4  1034  Q 089               10
183  1 038         LCA   CODADR,0&X3  MOVE UP CODE AND ADDRESS       7  1038  L W49 0?0           10
184  1 045         LCA   GM             AND PUT A GMWM BELOW IT      4  1045  L W27               10
185  1 049         SBR   X3                                          4  1049  H 099               10
186  1 053         CW    2&X3         UNDER STATEMENT CODE           4  1053  ) 0?2               10
187  1 057         BWZ   NOFMT,CODADR-1,B                           8  1057  V U39 W48 B         11
188  1 065         BCE   RWTP,CODADR-3,1    READ TAPE                8  1065  B /16 W46 1         11
189  1 073         BCE   RWTP,CODADR-3,3    WRITE TAPE               8  1073  B /16 W46 3         11
190  1 081         BCE   RDPRPU,CODADR-3,L  READ                     8  1081  B V32 W46 L         11
191  1 089         BCE   RDPRPU,CODADR-3,P  PRINT                    8  1089  B V32 W46 P         12
192  1 097         BCE   RDPRPU,CODADR-3,U  PUNCH                    8  1097  B V32 W46 U         12
193  1 105         MCW   0&X1,FORMAT        READ/WRITE INPUT/OUTPUT TAPE 7  1105  M 0|0 W44         12
194  1 112         SAR   X1                                          4  1112  Q 089               12
195  1 116  RWTP   MCW   0&X1,TAPVAR  TAPE VARIABLE OR CONSTANT      7  1116  M 0|0 W38           12
196  1 123         SAR   X1                                          4  1123  Q 089               12
197  1 127         MCW   0&X1,IOLSTG  I/O LIST AND GMWM              7  1127  M 0|0 W35           13
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
198  1 134         BCE   CONST,IOLSTG-1,}  TAPE NUMBER CONST WITH I/O LIST      8  1134  B T91 W34 } GMARK   13
199  1 142         BCE   CONST,TAPVAR-1,}  TAPE NUMBER CONST, NO I/O LIST      8  1142  B T91 W37 } GMARK   13
200  1 150         MN    K1,TAPCON                                            7  1150  D W67 X10           13
201  1 157         BCE   VARNOL,IOLSTG,}   TAPE NUMBER VAR, NO I/O LIST       8  1157  B U28 W35 } GMARK   13
202  1 165  RWTP2  MCW   0&X1,IOLIST                                          7  1165  M 0|0 W41           14
203  1 172         SAR   X1                                                   4  1172  Q 089               14
204  1 176  RWTP3  LCA   IOLIST,0&X3                                         7  1176  L W41 0?0           14
205  1 183         SBR   X3                                                   4  1183  H 099               14
206  1 187         LCA   FORMAT,0&X3                                        7  1187  L W44 0?0           14
207  1 194         SBR   X3                                                   4  1194  H 099               14
208  1 198         LCA   TAPCON,0&X3                                        7  1198  L X10 0?0           15
209  1 205         LCA   DOIO&3  LOAD BRANCH TO START I/O ROUTINE             4  1205  L W31               15
210  1 209         SBR   X3                                                   4  1209  H 099               15
211  1 213         BCE   GOTZON,CODADR-3,L  READ                            8  1213  B S82 W46 L         15
212  1 221         BCE   GOTZON,CODADR-3,P  PRINT                           8  1221  B S82 W46 P         15
213  1 229         BCE   GOTZON,CODADR-3,U  PUNCH                           8  1229  B S82 W46 U         15
214  1 237         BCE   GOTZON,CODADR-3,1  READ TAPE                       8  1237  B S82 W46 1         16
215  1 245         MZ    AZONE,5&X3                                         7  1245  Y W68 0?5           16
216  1 252         BCE   GOTZON,CODADR-3,3  WRITE TAPE                      8  1252  B S82 W46 3         16
217  1 260         MZ    BZONE,5&X3                                         7  1260  Y W69 0?5           16
218  1 267         BCE   GOTZON,CODADR-3,5  READ INPUT TAPE                 8  1267  B S82 W46 5         16
219  1 275         MZ    ABZONE,5&X3                                        7  1275  Y W70 0?5           17
220  1 282  GOTZON BW    NOVAR,FLAG                                         8  1282  V T23 X57 1         17
221  1 290         BWZ   NOVAR,TAPVAR-1,2                                   8  1290  V T23 W37 2         17
222  1 298         MCW   TAPVAR,MN-3                                        7  1298  M W38 W23           17
223  1 305         MZ    KB1,MN-4  CLOBBER INTEGER ZONE TAG                 7  1305  Y X11 W22           17
224  1 312         LCA   MN,0&X3                                           7  1312  L W26 0?0           18
225  1 319         SBR   X3                                                 4  1319  H 099               18
226  1 323  NOVAR  MCW   KB3,IOLSTG                                  V3M4    7  1323  M W73 W35           18
227  1 330         LCA   GM,0&X3                                     V3M4    7  1330  L W27 0?0           18
228  1 337         SBR   X3                                                 4  1337  H 099               18
229  1 341         C     0&X1                                               4  1341  C 0|0               18
230  1 345         SAR   X1                                                 4  1345  Q 089               18
231  1 349  CHECK  BCE   LOOP,0,<  LESS SIGN MEANS CODE NOT CLOBBERED YET    8  1349  B 842 000 <         19
232         *
233         * PROGRAM TOO BIG
234         *
235  1 357         CS    332                                                4  1357  / 332               19
236  1 361         CS                                                       1  1361  /                   19
237  1 362         CC    1                                                  2  1362  F 1                 19
238  1 364         MCW   ERROR2,270                                         7  1364  M X09 270           19
239  1 371         W                                                        1  1371  2                   19
240  1 372         CC    1                                                  2  1372  F 1                 19
241  1 374         BCE   HALT,CDOVLY,1                                     8  1374  B T87 769 1         20
242  1 382         RWD   1                                                  5  1382  U %U1 R             20
243  1 387  HALT   H     HALT                                               4  1387  . T87               20
244         *
245         * TAPE NUMBER IS A CONSTANT
246         *
247  1 391  CONST  MN    TAPVAR,TAPCON                                      7  1391  D W38 X10           20
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
248  1 398          SW    FLAG                                        4 1398  , X57               20
249  1 402          BCE   CONST2,TAPVAR-1,}                          8 1402  B U21 W37 } GMARK   20
250  1 410          SBR   X1,2&X1                                     7 1410  H 089 0|2           21
251  1 417          B     RWTP2                                       4 1417  B /65               21
252  1 421  CONST2  SBR   X1,1&X1                                     7 1421  H 089 0|1           21
253          *
254          * TAPE IS VARIABLE, BUT THERE IS NO LIST
255          *
256  1 428  VARNOL  MCW   BOTFMT,IOLIST                               7 1428  M 154 W41           21
257  1 435          B     RWTP3                                       4 1435  B /76               21
258          *
259          * NO FORMAT
260          *
261  1 439  NOFMT   MZ    KB1,3&X3                                    7 1439  Y X11 0?3           21
262  1 446          MCW   4&X3,SEQNO                                  7 1446  M 0?4 X14           22
263  1 453          BWZ   *&5,SEQNO,2                                 8 1453  V U65 X14 2         22
264  1 461          B     *&9                                         4 1461  B U73               22
265  1 465          BWZ   NOFMTM,SEQNO-2,2                           8 1465  V U87 X12 2         22
266  1 473          MCW   SEQNO,*&4                                   7 1473  M X14 U83           22
267  1 480          MCW   0,SEQNO                                    7 1480  M 000 X14           23
268  1 487  NOFMTM  CS    332                                         4 1487  / 332               23
269  1 491          CS                                                1 1491  /                   23
270  1 492          SW    GLOBER                                      4 1492  , 184               23
271  1 496          MN    SEQNO,242                                   7 1496  D X14 242           23
272  1 503          MN                                                1 1503  D                   23
273  1 504          MN                                                1 1504  D                   23
274  1 505          MCW   ERR22                                      4 1505  M X53               24
275  1 509          W                                                 1 1509  2                   24
276  1 510          BCV   *&5                                        5 1510  B V19 @             24
277  1 515          B     *&3                                         4 1515  B V21               24
278  1 519          CC    1                                           2 1519  F 1                 24
279  1 521          MZ    *-4,CODADR-1                                7 1521  Y V23 W48           24
280  1 528          B     RWTP                                        4 1528  B /16               24
281          *
282          * READ, PRINT, PUNCH
283          *
284  1 532  RDPRPU  MCW   0&X1,FORMAT                                 7 1532  M 0|0 W44           25
285  1 539          SAR   X1                                          4 1539  Q 089               25
286  1 543          MCW   BOTFMT,IOLIST                               7 1543  M 154 W41           25
287  1 550          BCE   RDPRP2,0&X1,}                              8 1550  B V69 0|0 } GMARK   25
288  1 558          MCW   0&X1,IOLIST                                7 1558  M 0|0 W41           25
289  1 565          SAR   X1                                          4 1565  Q 089               25
290  1 569  RDPRP2  MCW   RDUNIT,TAPCON  ASSUME READ                 7 1569  M X54 X10           26
291  1 576          BCE   RDPRP3,CODADR-3,L  READ                   8 1576  B W06 W46 L         26
292  1 584          MCW   PUUNIT,TAPCON  ASSUME PUNCH                7 1584  M X55 X10           26
293  1 591          BCE   RDPRP3,CODADR-3,U  PUNCH                  8 1591  B W06 W46 U         26
294  1 599          MCW   PRUNIT,TAPCON                              7 1599  M X56 X10           26
295  1 606  RDPRP3  SW    FLAG                                        4 1606  , X57               27
296  1 610          B     RWTP3                                       4 1610  B /76               27
297          *
```

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

298         * DATA
299         *
300  1 616  K999X3 DSA   999                                               3  1616  999                 27
301  1 619  K999X1 DSA   999                                               3  1619  999                 27
302  1 626  MN     DCW   @DXXX0?5@                                         7  1626                      27
303  1 627  GM     DC    @}@                                               1  1627              GMARK   27
304  1 628  DOIO   B     1697  ENTRY FOR I/O ROUTINE                       4  1628  B W97               27
305  1 635  IOLSTG DCW   #4                                                4  1635                      27
306  1 638  TAPVAR DCW   #3  TAPE VARIABLE OR CONSTANT                     3  1638                      28
307  1 641  IOLIST DCW   000                                               3  1641                      28
308  1 644  FORMAT DCW   000                                               3  1644                      28
309  1 649  CODADR DCW   #5  GM, STATEMENT CODE, ADDRESS                   5  1649                      28
310  1 656  STMTS  DCW   @1356LPU@  CODES FOR STATEMENTS WITH FORMATS      7  1656                      28
311  1 665  ARITH1 DCW   @ARITH ONE@                                       9  1665                      28
312  1 666  KLESS  DCW   @<@                                               1  1666                      28
313  1 667  K1     DCW   1                                                 1  1667                      29
314  1 668  AZONE  DCW   @S@                                               1  1668                      29
315  1 669  BZONE  DCW   @K@                                               1  1669                      29
316  1 670  ABZONE DCW   @B@                                               1  1670                      29
317  1 673  KB3    DCW   #3                                                3  1673                      29
318  1 709  ERROR2 DCW   @MESSAGE 2 - OBJECT PROGRAM TOO LARGE@           36  1709                      30
319  1 710  TAPCON DCW   #1  TAPE NUMBER CONSTANT                          1  1710                      30
320  1 711  KB1    DCW   #1                                                1  1711                      30
321  1 714  SEQNO  DCW   #3                                                3  1714                      31
322  1 753  ERR22  DCW   @ERROR 22 - UNDEFINED FORMAT, STATEMENT @        39  1753                      32
323  1 754  RDUNIT DCW   @&@  READ UNIT                                    1  1754                      33
324  1 755  PUUNIT DCW   @-@  PUNCH UNIT                                   1  1755                      33
325  1 756  PRUNIT DCW   @*@  PRINT UNIT                                   1  1756                      33
326  1 757  FLAG   DCW   #1                                                1  1757                      33
327  1 758  GMWM   DCW   @}@                                               1  1758              GMARK   33
328         EX    BEGINN                                                        B 838                     34
329         END                                                                 / 000 080
```

| SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS | SYMBOL | ADDRESS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABZONE | 1670 | ARITH1 | 1665 | AZONE | 1668 | BEGINN | 838 | BOTFMT | 154 | BZONE | 1669 | CDOVLY | 769 |
| CHECK | 1349 | CLEARL | 707 | CLRL | 923 | CLRL2 | 950 | CLRX | 943 | CLRX2 | 981 | CODADR | 1649 |
| CONST | 1391 | CONST2 | 1421 | DOIO | 1628 | ERR22 | 1753 | ERROR2 | 1709 | FLAG | 1757 | FORMAT | 1644 |
| GLOBER | 184 | GM | 1627 | GMWM | 1758 | GOTZON | 1282 | HALT | 1387 | INTRST | 1012 | IOLIST | 1641 |
| IOLSTG | 1635 | K1 | 1667 | K999X1 | 1619 | K999X3 | 1616 | KB1 | 1711 | KB3 | 1673 | KLESS | 1666 |
| LOADNX | 700 | LOOP | 842 | MN | 1626 | NOFMT | 1439 | NOFMTM | 1487 | NOVAR | 1323 | OTHER | 886 |
| PHASID | 110 | PRUNIT | 1756 | PUUNIT | 1755 | RDPRP2 | 1569 | RDPRP3 | 1606 | RDPRPU | 1532 | RDUNIT | 1754 |
| RWTP | 1116 | RWTP2 | 1165 | RWTP3 | 1176 | SEQNO | 1714 | SNAPSH | 333 | STMTS | 1656 | TAPCON | 1710 |
| TAPVAR | 1638 | VARNOL | 1428 | X1 | 89 | X2 | 94 | X3 | 99 | | | | |