```
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

                          FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18                          PAGE    1

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

 101               JOB   FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18
 102               CTL   6611
 103         *
 104         * CONSTANTS IN THE SOURCE PROGRAM ARE NOTED AND NORMALIZED
 105         * AND/OR TRUNCATED.  THE ONLY WORD MARKS IN THE STATEMENT ARE
 106         * UNDER THE GROUP MARKS THAT SEPARATE PREFIX FROM BODY AND
 107         * ONE STATEMENT FROM ANOTHER.
 108         *
 109         X1     EQU   89                                                    0089
 110         X2     EQU   94                                                    0094
 111         X3     EQU   99                                                    0099
 112         *
 113         * ON ENTRY, X1 IS THE TOP OF CODE.
 114         *
 115         * ON EXIT, CODE IS MOVED UP TO THE TOP, 83 IS THE TOP OF
 116         * CODE, AND X2 IS ONE BELOW THE BOTTOM OF CODE.
 117         *
 118         * STUFF IN THE RESIDENT AREA
 119         *
 120         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                    0110
 121         GLOBER EQU   184  GLOBAL ERROR FLAG -- WM MEANS ERROR             0184
 122         SNAPSH EQU   333  CORE DUMP SNAPSHOT                              0333
 123         TOPCOR EQU   688  TOP CORE ADDRESS FROM PARAM CARD                0688
 124         IMOD   EQU   690  INTEGER MODULUS -- NUMBER OF DIGITS             0690
 125         MANTIS EQU   692  FLOATING POINT MANTISSA DIGITS                  0692
 126         LOADNX EQU   700  LOAD NEXT OVERLAY                               0700
 127         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                   0707
 128         CDOVLY EQU   769  1 IF RUNNING FROM CARDS, N IF FROM TAPE        0769
 129         LOADXX EQU   793  EXIT FROM OVERLAY LOADER                        0793
 130         *
 131               ORG   838                                                          0838
 132         LOADDD EQU   *&1          LOAD ADDRESS                            0838
 133    838  BEGINN CS    299                                               4  0838  / 299               4
 134    842         SW    GM                                                4  0842  , L49               4
 135    846         SW    200                                               4  0846  , 200               4
 136    850         MCW   TOPCOR,X2                                         7  0850  M 688 094            4
 137    857         MN    0&X2                                              4  0857  D 0!0               4
 138    861         MN                                                      1  0861  D                   4
 139    862         SAR   X2          TOPCOR-2                            4  0862  Q 094               4
 140    866         SBR   83          TOPCOR-2                            4  0866  H 083               5
 141    870         LCA   GM,1&X2     GMWM TO TOPCOR-1                    7  0870  L L49 0!1           5
 142    877  LOOP   BCE   DONE,0&X1,  BOTTOM OF STATEMENTS IF BLANK         8  0877  B J53 0|0           5
 143    885         MCW   0&X1,SEQCOD                                       7  0885  M 0|0 L53           5
 144    892         LCA   0&X1,PREFIX                                       7  0892  L 0|0 L63           5
 145    899         SAR   X1                                                4  0899  Q 089               5
 146    903         SBR   SX1                                               4  0903  H L66               6
 147    907         SBR   SX2,0&X2                                          7  0907  H L69 0!0           6
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD

148    914          LCA   PREFIX,0&X2  MOVE PREFIX UP                        7  0914  L L63 0!0           6
149    921          SBR   X2                                                 4  0921  H 094               6
150    925          MCW   SEQCOD-3,*&8                                       7  0925  M L50 939           6
151    932          BCE   IO,CODES,0  INTERESTING STATEMENT?                 8  0932  B 972 L79 0         6
152    940          CHAIN 9                                                                MACRO
153                 BCE                                                      1  0940  B           GEN     6
154                 BCE                                                      1  0941  B           GEN     7
155                 BCE                                                      1  0942  B           GEN     7
156                 BCE                                                      1  0943  B           GEN     7
157                 BCE                                                      1  0944  B           GEN     7
158                 BCE                                                      1  0945  B           GEN     7
159                 BCE                                                      1  0946  B           GEN     7
160                 BCE                                                      1  0947  B           GEN     7
161                 BCE                                                      1  0948  B           GEN     8
162    949          LCA   0&X1,0&X2   MOVE STATEMENT BODY UP                 7  0949  L 0|0 0!0           8
163    956          SAR   X1                                                 4  0956  Q 089               8
164    960          C     0&X2                                               4  0960  C 0!0               8
165    964          SAR   X2                                                 4  0964  Q 094               8
166    968          B     LOOP                                               4  0968  B 877               8
167          *
168          * I/O, IF, DO, ARITHEMTIC STATEMENT
169          *
170    972  IO      SBR   X3,CODTAB-4                                        7  0972  H 099 L07           8
171    979          MCW   SEQCOD-3,*&8                                       7  0979  M L50 993           9
172    986  SEARCH  BCE   FOUND,4&X3,0                                       8  0986  B |02 0?4 0         9
173    994          SBR   X3                                                 4  0994  H 099               9
174    998          B     SEARCH                                             4  0998  B 986               9
175          *
176          * FOUND THE STATEMENT CODE IN CODTAB.  COPY THE INTERESTING
177          * PUNCTUATION AND THE COUNT TO PUNCNT.  THE PUNCTUATION
178          * MARK IS WHAT IS SOUGHT IN THE STATEMENT.  THE COUNT
179          * PART IS 2 MINUS THE NUMBER OF TIMES THE PUNCTUATION
180          * MARK MUST BE FOUND.  IT STARTS AT 0, 1 OR 2, AND IS
181          * INCREMENTED UNTIL IT IS 2.
182          *
183  1 002  FOUND   MCW   6&X3,PUNCNT                                        7  1002  M 0?6 L81           9
184  1 009          MCW   PUNCNT-1,SCHPUN&7                                  7  1009  M L80 |38           9
185  1 016  SCHCNT  BCE   FOUND2,PUNCNT,2  FOUND IT ENOUGH TIMES?           8  1016  B |67 L81 2        10
186  1 024          A     K1,PUNCNT                                          7  1024  A L82 L81          10
187  1 031  SCHPUN  BCE   GOTPUN,0&X1,0  FOUND THE DESIRED PUNCTUATION?     8  1031  B |55 0|0 0        10
188  1 039          BCE   FOUND2,0&X1,}  FOUND GM?                          8  1039  B |67 0|0 } GMARK  10
189  1 047          SBR   X1                                                 4  1047  H 089              10
190  1 051          B     SCHPUN  GO SEARCH FOR MORE PUNCTUATION             4  1051  B |31              10
191  1 055  GOTPUN  MN    0&X1                                               4  1055  D 0|0              11
192  1 059          SAR   X1                                                 4  1059  Q 089              11
193  1 063          B     SCHCNT  GO TEST HAVE WE SEEN IT ENOUGH TIMES?      4  1063  B |16              11
194  1 067  FOUND2  BWZ   NOZONE,0&X1,3  DIGIT OR GMWM?                      8  1067  V |91 0|0 3        11
195  1 075          SBR   X1                                                 4  1075  H 089              11
196  1 079          BCE   SWITCH,1&X1,$  SUBSCRIPT?                         8  1079  B /76 0|1 $        11
197  1 087          B     FOUND2                                             4  1087  B |67              11
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
198  1 091  NOZONE BCE   ENDSTM,0&X1,}  GM MEANS END OF STATEMENT              8  1091  B J95 0|0 } GMARK   12
199  1 099         SBR   X1                                                   4  1099  H 089              12
200  1 103         BCE   FOUND2,1&X1,#  ASSIGNMENT OPERATOR IS NOT A NUMBER   8  1103  B |67 0|1 #        12
201  1 111         BCE   FOUND2,1&X1,@  ATSIGN IS NOT A NUMBER               8  1111  B |67 0|1 @        12
202  1 119         MCW   2&X1,BEFORE                                          7  1119  M 0|2 L48          12
203  1 126         MCW        AT                                              1  1126  M                  12
204  1 127         MCW        AFTER                                           1  1127  M                  12
205  1 128         SAR   X1                                                   4  1128  Q 089              13
206  1 132         MCW   BEFORE,*&8                                          7  1132  M L48 /46          13
207  1 139         BCE   FOUND3,OPPUN,0  CHAR BEFORE IS OPERATOR OR PUNCT?   8  1139  B S16 L93 0        13
208  1 147         CHAIN 10                                                                MACRO
209                BCE                                                       1  1147  B                  GEN     13
210                BCE                                                       1  1148  B                  GEN     13
211                BCE                                                       1  1149  B                  GEN     13
212                BCE                                                       1  1150  B                  GEN     13
213                BCE                                                       1  1151  B                  GEN     14
214                BCE                                                       1  1152  B                  GEN     14
215                BCE                                                       1  1153  B                  GEN     14
216                BCE                                                       1  1154  B                  GEN     14
217                BCE                                                       1  1155  B                  GEN     14
218                BCE                                                       1  1156  B                  GEN     14
219  1 157         BCE   ENDSTM,1&X1,}                                       8  1157  B J95 0|1 } GMARK   14
220  1 165  BACKSP SBR   X1,1&X1                                             7  1165  H 089 0|1          15
221  1 172         B     FOUND2                                              4  1172  B |67              15
222         *
223         * SUBSCRIPT BEGIN
224         *
225  1 176  SWITCH NOP   UNSW                                               4  1176  N /98              15
226  1 180         MCW   BRANCH,SWITCH                                       7  1180  M L94 /76          15
227  1 187         MCW   KB1,SWICH3&4  SET TO UNCONDITIONAL BRANCH           7  1187  M N04 !42          15
228  1 194         B     FOUND2                                              4  1194  B |67              15
229         *
230         * SUBSCRIPT END
231         *
232  1 198  UNSW   MCW   NOP,SWITCH                                          7  1198  M L95 /76          16
233  1 205         MCW   UNEQ,SWICH3&4  SET TO BRANCH UNEQUAL                7  1205  M L96 !42          16
234  1 212         B     FOUND2                                              4  1212  B |67              16
235         *
236         * FOUND A DIGIT PRECEDED BY AN OPERATOR OR PUNCTUATION IN OPPUN
237         *
238  1 216  FOUND3 BCE   DECMAL,3&X1,.  3&X1 = BEFORE                        8  1216  B K32 0|3 .        16
239  1 224         MCW   AFTER,*&8                                           7  1224  M L46 S38          16
240  1 231         BCE   BACKSP,ATHRUR,0  ?A-I!J-R ?                         8  1231  B /65 M16 0        17
241  1 239         CHAIN 19                                                                MACRO
242                BCE                                                       1  1239  B                  GEN     17
243                BCE                                                       1  1240  B                  GEN     17
244                BCE                                                       1  1241  B                  GEN     17
245                BCE                                                       1  1242  B                  GEN     17
246                BCE                                                       1  1243  B                  GEN     17
247                BCE                                                       1  1244  B                  GEN     17
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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
248                 BCE                                                1  1245  B           GEN     18
249                 BCE                                                1  1246  B           GEN     18
250                 BCE                                                1  1247  B           GEN     18
251                 BCE                                                1  1248  B           GEN     18
252                 BCE                                                1  1249  B           GEN     18
253                 BCE                                                1  1250  B           GEN     18
254                 BCE                                                1  1251  B           GEN     18
255                 BCE                                                1  1252  B           GEN     19
256                 BCE                                                1  1253  B           GEN     19
257                 BCE                                                1  1254  B           GEN     19
258                 BCE                                                1  1255  B           GEN     19
259                 BCE                                                1  1256  B           GEN     19
260                 BCE                                                1  1257  B           GEN     19
261  1 258          BCE   TESTIF,3&X1,)                                8  1258  B J83 0|3 )         19
262  1 266  MARK    SW    3&X1  WM ABOVE FIELD                          4  1266  , 0|3               20
263  1 270          MCW   SX1,X3                                       7  1270  M L66 099           20
264  1 277          LCA   0&X3,0&X2  MOVE UP STUFF ABOVE FIELD         7  1277  L 0?0 0!0           20
265  1 284          SBR   X2                                          4  1284  H 094               20
266  1 288          MCW   KLESS,3&X1                                  7  1288  M M17 0|3           20
267  1 295          SBR   TLESS&6,3&X1                               7  1295  H J17 0|3           20
268  1 302          CW    1&X2                                        4  1302  ) 0!1               21
269  1 306          LCA   KUNDER,0&X2  MARK TOP OF CONSTANT           7  1306  L M18 0!0           21
270  1 313          SBR   X2                                          4  1313  H 094               21
271  1 317          CW    1&X2                                        4  1317  ) 0!1               21
272  1 321          CW    FLAG                                        4  1321  ) N44               21
273  1 325          S     EXP                                         4  1325  S M20               21
274  1 329          S     SIGWID                                      4  1329  S M23               21
275  1 333          S     NLZ                                         4  1333  S M28               22
276  1 337          MCW   SW,SWNOP                                   7  1337  M M24 K64           22
277  1 344          MCW   NOP,ASN2                                   7  1344  M L95 T90           22
278  1 351          MCW   BRANCH,SWICH2                              7  1351  M L94 U04           22
279  1 358          SBR   MAN&3,ADD                                   7  1358  H K75 L41           22
280  1 365          SBR   MSN&3,SUB                                   7  1365  H K46 L42           22
281  1 372          SBR   X1,2&X1                                     7  1372  H 089 0|2           23
282  1 379  ZSCAN   MCW   0&X1,AT                                     7  1379  M 0|0 L47           23
283  1 386          SAR   X1                                          4  1386  Q 089               23
284  1 390  ASN2    NOP   KP1,EXP  ADD, SUB OR NOP                   7  1390  N M25 M20           23
285  1 397          A     KP1,NLZ                                     7  1397  A M25 M28           23
286  1 404  SWICH2  BCE   ZSCAN,AT,0                                  8  1404  B T79 L47 0         24
287  1 412          BCE   MSN,AT,.                                    8  1412  B K43 L47 .         24
288  1 420          BCE   MAN,SWICH2,B                               8  1420  B K72 U04 B         24
289  1 428          A     KP1,SIGWID                                  7  1428  A M25 M23           24
290  1 435  TSTASG  BCE   KLEFT,AT,#  CONSTANT ON LEFT SIDE OF EQUAL SIGN  8  1435  B X20 L47 #         24
291  1 443          BCE   *&9,AT,@    ORIGINALLY SLASH IN INPUT?      8  1443  B U59 L47 @         25
292  1 451          BWZ   ZSCAN,AT,2                                  8  1451  V T79 L47 2         25
293  1 459          C     MAN&3,ANOP                                  7  1459  C K75 L45           25
294  1 466          BU    GOTIK                                       5  1466  B Z31 /             25
295  1 471          BWZ   *&8,EXP,B                                   8  1471  V U86 M20 B         25
296  1 479          A     KP1,EXP                                     7  1479  A M25 M20           26
297  1 486          SW    2&X1                                        4  1486  , 0|2               26
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SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
298  1 490          BCE   DEC2,2&X1,.                                         8  1490  B Y22 0|2 .          26
299  1 498  DECBAK  BCE   GOTEXP,AT,E                                         8  1498  B Y37 L47 E          26
300  1 506  EXPBAK  C     NLZ,KP01                                            7  1506  C M28 M30            26
301  1 513          NOP   SYNTAX                                             4  1513  N X84                26
302  1 517          NOP                                                       1  1517  N                    26
303  1 518          C     SIGWID,KPZ3                                         7  1518  C M23 M33            27
304  1 525          BU    GOTFPK                                              5  1525  B V49 /              27
305  1 530  SYNBAK  LCA   K15K,0&X2                                          7  1530  L M36 0!0            27
306  1 537          SBR   X2                                                  4  1537  H 094                27
307  1 541          CW    1&X2                                                4  1541  ) 0!1                27
308  1 545          B     TLESSX                                              4  1545  B J00                27
309          *
310          * FOUND A FLOATING-POINT CONSTANT
311          *
312  1 549  GOTFPK  MCW   X1,SX1A                                            7  1549  M 089 M39            27
313  1 556          BW    *&8,FLAG                                            8  1556  V V71 N44 1          28
314  1 564          LCA   0&X3,1&X3                                           7  1564  L 0?0 0?1            28
315  1 571          MCW   SX1B,X1                                             7  1571  M M42 089            28
316  1 578          MCW   MANTIS,WIDTH                                        7  1578  M 692 M44            28
317  1 585          A     KP2,WIDTH                                           7  1585  A M45 M44            28
318  1 592          SBR   X3,198                                             7  1592  H 099 198            29
319  1 599          SW    200                                                 4  1599  , 200                29
320  1 603  FLOOP   MCW   0&X1,AT  USE THE                                    7  1603  M 0|0 L47            29
321  1 610          SAR   X1         PRINT AREA                               4  1610  Q 089                29
322  1 614          MCW   AT,2&X3      TO REVERSE                            7  1614  M L47 0?2            29
323  1 621          SBR   X3             THE CONSTANT                        4  1621  H 099                29
324  1 625          BW    FINFK,1&X1       TO CORRECT                        8  1625  V W52 0|1 1          30
325  1 633          S     KP1,WIDTH          ORDER                           7  1633  S M25 M44            30
326  1 640          C     WIDTH,KP00                                          7  1640  C M44 M47            30
327  1 647          BU    FLOOP                                               5  1647  B W03 /              30
328  1 652  FINFK   SBR   X3,1&X3  FINISHED WITH FLOATING POINT CONSTANT      7  1652  H 099 0?1            30
329  1 659  SKIP0   BCE   *&5,0&X3,0                                          8  1659  B W71 0?0 0          31
330  1 667          B     NOT0                                                4  1667  B W83                31
331  1 671          MN    0&X3                                                4  1671  D 0?0                31
332  1 675          SAR   X3                                                  4  1675  Q 099                31
333  1 679          B     SKIP0                                               4  1679  B W59                31
334  1 683  NOT0    MN    0&X3                                                4  1683  D 0?0                31
335  1 687          SAR   X3                                                  4  1687  Q 099                31
336  1 691          MCW   EXP,3&X3   MOVE EXPONENT                           7  1691  M M20 0?3            32
337  1 698          MZ    ADD2,1&X3  ZONE FOR MANTISSA                       7  1698  Y M48 0?1            32
338  1 705          LCA   3&X3,0&X2                                          7  1705  L 0?3 0!0            32
339  1 712          SBR   X2                                                  4  1712  H 094                32
340  1 716          B     KFIN                                                4  1716  B !89                32
341          *
342          * CONSTANT ON LEFT SIDE OF EQUAL SIGN
343          *
344  1 720  KLEFT   CS    332                                                 4  1720  / 332                32
345  1 724          CS                                                        1  1724  /                    32
346  1 725          SW    GLOBER                                              4  1725  , 184                33
347  1 729          MN    SEQCOD,256                                          7  1729  D L53 256            33
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
348  1 736         MN                                                    1  1736  D                   33
349  1 737         MN                                                    1  1737  D                   33
350  1 738         MCW   KLM1                                          4  1738  M M70               33
351  1 742         MCW   KLM2                                          4  1742  M N03               33
352  1 746         W                                                   1  1746  2                   33
353  1 747         BCV   *&5                                          5  1747  B X56 @             34
354  1 752         B     *&3                                          4  1752  B X58               34
355  1 756         CC    1                                            2  1756  F 1                 34
356  1 758         MCW   SX2,X2                                       7  1758  M L69 094           34
357  1 765         MCW   KB1,0&X2                                     7  1765  M N04 0!0           34
358  1 772         C     0&X1                                         4  1772  C 0|0               34
359  1 776         SAR   X1                                           4  1776  Q 089               34
360  1 780         B     LOOP                                         4  1780  B 877               35
361         *
362         * SYNTAX ERROR FOR CONSTANT
363         *
364  1 784  SYNTAX CS    332                                          4  1784  / 332               35
365  1 788         CS                                                 1  1788  /                   35
366  1 789         SW    GLOBER                                       4  1789  , 184               35
367  1 793         MN    SEQCOD,241                                   7  1793  D L53 241           35
368  1 800         MN                                                 1  1800  D                   35
369  1 801         MN                                                 1  1801  D                   35
370  1 802         MCW   ERR44                                        4  1802  M N42               36
371  1 806         W                                                  1  1806  2                   36
372  1 807         BCV   *&5                                          5  1807  B Y16 @             36
373  1 812         B     *&3                                          4  1812  B Y18               36
374  1 816         CC    1                                            2  1816  F 1                 36
375  1 818         B     SYNBAK                                       4  1818  B V30               36
376         *
377  1 822  DEC2   MCW   K0,2&X1                                      7  1822  M N43 0|2           36
378  1 829         SW    FLAG                                         4  1829  , N44               37
379  1 833         B     DECBAK                                       4  1833  B U98               37
380         *
381         * FLOATING-POINT EXPONENT
382         *
383  1 837  GOTEXP ZA    PZE,THEEXP                                   7  1837  ? N45 N47           37
384  1 844         BWZ   EXPNS,0&X1,2                                 8  1844  V Y63 0|0 2         37
385  1 852         MZ    0&X1,THEEXP  EXPONENT IS SIGNED              7  1852  Y 0|0 N47           37
386  1 859         SAR   X1                                           4  1859  Q 089               37
387  1 863  EXPNS  MN    0&X1                                         4  1863  D 0|0               37
388  1 867         SAR   X1                                           4  1867  Q 089               38
389  1 871         C     0&X1,Z                                       7  1871  C 0|0 N48           38
390  1 878         BL    EXP2                                         5  1878  B Y94 T             38
391  1 883         MN    1&X1,THEEXP                                  7  1883  D 0|1 N47           38
392  1 890         B     EXP3                                         4  1890  B Z12               38
393  1 894  EXP2   MN    1&X1,THEEXP-1                                7  1894  D 0|1 N46           38
394  1 901         MN    0&X1,THEEXP                                  7  1901  D 0|0 N47           39
395  1 908         SAR   X1                                           4  1908  Q 089               39
396  1 912  EXP3   A     THEEXP,EXP                                   7  1912  A N47 M20           39
397  1 919         MN    0&X1                                         4  1919  D 0|0               39
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SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD
398  1 923         SAR   X1                                                 4  1923  Q 089               39
399  1 927         B     EXPBAK                                             4  1927  B V06               39
400         *
401         * FOUND INTEGER CONSTANT
402         *
403  1 931  GOTIK  C     SIGWID,KPZ3                                        7  1931  C M23 M33           39
404  1 938         BU    I2                                                 5  1938  B Z62 /             40
405  1 943         LCA   KB0,0&X2  ZERO CONSTANT                            7  1943  L N50 0!0           40
406  1 950         SBR   X2                                                 4  1950  H 094               40
407  1 954         CW    1&X2                                               4  1954  ) 0!1               40
408  1 958         B     TLESSX                                             4  1958  B J00               40
409  1 962  I2     MCW   X1,SX1A                                            7  1962  M 089 M39           40
410  1 969         MCW   SX1B,X3                                           7  1969  M M42 099           40
411  1 976         SW    0&X3                                               4  1976  , 0?0               41
412  1 980         SBR   X3,299                                            7  1980  H 099 299           41
413  1 987         MCW   IMOD,WIDTH                                        7  1987  M 690 M44           41
414  1 994  ILOOP  MCW   2&X1,AT  MOVE UP                                  7  1994  M 0|2 L47           41
415  2 001         SAR   X1         CONSTANT,                             4  2001  Q 089               41
416  2 005         MCW   AT,0&X3      REVERSING DIGITS                    7  2005  M L47 0?0           41
417  2 012         SBR   X3             TO CORRECT                        4  2012  H 099               42
418  2 016         BW    FINIK,1&X1       ORDER                           8  2016  V !43 0|1 1         42
419  2 024         S     KP1,WIDTH                                          7  2024  S M25 M44           42
420  2 031         C     WIDTH,KP00                                         7  2031  C M44 M47           42
421  2 038  SWICH3 BU    ILOOP                                              5  2038  B Z94 /             42
422  2 043  FINIK  SW    1&X3  FINISHED WITH INTEGER CONSTANT               4  2043  , 0?1               42
423  2 047         LCA   299,0&X2                                           7  2047  L 299 0!0           43
424  2 054         SBR   X2                                                 4  2054  H 094               43
425  2 058         CW    1&X3                                               4  2058  ) 0?1               43
426  2 062         C     SIGWID,KP001                                       7  2062  C M23 N53           43
427  2 069         BU    KFIN                                               5  2069  B !89 /             43
428  2 074         CW    1&X2                                               4  2074  ) 0!1               43
429  2 078         LCA   KB1A,0&X2                                          7  2078  L N54 0!0           43
430  2 085         SBR   X2                                                 4  2085  H 094               44
431  2 089  KFIN   CW    1&X2  FINISHED WITH INTEGER OR FP CONSTANT          4  2089  ) 0!1               44
432  2 093         MCW   SX1A,X1                                           7  2093  M M39 089           44
433  2 100  TLESSX SBR   X1,1&X1                                           7  2100  H 089 0|1           44
434  2 107         SBR   SX1                                                4  2107  H L66               44
435  2 111  TLESS  BCE   FOUND2,0-0,<                                      8  2111  B |67 000 <         44
436         *
437         * PROGRAM IS TOO BIG
438         *
439  2 119         CS    332                                                4  2119  / 332               44
440  2 123         CS                                                       1  2123  /                   45
441  2 124         CC    1                                                  2  2124  F 1                 45
442  2 126         MCW   ERROR2,270                                         7  2126  M N90 270           45
443  2 133         W                                                        1  2133  2                   45
444  2 134         CC    1                                                  2  2134  F 1                 45
445  2 136         BCE   HALT,CDOVLY,1                                     8  2136  B J49 769 1         45
446  2 144         RWD   1                                                  5  2144  U %U1 R             45
447  2 149  HALT   H     HALT                                               4  2149  . J49               46
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

448         *
449         * DONE
450         *
451  2 153  DONE   BSS   SNAPSH,C                                    5  2153  B 333 C             46
452  2 158         SBR   LOADXX&3,849                                7  2158  H 796 849           46
453  2 165         SBR   CLEARL&3,GMWM                               7  2165  H 710 O01           46
454  2 172         LCA   CONST2,PHASID                              7  2172  L N99 110           46
455  2 179         B     LOADNX                                      4  2179  B 700               46
456         *
457         * CHECK FOR IF STATEMENT
458         *
459  2 183  TESTIF BCE   ENDSTM,SEQCOD-3,E  IF STATEMENT?           8  2183  B J95 L50 E         47
460  2 191         B     MARK                                        4  2191  B S66               47
461         *
462         * END OF STATEMENT.  MOVE IT UP
463         *
464  2 195  ENDSTM MCW   SX1,X3                                     7  2195  M L66 099           47
465  2 202         LCA   0&X3,0&X2                                 7  2202  L 0?0 0!0           47
466  2 209         SAR   X3                                        4  2209  Q 099               47
467  2 213         C     0&X2                                      4  2213  C 0!0               47
468  2 217         SAR   X2                                        4  2217  Q 094               47
469  2 221         MCW   X3,X1                                     7  2221  M 099 089           48
470  2 228         B     LOOP                                      4  2228  B 877               48
471         *
472         * FP CONSTANT BEGINNING WITH A DECIMAL POINT
473         *
474  2 232  DECMAL SBR   X1,1&X1                                    7  2232  H 089 0|1           48
475  2 239         B     MARK                                      4  2239  B S66               48
476         *
477         * DECIMAL POINT
478         *
479  2 243  MSN    MCW   SUB2,ASN2  MOVE SUB OR NOP                7  2243  M O00 T90           48
480  2 250         MCW   ANOP,MAN&3                                7  2250  M L45 K75           48
481  2 257         MCW   X1,X3                                     7  2257  M 089 099           49
482  2 264  SWNOP  SW    FLAG  EITHER SW OR NOP                    4  2264  , N44               49
483  2 268         B     ZSCAN                                     4  2268  B T79               49
484         *
485  2 272  MAN    MCW   ADD2,ASN2  MOVE ADD OR NOP                7  2272  M M48 T90           49
486  2 279         MCW   ANOP,MSN&3                                7  2279  M L45 K46           49
487  2 286         MCW   NOP,SWICH2                                7  2286  M L95 U04           49
488  2 293         SBR   SX1B,1&X1                                 7  2293  H M42 0|1           50
489  2 300         MCW   NOP,SWNOP                                 7  2300  M L95 K64           50
490  2 307         B     TSTASG                                    4  2307  B U35               50
491         *
492         * DATA
493         *
494         CODTAB EQU   *&1                                          2311
495  2 340         DCW   @R 2E 2D#1L,15,0U,1P,16,01,13,1@           30  2340                    51
496  2 341  ADD    A                                               1  2341  A                   51
497  2 342  SUB    S                                               1  2342  S                   51
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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
498  2 345  ANOP    DSA   NOP                                           3  2345  L95               51
499  2 346  AFTER   DCW   #1    CHAR AFTER DIGIT                        1  2346                    51
500  2 347  AT      DCW   #1    DIGIT                                   1  2347                    51
501  2 348  BEFORE  DCW   #1    CHAR BEFORE DIGIT                       1  2348                    51
502  2 349  GM      DC    @}@   GM                                      1  2349            GMARK   51
503  2 353  SEQCOD  DCW   #4    STATEMENT CODE, SEQUENCE NUMBER         4  2353                    52
504  2 363  PREFIX  DCW   #10   ENTIRE STATEMENT PREFIX                10  2363                    52
505  2 366  SX1     DCW   #3                                            3  2366                    52
506  2 369  SX2     DCW   #3                                            3  2369                    52
507  2 379  CODES   DCW   @UPL3165DER@  I/O, DO, IF, ARITH CODES       10  2379                    52
508  2 381  PUNCNT  DCW   #2                                            2  2381                    52
509  2 382  K1      DCW   1                                             1  2382                    52
510  2 393  OPPUN   DCW   @)}@.#%$,*-&@  OPERATORS AND PUNCTUATION     11  2393                    53
511  2 394  BRANCH  B                                                   1  2394  B                 53
512  2 395  NOP     NOP                                                 1  2395  N                 53
513  2 396  UNEQ    DCW   @/@  D-MODIFIER FOR UNEQUAL BRANCH           1  2396                    53
514  2 416  ATHRUR  DCW   @?ABCDEFGHI!JKLMNOPQR@                      20  2416                    53
515  2 417  KLESS   DCW   @<@                                           1  2417                    53
516  2 418  KUNDER  DCW   @_@                                           1  2418                    53
517  2 420  EXP     DCW   #2                                            2  2420                    54
518  2 423  SIGWID  DCW   #3  SIGNIFICANT WIDTH OF CONSTANT            3  2423                    54
519  2 424  SW      SW                                                  1  2424  ,                 54
520  2 425  KP1     DCW   &1                                            1  2425                    54
521  2 428  NLZ     DCW   #3  NUMBER OF LEADING ZEROS                   3  2428                    54
522  2 430  KP01    DCW   &01                                           2  2430                    54
523  2 433  KPZ3    DCW   &000                                          3  2433                    54
524  2 436  K15K    DSA   15000                                         3  2436  ?0?               55
525  2 439  SX1A    DCW   #3                                            3  2439                    55
526  2 442  SX1B    DCW   #3                                            3  2442                    55
527  2 444  WIDTH   DCW   #2  MANTIS OR IMOD                           2  2444                    55
528  2 445  KP2     DCW   &2                                            1  2445                    55
529  2 447  KP00    DCW   &00                                           2  2447                    55
530  2 448  ADD2    A                                                   1  2448  A                 55
531  2 470  KLM1    DCW   @EQUAL SIGN, STATEMENT @                     22  2470                    56
532  2 503  KLM2    DCW   @ERROR 41 - CONSTANT LEFT SIDE OF @          33  2503                    57
533  2 504  KB1     DCW   #1                                            1  2504                    57
534  2 542  ERR44   DCW   @ERROR 44 - CONSTANT SYNTAX, STATEMENT @     38  2542                    58
535  2 543  K0      DCW   0                                             1  2543                    58
536  2 544  FLAG    DCW   #1                                            1  2544                    59
537  2 545  PZE     DCW   &0                                            1  2545                    59
538  2 547  THEEXP  DCW   #2                                            2  2547                    59
539  2 548  Z       DCW   @Z@                                           1  2548                    59
540  2 550  KB0     DCW   @ 0@                                          2  2550                    59
541  2 553  KP001   DCW   &001                                         3  2553                    59
542  2 554  KB1A    DCW   #1                                            1  2554                    59
543  2 590  ERROR2  DCW   @MESSAGE 2 - OBJECT PROGRAM TOO LARGE@      36  2590                    60
544  2 599  CONST2  DCW   @CONST TWO@                                  9  2599                    61
545  2 600  SUB2    S                                                   1  2600  S                 61
546  2 601  GMWM    DCW   @}@                                           1  2601            GMARK   61
547             ORG   201                                                     0201
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

548    203         DSA   LOADDD    LOAD ADDRESS FOR CARD-TO-TAPE PROGRAM         3  0203  838               62
549                EX    BEGINN                                                       B 838               63
550                END                                                              / 000 080
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ADD	2341	ADD2	2448	AFTER	2346	ANOP	2345	ASN2	1390	AT	2347	ATHRUR	2416
BACKSP	1165	BEFORE	2348	BEGINN	838	BRANCH	2394	CDOVLY	769	CLEARL	707	CODES	2379
CODTAB	2311	CONST2	2599	DEC2	1822	DECBAK	1498	DECMAL	2232	DONE	2153	ENDSTM	2195
ERR44	2542	ERROR2	2590	EXP	2420	EXP2	1894	EXP3	1912	EXPBAK	1506	EXPNS	1863
FINFK	1652	FINIK	2043	FLAG	2544	FLOOP	1603	FOUND	1002	FOUND2	1067	FOUND3	1216
GLOBER	184	GM	2349	GMWM	2601	GOTEXP	1837	GOTFPK	1549	GOTIK	1931	GOTPUN	1055
HALT	2149	I2	1962	ILOOP	1994	IMOD	690	IO	972	K0	2543	K1	2382
K15K	2436	KB0	2550	KB1	2504	KB1A	2554	KFIN	2089	KLEFT	1720	KLESS	2417
KLM1	2470	KLM2	2503	KP00	2447	KP001	2553	KP01	2430	KP1	2425	KP2	2445
KPZ3	2433	KUNDER	2418	LOADDD	838	LOADNX	700	LOADXX	793	LOOP	877	MAN	2272
MANTIS	692	MARK	1266	MSN	2243	NLZ	2428	NOP	2395	NOT0	1683	NOZONE	1091
OPPUN	2393	PHASID	110	PREFIX	2363	PUNCNT	2381	PZE	2545	SCHCNT	1016	SCHPUN	1031
SEARCH	986	SEQCOD	2353	SIGWID	2423	SKIP0	1659	SNAPSH	333	SUB	2342	SUB2	2600
SW	2424	SWICH2	1404	SWICH3	2038	SWITCH	1176	SWNOP	2264	SX1	2366	SX1A	2439
SX1B	2442	SX2	2369	SYNBAK	1530	SYNTAX	1784	TESTIF	2183	THEEXP	2547	TLESS	2111
TLESSX	2100	TOPCOR	688	TSTASG	1435	UNEQ	2396	UNSW	1198	WIDTH	2444	X1	89
X2	94	X3	99	Z	2548	ZSCAN	1379						