```
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 -- ARITH PHASE ONE -- PHASE 33                          PAGE    1

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

 101               JOB   FORTRAN COMPILER -- ARITH PHASE ONE -- PHASE 33
 102               CTL   6611
 103         *
 104         * THIS IS A HOUSEKEEPING PHASE.  THE UNARY MINUS (NEGATE) AND
 105         * EXPONENTIATION OPERATORS ARE CHANGED TO UNIQUE ONE-CHARACTER
 106         * SYMBOLS (NEGATE BECOMES COMMA, EXPONENTIATE BECOMES DOT).
 107         * ERROR CHECKING ALSO TAKES PLACE.
 108         *
 109         * ON ENTRY, X1 IS THE TOP OF THE PREFIX OF CODE IN LOW CORE,
 110         * X2 IS X1&1, AND X3 IS TWO BELOW THE GM BELOW THE I/O STRINGS,
 111         * FORMATS AND CONSTANTS IN HIGH CORE.
 112         *
 113         X1     EQU   89                                                          0089
 114         X2     EQU   94                                                          0094
 115         X3     EQU   99                                                          0099
 116         *
 117         * STUFF IN THE RESIDENT AREA
 118         *
 119         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                           0110
 120         SERIES EQU   117  NEED SERIES ROUTINE IF NO WM                           0117
 121         SINCOS EQU   118  SAW SINF OR COSF IF NO WM                              0118
 122         SAWABS EQU   122  SAW ABSF IF NO WM                                      0122
 123         SAWNEG EQU   123  SAW NEGATION OPERATOR (UNARY MINUS) IF NO WM           0123
 124         GLOBER EQU   184  GLOBAL ERROR FLAG -- WM MEANS ERROR                   0184
 125         SNAPSH EQU   333  CORE DUMP SNAPSHOT                                     0333
 126         LOADNX EQU   700  LOAD NEXT OVERLAY                                     0700
 127         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                         0707
 128         *
 129               ORG   838                                                                 0838
 130    838  BEGINN SBR   SX3,2&X3                                                 7  0838  H M53 0?2            4
 131    845         SW    GM                                                      4  0845  , J60                4
 132    849         MCW   0&X1,CODSEQ                                             7  0849  M 0|0 M47            4
 133    856         BCE   LOOP1,CODSEQ-3,R                                       8  0856  B 890 M44 R          4
 134    864         BCE   LOOP1,CODSEQ-3,E                                       8  0864  B 890 M44 E          4
 135    872         MCW   DOT,X2                                                 7  0872  M M43 094            5
 136    879         B     DONE                                                    4  0879  B 920                5
 137    883  LOOP   MCW   0&X1,CODSEQ                                             7  0883  M 0|0 M47            5
 138    890  LOOP1  SBR   SX3B,0&X3                                               7  0890  H M50 0?0            5
 139    897         BCE   EXPR,CODSEQ-3,R                                         8  0897  B 943 M44 R          5
 140    905         BCE   EXPR,CODSEQ-3,E                                         8  0905  B 943 M44 E          6
 141    913         MCW   SX3,X2                                                 7  0913  M M53 094            6
 142    920  DONE   BSS   SNAPSH,C                                               5  0920  B 333 C              6
 143    925         SBR   CLEARL&3,GMWM                                          7  0925  H 710 P68            6
 144    932         LCA   ARITH2,PHASID                                          7  0932  L M62 110            6
 145    939         B     LOADNX                                                  4  0939  B 700                6
 146         *
 147         * EITHER ASSIGNMENT OR ARITHMETIC IF
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD

148         *
149    943  EXPR   LCA   0&X1,0&X3  MOVE PREFIX UP                      7  0943  L 0|0 0?0           7
150    950         SAR   X1                                            4  0950  Q 089               7
151    954         C     0&X3                                          4  0954  C 0?0               7
152    958         SAR   X3                                            4  0958  Q 099               7
153    962         BWZ   *&5,CODSEQ,2                                  8  0962  V 974 M47 2         7
154    970         B     *&9                                           4  0970  B 982               7
155    974         BWZ   EXPR2,CODSEQ-2,2                              8  0974  V 998 M45 2         7
156    982         MCW   CODSEQ,X2                                     7  0982  M M47 094           8
157    989         MN    0&X2,CODSEQ                                   7  0989  D 0!0 M47           8
158    996         MN                                                  1  0996  D                   8
159    997         MN                                                  1  0997  D                   8
160    998  EXPR2  C     0&X1                                          4  0998  C 0|0               8
161  1 002         SAR   SX1                                           4  1002  Q M65               8
162  1 006         BCE   ASG,CODSEQ-3,R                               8  1006  B |85 M44 R         8
163         *
164         * STATEMENT IS ARITHMETIC IF
165         *
166  1 014         C     0&X1,KB10  MOVE X1 DOWN                       7  1014  C 0|0 M75           9
167  1 021         SAR   X1           BY TEN                           4  1021  Q 089               9
168  1 025         SW    1&X1                                          4  1025  , 0|1               9
169  1 029         LCA   10&X1,0&X3  MOVE UP LABELS                    7  1029  L 0/0 0?0           9
170  1 036         SAR   X1                                            4  1036  Q 089               9
171  1 040         C     0&X3                                          4  1040  C 0?0               9
172  1 044         SAR   X3                                            4  1044  Q 099               9
173  1 048         CW    1&X1,1&X3                                     7  1048  ) 0|1 0?1          10
174  1 055         LCA   GM                                            4  1055  L J60              10
175  1 059         LCA   KIFBOT                                       4  1059  L M79              10
176  1 063         SBR   X3                                            4  1063  H 099              10
177  1 067         CW    1&X3,5&X3                                     7  1067  ) 0?1 0?5          10
178  1 074         SBR   SX1B,0&X1                                     7  1074  H M82 0|0          10
179  1 081         B     EXPR3                                         4  1081  B /43              10
180         *
181         * STATEMENT IS ASSIGNMENT
182         *
183  1 085  ASG    SBR   X2,1&X1                                      7  1085  H 094 0|1          11
184  1 092         BCE   MSG23,0&X1,#  EQUAL SIGN IS FIRST            8  1092  B !01 0|0 #        11
185  1 100         SBR   SX1B,0&X1                                     7  1100  H M82 0|0          11
186  1 107  GETEQ  BCE   GOTEQ,0&X1,#                                  8  1107  B /31 0|0 #        11
187  1 115         BCE   MSG23,0&X1,}  NO EQUAL SIGN AT ALL            8  1115  B !01 0|0 } GMARK  11
188  1 123         SBR   X1                                            4  1123  H 089              12
189  1 127         B     GETEQ                                         4  1127  B /07              12
190  1 131  GOTEQ  B     SUBCHK                                        4  1131  B !53              12
191  1 135  ASGL   MN    0&X1                                          4  1135  D 0|0              12
192  1 139         SAR   X1                                            4  1139  Q 089              12
193  1 143  EXPR3  SBR   X2,1&X1                                      7  1143  H 094 0|1          12
194  1 150         SBR   SX1C                                          4  1150  H M85              12
195  1 154  OPCHKL MN    0&X1,OPCHK&7                                  7  1154  D 0|0 /79          13
196  1 161         MZ    0&X1,OPCHK&7                                  7  1161  Y 0|0 /79          13
197  1 168         SAR   X1                                            4  1168  Q 089              13
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD
198  1 172  OPCHK   BCE   GOTOP,OPRATR,0  &-@*#%) OR GM                        8  1172  B /91 M93 0         13
199  1 180         CHAIN 7                                                                  MACRO
200                BCE                                                       1  1180  B           GEN     13
201                BCE                                                       1  1181  B           GEN     13
202                BCE                                                       1  1182  B           GEN     13
203                BCE                                                       1  1183  B           GEN     14
204                BCE                                                       1  1184  B           GEN     14
205                BCE                                                       1  1185  B           GEN     14
206                BCE                                                       1  1186  B           GEN     14
207  1 187         B     OPCHKL                                              4  1187  B /54               14
208  1 191  GOTOP  SBR   X1,1&X1                                            7  1191  H 089 0|1           14
209  1 198         BCE   MINUS,0&X1,-                                        8  1198  B V98 0|0 -         14
210  1 206         BCE   LPAREN,0&X1,%                                       8  1206  B W41 0|0 %         15
211  1 214         BCE   STAR,0&X1,*                                         8  1214  B U31 0|0 *         15
212  1 222         BCE   PLUS,0&X1,&                                         8  1222  B V44 0|0 &         15
213  1 230         BCE   CHK27,0&X1,@  WAS ORIGINALLY SLASH                 8  1230  B U46 0|0 @         15
214  1 238         BCE   ASGL,0&X1,#                                         8  1238  B /35 0|0 #         16
215  1 246         BCE   RPAREN,0&X1,)                                      8  1246  B T39 0|0 )         16
216  1 254         MN    1&X1,OPCHK2&7                                       7  1254  D 0|1 S75           16
217  1 261         MZ    1&X1,OPCHK2&7                                       7  1261  Y 0|1 S75           16
218  1 268  OPCHK2 BCE   MSG27,OPRAT2,0  &-*@.#,                           8  1268  B J22 N00 0         16
219  1 276         CHAIN 6                                                                  MACRO
220                BCE                                                       1  1276  B           GEN     16
221                BCE                                                       1  1277  B           GEN     17
222                BCE                                                       1  1278  B           GEN     17
223                BCE                                                       1  1279  B           GEN     17
224                BCE                                                       1  1280  B           GEN     17
225                BCE                                                       1  1281  B           GEN     17
226  1 282         BCE   RESTR2,1&X1,                                        8  1282  B T10 0|1           17
227  1 290         BCE   RESTR2,1&X1,%                                       8  1290  B T10 0|1 %         17
228  1 298         BCE   RESTR2,1&X1,)                                       8  1298  B T10 0|1 )         18
229  1 306         B     SUBCHK                                              4  1306  B !53               18
230  1 310  RESTR2 MCW   SX1B,X2                                            7  1310  M M82 094           18
231  1 317         LCA   0&X2,0&X3                                          7  1317  L 0!0 0?0           18
232  1 324         SBR   X3                                                  4  1324  H 099               18
233  1 328         MCW   SX1,X1                                            7  1328  M M65 089           18
234  1 335         B     LOOP                                                4  1335  B 883               19
235         *
236  1 339  RPAREN MCW   0&X1,RPARSV                                        7  1339  M 0|0 N02           19
237  1 346         MCW   RPARSV-1,*&8  CHAR AFTER RIGHT PARENTHESIS         7  1346  M N01 T60           19
238  1 353         BCE   RPAR2,OPRAT3,0  &*@-})  INCLUDES GM               8  1353  B T78 N08 0         19
239  1 361         CHAIN 5                                                                  MACRO
240                BCE                                                       1  1361  B           GEN     19
241                BCE                                                       1  1362  B           GEN     19
242                BCE                                                       1  1363  B           GEN     19
243                BCE                                                       1  1364  B           GEN     20
244                BCE                                                       1  1365  B           GEN     20
245  1 366         BCE   RPAR2,RPARSV-1,#                                    8  1366  B T78 N01 #         20
246  1 374         B     MSG27                                               4  1374  B J22               20
247  1 378  RPAR2  MN    1&X1,OPCHK4&7                                       7  1378  D 0|1 T99           20
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                        FORTRAN COMPILER -- ARITH PHASE ONE -- PHASE 33                          PAGE    4

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

248  1 385         MZ    1&X1,OPCHK4&7                                        7  1385  Y 0|1 T99          20
249  1 392  OPCHK4 BCE   MSG27,OPRAT4,0  &-*.@ %,                            8  1392  B J22 N16 0        20
250  1 400         CHAIN 7                                                                 MACRO
251                BCE                                                        1  1400  B           GEN    21
252                BCE                                                        1  1401  B           GEN    21
253                BCE                                                        1  1402  B           GEN    21
254                BCE                                                        1  1403  B           GEN    21
255                BCE                                                        1  1404  B           GEN    21
256                BCE                                                        1  1405  B           GEN    21
257                BCE                                                        1  1406  B           GEN    21
258  1 407         BCE   ASGL,1&X1,#                                          8  1407  B /35 0|1 #        22
259  1 415         BCE   ASGL,1&X1,)                                          8  1415  B /35 0|1 )        22
260  1 423         B     SUBCHK                                               4  1423  B !53              22
261  1 427         B     ASGL                                                 4  1427  B /35              22
262         *
263         * ASTERISK
264         *
265  1 431  STAR   MCW   0&X1,STAR2                                           7  1431  M 0|0 N18          22
266  1 438         BCE   EXPON,STAR2-1,*                                      8  1438  B V13 N17 *        22
267         * SLASH ORIGINALLY, NOW @
268  1 446  CHK27  BCE   MSG27,1&X1,#                                         8  1446  B J22 0|1 #        23
269  1 454         BCE   MSG27,1&X1,%                                         8  1454  B J22 0|1 %        23
270  1 462         BCE   MSG27,1&X1,                                          8  1462  B J22 0|1          23
271  1 470  CHK31  MN    1&X1,OPCHK5&7                                        7  1470  D 0|1 U91          23
272  1 477         MZ    1&X1,OPCHK5&7                                        7  1477  Y 0|1 U91          23
273  1 484  OPCHK5 BCE   MSG31,OPRAT5,0  &-@*.,                            8  1484  B J61 N24 0        24
274  1 492         CHAIN 5                                                                 MACRO
275                BCE                                                        1  1492  B           GEN    24
276                BCE                                                        1  1493  B           GEN    24
277                BCE                                                        1  1494  B           GEN    24
278                BCE                                                        1  1495  B           GEN    24
279                BCE                                                        1  1496  B           GEN    24
280  1 497         BCE   ASGL,1&X1,)                                          8  1497  B /35 0|1 )        24
281  1 505         B     SUBCHK                                               4  1505  B !53              25
282  1 509         B     ASGL                                                 4  1509  B /35              25
283         *
284         * TWO ASTERISKS IN A ROW
285         *
286  1 513  EXPON  MN    0&X1                                                 4  1513  D 0|0              25
287  1 517         MN                                                         1  1517  D                  25
288  1 518         SAR   X1                                                   4  1518  Q 089              25
289  1 522         MCW   DOT,2&X1  REPLACE ** BY DOT                          7  1522  M M43 0|2          25
290  1 529         LCA   0&X1                                                 4  1529  L 0|0              25
291  1 533         SBR   X1,2&X1                                              7  1533  H 089 0|2          26
292  1 540         B     CHK27                                                4  1540  B U46              26
293         *
294         * PLUS SIGN
295         *
296  1 544  PLUS   BCE   IGNORE,1&X1,#  IS PLUS                               8  1544  B V72 0|1 #        26
297  1 552         BCE   IGNORE,1&X1,%    SIGN                               8  1552  B V72 0|1 %        26
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD

298  1 560         BCE   IGNORE,1&X1,       UNARY?                        8  1560  B V72 0|1           26
299  1 568         B     CHK31                                            4  1568  B U70               26
300  1 572  IGNORE MN    0&X1                                             4  1572  D 0|0               27
301  1 576         SAR   X1                                               4  1576  Q 089               27
302  1 580         LCA   0&X1,1&X1  MOVE UP, CLOBBERING PLUS SIGN         7  1580  L 0|0 0|1           27
303  1 587         SBR   X1,1&X1                                          7  1587  H 089 0|1           27
304  1 594         B     EXPR3                                            4  1594  B /43               27
305         *
306         * MINUS SIGN
307         *
308  1 598  MINUS  BCE   NEGATE,1&X1,#                                    8  1598  B W26 0|1 #         27
309  1 606         BCE   NEGATE,1&X1,%                                    8  1606  B W26 0|1 %         28
310  1 614         BCE   NEGATE,1&X1,                                     8  1614  B W26 0|1           28
311  1 622         B     CHK31                                            4  1622  B U70               28
312         *
313  1 626  NEGATE MCW   COMMA,0&X1                                       7  1626  M N25 0|0           28
314  1 633         CW    SAWNEG                                           4  1633  ) 123               28
315  1 637         B     ASGL                                             4  1637  B /35               28
316         *
317         * LEFT PARENTHESIS
318         *
319  1 641  LPAREN BCE   FUNC,1&X1,F  MAYBE A FUNCTION                   8  1641  B W83 0|1 F         29
320  1 649         MN    1&X1,LPARC&7                                     7  1649  D 0|1 W70           29
321  1 656         MZ    1&X1,LPARC&7                                     7  1656  Y 0|1 W70           29
322  1 663  LPARC  BCE   ASGL,OPRAT6,0  &-*@ #%,.                        8  1663  B /35 N34 0         29
323  1 671         CHAIN 8                                                                 MACRO
324                BCE                                                   1  1671  B           GEN     29
325                BCE                                                   1  1672  B           GEN     29
326                BCE                                                   1  1673  B           GEN     29
327                BCE                                                   1  1674  B           GEN     30
328                BCE                                                   1  1675  B           GEN     30
329                BCE                                                   1  1676  B           GEN     30
330                BCE                                                   1  1677  B           GEN     30
331                BCE                                                   1  1678  B           GEN     30
332  1 679         B     MSG27                                            4  1679  B J22               30
333         *
334         * LEFT PARENTHESIS FOLLOWS F, MAYBE A FUNCTION
335         *
336  1 683  FUNC   MCW   X2,SX2                                           7  1683  M 094 N37           30
337  1 690         MCW   SX1C,X2                                          7  1690  M M85 094           31
338  1 697         MN    0&X2                                             4  1697  D 0!0               31
339  1 701         SAR   X2                                               4  1701  Q 094               31
340  1 705         SW    0&X1                                             4  1705  , 0|0               31
341  1 709         SBR   SX1C,2&X1                                        7  1709  H M85 0|2           31
342  1 716         C     SX1C,X2                                          7  1716  C M85 094           31
343  1 723         BE    MSG27                                            5  1723  B J22 S             31
344  1 728         SBR   SX1C,3&X1                                        7  1728  H M85 0|3           32
345  1 735         C     SX1C,X2                                          7  1735  C M85 094           32
346  1 742         BE    MSG27                                            5  1742  B J22 S             32
347  1 747         MCW   X3,SX3C                                          7  1747  M 099 N40           32
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
348  1 754         MCW   X1,SX1D                                             7  1754  M 089 N43           32
349  1 761         SBR   X1,SINCOS                                           7  1761  H 089 118           33
350  1 768         SBR   X3,FNCLST                                           7  1768  H 099 M41           33
351  1 775  FUNCL  BCE   NOTFNC,0&X3,*  SEARCH FUNCTION NAME TABLE           8  1775  B Y18 0?0 *         33
352  1 783         SBR   X3                                                  4  1783  H 099               33
353  1 787         C     0&X3,0&X2                                           7  1787  C 0?0 0!0           33
354  1 794         BE    GOTFNC                                              5  1794  B Y83 S             33
355  1 799         C     0&X3                                                4  1799  C 0?0               34
356  1 803         SAR   X3                                                  4  1803  Q 099               34
357  1 807         SBR   X1,1&X1                                            7  1807  H 089 0|1           34
358  1 814         B     FUNCL                                               4  1814  B X75               34
359         *
360         * NAME ENDING IN F AND FOLLOWED BY LEFT PARENTHESIS
361         * IS NOT IN THE FUNCTION TABLE
362         *
363  1 818  NOTFNC CS    332                                                 4  1818  / 332               34
364  1 822         CS                                                        1  1822  /                   34
365  1 823         SW    GLOBER                                              4  1823  , 184               34
366  1 827         MN    CODSEQ,249                                          7  1827  D M47 249           35
367  1 834         MN                                                        1  1834  D                   35
368  1 835         MN                                                        1  1835  D                   35
369  1 836         MCW   ERR29                                               4  1836  M N89               35
370  1 840         W                                                         1  1840  2                   35
371  1 841         BCV   *&5                                                 5  1841  B Y50 @             35
372  1 846         B     *&3                                                 4  1846  B Y52               35
373  1 850         CC    1                                                   2  1850  F 1                 36
374  1 852         B     RESTRT                                              4  1852  B !35               36
375         *
376         * NEED SERIES FOR UNDEFINED FUNCTION, SIN, COS, LOG, EXP, ATAN
377         *
378  1 856  GETSER CW    SERIES                                              4  1856  ) 117               36
379  1 860         B     FNC2                                                4  1860  B Z26               36
380         *
381         * SIN AND COS ARE THE SAME
382         *
383  1 864  COSF   CW    SINCOS                                              4  1864  ) 118               36
384  1 868         B     GETSER                                              4  1868  B Y56               36
385         *
386         * NEED NEGATE FOR ABS
387         *
388  1 872  ABSF   CW    SAWABS,SAWNEG  ABSF NEEDS NEGATION                  7  1872  ) 122 123           36
389  1 879         B     FNC2                                                4  1879  B Z26               37
390         *
391  1 883  GOTFNC SW    1&X3                                                4  1883  , 0?1               37
392  1 887         BCE   COSF,1&X3,C  COSF                                   8  1887  B Y64 0?1 C         37
393  1 895         BCE   ABSF,1&X3,A  ABSF                                   8  1895  B Y72 0?1 A         37
394  1 903         CW    0&X1                                                4  1903  ) 0|0               37
395  1 907         MCW   1&X3,*&8                                            7  1907  M 0?1 Z21           37
396  1 914         BCE   GETSER,SGECT,0  SIN LOG EXP COS ATAN               8  1914  B Y56 N94 0         38
397  1 922         CHAIN 4                                                                 MACRO
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
398                BCE                                                  1  1922  B           GEN     38
399                BCE                                                  1  1923  B           GEN     38
400                BCE                                                  1  1924  B           GEN     38
401                BCE                                                  1  1925  B           GEN     38
402  1 926  FNC2   BCE   INTFNC,0&X2,X  INTEGER FUNCTION RESULT?         8  1926  B Z89 0!0 X         38
403  1 934  FNC3   MCW   1&X3,0&X2  MOVE FUNCTION CODE                   7  1934  M 0?1 0!0           38
404  1 941         MCW   KB1          AND A BLANK                       4  1941  M N95               39
405  1 945         SBR   X2                                             4  1945  H 094               39
406  1 949         MCW   SX3C,X3                                        7  1949  M N40 099           39
407  1 956         MCW   SX1D,X1                                        7  1956  M N43 089           39
408  1 963         CW    0&X1                                           4  1963  ) 0|0               39
409  1 967         SAR   X1                                             4  1967  Q 089               39
410  1 971         LCA   0&X1,0&X2                                      7  1971  L 0|0 0!0           39
411  1 978         SBR   X1,0&X2                                       7  1978  H 089 0!0           40
412  1 985         B     EXPR3                                          4  1985  B /43               40
413  1 989  INTFNC MN    0&X2                                           4  1989  D 0!0               40
414  1 993         SAR   X2                                             4  1993  Q 094               40
415  1 997         B     FNC3                                           4  1997  B Z34               40
416         *
417         * EMIT CODING IS UNINTELLIGIBLE MESSAGE
418         *
419  2 001  MSG23  CS    332                                            4  2001  / 332               40
420  2 005         CS                                                   1  2005  /                   40
421  2 006         SW    GLOBER                                         4  2006  , 184               41
422  2 010         MN    CODSEQ,247                                     7  2010  D M47 247           41
423  2 017         MN                                                   1  2017  D                   41
424  2 018         MN                                                   1  2018  D                   41
425  2 019         MCW   ERR23  UNINTELLIGIBLE                          4  2019  M O39               41
426  2 023         W                                                    1  2023  2                   41
427  2 024         BCV   *&5                                            5  2024  B !33 @             41
428  2 029         B     *&3                                            4  2029  B !35               42
429  2 033         CC    1                                              2  2033  F 1                 42
430  2 035  RESTRT MCW   SX3B,X3                                        7  2035  M M50 099           42
431  2 042         MCW   SX1,X1                                        7  2042  M M65 089           42
432  2 049         B     LOOP                                           4  2049  B 883               42
433         *
434         * CHECK FOR SUBSCRIPT?
435         *
436  2 053  SUBCHK SBR   SUBCHX&3                                       4  2053  H !82               42
437  2 057         BCE   SUBCH2,1&X1,$                                  8  2057  B J99 0|1 $         42
438  2 065         SBR   SX1E,4&X1                                      7  2065  H O42 0|4           43
439  2 072  SUBCH3 C     SX1E,X2                                        7  2072  C O42 094           43
440  2 079  SUBCHX BE    0                                              5  2079  B 000 S             43
441         *
442         * LEFT SIDE IS INVALID
443         *
444  2 084  MSG25  CS    332                                            4  2084  / 332               43
445  2 088         CS                                                   1  2088  /                   43
446  2 089         SW    GLOBER                                         4  2089  , 184               43
447  2 093         MN    CODSEQ,243                                     7  2093  D M47 243           43
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 SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD

 448  2 100          MN                                                      1  2100  D                    44
 449  2 101          MN                                                      1  2101  D                    44
 450  2 102          MCW   ERR25                                            4  2102  M O82                44
 451  2 106          W                                                       1  2106  2                    44
 452  2 107          BCV   *&5                                              5  2107  B J16 @              44
 453  2 112          B     *&3                                              4  2112  B J18                44
 454  2 116          CC    1                                                2  2116  F 1                  44
 455  2 118          B     RESTRT                                           4  2118  B !35                45
 456          *
 457          * ARITHMETIC SYNTAX ERROR
 458          *
 459  2 122  MSG27   CS    332                                              4  2122  / 332                45
 460  2 126          CS                                                     1  2126  /                    45
 461  2 127          SW    GLOBER                                           4  2127  , 184                45
 462  2 131          MN    CODSEQ,249                                       7  2131  D M47 249            45
 463  2 138          MN                                                     1  2138  D                    45
 464  2 139          MN                                                     1  2139  D                    45
 465  2 140          MCW   ERR27                                            4  2140  M P28                46
 466  2 144          W                                                      1  2144  2                    46
 467  2 145          BCV   *&5                                              5  2145  B J54 @              46
 468  2 150          B     *&3                                              4  2150  B J56                46
 469  2 154          CC    1                                                2  2154  F 1                  46
 470  2 156          B     RESTRT                                           4  2156  B !35                46
 471          *
 472  2 160  GM      DC    @}@                                              1  2160              GMARK   46
 473          *
 474          * DOUBLE OPERATORS
 475          *
 476  2 161  MSG31   CS    332                                              4  2161  / 332                46
 477  2 165          CS                                                     1  2165  /                    47
 478  2 166          SW    GLOBER                                           4  2166  , 184                47
 479  2 170          MN    CODSEQ,242                                       7  2170  D M47 242            47
 480  2 177          MN                                                     1  2177  D                    47
 481  2 178          MN                                                     1  2178  D                    47
 482  2 179          MCW   ERR31                                            4  2179  M P67                47
 483  2 183          W                                                      1  2183  2                    47
 484  2 184          BCV   *&5                                              5  2184  B J93 @              48
 485  2 189          B     *&3                                              4  2189  B J95                48
 486  2 193          CC    1                                                2  2193  F 1                  48
 487  2 195          B     RESTRT                                           4  2195  B !35                48
 488          *
 489  2 199  SUBCH2  SBR   SX1E,12&X1                                       7  2199  H O42 0/2            48
 490  2 206          BCE   SUBCH3,11&X1,$                                  8  2206  B !72 0/1 $          48
 491  2 214          SBR   SX1E,18&X1                                       7  2214  H O42 0/8            48
 492  2 221          B     SUBCH3                                           4  2221  B !72                49
 493          *
 494          * DATA
 495          *
 496  2 225          DCW   @*@                   WM CLEARED IF NEEDED       1  2225                       49
 497  2 234          DCW   @   %FSOCC@  COSF     118 AND 117                9  2234                       49
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
498  2 243         DCW   @  %FSBAXA@  XABSF     122 AND 123                    9  2243                      49
499  2 252         DCW   @ %FKNILXI@  XLINKF    139                            9  2252                      49
500  2 261         DCW   @        H@            138                            9  2261                      50
501  2 270         DCW   @        D@            137                            9  2270                      50
502  2 279         DCW   @        M@            136                            9  2279                      50
503  2 288         DCW   @        L@            135                            9  2288                      50
504  2 297         DCW   @        K@            134                            9  2297                      51
505  2 306         DCW   @        J@            133                            9  2306                      51
506  2 315         DCW   @        Z@            132                            9  2315                      51
507  2 324         DCW   @        Y@            131                            9  2324                      51
508  2 333         DCW   @        W@            130                            9  2333                      52
509  2 342         DCW   @        P@            129                            9  2342                      52
510  2 351         DCW   @        U@            128                            9  2351                      52
511  2 360         DCW   @        R@            127                            9  2360                      52
512  2 369         DCW   @  %FTRQSQ@  SQRTF     126                            9  2369                      53
513  2 378         DCW   @ %FTAOLFF@  FLOATF    125                            9  2378                      53
514  2 387         DCW   @  %FXIFXX@  XFIXF     124                            9  2387                      53
515  2 396         DCW   #9          NEGATION   123                            9  2396                      53
516  2 405         DCW   @   %FSBAA@  ABSF      122                            9  2405                      54
517  2 414         DCW   @  %FNATAT@  ATANF     121 AND 117                    9  2414                      54
518  2 423         DCW   @   %FPXEE@  EXPF      129 AND 117                    9  2423                      54
519  2 432         DCW   @   %FGOLG@  LOGF      119 AND 117                    9  2432                      54
520  2 441  FNCLST DCW   @   %FNISS@  SINF      118 AND 117                    9  2441                      55
521  2 442         DCW   #1                                                     1  2442                      55
522  2 443  DOT    DCW   @.@                                                    1  2443                      55
523  2 447  CODSEQ DCW   #4  STATEMENT CODE AND SEQUENCE NUMBER                4  2447                      55
524  2 450  SX3B   DCW   #3                                                     3  2450                      55
525  2 453  SX3    DCW   #3                                                     3  2453                      55
526  2 462  ARITH2 DCW   @ARITH TWO@                                           9  2462                      55
527  2 465  SX1    DCW   #3                                                     3  2465                      56
528  2 475  KB10   DCW   #10                                                   10  2475                      56
529  2 479  KIFBOT DCW   @#<99@                                                4  2479                      56
530  2 482  SX1B   DCW   #3                                                     3  2482                      56
531  2 485  SX1C   DCW   #3                                                     3  2485                      56
532  2 493  OPRATR DCW   @&-@*#%)}@                                           8  2493                      56
533  2 500  OPRAT2 DCW   @&-*@.#,@                                            7  2500                      56
534  2 502  RPARSV DCW   #2  RIGHT PARENTHESIS AND NEXT CHARACTER             2  2502                      57
535  2 508  OPRAT3 DCW   @&*@-})@                                              6  2508                      57
536  2 516  OPRAT4 DCW   @&-*.@ %,@                                           8  2516                      57
537  2 518  STAR2  DCW   #2  ASTERISK AND NEXT CHARACTER                       2  2518                      57
538  2 524  OPRAT5 DCW   @&-@*.,@                                             6  2524                      57
539  2 525  COMMA  DCW   @,@                                                   1  2525                      57
540  2 534  OPRAT6 DCW   @&-*@ #%,.@                                          9  2534                      57
541  2 537  SX2    DCW   #3                                                     3  2537                      58
542  2 540  SX3C   DCW   #3                                                     3  2540                      58
543  2 543  SX1D   DCW   #3                                                     3  2543                      58
544  2 589  ERR29  DCW   @ERROR 29 - UNDEFINED FUNCTION NAME, STATEMENT @     46  2589                      60
545  2 594  SGECT  DCW   @SGECT@                                               5  2594                      60
546  2 595  KB1    DCW   #1                                                     1  2595                      60
547  2 639  ERR23  DCW   @ERROR 23 - CODING UNINTELLIGIBLE, STATEMENT @       44  2639                      62
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

548  2 642  SX1E   DCW   #3                                                     3  2642                      62
549  2 682  ERR25  DCW   @ERROR 25 - LEFT SIDE INVALID, STATEMENT @           40  2682                      64
550  2 728  ERR27  DCW   @ERROR 27 - ARITHMETIC SYNTAX ERROR, STATEMENT @     46  2728                      66
551  2 767  ERR31  DCW   @ERROR 31 - DOUBLE OPERATORS, STATEMENT @            39  2767                      67
552  2 768  GMWM   DCW   @}@                                                  1  2768            GMARK     68
553                EX    BEGINN                                                      B 838                 69
554                END                                                               / 000 080
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ABSF	1872	ARITH2	2462	ASG	1085	ASGL	1135	BEGINN	838	CHK27	1446	CHK31	1470
CLEARL	707	CODSEQ	2447	COMMA	2525	COSF	1864	DONE	920	DOT	2443	ERR23	2639
ERR25	2682	ERR27	2728	ERR29	2589	ERR31	2767	EXPON	1513	EXPR	943	EXPR2	998
EXPR3	1143	FNC2	1926	FNC3	1934	FNCLST	2441	FUNC	1683	FUNCL	1775	GETEQ	1107
GETSER	1856	GLOBER	184	GM	2160	GMWM	2768	GOTEQ	1131	GOTFNC	1883	GOTOP	1191
IGNORE	1572	INTFNC	1989	KB1	2595	KB10	2475	KIFBOT	2479	LOADNX	700	LOOP	883
LOOP1	890	LPARC	1663	LPAREN	1641	MINUS	1598	MSG23	2001	MSG25	2084	MSG27	2122
MSG31	2161	NEGATE	1626	NOTFNC	1818	OPCHK	1172	OPCHK2	1268	OPCHK4	1392	OPCHK5	1484
OPCHKL	1154	OPRAT2	2500	OPRAT3	2508	OPRAT4	2516	OPRAT5	2524	OPRAT6	2534	OPRATR	2493
PHASID	110	PLUS	1544	RESTR2	1310	RESTRT	2035	RPAR2	1378	RPAREN	1339	RPARSV	2502
SAWABS	122	SAWNEG	123	SERIES	117	SGECT	2594	SINCOS	118	SNAPSH	333	STAR	1431
STAR2	2518	SUBCH2	2199	SUBCH3	2072	SUBCHK	2053	SUBCHX	2079	SX1	2465	SX1B	2482
SX1C	2485	SX1D	2543	SX1E	2642	SX2	2537	SX3	2453	SX3B	2450	SX3C	2540
X1	89	X2	94	X3	99								