```
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 -- TAMROF PHASE TWO -- 24                                PAGE    1

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

 101               JOB   FORTRAN COMPILER -- TAMROF PHASE TWO -- 24
 102               CTL   6611
 103         *
 104         * THE OBJECT-TIME FORMAT STRINGS ARE DEVELOPED AND STORED
 105         * IMMEDIATELY PRECEDING THE CONSTANTS AT THE LOWER (RIGHTMOST)
 106         * END OF STORAGE.
 107         *
 108         * ON ENTRY, X1 IS THE TOP OF STATEMENTS, X2 IS THE TOP OF
 109         * FORMATTED I/O STATEMENTS, AND 81-83 IS ONE BELOW THE NUMBER
 110         * TABLE.
 111         *
 112         X1     EQU   89                                                    0089
 113         X2     EQU   94                                                    0094
 114         X3     EQU   99                                                    0099
 115         *
 116         * STUFF IN THE RESIDENT AREA
 117         *
 118         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                    0110
 119         ARYSIZ EQU   160  TOTAL ARRAY SIZE & 2                            0160
 120         NEGARY EQU   163  16000 - ARYSIZ                                  0163
 121         SNAPSH EQU   333  CORE DUMP SNAPSHOT                              0333
 122         LOADNX EQU   700  LOAD NEXT OVERLAY                               0700
 123         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                   0707
 124         TPREAD EQU   780  TAPE READ INSTRUCTION IN OVERLAY LOADER         0780
 125         LOADXX EQU   793  EXIT FROM OVERLAY LOADER                       0793
 126         CLRBOT EQU   833  BOTTOM OF CORE TO CLEAR IN OVERLAY LOADER       0833
 127         TOOBIG EQU   838  TOO BIG ROUTINE                                0838
 128         SEMIC  EQU   872  A SEMICOLON                                     0872
 129         SX3    EQU   875  SAVE AREA FOR X3 -- USED EXACTLY ONCE?          0875
 130         SEQCOD EQU   879  STATEMENT CODE, SEQUENCE NUMBER                 0879
 131         MSG    EQU   880  ERROR MESSAGE ROUTINE                          0880
 132         *
 133               ORG   980                                                    0980
 134    980  BEGINN BCE   DONE,96,.  NO FORMAT STATEMENTS                  8  0980  B |21 096 .          4
 135    988         MCW   X2,SX2&6                                         7  0988  M 094 J47            4
 136    995  NEXT   SBR   X2,2&X1                                        7  0995  H 094 0|2            4
 137  1 002         LCA   KB1                                             4  1002  L M08                4
 138  1 006         MCW   0&X1,SEQCOD                                     7  1006  M 0|0 879            4
 139  1 013         BCE   FORMAT,SEQCOD-3,F                               8  1013  B |62 876 F          5
 140         *
 141         * FORMAT STATEMENTS ARE SORTED TOGETHER, SO IF WE DO NOT
 142         * SEE ONE HERE, THERE ARE NO MORE.
 143         *
 144  1 021  DONE   BSS   SNAPSH,C                                         5  1021  B 333 C              5
 145  1 026         SBR   TPREAD&6,838                                     7  1026  H 786 838            5
 146  1 033         SBR   CLRBOT                                           4  1033  H 833                5
 147  1 037         SBR   LOADXX&3,845                                     7  1037  H 796 845            5
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD
148  1 044         SBR   CLEARL&3,GMWM                                       7  1044  H 710 N99           5
149  1 051         LCA   LISTR1,PHASID                                       7  1051  L M14 110           6
150  1 058         B     LOADNX                                              4  1058  B 700               6
151         *
152         * FORMAT STATEMENT
153         *
154  1 062  FORMAT C     0&X1  GET DOWN TO BODY                              4  1062  C 0|0               6
155  1 066         SAR   X1                                                  4  1066  Q 089               6
156  1 070         SBR   SX1&6                                               4  1070  H /21              6
157  1 074         MCW   4&X1,FMTLAB                                         7  1074  M 0|4 M17           6
158  1 081         SW    FLAG1                                               4  1081  , M18               6
159  1 085         CW    FLAG2                                               4  1085  ) M19               7
160  1 089         ZA    KP1,W3                                              7  1089  ? M20 M26           7
161  1 096         BCE   SYNTAX,0&X1,)                                       8  1096  B S58 0|0 )         7
162  1 104         MCW   X2,SX2B                                            7  1104  M 094 M23           7
163  1 111         B     CONT                                                4  1111  B V10               7
164  1 115  SX1    SBR   X1,0                                               7  1115  H 089 000           7
165  1 122  LOOP   ZA    KP1,W3                                              7  1122  ? M20 M26           8
166  1 129  CODEOK BCE   RPAR,0&X1,)                                        8  1129  B V41 0|0 )         8
167  1 137         SBR   SX1&6                                               4  1137  H /21              8
168  1 141         BCE   LPAR,0&X1,%                                        8  1141  B U98 0|0 %         8
169  1 149         BCE   IFEA,0&X1,I                                        8  1149  B W64 0|0 I         8
170  1 157         BCE   IFEA,0&X1,F                                        8  1157  B W64 0|0 F         9
171  1 165         BCE   IFEA,0&X1,E                                        8  1165  B W64 0|0 E         9
172  1 173         BCE   IFEA,0&X1,A                                        8  1173  B W64 0|0 A         9
173  1 181         BCE   SIGN,0&X1,&                                       8  1181  B U24 0|0 &         9
174  1 189         BCE   SIGN,0&X1,-                                       8  1189  B U24 0|0 -        10
175  1 197         BCE   SLASH,0&X1,@                                      8  1197  B W36 0|0 @        10
176  1 205         C     0&X1,KZ                                             7  1205  C 0|0 M27          10
177  1 212         BL    NUMBER                                              5  1212  B Z04 T            10
178  1 217         BL    CHKCOD                                              5  1217  B Z98 T            10
179  1 222         BW    SYNTAX,FLAG1  NOT PRECEDED BY A NUMBER?             8  1222  V S58 M18 1        11
180  1 230         BCE   HOLRIT,0&X1,H  NUMBER, THE HOLLERITH               8  1230  B T06 0|0 H        11
181  1 238         SBR   X1                                                  4  1238  H 089              11
182  1 242         BCE   XFLD,1&X1,X                                        8  1242  B S81 0|1 X        11
183  1 250         BCE   PFLD,1&X1,P                                        8  1250  B U79 0|1 P        11
184  1 258  SYNTAX B     MSG                                                 4  1258  B 880              12
185  1 262         MCW   ERR15,223                                           7  1262  M M45 223          12
186  1 269  WMSG   W                                                         1  1269  2                  12
187  1 270         MZ    ABZONE,SEQCOD                                       7  1270  Y M46 879          12
188  1 277         B     ENDFMT                                              4  1277  B !42              12
189         *
190         * X FORMAT CONTROL.  EMIT SBR X3,NUMBER&X3
191         *
192  1 281  XFLD   SW    8&X2                                                4  1281  , 0!8              12
193  1 285         SBR   X2                                                  4  1285  H 094              12
194  1 289         LCA   BUMPX3                                              4  1289  L L83              13
195  1 293         MN    W3,0&X2                                             7  1293  D M26 0!0          13
196  1 300         MN                                                        1  1300  D                  13
197  1 301         MN                                                        1  1301  D                  13
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
198  1 302         B     ENDFLD                                               4  1302  B Y35               13
199         *
200         * HOLLERITH
201         *
202  1 306  HOLRIT SW    5&X2                                                 4  1306  , 0!5               13
203  1 310         CW                                                         1  1310  )                   13
204  1 311         SBR   X2                                                   4  1311  H 094               14
205  1 315         LCA   DOH&3,1&X2  EMIT CALL TO DO HOLLERITH ROUTINE        7  1315  L L76 0!1          14
206  1 322         S     KP1,W3                                               7  1322  S M20 M26           14
207  1 329         BM    SYNTAX,W3                                            8  1329  V S58 M26 K         14
208  1 337         MN    0&X1                                                 4  1337  D 0|0               14
209  1 341         SAR   X1                                                   4  1341  Q 089               14
210  1 345  MOVEH  MN    0&X1,2&X2  MOVE                                      7  1345  D 0|0 0!2           15
211  1 352         SBR   X2           CHARACTERS                            4  1352  H 094               15
212  1 356         MZ    0&X1,1&X2      OF HOLLERITH                        7  1356  Y 0|0 0!1           15
213  1 363         SAR   X1               FIELD WHILE                       4  1363  Q 089               15
214  1 367         SBR   SX1&6              REVERSING                       4  1367  H /21               15
215  1 371         CW    2&X2                 TO CORRECT                    4  1371  ) 0!2               15
216  1 375         S     KP1,W3                 ORDER                       7  1375  S M20 M26           15
217  1 382         BCE   SHORTH,0&X1,}                                      8  1382  B U09 0|0 } GMARK   16
218  1 390         BWZ   MOVEH,W3,B                                         8  1390  V T45 M26 B         16
219  1 398  HOLFIN SBR   X2,1&X2                                            7  1398  H 094 0!1           16
220  1 405         B     ENDFLD                                               4  1405  B Y35               16
221         *
222         * STATEMENT ENDS BEFORE HOLLERITH ENDS
223         *
224  1 409  SHORTH B     MSG                                                  4  1409  B 880               16
225  1 413         MCW   ERR45,231                                            7  1413  M M66 231           16
226  1 420         W     HOLFIN                                               4  1420  2 T98               17
227         *
228         * PLUS OR MINUS SIGN BEFORE NUMBER BEFORE P CODE
229         *
230  1 424  SIGN   MZ    0&X1,W3  MOVE SIGN TO WHERE THE NUMBER WILL BE       7  1424  Y 0|0 M26           17
231  1 431         SAR   X1                                                   4  1431  Q 089               17
232  1 435         B     NUMBER                                               4  1435  B Z04               17
233  1 439         C     X3,K20                                               7  1439  C 099 M69           17
234  1 446         BL    SYNTAX   SCALE FACTOR TOO BIG?                       5  1446  B S58 T             17
235  1 451         MN    X3,W3                                                7  1451  D 099 M26           17
236  1 458         MN                                                         1  1458  D                   18
237  1 459         C     0&X1,KP                                              7  1459  C 0|0 M70           18
238  1 466         SAR   SX1&6                                               4  1466  Q /21               18
239  1 470         SBR   X1                                                   4  1470  H 089               18
240  1 474         BU    SYNTAX   ERROR IF NOT P FIELD                       5  1474  B S58 /             18
241  1 479  PFLD   SBR   X2,7&X2                                             7  1479  H 094 0!7           18
242  1 486         LCA   W3       EMIT SCALE FACTOR                         4  1486  L M26               18
243  1 490         LCA   DOP&3    EMIT CALL TO P ROUTINE                    4  1490  L M07               19
244  1 494         B     ENDFLD                                               4  1494  B Y35               19
245         *
246         * LEFT PARENTHESIS
247         *
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD
248  1 498  LPAR   BW    DEEP,FLAG2                                           8  1498  V V69 M19 1         19
249  1 506         SW    FLAG2                                                4  1506  , M19               19
250  1 510  CONT   SW    8&X2                                                 4  1510  , 0!8               19
251  1 514         SBR   X2                                                 4  1514  H 094               19
252  1 518         CW    FLAG3                                                4  1518  ) N50               19
253  1 522         LCA   W3,0&X2                                            7  1522  L M26 0!0           20
254  1 529         LCA   DOLP&3                                             4  1529  L L87               20
255  1 533         SW    FLAG1                                                4  1533  , M18               20
256  1 537         B     SX1                                                  4  1537  B /15               20
257         *
258         * RIGHT PARENTHESIS
259         *
260  1 541  RPAR   MN    0&X1                                                 4  1541  D 0|0               20
261  1 545         SAR   SX1&6                                               4  1545  Q /21               20
262  1 549         SBR   *&7                                                  4  1549  H V59               20
263  1 553         BCE   SAWGM,0,}                                           8  1553  B W12 000 } GMARK   21
264  1 561         BW    RPOK,FLAG2  SEEN A RIGHT PARENTHESIS?                8  1561  V V84 M19 1         21
265  1 569  DEEP   B     MSG                                                  4  1569  B 880               21
266  1 573         MCW   ERR16,228                                           7  1573  M M92 228           21
267  1 580         B     WMSG                                                 4  1580  B S69               21
268         *
269  1 584  RPOK   CW    FLAG2                                                4  1584  ) M19               21
270  1 588         SW    5&X2                                                 4  1588  , 0!5               21
271  1 592         SBR   X2                                                 4  1592  H 094               22
272  1 596         LCA   DORP&3                                             4  1596  L L91               22
273  1 600         MN    0&X1                                                 4  1600  D 0|0               22
274  1 604         SAR   X1                                                 4  1604  Q 089               22
275  1 608         B     ENDFLD                                               4  1608  B Y35               22
276         *
277         * SAW GM AFTER RIGHT PARENTHESIS
278         *
279  1 612  SAWGM  CW    5&X2                                                 4  1612  ) 0!5               22
280  1 616         SBR   X2                                                 4  1616  H 094               22
281  1 620         LCA   DOGM&3                                             4  1620  L M03               23
282  1 624         BW    DEEP,FLAG2                                           8  1624  V V69 M19 1         23
283  1 632         B     ENDFMT                                               4  1632  B !42               23
284         *
285         * SLASH FIELD.  SLASH WAS CONVERTED TO @ IN PHASE 2
286         *
287  1 636  SLASH  BW    *&5,FLAG1  NO NUMBER?                                8  1636  V W48 M18 1         23
288  1 644         B     SYNTAX     ERROR IF NUMBER                           4  1644  B S58               23
289  1 648         SW    5&X2                                                 4  1648  , 0!5               23
290  1 652         SBR   X2                                                 4  1652  H 094               23
291  1 656         LCA   DOSLSH&3  EMIT CALL TO SLASH ROUTINE                4  1656  L L95               24
292  1 660         B     SX1                                                  4  1660  B /15               24
293         *
294         * I, F, E OR A FIELD
295         *
296  1 664  IFEA   SW    5&X2                                                 4  1664  , 0!5               24
297  1 668         LCA   DOIFEA&3                                           4  1668  L L99               24
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
298  1 672          LCA   W3,8&X2                                             7  1672  L M26 0!8           24
299  1 679          MCW   0&X1                                                4  1679  M 0|0               24
300  1 683          SAR   X1                                                  4  1683  Q 089               24
301  1 687          B     NUMBER                                              4  1687  B Z04               25
302  1 691          ZA    X3,W3B                                              7  1691  ? 099 M95           25
303  1 698          SW    IFEAT&4                                             4  1698  , Y12               25
304  1 702          BCE   FFLD,5&X2,F                                         8  1702  B X33 0!5 F         25
305  1 710          BCE   IAFLD,5&X2,I                                        8  1710  B X72 0!5 I         25
306  1 718          BCE   IAFLD,5&X2,A                                        8  1718  B X72 0!5 A         25
307  1 726          S     KP4,W3B  EW.D FIELD, SUBTRACT FOUR FROM W FOR EXP   7  1726  S M96 M95           26
308  1 733  FFLD    CW    IFEAT&4  FW.D FIELD                                  4  1733  ) Y12               26
309  1 737          C     0&X1,KDOT                                           7  1737  C 0|0 M97           26
310  1 744          SAR   X1                                                  4  1744  Q 089               26
311  1 748          BU    SYNTAX  NUMBER NOT FOLLOWED BY DOT                  5  1748  B S58 /             26
312  1 753          B     NUMBER                                              4  1753  B Z04               26
313  1 757          S     X3,W3B  SUBTRACT D FROM W                           7  1757  S 099 M95           26
314  1 764          BM    ETEST,W3B                                  V3M4     8  1764  V N51 M95 K         27
315  1 772  IAFLD   BCE   FFLD2,5&X2,F  I OR A FIELD                         8  1772  B X87 0!5 F         27
316  1 780          A     KP4,X3                                              7  1780  A M96 099           27
317  1 787  FFLD2   SBR   X2,11&X2                                           7  1787  H 094 0J1           27
318  1 794          MZ    *-4,W3B                                             7  1794  Y X96 M95           27
319  1 801          LCA   W3B,0&X2                                           7  1801  L M95 0!0           28
320  1 808  IFEAT   BCE   TSTWID,IFEAT,C                                     8  1808  B Y27 Y08 C         28
321  1 816          SBR   X2,3&X2                                            7  1816  H 094 0!3           28
322  1 823          LCA   X3                                                  4  1823  L 099               28
323  1 827  TSTWID  BM    SYNTAX,W3B                                          8  1827  V S58 M95 K         28
324          *
325          * END OF FIELD
326          *
327  1 835  ENDFLD  SW    FLAG1  SET NO NUMBER FLAG                           4  1835  , M18               28
328  1 839  SKPCOM  C     0&X1,COMMA                                          7  1839  C 0|0 M98           29
329  1 846          SAR   SX1&6                                               4  1846  Q /21               29
330  1 850          SBR   X1                                                  4  1850  H 089               29
331  1 854          BE    SKPCOM  SKIP COMMAS                                 5  1854  B Y39 S             29
332  1 859          SBR   X1,1&X1                                           7  1859  H 089 0|1           29
333  1 866          B     LOOP                                                4  1866  B /22               29
334          *
335          * W GT D FOR F FIELD, OR W+4 GT D FOR E FIELD
336          *
337  1 870  WBIG    A     X3,W3B                                              7  1870  A 099 M95           29
338  1 877          A     K4,W3B                                              7  1877  A M99 M95           30
339  1 884          MN    W3B,X3                                              7  1884  D M95 099           30
340  1 891          MN                                                        1  1891  D                   30
341  1 892          MN                                                        1  1892  D                   30
342  1 893          MCW   KZ3,W3B                                             7  1893  M N02 M95           30
343  1 900          B     FFLD2                                               4  1900  B X87               30
344          *
345          * PROBABLY A DIGIT.  MAKE SURE.  THEN PUT INTO X3.
346          *
347  1 904  NUMBER  SBR   NUMBRX&3                                           4  1904  H Z97               30
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
348  1 908          S     X3&1    CLEAR X3                                     4  1908  S 100               31
349  1 912          C     0&X1,K0                                              7  1912  C 0|0 N03           31
350  1 919          BH    SYNTAX  0 GT CHAR, Z LT CHAR                         5  1919  B S58 U             31
351  1 924  NUMBRL  MN    0&X1,X3                                              7  1924  D 0|0 099           31
352  1 931          SAR   X1                                                   4  1931  Q 089               31
353  1 935          C     0&X1,K0                                              7  1935  C 0|0 N03           31
354  1 942          BH    NODIG   NOT A DIGIT, MUST BE DONE                   5  1942  B Z77 U             31
355  1 947          C     X3,K133  IS THE NUMBER TOO BIG?                     7  1947  C 099 N06           32
356  1 954          BL    SYNTAX                                               5  1954  B S58 T             32
357  1 959          MN    X3-1,X3-2  SHIFT LEFT TO REVERSE                    7  1959  D 098 097           32
358  1 966          MN    X3,X3-1      DIGITS TO CORRECT ORDER                 7  1966  D 099 098           32
359  1 973          B     NUMBRL   LOOK FOR ANOTHER DIGIT                     4  1973  B Z24               32
360  1 977  NODIG   C     K134,X3  IS THE NUMBER TOO BIG?                      7  1977  C N09 099           32
361  1 984          BH    SYNTAX                                               5  1984  B S58 U             33
362  1 989          BE    SYNTAX                                               5  1989  B S58 S             33
363  1 994  NUMBRX  B     0                                                    4  1994  B 000               33
364         *
365         * CHECK THE FORMAT CODE FOLLOWING A NUMBER
366         *
367  1 998  CHKCOD  ZA    X3,W3  SAVE NUMBER                                   7  1998  ? 099 M26           33
368  2 005          SW    TEST&7                                               4  2005  , !30               33
369  2 009          MCW   0&X1,TEST&7                                          7  2009  M 0|0 !30           33
370  2 016          CW    TEST&7,FLAG1                                         7  2016  ) !30 M18           33
371  2 023  TEST    BCE   CODEOK,FMTCOD,X                                     8  2023  B /29 N17 X         34
372  2 031          CHAIN 7                                                                 MACRO
373                 BCE                                                        1  2031  B           GEN     34
374                 BCE                                                        1  2032  B           GEN     34
375                 BCE                                                        1  2033  B           GEN     34
376                 BCE                                                        1  2034  B           GEN     34
377                 BCE                                                        1  2035  B           GEN     34
378                 BCE                                                        1  2036  B           GEN     34
379                 BCE                                                        1  2037  B           GEN     35
380  2 038          B     SYNTAX                                               4  2038  B S58               35
381         *
382  2 042  ENDFMT  MCW   83,X3                                               7  2042  M 083 099           35
383  2 049          BWZ   ENDERR,SEQCOD,B                                      8  2049  V K60 879 B         35
384  2 057          C     0&X3,SEMIC  SEMICOLON BELOW NUMBER TABLE GONE?       7  2057  C 0?0 872           35
385  2 064          BU    TOOBIG                                               5  2064  B 838 /             35
386  2 069  ENDFM2  LCA   0&X2,0&X3                                           7  2069  L 0!0 0?0           35
387  2 076          SAR   X2                                                   4  2076  Q 094               36
388  2 080          C     0&X3                                                 4  2080  C 0?0               36
389  2 084          SAR   X3                                                   4  2084  Q 099               36
390  2 088          CW    1&X2                                                 4  2088  ) 0!1               36
391  2 092          C     X2,SX2B                                              7  2092  C 094 M23           36
392  2 099          BU    ENDFM2                                               5  2099  B !69 /             36
393  2 104          SBR   SX3,0&X3                                             7  2104  H 875 0?0           36
394  2 111          CW    0&X2                                                 4  2111  ) 0!0               37
395  2 115          CW                                                         1  2115  )                   37
396  2 116          MCW                                                        1  2116  M                   37
397  2 117          SAR   X2                                                   4  2117  Q 094               37
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
398  2 121          CW    1&X2                                        4  2121  ) 0!1               37
399  2 125          BW    ENDER2,FLAG3                                8  2125  V K48 N50 1         37
400  2 133          BCE   ENDER2,*&6,  WAS X2 ORIGINALLY BLANK?      8  2133  B K48 J46           37
401  2 141  SX2     SBR   X2,0                                       7  2141  H 094 000           38
402  2 148          CW    FLAG4                                       4  2148  ) N18               38
403  2 152          SBR   SX3B&6,1&X3                                 7  2152  H L46 0?1           38
404  2 159  ENDER4  MN    0&X2                                        4  2159  D 0!0               38
405  2 163          MN                                                1  2163  D                   38
406  2 164          MN                                                1  2164  D                   38
407  2 165          SAR   X3                                        4  2165  Q 099               38
408  2 169          MN    0&X3,*&15                                   7  2169  D 0?0 J90           39
409  2 176          MZ    0&X3,*&8                                    7  2176  Y 0?0 J90           39
410  2 183          BCE   IOSTMT,IOCODE,X                           8  2183  B K97 N23 X         39
411  2 191          CHAIN 4                                                                MACRO
412                 BCE                                               1  2191  B           GEN     39
413                 BCE                                               1  2192  B           GEN     39
414                 BCE                                               1  2193  B           GEN     39
415                 BCE                                               1  2194  B           GEN     39
416  2 195          BW    ENDER5,FLAG4                                8  2195  V K19 N18 1         40
417  2 203          B     MSG                                         4  2203  B 880               40
418  2 207          MCW   ERR17,232                                   7  2207  M N49 232           40
419  2 214          W                                                 1  2214  2                   40
420  2 215          B     ENDER6                                      4  2215  B K75               40
421  2 219  ENDER5  MCW   SX3,X3                                     7  2219  M 875 099           40
422  2 226          BWZ   ENDER6,SEQCOD,B                           8  2226  V K75 879 B         40
423  2 234  ENDER3  MCW   X3,83                                      7  2234  M 099 083           41
424  2 241          MCW   SEMIC,0&X3                                7  2241  M 872 0?0           41
425  2 248  ENDER2  C     0&X1                                        4  2248  C 0|0               41
426  2 252          SAR   X1                                        4  2252  Q 089               41
427  2 256          B     NEXT                                        4  2256  B 995               41
428         *
429  2 260  ENDERR  MCW   X2,X3                                      7  2260  M 094 099           41
430  2 267          SW    FLAG3                                       4  2267  , N50               41
431  2 271          B     ENDFM2                                      4  2271  B !69               42
432  2 275  ENDER6  MCW   83,X3                                      7  2275  M 083 099           42
433  2 282          LCA   KDOT,0&X3                                 7  2282  L M97 0?0           42
434  2 289          SBR   X3                                        4  2289  H 099               42
435  2 293          B     ENDER3                                      4  2293  B K34               42
436         *
437  2 297  IOSTMT  C     0&X3                                        4  2297  C 0?0               42
438  2 301          SAR   X2                                        4  2301  Q 094               42
439  2 305          BWZ   *&5,2&X3,B                                8  2305  V L17 0?2 B         43
440  2 313          B     IOSTME                                      4  2313  B L61               43
441  2 317          C     0&X2,FMTLAB                               7  2317  C 0!0 M17           43
442  2 324          BU    IOSTME                                      5  2324  B L61 /             43
443  2 329          SW    FLAG4                                       4  2329  , N18               43
444  2 333          MA    NEGARY,SX3B&6                             7  2333  # 163 L46           43
445  2 340  SX3B    SBR   0&X2,0                                     7  2340  H 0!0 000           44
446  2 347          MZ    KB1,2&X3                                    7  2347  Y M08 0?2           44
447  2 354          MA    ARYSIZ,SX3B&6                             7  2354  # 160 L46           44
```

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

448  2 361  IOSTME C     0&X2                                                 4  2361  C 0!0               44
449  2 365         SAR   X2                                                   4  2365  Q 094               44
450  2 369         B     ENDER4                                               4  2369  B J59               44
451         *
452         * VECTORS TO FORMAT CONVERSION ROUTINES
453         *
454  2 373  DOH    B     2328       DO HOLLERITH                              4  2373  B L28               44
455  2 383  BUMPX3 DCW   @H0990&0@  BUMPS X3, FOR X FORMAT                     7  2383                      45
456  2 384  DOLP   B     2152       DO LEFT PARENTHESIS                       4  2384  B J52               45
457  2 388  DORP   B     2185       DO RIGHT PARENTHESIS                      4  2388  B J85               45
458  2 392  DOSLSH B     2208       DO / -- NEWLINE                           4  2392  B K08               45
459  2 396  DOIFEA B     2385       I, F, E OR A FIELD                        4  2396  B L85               45
460  2 400  DOGM   B     2223       DO GM -- END OF FORMAT                    4  2400  B K23               45
461  2 404  DOP    B     2310       DO P -- SCALE FACTOR                      4  2404  B L10               45
462         *
463         * DATA
464         *
465  2 408  KB1    DCW   #1                                                   1  2408                      46
466  2 414  LISTR1 DCW   @LISTR1@                                             6  2414                      46
467  2 417  FMTLAB DCW   #3                                                   3  2417                      46
468  2 418  FLAG1  DCW   #1  CLEARED WHEN A NUMBER IS PROCESSED               1  2418                      46
469  2 419  FLAG2  DCW   #1  SET WHEN LEFT PARENTHESIS IS PROCESSED           1  2419                      46
470  2 420  KP1    DCW   &1                                                   1  2420                      46
471  2 423  SX2B   DCW   #3                                                   3  2423                      46
472  2 426  W3     DCW   #3                                                   3  2426                      47
473  2 427  KZ     DCW   @Z@                                                  1  2427                      47
474  2 445  ERR15  DCW   @15 - FORMAT SYNTAX@                                18  2445                      47
475  2 446  ABZONE DCW   @A@                                                  1  2446                      47
476  2 466  ERR45  DCW   @45 - HOLLERITH COUNT@                             20  2466                      48
477  2 469  K20    DCW   020                                                  3  2469                      48
478  2 470  KP     DCW   @P@                                                  1  2470                      48
479  2 492  ERR16  DCW   @16 - PARENTHESIS ERROR@                            22  2492                      49
480  2 495  W3B    DCW   #3                                                   3  2495                      49
481  2 496  KP4    DCW   &4                                                   1  2496                      49
482  2 497  KDOT   DCW   @.@                                                  1  2497                      49
483  2 498  COMMA  DCW   @,@                                                  1  2498                      49
484  2 499  K4     DCW   4                                                    1  2499                      49
485  2 502  KZ3    DCW   000                                                  3  2502                      49
486  2 503  K0     DCW   0                                                    1  2503                      50
487  2 506  K133   DCW   133                                                  3  2506                      50
488  2 509  K134   DCW   134                                                  3  2509                      50
489  2 517  FMTCOD DCW   @PAXHIFE%@                                           8  2517                      50
490  2 518  FLAG4  DCW   #1                                                   1  2518                      50
491  2 523  IOCODE DCW   @56ULP@  STMT CODE FOR FORMATTED I/O STMT           5  2523                      50
492  2 549  ERR17  DCW   @17 - DOUBLY DEFINED FORMAT@                        26  2549                      51
493  2 550  FLAG3  DCW   #1  SET IF ERROR                                     1  2550                      51
494         *
495         * PATCH IN V3M4
496         *
497  2 551  ETEST  BCE   WBIG,5&X2,E                              V3M4       8  2551  B Y70 0!5 E         51
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
498  2 559         BIN   SYNTAX,                                V3M4      5  2559  B S58               52
499                ORG   2599                                   V3M4                 2599
500  2 599  GMWM   DCW   @}@                                             1  2599             GMARK   53
501                EX    BEGINN                                                 B 980               54
502                END                                                          / 000 080
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ABZONE	2446	ARYSIZ	160	BEGINN	980	BUMPX3	2383	CHKCOD	1998	CLEARL	707	CLRBOT	833
CODEOK	1129	COMMA	2498	CONT	1510	DEEP	1569	DOGM	2400	DOH	2373	DOIFEA	2396
DOLP	2384	DONE	1021	DOP	2404	DORP	2388	DOSLSH	2392	ENDER2	2248	ENDER3	2234
ENDER4	2159	ENDER5	2219	ENDER6	2275	ENDERR	2260	ENDFLD	1835	ENDFM2	2069	ENDFMT	2042
ERR15	2445	ERR16	2492	ERR17	2549	ERR45	2466	ETEST	2551	FFLD	1733	FFLD2	1787
FLAG1	2418	FLAG2	2419	FLAG3	2550	FLAG4	2518	FMTCOD	2517	FMTLAB	2417	FORMAT	1062
GMWM	2599	HOLFIN	1398	HOLRIT	1306	IAFLD	1772	IFEA	1664	IFEAT	1808	IOCODE	2523
IOSTME	2361	IOSTMT	2297	K0	2503	K133	2506	K134	2509	K20	2469	K4	2499
KB1	2408	KDOT	2497	KP	2470	KP1	2420	KP4	2496	KZ	2427	KZ3	2502
LISTR1	2414	LOADNX	700	LOADXX	793	LOOP	1122	LPAR	1498	MOVEH	1345	MSG	880
NEGARY	163	NEXT	995	NODIG	1977	NUMBER	1904	NUMBRL	1924	NUMBRX	1994	PFLD	1479
PHASID	110	RPAR	1541	RPOK	1584	SAWGM	1612	SEMIC	872	SEQCOD	879	SHORTH	1409
SIGN	1424	SKPCOM	1839	SLASH	1636	SNAPSH	333	SX1	1115	SX2	2141	SX2B	2423
SX3	875	SX3B	2340	SYNTAX	1258	TEST	2023	TOOBIG	838	TPREAD	780	TSTWID	1827
W3	2426	W3B	2495	WBIG	1870	WMSG	1269	X1	89	X2	94	X3	99
XFLD	1281												