```
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 -- PHASES 00-01                        00004              PAGE    1

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

 101               JOB   FORTRAN COMPILER -- PHASES 00-01
 102               CTL   6611
 103         *
 104         * PHASE 0: SNAPSHOT AND OVERLAY LOADER PHASE.
 105         *
 106               ORG   81                                                                 0081
 107     86        DC    @      @                                                  6  0086                    4
 108     89  X1    DCW   @000@                                                     3  0089                    4
 109         XXXXX1 EQU  X1     FOR USE IN SFX REGIONS                             0089
 110     91        DC    @00@                                                     2  0091                    4
 111     94  X2    DCW   @000@                                                     3  0094                    4
 112         XXXXX2 EQU  X2     FOR USE IN SFX REGIONS                             0094
 113     96        DC    @00@                                                     2  0096                    4
 114     99  X3    DCW   @000@                                                     3  0099                    4
 115         XXXXX3 EQU  X3     FOR USE IN SFX REGIONS                             0099
 116    104        DC    @0    @                                                  5  0104                    4
 117    110 PHASID DCW   @LOADER@  PHASE ID, FOR SNAPSHOT                         6  0110                    4
 118    111        DCW   #1  WM CLEARED IF DO STATEMENT APPEARS                   1  0111                    5
 119    112        DCW   #1  WM CLEARED IF DO STATEMENT APPEARS                   1  0112                    5
 120    113        DCW   #1  WM CLEARED IF DO STATEMENT APPEARS                   1  0113                    5
 121    114        DCW   #1  WM CLEARED WHEN AN I/O LIST OF DO IS PROCESSED       1  0114                    5
 122    115        DCW   #1  WM CLEARED IF I/O LIST AND NOT LIMITED FORMAT        1  0115                    5
 123    116 SUBSCR DCW   #1  WM CLEARED IF SUBSCRIPT CODE NEEDED                  1  0116                    5
 124    117 SERIES DCW   #1  NEED SERIES ROUTINE IF NO WM                         1  0117                    5
 125    118 SINCOS DCW   #1  SAW SINF OR COSF IF NO WM                            1  0118                    6
 126    119 LOGF   DCW   #1  SAW LOGF IF NO WM                                    1  0119                    6
 127    120 EXPF   DCW   #1  SAW EXPF IF NO WM                                    1  0120                    6
 128    121        DCW   #1  SAW ATANF IF NO WM                                   1  0121                    6
 129    122 SAWABS DCW   #1  SAW ABSF IF NO WM                                    1  0122                    6
 130    123 SAWNEG DCW   #1  SAW NEGATION OPERATOR (UNARY MINUS) IF NO WM         1  0123                    6
 131    124 XFIXF  DCW   #1  SAW XFIXF IF NO WM                                   1  0124                    6
 132    125 FLOATF DCW   #1  SAW FLOATF IF NO WM                                  1  0125                    7
 133    126        DCW   #1  SAW SQRTF IF NO WM                                   1  0126                    7
 134    127        DCW   #1  SAW USER FUNCTION R IF NO WM                         1  0127                    7
 135    128        DCW   #1  SAW USER FUNCTION U IF NO WM                         1  0128                    7
 136    129        DCW   #1  SAW USER FUNCTION P IF NO WM                         1  0129                    7
 137    130        DCW   #1  SAW USER FUNCTION W IF NO WM                         1  0130                    7
 138    131        DCW   #1  SAW USER FUNCTION Y IF NO WM                         1  0131                    7
 139    132        DCW   #1  SAW USER FUNCTION Z IF NO WM                         1  0132                    8
 140    133        DCW   #1  SAW USER FUNCTION J IF NO WM                         1  0133                    8
 141    134        DCW   #1  SAW USER FUNCTION K IF NO WM                         1  0134                    8
 142    135        DCW   #1  SAW USER FUNCTION L IF NO WM                         1  0135                    8
 143    136        DCW   #1  SAW USER FUNCTION M IF NO WM                         1  0136                    8
 144    137        DCW   #1  SAW USER FUNCTION D IF NO WM                         1  0137                    8
 145    138        DCW   #1  SAW USER FUNCTION H IF NO WM                         1  0138                    8
 146    139        DCW   #1  SAW XLINKF IF NO WM                                  1  0139                    9
 147    142 NEGAR2 DCW   #3  LOOKS LIKE NEGARY -- SEE PHASE 20                    3  0142                    9
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
148    145  TBLBOT DCW   #3  ONE BELOW NUMBERS, FORMATS, I/O LISTS             3  0145                      9
149    148  SEQTAB DCW   #3  BOTTOM OF SEQUENCE NUMBER TABLE - 2               3  0148                      9
150    151  DOCNT  DCW   #3  COUNT OF DO STATEMENTS                           3  0151                      9
151    154  BOTFMT DCW   #3  BOTTOM OF FORMAT STRINGS OR NUMBER TABLE - 1     3  0154                      9
152    157  NEGAR3 DCW   #3  LOOKS LIKE NEGARY -- SEE PHASE 20               3  0157                      9
153    160  ARYSIZ DCW   #3  TOTAL ARRAY SIZE & 2                            3  0160                     10
154    163  NEGARY DCW   #3  16000 - ARYSIZ                                  3  0163                     10
155    180         DC    #17                                                17  0180                     10
156    183  NSTMTS DCW   #3  NUMBER OF STATEMENTS, INCLUDING GENERATED STOP   3  0183                     10
157    184  GLOBER DC    #1  GLOBAL ERROR FLAG -- WM MEANS ERROR              1  0184                     10
158    185  GOTXL  DCW   #1  XLINKF WAS REFERENCED IF NO WM                   1  0185                     10
159    188  RELTAB DCW   #3  RELOCATABLE FUNCTION TABLE ENTRY ADDRESSES       3  0188                     10
160    191  SUBENT DCW   #3  ENTRY TO SUBSCRIPT ROUTINE                       3  0191                     10
161    194  ARYTOP DCW   #3  TOP OF ARRAYS IN OBJECT CODE                     3  0194                     10
162    195         DC    #1                                                  1  0195                     10
163    199         DCW   @V4M1@                                              4  0199                     11
```

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

164             JOB   SNAPSHOT ROUTINE
165             ORG   333                                                       0333
166         *
167         * SNAPSHOT ROUTINE
168         *
169             SFX   S
170   333 SNAPSH SBR    EXIT&3                                          S   4 0333  H 567             12   567
171   337        SBR    SXX&6                                           S   4 0337  H 408             12   408
172   341        MCW    KZ3,ADR5-2  START FIVE-DIGIT ADDRESS AT ZERO    S   7 0341  M 661 656         12   661     656
173   348        MCW    XXXXX3,SX3&6                                    S   7 0348  M 099 415         12   099     415
174   355        MCW    XXXXX1,SX1&6                                    S   7 0355  M 089 422         12   089     422
175   362        SBR    XXXXX1,1                                        S   7 0362  H 089 001         12   089     001
176   369        SBR    XXXXX3,202                                      S   7 0369  H 099 202         13   099     202
177   376        CS     332                                             S   4 0376  / 332             13   332
178   380        CS                                                     S   1 0380  /                 13
179   381        MCW    PHASID,210                                      S   7 0381  M 110 210         13   110     210
180   388        BSS    SKIP,F                                          S   5 0388  B 621 F           13   621
181         *
182         * PRINT A HEADER
183         *
184   393        CC     1                                               S   2 0393  F 1               13
185   395        MCW    XXXXX2,250  X2 MIGHT CONTAIN DOT INSTEAD OF ADDRESS S   7 0395  M 094 250     13   094     250
186   402 SXX    SBR    216,0       RETURN ADDRESS WAS STORED IN B      S   7 0402  H 216 000         14   216     000
187   409 SX3    SBR    256,0       X3 WAS STORED IN B                  S   7 0409  H 256 000         14   256     000
188   416 SX1    SBR    244,0       X1 WAS STORED IN B                  S   7 0416  H 244 000         14   244     000
189   423        W                                                      S   1 0423  2                 14
190   424        CC     K                                               S   2 0424  F K               14
191   426        ZA     KP2,W2A                                         S   7 0426  ? 662 664         14   662     664
192   433 CLEARH CS     332                                             S   4 0433  / 332             14   332
193   437        CS                                                     S   1 0437  /                 15
194   438        CC     J                                               S   2 0438  F J               15
195   440        MCW    ADR5,306    FIVE-DIGIT ADDRESS                  S   7 0440  M 658 306         15   658     306
196   447        MCW                                                    S   1 0447  M                 15
197   448        SBR    LOOP&6                                          S   4 0448  H 465             15   465
198   452        MCW    K9,W2B-1                                        S   7 0452  M 665 668         15   665     668
199   459 LOOP   MCW    W2B-1,000                                       S   7 0459  M 668 000         15   668     000
200   466        MCW    DOTS                                            S   4 0466  M 651             16   651
201   470        SBR    LOOP&6                                          S   4 0470  H 465             16   465
202   474        A      KM10,W2B    ADD I0 = -10                        S   7 0474  A 667 669         16   667     669
203   481        BWZ    LOOP,W2B-1,2  NO ZONE IN COUNTER HIGH DIGIT?    S   8 0481  V 459 668 2       16   459     668
204   489        A      KP1,ADR5-2  BUMP HUNDREDS DIGIT OF ADDRESS      S   7 0489  A 670 656         16   670     656
205   496        W                                                      S   1 0496  2                 16
206   497 GET    SW     0&X3        MOVE DATA AND WM TO PRINT AREA      S   4 0497  , 0?0             16   000+3
207   501        MCW    0&X1,0&X3                                       S   7 0501  M 0|0 0?0         17   000+1   000+3
208   508        BW     DOWM,0&X1   SKIP CLEARING PRINT AREA WM         S   8 0508  V 520 0|0 1       17   520     000+1
209   516        CW     0&X3                                            S   4 0516  ) 0?0             17   000+3
210   520 DOWM   C      XXXXX1,TOPCOR  DONE?                            S   7 0520  C 089 688         17   089     688
211   527        BU     CONT        NO                                  S   5 0527  B 568 /           17   568
212   532        W                                                      S   1 0532  2                 17
213   533        WM                                                     S   2 0533  2 )               17
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
214    535  RX1    MCW   SX1&6,XXXXX1   RESTORE INDEX REGS         S   7  0535  M 422 089          18   422     089
215    542         MCW   SX3&6,XXXXX3                             S   7  0542  M 415 099          18   415     099
216    549         CS    332                                       S   4  0549  / 332              18   332
217    553         CS                                              S   1  0553  /                  18
218    554         BSS   HALT,G                                    S   5  0554  B 563 G            18   563
219    559         B     EXIT                                      S   4  0559  B 564              18   564
220    563  HALT   H                                               S   1  0563  .                  18
221    564  EXIT   B     0-0                                       S   4  0564  B 000              19   000
222    568  CONT   SBR   XXXXX1,1&X1                               S   7  0568  H 089 0|1           19   089     001+1
223    575         BCE   BUMP3,XXXXX3-2,2                         S   8  0575  B 632 097 2        19   632     097
224    583         SBR   XXXXX3,201                               S   7  0583  H 099 201          19   099     201
225    590         W                                               S   1  0590  2                  19
226    591         WM                                              S   2  0591  2 )                19
227    593         A     KP1,W2A                                   S   7  0593  A 670 664          19   670     664
228    600         C     W2A,KP15                                  S   7  0600  C 664 672          20   664     672
229    607         BU    CLEARH                                    S   5  0607  B 433 /            20   433
230    612         S     W2A                                       S   4  0612  S 664              20   664
231    616         CCB   CLEARH,1                                 S   5  0616  F 433 1            20   433
232    621  SKIP   MCW   XQTD,220                                 S   7  0621  M 680 220          20   680     220
233    628         W     RX1                                       S   4  0628  2 535              20   535
234    632  BUMP3  A     KP1,XXXXX3                                S   7  0632  A 670 099          20   670     099
235    639         B     GET                                       S   4  0639  B 497              21   497
236    651  DOTS   DCW   @9........@                               S   9  0651                     21
237    653         DCW   @9-@                                     S   2  0653                     21
238    658  ADR5   DCW   00000      FIVE DIGIT ADDRESS             S   5  0658                     21
239    661  KZ3    DCW   000                                       S   3  0661                     21
240    662  KP2    DCW   &2                                        S   1  0662                     21
241    664  W2A    DCW   #2                                        S   2  0664                     21
242    665  K9     DCW   9                                         S   1  0665                     22
243    667  KM10   DCW   @I0@                                      S   2  0667                     22
244    669  W2B    DCW   #2                                        S   2  0669                     22
245    670  KP1    DCW   &1                                        S   1  0670                     22
246    672  KP15   DCW   &15                                       S   2  0672                     22
247    680  XQTD   DCW   @EXECUTED@                                S   8  0680                     22
248                SFX             END OF SNAPSHOT ROUTINE
249         *
250         * STORAGE FOR PARAMETER CARD
251         *
252                DA    1X19                                                0681   0699            22
253    685  PWORD        5   THE WORD PARAM                                  0685            SBFLD
254    688  TOPCOR       8   TOP CORE ADDRESS FROM PARAM CARD                0688            SBFLD
255    690  IMOD         10  INTEGER MODULUS -- NUMBER OF DIGITS             0690            SBFLD
256    692  MANTIS       12  FLOATING POINT MANTISSA DIGITS                  0692            SBFLD
257    693  CONDNS       13  P FOR CONDENSED DECK                            0693            SBFLD
258    694  SNAPSW       14  S FOR SNAPSHOT                                  0694            SBFLD
259    695  C1410        15  T IF RUN ON 1410 IN 1401 COMPATIBILITY MODE     0695            SBFLD
260    696  FMTSW        16  X FOR NO FORMAT, L FOR LIMITED FORMAT           0696            SBFLD
261         *                    BLANK FOR ORDINARY, A FOR A CONVERSION
262    699  PARAM        19  PARAMETER CARD IS STORED HERE                   0699            SBFLD
```

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

263                 JOB   LOAD NEXT OVERLAY
264         *
265         * THE DEFAULT IS TO LOAD A BLOCK AT 201 AND BRANCH TO IT, ASSUMING
266         * IT'S AN INTERPHASE CLEAR OR LOAD BLOCK. IF LOADED FROM AN
267         * AUTOCODER TAPE, THE ADDRESSES ARE CHANGED TO 1. IF LOADED FROM
268         * CARDS THE LOAD AND ENTRY ADDRESSES ARE IRRELEVANT. TO LOAD OTHER
269         * PHASE BLOCKS, THE LOAD BLOCK CHANGES THE TPREAD AND LOADEX
270         * ADDRESSES, AND THEN CHANGES THEM BACK.
271         *
272                 ORG   700                                                  0700
273    700  LOADNX  R     40          CARD OVERLAY UNLESS NOP OR SW       4  0700  1 040               23   040
274    704  RDAGIN  ZA    ECOUNT         INITIALIZE ERROR COUNT           4  0704  ? 755               23   755
275    708  TPREAD  RTW   1,201       LOAD OVERLAY FROM TAPE              8  0708  L %U1 201 R         23   %U1      201
276    716          BER   TPERR       ERROR?                              5  0716  B 725 L             23   725
277    721  LOADEX  B     201         NO, RUN THE OVERLAY                 4  0721  B 201               23   201
278    725  TPERR   BSP   1                                               5  0725  U %U1 B             23   %U1
279    730          A     *-6,ECOUNT                                      7  0730  A 730 755           23   730      755
280    737          BCE   TPREAD,ECOUNT-1,0  NOT TEN YET?                8  0737  B 708 754 0         24   708      754
281    745          NOP   3333        TOO MANY TAPE ERRORS                4  0745  N C33               24  3333
282    749          H                                                     1  0749  .                   24
283    750          B     RDAGIN      READ AGAIN                          4  0750  B 704               24   704
284    755  ECOUNT  DCW   #2                                              2  0755                      24
285         *
286         * START HERE. SET UP THE LOADER AND LOAD PHASE 1.
287         *
288         NOP1    NOP                                                   1  0756  N                   24
289         COMMA   SW                                                    1  0757  ,                   24
290         BEGIN1  BCE   RDPARM,1,     CARDS FROM REAL AUTOCODER?        8  0758  B 853 001           25   853      001
291                 MCW   NOP1,LOADNX   NO, TURN OFF CARD OVERLAY         7  0766  M 756 700           25   756      700
292                 BCE   RDPARM,1,B    LOADED FROM COMPILER-GEN TAPE BLOCKS?  8  0773  B 853 001 B  25   853      001
293                 MCW   COMMA,LOADNX  NO, LOADED FROM AUTOCODER TAPE     7  0781  M 757 700           25   757      700
294                 SBR   TPREAD&6,1    AUTOCODER TAPE BLOCKS LOAD AT 1    7  0788  H 714 001           25   714      001
295                 SBR   LOADEX&3        AND ENTER AT 1                  4  0795  H 724               26   724
```

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

296                 JOB   PHASE 1: READ AND CHECK PARAMETER CARD
297         *
298         * BEGIN PHASE 1: READ AND CHECK PARAMETER CARD
299         *
300                 ORG   838   TEMP SAME AS MOKOTOFF V3M0 LINE 210          0838
301         XBEGIN  EQU   *&1        ORIGIN FOR MANY OTHER PHASES      0838
302                 ORG   853   TEMP SAME AS MOKOTOFF V3M0 LINE 212          0853
303         RDPARM  CS    80                                        4  0853  / 080             27   080
304                 SW    1,GM                                      7  0857  , 001 S54         27   001    1254
305                 SW    81,84                                     7  0864  , 081 084         27   081     084
306                 CS    332                                       4  0871  / 332             27   332
307                 CS                                              1  0875  /                 27
308                 R               READ PARAMETER CARD             1  0876  1                 27
309                 LCA   19,PARAM   SAVE IT                        7  0877  L 019 699         27   019     699
310                 C     PARAM-14,KPARAM  IS IT A PARAMETER CARD?  7  0884  C 685 S59         28   685    1259
311                 BU    NOPARM     NO, ANNOUNCE ERROR             5  0891  B /23 /           28  1123
312                 SW    TOPCOR-2                                  4  0896  , 686             28   686
313                 MCW   80,PWORD                                   7  0900  M 080 685         28   080     685
314         *
315         * DETERMINE THIS MACHINE'S CORE SIZE, COMPARE IT TO
316         * SIZE ON PARAMETER CARD
317         *
318                 CS    0-0                                       4  0907  / 000             28   000
319                 SBR   CORSIZ                                    4  0911  H S62             28  1262
320                 MCW   TOPCOR,TOCONV                             7  0915  M 688 S65         28   688    1265
321                 B     ADCONV     COVERT TOPCOR TO FIVE DIGITS   4  0922  B /57             29  1157
322                 MCW   CONVTD,TOP5                              7  0926  M S70 T58         29  1270    1358
323                 MCW   CORSIZ,TOCONV                           7  0933  M S62 S65         29  1262    1265
324                 B     ADCONV     CONVERT CORSIZ TO FIVE DIGITS  4  0940  B /57             29  1157
325                 MCW   CONVTD,COR5                             7  0944  M S70 T53         29  1270    1353
326                 A     KP1,TOP5   TOP ADDR + 1 = SIZE           7  0951  A S71 T58         29  1271    1358
327                 A     KP1,COR5   COR ADDR + 1 = SIZE           7  0958  A S71 T53         30  1271    1353
328                 CS    332                                       4  0965  / 332             30   332
329                 CS                                              1  0969  /                 30
330                 CC    1                                         2  0970  F 1               30
331                 CS    332                                       4  0972  / 332             30   332
332                 CS                                              1  0976  /                 30
333                 MCW   STMSG,228  START FORTRAN COMPILATION MSG   7  0977  M S99 228         30  1299     228
334                 W                                               1  0984  2                 31
335                 CC    J                                         2  0985  F J               31
336                 MCW   TOP5,231                                  7  0987  M T58 231         31  1358     231
337                 MCW   SPSIZE     SPECIFIED SIZE                 4  0994  M T25             31  1325
338                 W                                               1  0998  2                 31
339                 CS    235                                       4  0999  / 235             31   235
340                 MCW   COR5,228                                  7  1003  M T53 228         31  1353     228
341                 MCW   ACTSIZ     ACTUAL SIZE                    4  1010  M T48             32  1348
342                 BCE   BIGNUF,C1410,T  COMPILING FOR 1410 COMPATIBILITY?  8  1014  B |85 695 T       32  1085     695
343                 W                                               1  1022  2                 32
344                 C     COR5,TOP5                                 7  1023  C T53 T58         32  1353    1358
345                 BH    PSGTM       PRINT SPEC SIZE GT MACH SIZE  5  1030  B |66 U           32  1066
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
346                 C     TOP5,K3900  COMPARE TOP TO 3900               7  1035  C T58 T63          32  1358    1363
347                 BL    BIGNUF                                        5  1042  B |85 T            32  1085
348                 CC    J                                             2  1047  F J                33
349                 CS    332                                           4  1049  / 332              33   332
350                 CS                                                  1  1053  /                  33
351                 MCW   SIZERR,218  MACHINE SIZE ERROR                7  1054  M T81 218          33  1381     218
352                 W                                                   1  1061  2                  33
353                 B     USEACT                                        4  1062  B |78              33  1078
354         PSGTM   MCW   SGTM,267  SPEC. SIZE GT MACH. SIZE MSG        7  1066  M U27 267          33  1427     267
355                 MCW   SGTM2     REST OF THE MESSAGE                 4  1073  M U48              34  1448
356                 W                                                   1  1077  2                  34
357         USEACT  MCW   CORSIZ,TOPCOR  USE ACTUAL SIZE               7  1078  M S62 688          34  1262     688
358         BIGNUF  MCW   TOPCOR,CLEARD&3                             7  1085  M 688 |99          34   688    1099
359         *
360         * CLEAR FROM TOP OF THIS MACHINE'S MEMORY DOWN TO DOWNTO
361         *
362         DOWNTO  EQU   3000                                                  3000
363                 SW    DOWNTO                                        4  1092  , ?00              34  3000
364         CLEARD  CS    0-0                                           4  1096  / 000              34   000
365                 SBR   CLEARD&3                                      4  1100  H |99              34  1099
366                 BW    CLEARD,DOWNTO                                 8  1104  V |96 ?00 1        35  1096    3000
367                 SW    40,47    IN CASE LOADING FROM CARDS           7  1112  , 040 047          35   040     047
368                 B     LOADNX                                        4  1119  B 700              35   700
369         *
370         * NO PARAMETER CARD
371         *
372         NOPARM  CC    1                                             2  1123  F 1                35
373                 CS    332                                           4  1125  / 332              35   332
374                 CS                                                  1  1129  /                  35
375                 MCW   MSG3,270                                      7  1130  M U85 270          35  1485     270
376                 W                                                   1  1137  2                  36
377                 CC    1                                             2  1138  F 1                36
378                 BCE   HALT3,LOADNX,1  RUNNING FROM CARDS?           8  1140  B /53 700 1        36  1153     700
379                 RWD   1             NO, REWIND THE TAPE             5  1148  U %U1 R            36   %U1
380         HALT3   H     HALT3                                         4  1153  . /53              36  1153
381         *
382         * CONVERT ADDRESS TO FIVE DIGITS
383         *
384         ADCONV  SBR   CNVEX&3                                       4  1157  H S53              36  1253
385                 S     CNVW2A                                        4  1161  S U50              36  1450
386                 S     CNVW2B                                        4  1165  S U52              37  1452
387                 MZ    TOCONV,CNVW2A-1                               7  1169  Y S65 U49          37  1265    1449
388                 MZ    TOCONV-2,CNVW2B-1                             7  1176  Y S63 U51          37  1263    1451
389         LOOP1   BWZ   LOOP2,CNVW2B-1,2                             8  1183  V S02 U51 2        37  1202    1451
390                 A     CNVKA0,CNVW2B                                 7  1191  A U54 U52          37  1454    1452
391                 B     LOOP1                                         4  1198  B /83              37  1183
392         LOOP2   BWZ   LP2X,CNVW2A-1,2                             8  1202  V S21 U49 2        38  1221    1449
393                 A     CNVKQ4,CNVW2A                                 7  1210  A U56 U50          38  1456    1450
394                 B     LOOP2                                         4  1217  B S02              38  1202
395         LP2X    A     CNVW2B-1,CNVW2A                               7  1221  A U51 U50          38  1451    1450
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
396                 MCW   TOCONV,CONVTD                                       7  1228  M S65 S70          38  1265    1270
397                 MCW   CNVW2A                                             4  1235  M U50              38  1450
398                 ZA    CONVTD                                            4  1239  ? S70              39  1270
399                 MZ    *-4,CONVTD  CLEAR ZONE IN OUTPUT                  7  1243  Y S45 S70          39  1245    1270
400         CNVEX   B     0-0                                               4  1250  B 000              39   000
401         *
402         * CONSTANTS AND WORK AREAS
403         *
404         GM      DC    @}@                                               1  1254             GMARK   39
405         KPARAM  DCW   @PARAM@                                           5  1259                     39
406         CORSIZ  DCW   #3          ACTUAL MACHINE SIZE (TOP ADDR)        3  1262                     39
407         TOCONV  DCW   #3          ADDRESS TO BE CONVERTED TO FIVE DIGITS 3  1265                     39
408         CONVTD  DCW   #5          ADDRESS CONVERTED TO FIVE DIGITS      5  1270                     39
409         KP1     DCW   &1                                                1  1271                     40
410         STMSG   DCW   @START OF FORTRAN COMPILATION@                   28  1299                     40
411         SPSIZE  DCW   @MACHINE SIZE SPECIFIED IS @                     26  1325                     41
412         ACTSIZ  DCW   @ACTUAL MACHINE SIZE IS @                        23  1348                     42
413         COR5    DCW   #5          CORSIZ AS FIVE DIGITS                 5  1353                     42
414         TOP5    DCW   #5          TOPCOR AS FIVE DIGITS                 5  1358                     42
415         K3900   DCW   03900                                             5  1363                     42
416         SIZERR  DCW   @MACHINE SIZE ERROR@                             18  1381                     43
417         SGTM    DCW   @SPECIFIED IS GREATER THAN ACTUAL MACHINE SIZE.@  46  1427                     45
418         SGTM2   DCW   @ERROR - MACHINE SIZE @                          21  1448                     45
419         CNVW2A  DCW   #2          WORK SPACE FOR ADDRESS CONVERSION     2  1450                     45
420         CNVW2B  DCW   #2          WORK SPACE FOR ADDRESS CONVERSION     2  1452                     45
421         CNVKA0  DCW   @A0@        CONSTANT FOR ADDRESS CONVERSION       2  1454                     45
422         CNVKQ4  DCW   @?4@        CONSTANT FOR ADDRESS CONVERSION       2  1456                     46
423         MSG3    DCW   @MESSAGE 3 - NO PARAMETER CARD@                  29  1485                     46
424         GMWM1   DCW   @}@                                               1  1486             GMARK   46
425         * A LOAD ADDRESS FOR COMPILER_GEN IS NOT NEEDED FOR BLOCK 1
426                 XFR   BEGIN1                                                    B 758              47   758
427         *
428         * GENERATE A CLEAR BLOCK FROM BEGIN1 TO GMWM
429         *
430         CLR1    CLRA  BEGIN1,GMWM1                                                       MACRO
            *                                                                              GEN
            * CLEAR CORE AFTER A PHASE USING THE CLRTOP ADDRESS                            GEN
            *                                                                              GEN
431                 ORG   BEGIN1&X00                                                0800
432         )0R001  EQU   *           CLRBOT & X00 - 1                        0799       GEN
433                 ORG   201                                                     0201
            *                                                                              GEN
            * CLEAR DOWN TO CLRBOT & X00 THE EASY WAY                                      GEN
            *                                                                              GEN
434         CLR1    EQU   *&1                                                 0201       GEN
435         )0J001  CS    GMWM1         CLEAR FROM CLRTOP                     4  0201  / U86      GEN     50  1486
436                 SBR   )0J001&3                                            4  0205  H 204      GEN     50   204
437                 SBR   )0L001&6                                            4  0209  H 250      GEN     50   250
438                 C     )0J001&3,)0M001   DOWN TO CLRBOT & X00?            7  0213  C 204 261  GEN     50   204     261
439                 BU    )0J001                                            5  0220  B 201 /    GEN     50   201
```

```
SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR  B-ADDR
            *                                                                                 GEN
            * NOW CLEAR DOWN TO CLRBOT THE HARD WAY                                           GEN
            *                                                                                 GEN
440         )0K001 C     )0L001&6,)0N001                              7  0225  C 250 264    GEN     50   250     264
441                BU    )0L001                                       5  0232  B 244 /      GEN     50   244
442                CS    LOADNX,)0Q001  LOAD THE NEXT BLOCK AT 1      7  0237  / 700 271    GEN     51   700     271
443         )0L001 LCA   )0P001,0-0     CLEAR WITH BLANK AND WORD MARK 7  0244  L 265 000    GEN     51   265     000
444                SBR   )0L001&6                                     4  0251  H 250        GEN     51   250
445                B     )0K001                                       4  0255  B 225        GEN     51   225
446         )0M001 DSA   )0R001         CLRBOT & X00 - 1             3  0261  799          GEN     51   799
447         )0N001 DSA   BEGIN1         CLRBOT                       3  0264  758          GEN     51   758
448         )0P001 DCW   #1                                          1  0265                GEN     51
449                DC    @CLRA @     IDENTIFY IN A DECK, TAPE, OR DUMP 5  0270                GEN     51
450         )0Q001 DCW   @}@                                         1  0271                GEN     52
451                ORG   *&1         START NEW CARD FOR COMPILER-GEN                0273
            *         DSA  CLR1      CLRA                                            GEN
452                XFR   CLR1       PROHIBITED IN A MACRO                 B 201               53   201
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J001	0201: 0	)0K001	0225: 0	)0L001	0244: 0	)0M001	0261: 0	)0N001	0264: 0	)0P001	0265: 0
)0Q001	0271: 0	)0R001	0799: 0	ACTSIZ	1348: 0	ADCONV	1157: 0	ADR5 S	0658: 0	ARYSIZ	0160: 0
ARYTOP	0194: 0	BEGIN1	0758: 0	BIGNUF	1085: 0	BOTFMT	0154: 0	BUMP3S	0632: 0	C1410	0695: 0
CLEARD	1096: 0	CLEARH	0433: 0	CLR1	0201: 0	CNVEX	1250: 0	CNVKA0	1454: 0	CNVKQ4	1456: 0
CNVW2A	1450: 0	CNVW2B	1452: 0	COMMA	0757: 0	CONDNS	0693: 0	CONT S	0568: 0	CONVTD	1270: 0
COR5	1353: 0	CORSIZ	1262: 0	DOCNT	0151: 0	DOTS S	0651: 0	DOWM S	0520: 0	DOWNTO	3000: 0
ECOUNT	0755: 0	EXIT S	0564: 0	EXPF	0120: 0	FLOATF	0125: 0	FMTSW	0696: 0	GET S	0497: 0
GLOBER	0184: 0	GM	1254: 0	GMWM1	1486: 0	GOTXL	0185: 0	HALT S	0563: 0	HALT3	1153: 0
IMOD	0690: 0	K3900	1363: 0	K9 S	0665: 0	KM10 S	0667: 0	KP1	1271: 0	KP1 S	0670: 0
KP15 S	0672: 0	KP2 S	0662: 0	KPARAM	1259: 0	KZ3 S	0661: 0	LOADEX	0721: 0	LOADNX	0700: 0
LOGF	0119: 0	LOOP S	0459: 0	LOOP1	1183: 0	LOOP2	1202: 0	LP2X	1221: 0	MANTIS	0692: 0
MSG3	1485: 0	NEGAR2	0142: 0	NEGAR3	0157: 0	NEGARY	0163: 0	NOP1	0756: 0	NOPARM	1123: 0
NSTMTS	0183: 0	PARAM	0699: 0	PHASID	0110: 0	PSGTM	1066: 0	PWORD	0685: 0	RDAGIN	0704: 0
RDPARM	0853: 0	RELTAB	0188: 0	RX1 S	0535: 0	SAWABS	0122: 0	SAWNEG	0123: 0	SEQTAB	0148: 0
SERIES	0117: 0	SGTM	1427: 0	SGTM2	1448: 0	SINCOS	0118: 0	SIZERR	1381: 0	SKIP S	0621: 0
SNAPSH	0333: 0	SNAPSW	0694: 0	SPSIZE	1325: 0	STMSG	1299: 0	SUBENT	0191: 0	SUBSCR	0116: 0
SX1 S	0416: 0	SX3 S	0409: 0	SXX S	0402: 0	TBLBOT	0145: 0	TOCONV	1265: 0	TOP5	1358: 0
TOPCOR	0688: 0	TPERR	0725: 0	TPREAD	0708: 0	USEACT	1078: 0	W2A S	0664: 0	W2B S	0669: 0
X1	0089: 0	X2	0094: 0	X3	0099: 0	XBEGIN	0838: 0	XFIXF	0124: 0	XQTD S	0680: 0
XXXXX1	0089: 0	XXXXX2	0094: 0	XXXXX3	0099: 0						

UNREFERENCED SYMBOLS

ARYSIZ ARYTOP BOTFMT CONDNS DOCNT EXPF FLOATF FMTSW GLOBER GOTXL IMOD LOGF MANTIS NEGAR2 NEGAR3 NEGARY NSTMTS
RELTAB SAWABS SAWNEG SEQTAB SERIES SINCOS SNAPSH SNAPSW SUBENT SUBSCR TBLBOT XBEGIN XFIXF