```
CLEAR STORAGE 1      ,008015,022026,030037,044,049,053053N000000N00001026                              1
CLEAR STORAGE 2      L068116,105106,110117B101/I9I#071029C029056B026/B001/0991,001/001117I0?           2
BOOTSTRAP            ,008015,022029,036040,047054,061068,072/061039            ,0010011040             3
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                     FORTRAN COMPILER -- REPLACE PHASE ONE -- PHASE 51                      PAGE    1


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

 101                JOB    FORTRAN COMPILER -- REPLACE PHASE ONE -- PHASE 51
 102                CTL    6611
 103         *
 104         * OBJECT-TIME INSTRUCTIONS WHICH REFERENCE STATEMENT NUMBERS
 105         * ARE CORRECTED TO THE OBJECT-TIME ADDRESSES OF THE
 106         * STATEMENT.  SUBSCRIPT STRINGS ARE CLEANED UP.
 107         *
 108         X1     EQU    89                                                     0089
 109         X2     EQU    94                                                     0094
 110         X3     EQU    99                                                     0099
 111         *
 112         * STUFF IN THE RESIDENT AREA
 113         *
 114         PHASID EQU    110  PHASE ID, FOR SNAPSHOT DUMPS                       0110
 115         SUBSCR EQU    116  WM CLEARED IF SUBSCRIPT CODE NEEDED                0116
 116         SEQTAB EQU    148  BOTTOM OF SEQUENCE NUMBER TABLE - 2                0148
 117         BOTFMT EQU    154  BOTTOM OF FORMAT STRINGS OR NUMBER TABLE - 1       0154
 118         NEGARY EQU    163  16000 - ARYSIZ                                     0163
 119         SNAPSH EQU    333  CORE DUMP SNAPSHOT                                 0333
 120         LOADNX EQU    700  LOAD NEXT OVERLAY                                  0700
 121         CLEARL EQU    707  CS AT START OF OVERLAY LOADER                      0707
 122         LOADXX EQU    793  EXIT FROM OVERLAY LOADER                           0793
 123         CLRBOT EQU    833  BOTTOM OF CORE TO CLEAR IN OVERLAY LOADER          0833
 124         *
 125         * RUNTIME ROUTINES
 126         *
 127         ARITF  EQU    700 ARITHMETIC INTERPRETER                             0700
 128         *
 129                ORG    838                                                           0838
 130     838 BEGINN MCW    X3,SX3                                            7  0838  M 099 S49          4
 131     845        MCW    SEQTAB,*&7                                        7  0845  M 148 858          4
 132     852        MCW    KGREAT,0                                          7  0852  M S50 000          4
 133     859        MCW    BOTFMT,X2                                         7  0859  M 154 094          4
 134     866        MCW    KGREAT,1600                                       7  0866  M S50 W00          4
 135     873 GETSUB BCE    FIND,0&X2,$  WITHIN TEN OF TOP OF SUBSCRIPT?   V3M4  8  0873  B S71 0!0 $        5
 136     881        CHAIN 9                                                                   MACRO
 137                BCE                                                     1  0881  B            GEN    5
 138                BCE                                                     1  0882  B            GEN    5
 139                BCE                                                     1  0883  B            GEN    5
 140                BCE                                                     1  0884  B            GEN    5
 141                BCE                                                     1  0885  B            GEN    5
 142                BCE                                                     1  0886  B            GEN    5
 143                BCE                                                     1  0887  B            GEN    6
 144                BCE                                                     1  0888  B            GEN    6
 145                BCE                                                     1  0889  B            GEN    6
 146     890 BOTEX  BCE    BOTTOM,0&X2,>  GREATER SIGN BELOW CODE?          8  0890  B |15 0!0 >        6
 147     898        CHAIN 9                                                                   MACRO
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                     FORTRAN COMPILER -- REPLACE PHASE ONE -- PHASE 51   PAGE   2

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

148   BCE   1 0898 B   GEN   6
149   BCE   1 0899 B   GEN   6
150   BCE   1 0900 B   GEN   6
151   BCE   1 0901 B   GEN   7
152   BCE   1 0902 B   GEN   7
153   BCE   1 0903 B   GEN   7
154   BCE   1 0904 B   GEN   7
155   BCE   1 0905 B   GEN   7
156   BCE   1 0906 B   GEN   7
157   907   SBR   X2   4 0907 H 094   7
158   911   B   GETSUB   4 0911 B 873   8
159   915 GETSB2 BCE   SUBTOP,0&X2,$ TOP OF SUBSCRIPT?   8 0915 B 931 0!0 $ 8
160   923   SBR   X2   4 0923 H 094   8
161   927   B   GETSB2   4 0927 B 915   8
162   931 SUBTOP MN   0&X2   4 0931 D 0!0   8
163   935   SAR   X2   4 0935 Q 094   8
164   939   BCE   SUBBOT,0&X2,$ WITHIN 16 OF BOTTOM OF SUBSCRIPT? 8 0939 B 966 0!0 $ 8
165   947   CHAIN 15   MACRO
166   BCE   1 0947 B   GEN   9
167   BCE   1 0948 B   GEN   9
168   BCE   1 0949 B   GEN   9
169   BCE   1 0950 B   GEN   9
170   BCE   1 0951 B   GEN   9
171   BCE   1 0952 B   GEN   9
172   BCE   1 0953 B   GEN   9
173   BCE   1 0954 B   GEN   10
174   BCE   1 0955 B   GEN   10
175   BCE   1 0956 B   GEN   10
176   BCE   1 0957 B   GEN   10
177   BCE   1 0958 B   GEN   10
178   BCE   1 0959 B   GEN   10
179   BCE   1 0960 B   GEN   10
180   BCE   1 0961 B   GEN   11
181   962   B   GETSUB   4 0962 B 873   11
182   966 SUBBOT CW   SUBSCR   4 0966) 116   11
183   970 DEC3   MN   0&X2   4 0970 D 0!0   11
184   974   MN   1 0974 D   11
185   975   MN   1 0975 D   11
186   976   SAR   X2   4 0976 Q 094   11
187   980   SW   1&X2   4 0980 , 0!1   12
188   984   BCE   DEC1,0&X2,$ 8 0984 B |03 0!0 $ 12
189   992   MZ   *-4,2&X2   7 0992 Y 994 0!2   12
190   999   B   DEC3   4 0999 B 970   12
191 1 003 DEC1   MN   0&X2   4 1003 D 0!0   12
192 1 007   SAR   X2   4 1007 Q 094   12
193 1 011   B   GETSUB   4 1011 B 873   12
194 1 015 BOTTOM MCW   APASS2,BOTEX&3   7 1015 M S53 893   13
195 1 022   MCW   X3,X2   7 1022 M 099 094   13
196 1 029   B   GETSUB   4 1029 B 873   13
197 1 033 PASS2X BCE   DONE,0&X3,   8 1033 B S10 0?0   13

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

198  1 041         MCW  X3,LINK&6                                                 7  1041  M 099 /37          13
199  1 048         C    0&X3                                                      4  1048  C 0?0              13
200  1 052         SBR  X2                                                        4  1052  H 094              14
201  1 056         SBR  X3                                                        4  1056  H 099              14
202  1 060         BCE  TARITF,1&X3,|   TOP OF ARITHMETIC ASSIGNMENT             8  1060  B /74 0?1 |        14
203  1 068  TESTWM BW   PASS2X,4&X2                                              8  1068  V |33 0!4 1        14
204  1 076         BWZ                                                            1  1076  V                  14
205  1 077         BWZ                                                            1  1077  V                  14
206  1 078         BM   NOLINK,3&X2                                              8  1078  V /42 0!3 K        14
207  1 086         C    4&X2,A277X3                                              7  1086  C 0!4 S56          15
208  1 093         BE   PASS2X                                                    5  1093  B |33 S            15
209  1 098         BWZ  ADDLNK,3&X2,B                                            8  1098  V /17 0!3 B        15
210  1 106  BUMPX2 SBR  X2,3&X2                                                  7  1106  H 094 0!3          15
211  1 113         B    TESTWM                                                    4  1113  B |68              15
212  1 117  ADDLNK MCW  4&X2,X1   WHY NOT JUST MA 4&X2,LINK&6 ???                7  1117  M 0!4 089          15
213  1 124         MZ   *-6,*&6   X1 TAG                                         7  1124  Y /24 /36          16
214  1 131  LINK   SBR  4&X2,0                                                   7  1131  H 0!4 000          16
215  1 138         B    BUMPX2                                                    4  1138  B /06              16
216  1 142  NOLINK MCW  4&X2,X1                                                  7  1142  M 0!4 089          16
217  1 149         MA   NEGARY,X1                                               7  1149  # 163 089          16
218  1 156         MCW  0&X1,X1                                                  7  1156  M 0|0 089          16
219  1 163         MCW  X1,4&X2                                                  7  1163  M 089 0!4          17
220  1 170         B    BUMPX2                                                    4  1170  B /06              17
221  1 174  TARITF BW   *&5,2&X3   NEED TO LOOK FOR BRANCH TO ARITF?            8  1174  V /86 0?2 1        17
222  1 182         B    PASS2X                                                    4  1182  B |33              17
223  1 186  FARITF C    0&X3   FIND THE BRANCH TO ARITF                         4  1186  C 0?0              17
224  1 190         SBR  X3                                                        4  1190  H 099              17
225  1 194         C    4&X3,BARITF&3   BRANCH TO ARITHMETIC INTERPRETER?       7  1194  C 0?4 S60          17
226  1 201         BE   PASS2X          YES                                      5  1201  B |33 S            18
227  1 206         B    FARITF          NO, LOOK AGAIN                           4  1206  B /86              18
228  1 210  DONE   MCW  SX3,X3                                                   7  1210  M S49 099          18
229  1 217         BSS  SNAPSH,C                                                 5  1217  B 333 C            18
230  1 222         SBR  LOADXX&3,934                                            7  1222  H 796 934          18
231  1 229         SBR  CLEARL&3,GMWM                                           7  1229  H 710 S96          18
232  1 236         LCA  LOAD52,PHASID                                           7  1236  L S70 110          19
233  1 243         B    LOADNX                                                    4  1243  B 700              19
234  1 249  SX3    DCW  #3                                                       3  1249                     19
235  1 250  KGREAT DCW  @>@  GREATER THAN SIGN                                   1  1250                     19
236  1 253  APASS2 DSA  PASS2X                                                   3  1253  |33                19
237  1 256  A277X3 DSA  277&X3                                                   3  1256  2G7                19
238  1 257  BARITF B    ARITF                                                    4  1257  B 700              19
239  1 270  LOAD52 DCW  @LOAD 52B&C@                                            10  1270                     20
240  1 271  FIND   BCE  BOTEX,0&X2,>    GREATER SIGN BELOW CODE?       V3M4     8  1271  B 890 0!0 >        20
241  1 279         BCE  SUBTOP,0&X2,$   TOP OF SUBSCRIPT?              V3M4     8  1279  B 931 0!0 $        20
242  1 287         SBR  X2                                            V3M4     4  1287  H 094              20
243  1 291         BIN  FIND,                                         V3M4     5  1291  B S71              20
244  1 296  GMWM   DCW  @}@                                                      1  1296            GMARK    20
245                EX   BEGINN                                                      B 838              21
246                END                                                              / 000 080
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SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
A277X3	1256	ADDLNK	1117	APASS2	1253	ARITF	700	BARITF	1257	BEGINN	838	BOTEX	890
BOTFMT	154	BOTTOM	1015	BUMPX2	1106	CLEARL	707	CLRBOT	833	DEC1	1003	DEC3	970
DONE	1210	FARITF	1186	FIND	1271	GETSB2	915	GETSUB	873	GMWM	1296	KGREAT	1250
LINK	1131	LOAD52	1270	LOADNX	700	LOADXX	793	NEGARY	163	NOLINK	1142	PASS2X	1033
PHASID	110	SEQTAB	148	SNAPSH	333	SUBBOT	966	SUBSCR	116	SUBTOP	931	SX3	1249
TARITF	1174	TESTWM	1068	X1	89	X2	94	X3	99				