```
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

                          1401 AUTOCODER-PASS 1-GENERATE SYSTEM TAPE-VERSION 3       3711L              PAGE    1

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

 101         000    JOB   1401 AUTOCODER-PASS 1-GENERATE SYSTEM TAPE-VERSION 3
 102                CTL   630 1
 103         SYSTP  EQU   %U1                                                    %U1
 104         CARD   EQU   0                                                     0000
 105         PRINT  EQU   200                                                   0200
 106                ORG   87                                                          0087
 107         XR1    DCW   000                                                 3  0089                      4
 108                DC    00                                                  2  0091                      4
 109         XR2    DCW   000                                                 3  0094                      4
 110                DC    00                                                  2  0096                      4
 111         XR3    DCW   000                                                 3  0099                      4
 112                DC    000000                                              6  0105                      4
 113         ZONE   DCW   @2SKB@                                              4  0109                      4
 114         ABIT   EQU   ZONE-2                                                 0107
 115         NOBIT  EQU   ZONE-3                                                 0106
 116         XXXX   EQU   0                                                     0000
 117         *
 118         * START OF MAIN LINE
 119         *
 120                ORG   333                                                         0333
 121         START  RWD   SYSTP                                               5  0333  U %U1 R             5
 122                CC    1                                                   2  0338  F 1                  5
 123                MCW   @GENERATING 1401 AUTOCODER SYSTEM@,PRINT&32         7  0340  M '83 232            5
 124                W                                                        1  0347  2                    5
 125                CC    1                                                   2  0348  F 1                  5
 126                CS    PRINT&132                                           4  0350  / 332                5
 127                CS                                                       1  0354  /                    5
 128                MCW   CARD&75,SEQNO#4                                    7  0355  M 075 '87            6
 129         *
 130         * START UP NEXT BLOCK
 131         *
 132         NXTBK  R                                                        1  0362  1                    6
 133                C     CARD&12,@CONTROL@                                  7  0363  C 012 '94            6
 134                BU    MACRO                                              5  0370  B 792 /              6
 135                BWZ   CKSEQ,CARD&80,2   COMMENT OUT TO TURN OFF SEQ CHK   8  0375  V 726 080 2          6
 136                BCE   EOJOB,CARD&78,9                                    8  0383  B 877 078 9          6
 137                SW    CARD&21                                            4  0391  , 021                7
 138                ZA    CARD&25,HOLD5#5                                    7  0395  ? 025 '99            7
 139                CW    CARD&21                                            4  0402  ) 021                7
 140         *
 141         * FLOAT ADDRESS TO FIVE CHARACTERS
 142         *
 143         FLOAT  BCE   *&5,HOLD5,&                                        8  0406  B 418 '99 &          7
 144                B     COMP1                                              4  0414  B 429                7
 145                ZA    HOLD5-1,HOLD5                                      7  0418  ? '98 '99            7
 146                B     FLOAT                                              4  0425  B 406                7
 147         *



                          1401 AUTOCODER-PASS 1-GENERATE SYSTEM TAPE-VERSION 3       3711L              PAGE    2

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

 148         * TEST ADDRESS AGAINST HOME ADDRESS
 149         * TO DEVELOP INDEX VALUE
 150         *
 151         COMP1  MZ    NOBIT,HOLD5                                        7  0429  Y 106 '99            8
 152                S     XR1&2                                              4  0436  S 091                8
 153                C     HOLD5,@01500@                                      7  0440  C '99 /04           8
 154                BE    DOCOR                                              5  0447  B 538 S              8
 155                BH    SUB1                                               5  0452  B 527 U              8
 156                S     @01500@,HOLD5                                      7  0457  S /09 '99            8
 157                MCW   @16000@,WORK5#5                                    7  0464  M /14 /19            9
 158         SUB2   S     HOLD5,WORK5                                        7  0471  S '99 /19            9
 159         *
 160         * CONVERT INDEX VALUE TO 3 DIGIT MACHINE ADDRESS
 161         *
 162         CNVRT  BAV   *&1                                                5  0478  B 483 Z              9
 163                A     @96@,WORK5-3                                       7  0483  A /21 /16           9
 164                BAV   CNVRT&5                                            5  0490  B 483 Z              9
 165                MZ    WORK5-4,WORK5                                      7  0495  Y /15 /19            9
 166                MN    WORK5-3,*&4                                        7  0502  D /16 512           10
 167                MZ    ZONE,WORK5-2                                       7  0509  Y 109 /17           10
 168                MCW   WORK5,XR1                                          7  0516  M /19 089           10
 169                B     DOCOR                                              4  0523  B 538               10
 170         SUB1   MCW   @01500@,WORK5                                      7  0527  M /26 /19           10
 171                B     SUB2                                               4  0534  B 471               10
 172         *
 173         * READ CONDENSED CARDS
 174         *
 175         DOCOR  R                                                        1  0538  1                   10
 176                MCW   @045@,XR3                                          7  0539  M /29 099           11
 177                MCW   @042@,XR2                                          7  0546  M /32 094           11
 178                BWZ   CKSEQ,CARD&80,2   COMMENT OUT TO TURN OFF SEQ CHK   8  0553  V 726 080 2          11
 179                BCE   WTAP1,CARD&68,B                                    8  0561  B 675 068 B          11
 180                BCE   SETWM,CARD&40,N                                    8  0569  B 596 040 N          11
 181                C     CARD&46,@001@                                      7  0577  C 046 /35           12
 182                BE    SETWM                                              5  0584  B 596 S              12
 183                MZ    ABIT,CARD&45                                       7  0589  Y 107 045           12
 184         *
 185         * SET RETURN ADDRESS
 186         *
 187         SETWM  MCW   &DOCOR,CARD&71                                     7  0596  M /38 071           12
 188                MCW   @B@                                                4  0603  M /39               12
 189         *
 190         * INDEX WORD MARK ADDRESSES
 191         *
 192         COMP2  C     XR2,@063@                                          7  0607  C 094 /42           12
 193                BE    CARD&40                                            5  0614  B 040 S              13
 194                A     &7,XR3                                             7  0619  A /43 099           13
 195                A     &7,XR2                                             7  0626  A /43 094           13
 196                C     CARD&1&X2,@040@                                    7  0633  C 0!1 /46           13
 197                BE    *&8                                                5  0640  B 652 S              13
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

198                MZ    ABIT,CARD&X2                                        7  0645  Y 107 0!0           13
199                C     CARD&1&X3,@040@                                     7  0652  C 0?1 /46           14
200                BE    COMP2                                               5  0659  B 607 S             14
201                MZ    ABIT,CARD&X3                                        7  0664  Y 107 0?0           14
202                B     COMP2                                               4  0671  B 607               14
203         *
204         * WRITE CORE ON TAPE
205         *
206         WTAP1  LCA   @}@,3998                                            7  0675  L /47 I98           14
207                WTW   SYSTP,1500                                          8  0682  L %U1 V00 W         14
208                BER   WTERR                                               5  0690  B 973 L             15
209         *
210         * CLEAR INPUT AREA
211         *
212                MCW   @I99@,CLEAR&3                                       7  0695  M /50 705           15
213         CLEAR  CS    XXXX                                                4  0702  / 000               15
214                SBR   CLEAR&3                                             4  0706  H 705               15
215                C     CLEAR&3,@U99@                                       7  0710  C 705 /53           15
216                BU    CLEAR                                               5  0717  B 702 /             15
217                B     NXTBK                                               4  0722  B 362               15
218         *
219         * CHECK CARD SEQUENCE
220         *
221         CKSEQ  SBR   SEQXT&3                                             4  0726  H 759               16
222                A     &1,SEQNO                                            7  0730  A /54 '87           16
223                C     CARD&75,SEQNO                                       7  0737  C 075 '87           16
224                MCW   CARD&75,SEQNO                                       7  0744  M 075 '87           16
225                BU    SEQER                                               5  0751  B 760 /             16
226         SEQXT  B     XXXX                                                4  0756  B 000               16
227         *
228         * CARD SEQUENCE ERROR
229         *
230         SEQER  MCW   CARD&80,PRINT&80                                    7  0760  M 080 280           17
231                CHAIN 6                                                                    MACRO
232                MCW                                                       1  0767  M           GEN     17
233                MCW                                                       1  0768  M           GEN     17
234                MCW                                                       1  0769  M           GEN     17
235                MCW                                                       1  0770  M           GEN     17
236                MCW                                                       1  0771  M           GEN     17
237                MCW                                                       1  0772  M           GEN     17
238                MCW   @SEQUENCE ERROR@,PRINT&98                           7  0773  M /68 298           18
239                W                                                         1  0780  2                   18
240                H     0,176                                               7  0781  . 000 176           18
241                B     DOSEQ                                               4  0788  B 941               18
242         *
243         * PROCESS MACRO LIBRARY
244         *
245         MACRO  NOP   CRDER                                               4  0792  N 917               18
246                C     CARD&20,@HEADR@                                     7  0796  C 020 /73           18
247                BU    CRDER                                               5  0803  B 917 /             18
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SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

248                BWZ   CKSEQ,CARD&80,2  COMMENT OUT TO TURN OF SEQ CHK    8  0808  V 726 080 2         19
249                MCW   @B@,MACRO                                           7  0816  M /39 792           19
250                LCA   @}@,81                                              7  0823  L /47 081           19
251         *
252         * WRITE SKELETON INSTRUCTIONS ON TAPE
253         *
254         WTAP2  WT    SYSTP,CARD&1                                        8  0830  M %U1 001 W         19
255                BER   WTERR                                               5  0838  B 973 L             19
256                C     CARD&11,@999999@                                    7  0843  C 011 /79           20
257                BE    WTTM                                                5  0850  B 868 S             20
258                R                                                         1  0855  1                   20
259                BWZ   CKSEQ,CARD&80,2  COMMENT OUT TO TURN OF SEQ CHK    8  0856  V 726 080 2         20
260                B     WTAP2                                               4  0864  B 830               20
261         WTTM   WTM   SYSTP                                               5  0868  U %U1 M             20
262                B     NXTBK                                               4  0873  B 362               20
263         *
264         * END OF GENERATION
265         *
266         EOJOB  WTM   SYSTP                                               5  0877  U %U1 M             21
267                RWD   SYSTP                                               5  0882  U %U1 R             21
268                CW    @}@                                                 4  0887  ) /47               21
269                CS    PRINT&132                                           4  0891  / 332               21
270                CS                                                        1  0895  /                   21
271                MCW   @1401 AUTOCODER SYSTEM GENERATED ON TAPE UNIT 1@,246 7  0896  M S25 246           21
272                W                                                         1  0903  2                   21
273                CC    1                                                   2  0904  F 1                 22
274         *
275         * FINAL HALT
276         *
277         HALT   H     0,142                                               7  0906  . 000 142           22
278                B     HALT                                                4  0913  B 906               22
279         *
280         * MISSING CONTROL CARD
281         *
282         CRDER  CS    PRINT&132                                           4  0917  / 332               22
283                CS                                                        1  0921  /                   22
284                MCW   @SYSTEM CONTROL CARD MISSING@,PRINT&27              7  0922  M S52 227           22
285                W                                                         1  0929  2                   22
286         HALT2  H     0,177                                               7  0930  . 000 177           23
287                B     HALT2                                               4  0937  B 930               23
288         *
289         * AFTER SEQUENCE ERROR, CHECK BALANCE OF DECK
290         *
291         DOSEQ  R                                                         1  0941  1                   23
292                BWZ   CKSEQ,CARD&80,2                                     8  0942  V 726 080 2         23
293                BCE   ENDSQ,CARD&78,9                                     8  0950  B 962 078 9         23
294                B     DOSEQ                                               4  0958  B 941               23
295         ENDSQ  H     0,152                                               7  0962  . 000 152           23
296                B     ENDSQ                                               4  0969  B 962               24
297         *
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SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

298         * WRITE REDUNDANCY ROUTINE
299         *
300         WTERR   SBR   WTXT&3                                             4  0973  H '36              24
301                 SBR   XR3                                                4  0977  H 099             24
302                 MZ    &9,XR3                                             7  0981  Y S53 099          24
303                 MCW   4000-6&X3,RETRY&7                                  7  0988  M II4 '27          24
304         BSP     BSP   SYSTP                                              5  0995  U %U1 B            24
305                 SKP   SYSTP                                              5  1000  U %U1 E            24
306                 BCE   SUBCT,WTCT-1,1                                     8  1005  B '37 S54 1        25
307                 A     &1,WTCT#2                                          7  1013  A /54 S55          25
308         RETRY   WT    SYSTP,XXXX                                         8  1020  M %U1 000 W        25
309                 BER   BSP                                                5  1028  B 995 L            25
310         WTXT    B     XXXX                                               4  1033  B 000              25
311         SUBCT   S     WTCT                                               4  1037  S S55              25
312                 H     0,161                                              7  1041  . 000 161          26
313                 B     RETRY                                              4  1048  B '20              26
                    DCW   @GENERATING 1401 AUTOCODER SYSTEM@                32  1083            LIT     27
            SEQNO   DCW   #04                                                4  1087            AREA    27
                    DCW   @CONTROL@                                          7  1094            LIT     28
            HOLD5   DCW   #05                                                5  1099            AREA    28
                    DCW   @01500@                                            5  1104            LIT     28
                    DCW   @01500@                                            5  1109            LIT     28
                    DCW   @16000@                                            5  1114            LIT     28
            WORK5   DCW   #05                                                5  1119            AREA    28
                    DCW   @96@                                               2  1121            LIT     28
                    DCW   @01500@                                            5  1126            LIT     29
                    DCW   @045@                                              3  1129            LIT     29
                    DCW   @042@                                              3  1132            LIT     29
                    DCW   @001@                                              3  1135            LIT     29
                    DCW   &DOCOR                                             3  1138  538       ADCON   29
                    DCW   @B@                                                1  1139            LIT     29
                    DCW   @063@                                              3  1142            LIT     29
                    DCW   &7                                                 1  1143            LIT     30
                    DCW   @040@                                              3  1146            LIT     30
                    DCW   @}@                                                1  1147            LIT     30
                    DCW   @I99@                                              3  1150            LIT     30
                    DCW   @U99@                                              3  1153            LIT     30
                    DCW   &1                                                 1  1154            LIT     30
                    DCW   @SEQUENCE ERROR@                                  14  1168            LIT     30
                    DCW   @HEADR@                                            5  1173            LIT     31
                    DCW   @999999@                                           6  1179            LIT     31
                    DCW   @1401 AUTOCODER SYSTEM GENERATED ON TAPE UNIT 1@  46  1225            LIT     33
                    DCW   @SYSTEM CONTROL CARD MISSING@                     27  1252            LIT     33
                    DCW   &9                                                 1  1253            LIT     33
            WTCT    DCW   #02                                                2  1255            AREA    33
314                 EX    START                                                     B 333               34
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SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

315                 JOB   AUTOCODER-PASS 1 SELECT PROGRAM -VERSION 3
316                 SFX   B                                                B
317         PASSA   EQU   1650                                             B      1650
318         DOPSA   EQU   1900                                             B      1900
319         SYSTP   EQU   %U1                                              B      %U1
320         *
321         * BRANCH FROM TAPE LOAD ROUTINE
322         *
323                 ORG   1                                                B            0001
324                 B     333                                              B   4  0001  B 333              37  ADDR
325                 H     *-3                                              B   4  0005  . 005               37  ADDR
326         LOADD   DCW   @599@                                            B   3  0011                      37  ADDR
327                 ORG   87                                               B            0087
328         XR1     DCW   000                                              B   3  0089                      38
329                 DC    00                                               B   2  0091                      38
330                 DCW   000                                              B   3  0094                      38
331                 DC    00                                               B   2  0096                      38
332                 DCW   000                                              B   3  0099                      38
333                 DC    00                                               B   2  0101                      38
334         *
335         * BEGIN PROGRAM
336         *
337                 ORG   333                                              B            0333
338                 BER   HALT1                                            B   5  0333  B 407 L            39
339                 SW    GMRK1                                            B   4  0338  , 835              39
340         CLEAR   CS    3999                                             B   4  0342  / I99              39
341                 SBR   CLEAR&3                                          B   4  0346  H 345              39
342                 C     CLEAR&3,@U99@                                    B   7  0350  C 345 787          39
343                 BU    CLEAR                                            B   5  0357  B 342 /            39
344         *
345         * GET PAST LIBRARY
346         *
347         LOOP1   SW    GMRK1                                            B   4  0362  , 835              39
348                 RT    SYSTP,GMRK1-21                                   B   8  0366  M %U1 814 R        40
349                 C     GMRK1-2,@999999    HEADR@                        B   7  0374  C 833 802          40
350                 BU    LOOP1                                            B   5  0381  B 362 /            40
351                 SW    GMRK1                                            B   4  0386  , 835              40
352                 RT    SYSTP,GMRK1-1                                    B   8  0390  M %U1 834 R        40
353                 BEF   TSTSS                                            B   5  0398  B 418 K            40
354                 B     LOOP1                                            B   4  0403  B 362              41
355         *
356         * REDUNDANCY ON TAPE LOAD
357         *
358         HALT1   H     0,199                                            B   7  0407  . 000 199          41
359                 B     HALT1                                            B   4  0414  B 407              41
360         TSTSS   BSS   LIBRN,F                                          B   5  0418  B 521 F            41
361         *
362         * RETRIEVE PASS 2 FOR ASSEMBLY RUN
363         *
364                 SW    GMRK1                                            B   4  0423  , 835              41
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SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD
365                LCA   GMRK1,3998                              B   7  0427  L 835 I98          41
366                MCW   &PASSA&13,NOIS2&6                       B   7  0434  M 805 658          41
367         *
368         * GET PAST LIBRARIAN
369         *
370         LOOP2  BCE   LOPSA,BYCT,4                           B   8  0441  B 476 807 4        42
371                SW    3998                                   B   4  0449  , I98              42
372                RTW   SYSTP,PASSA                            B   8  0453  L %U1 W50 R        42
373                B     NOISE                                  B   4  0461  B 637              42
374                A     &1,BYCT#1                              B   7  0465  A 806 807          42
375                B     LOOP2                                  B   4  0472  B 441              42
376         *
377         * PASS 2 FOUND
378         *
379         LOPSA  RTW   SYSTP,PASSA                            B   8  0476  L %U1 W50 R        43
380                B     NOISE                                  B   4  0484  B 637              43
381                BER   RDERR                                  B   5  0488  B 676 L            43
382                CW    GMRK1                                  B   4  0493  ) 835              43
383         CLR    CS    PASSA-1                                B   4  0497  / W49              43
384                SBR   CLR&3                                  B   4  0501  H 500              43
385                C     CLR&3,LOADD                            B   7  0505  C 500 011          43
386                BU    CLR                                    B   5  0512  B 497 /            44
387                B     DOPSA                                  B   4  0517  B Z00              44
388         *
389         * LIBRARY RUN
390         *
391         LIBRN  MCW   @!13@,NOIS2&6                          B   7  0521  M 810 658          44
392                CW    GMRK1                                  B   4  0528  ) 835              44
393                BSS   OUTPT,B                                B   5  0532  B 558 B            44
394         *
395         * RETRIEVE UPDATE PROGRAM
396         *
397                RTW   SYSTP,2000                             B   8  0537  L %U1 !00 R        44
398                B     NOISE                                  B   4  0545  B 637              44
399                BER   RDERR                                  B   5  0549  B 676 L            45
400                B     2000                                   B   4  0554  B !00              45
401         *
402         * RETRIEVE OUTPUT PROGRAM
403         *
404         OUTPT  RTW   SYSTP,2000                             B   8  0558  L %U1 !00 R        45
405                B     NOISE                                  B   4  0566  B 637              45
406                SW    GMRK1                                  B   4  0570  , 835              45
407                LCA   GMRK1,3998                             B   7  0574  L 835 I98          45
408                RTW   SYSTP,2000                             B   8  0581  L %U1 !00 R        46
409                B     NOISE                                  B   4  0589  B 637              46
410                RTW   SYSTP,2000                             B   8  0593  L %U1 !00 R        46
411                B     NOISE                                  B   4  0601  B 637              46
412                SW    3998                                   B   4  0605  , I98              46
413                RTW   SYSTP,2000                             B   8  0609  L %U1 !00 R        46
414                B     NOISE                                  B   4  0617  B 637              47
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SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD
415                BER   RDERR                                  B   5  0621  B 676 L            47
416                CW    GMRK1,3998                             B   7  0626  ) 835 I98          47
417                B     2000                                   B   4  0633  B !00              47
418         *
419         * TEST FOR NOISE RECORDS
420         *
421         NOISE  SBR   NOSXT&3                                B   4  0637  H 675              47
422                SBR   XR1                                    B   4  0641  H 089              47
423                MZ    &9,XR1                                 B   7  0645  Y 811 089          47
424         NOIS2  BCE   4000-12&X1,0,}                         B   8  0652  B IY8 000 } GMARK   48
425                CHAIN 12                                     B                    MACRO
426                BCE                                          B   1  0660  B           GEN     48
427                BCE                                          B   1  0661  B           GEN     48
428                BCE                                          B   1  0662  B           GEN     48
429                BCE                                          B   1  0663  B           GEN     48
430                BCE                                          B   1  0664  B           GEN     48
431                BCE                                          B   1  0665  B           GEN     48
432                BCE                                          B   1  0666  B           GEN     49
433                BCE                                          B   1  0667  B           GEN     49
434                BCE                                          B   1  0668  B           GEN     49
435                BCE                                          B   1  0669  B           GEN     49
436                BCE                                          B   1  0670  B           GEN     49
437                BCE                                          B   1  0671  B           GEN     49
438         NOSXT  B     0                                      B   4  0672  B 000              49
439         *
440         * READ REDUNDANCY ROUTINE
441         *
442         RDERR  SBR   XR1                                    B   4  0676  H 089              50
443                SBR   RDXT&3                                 B   4  0680  H 726              50
444                MZ    &9,XR1                                 B   7  0684  Y 811 089          50
445                MCW   4000-10&X1,RDTRY&7                     B   7  0691  M IZ0 717          50
446         BSP    BSP   SYSTP                                  B   5  0698  U %U1 B            50
447                MCW   &9,RDCT#1                              B   7  0703  M 811 812          50
448         RDTRY  RTW   SYSTP,0                                B   8  0710  L %U1 000 R        51
449                BER   *&5                                    B   5  0718  B 727 L            51
450         RDXT   B     0                                      B   4  0723  B 000              51
451                BSP   SYSTP                                  B   5  0727  U %U1 B            51
452                S     &1,RDCT                                B   7  0732  S 806 812          51
453                BWZ   RDTRY,RDCT,B                           B   8  0739  V 710 812 B        51
454                H     0,191                                  B   7  0747  . 000 191          52
455                MCW   RDTRY&7,*&8                            B   7  0754  M 717 768          52
456                RTW   SYSTP,0                                B   8  0761  L %U1 000 R        52
457                BSS   BSP,E                                  B   5  0769  B 698 E            52
458                H     0,111                                  B   7  0774  . 000 111          52
459                B     RDXT                                   B   4  0781  B 723              52
460                LTORG *                                      B                0785
                   DCW   @U99@                                  B   3  0787           LIT     53
                   DCW   @999999    HEADR@                      B  15  0802           LIT     53
                   DCW   &PASSAB&13                             B   3  0805  W63      ADCON   53
                   DCW   &1                                     B   1  0806           LIT     53
```

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
			BYCTB	DCW	#01	B	1	0807		AREA	53
				DCW	@!13@	B	3	0810		LIT	53
				DCW	&9	B	1	0811		LIT	53
			RDCTB	DCW	#01	B	1	0812		AREA	54
461				DCW	#22	B	22	0834			54
462			GMRK1	DCW	@}@	B	1	0835		GMARK	54
463				EX	0	B			B 000		55

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
464				JOB	AUTOCODER-PASS 1 RETRIEVE UPDATE -VERSION 3	B					
465				SFX	R	R					
466			SYSTP	EQU	%U1	R		%U1			
467			LTAPSW	EQU	2725	R		2725			
468				ORG	2000	R			2000		
469				BSS	LIST,G	R	5	2000	B J26 G		58
470				CW	ENDRT	R	4	2005	) K12		58
471			START	RTW	SYSTP,1	R	8	2009	L %U1 001 R		58
472				BCE	START,013,}	R	8	2017	B !09 013 }	GMARK	58
473				CHAIN	12	R				MACRO	
474				BCE		R	1	2025	B	GEN	58
475				BCE		R	1	2026	B	GEN	58
476				BCE		R	1	2027	B	GEN	58
477				BCE		R	1	2028	B	GEN	59
478				BCE		R	1	2029	B	GEN	59
479				BCE		R	1	2030	B	GEN	59
480				BCE		R	1	2031	B	GEN	59
481				BCE		R	1	2032	B	GEN	59
482				BCE		R	1	2033	B	GEN	59
483				BCE		R	1	2034	B	GEN	59
484				BCE		R	1	2035	B	GEN	60
485				BCE		R	1	2036	B	GEN	60
486				BER	RDERR	R	5	2037	B !46 L		60
487				B	333	R	4	2042	B 333		60
488			RDERR	BSP	SYSTP	R	5	2046	U %U1 B		60
489				MCW	&9,RDCT#1	R	7	2051	M K06 K07		60
490			RDTRY	RTW	SYSTP,1	R	8	2058	L %U1 001 R		60
491				BER	*&5	R	5	2066	B !75 L		61
492				B	333	R	4	2071	B 333		61
493				BSP	SYSTP	R	5	2075	U %U1 B		61
494				S	&1,RDCT	R	7	2080	S K08 K07		61
495				BWZ	RDTRY,RDCT,B	R	8	2087	V !58 K07 B		61
496				H	0,191	R	7	2095	. 000 191		61
497			AGAIN	RTW	SYSTP,1	R	8	2102	L %U1 001 R		62
498				BSS	RDERR,E	R	5	2110	B !46 E		62
499				H	0,111	R	7	2115	. 000 111		62
500				B	333	R	4	2122	B 333		62
501			LIST	SW	ENDRT	R	4	2126	, K12		62
502				LCA	ENDRT,1998	R	7	2130	L K12 Z98		62
503				RTW	SYSTP,333	R	8	2137	L %U1 333 R		63
504				BEF	GET	R	5	2145	B J54 K		63
505				B	LIST	R	4	2150	B J26		63
506			GET	BSP	SYSTP	R	5	2154	U %U1 B		63
507				BSP	SYSTP	R	5	2159	U %U1 B		63
508				CW	ENDRT,1998	R	7	2164	) K12 Z98		63
509				SW	LTAPSW	R	4	2171	, P25		63
510				MCW	@333@,RDTRY&6	R	7	2175	M K11 !64		64
511				MCW	@333@,AGAIN&6	R	7	2182	M K11 J08		64
512				RTW	SYSTP,333	R	8	2189	L %U1 333 R		64
513				BER	RDERR	R	5	2197	B !46 L		64

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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
514                 B     333                                          R  4  2202  B 333              64
515                 LTORG *                                            R          2206
                    DCW   &9                                         R  1  2206             LIT     64
            RDCTR   DCW   #01                                        R  1  2207             AREA    64
                    DCW   &1                                         R  1  2208             LIT     65
                    DCW   @333@                                      R  3  2211             LIT     65
516         ENDRT   DCW   @}@                                        R  1  2212             GMARK   65
517                 EX    0                                          R          B 000             66
```



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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
518                 JOB   AUTOCODER-PASS 1 COPY SYSTEM TAPE -VERSION 3 R
519                 SFX   U                                          U
520                 ORG   87                                         U           0087
521         XR1     DCW   000                                        U  3  0089                    69
522                 DC    00                                         U  2  0091                    69
523         XR2     DCW   000                                        U  3  0094                    69
524                 DC    00                                         U  2  0096                    69
525         XR3     DCW   000                                        U  3  0099                    69
526                 DC    00                                         U  2  0101                    69
527         SYSTP   EQU   %U1                                        U     %U1
528         OUTAP   EQU   %U6                                        U     %U6
529         INPUT   EQU   1500                                       U     1500
530         *
531         * BEGIN PROGRAM
532         *
533                 ORG   333                                        U           0333
534                 SW    ENDUP                                      U  4  0333  , /39              70
535                 RWD   SYSTP                                      U  5  0337  U %U1 R            70
536                 RWD   OUTAP                                      U  5  0342  U %U6 R            70
537                 CC    1                                          U  2  0347  F 1                70
538                 CS    332                                        U  4  0349  / 332              70
539                 CS                                               U  1  0353  /                  70
540                 B     CLEAR                                      U  4  0354  B '21              70
541                 BSS   COPY,C                                     U  5  0358  B 525 C            71
542         *
543         * RETRIEVE UPDATE PROGRAM
544         *
545                 RTW   SYSTP,INPUT                                U  8  0363  L %U1 V00 R        71
546                 SBR   XR1                                        U  4  0371  H 089              71
547                 MN    0&X1                                       U  4  0375  D 0'0              71
548                 SW                                               U  1  0379  ,                  71
549                 DCW   @N0000@                                    U  5  0384                     71
550                 B     NOISE                                      U  4  0385  B 759              71
551                 BER   RDERR                                      U  5  0389  B 798 L            72
552                 WTW   OUTAP,INPUT                                U  8  0394  L %U6 V00 W        72
553                 BER   WTERR                                      U  5  0402  B 928 L            72
554                 B     CLEAR                                      U  4  0407  B '21              72
555         BYPSS   RTW   SYSTP,INPUT                                U  8  0411  L %U1 V00 R        72
556                 C     INPUT&19,@999999    HEADR@                 U  7  0419  C V19 '70          72
557                 BU    BYPSS                                      U  5  0426  B 411 /            73
558                 RTW   SYSTP,INPUT                                U  8  0431  L %U1 V00 R        73
559                 BEF   GETUP                                      U  5  0439  B 448 K            73
560                 B     BYPSS                                      U  4  0444  B 411              73
561         GETUP   BCE   LDUPD,BYCT,3                               U  8  0448  B 498 '72 3        73
562                 RTW   SYSTP,INPUT                                U  8  0456  L %U1 V00 R        73
563                 DCW   @N00000000000000@                          U 14  0477                     74
564                 B     NOISE                                      U  4  0478  B 759              74
565                 BER   RDERR                                      U  5  0482  B 798 L            74
566                 A     &1,BYCT#1                                  U  7  0487  A '71 '72          74
567                 B     GETUP                                      U  4  0494  B 448              74
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD

568         LDUPD  CS    199                                          U  4  0498  / 199              74
569                CS    80                                           U  4  0502  / 080              75
570                SW    6,16                                         U  7  0506  , 006 016           75
571                SW    21                                           U  4  0513  , 021              75
572                B     HEAD                                         U  4  0517  B N32              75
573                B     BEGIN                                        U  4  0521  B V00              75
574         *
575         * COPY SYSTEM
576         *
577         COPY   RTW   SYSTP,INPUT                                  U  8  0525  L %U1 V00 R         75
578                SBR   XR1                                          U  4  0533  H 089              75
579                MN    0&X1                                         U  4  0537  D 0'0              76
580                SW                                                 U  1  0541  ,                   76
581                BEF   EOF                                          U  5  0542  B 601 K            76
582                B     NOISE                                        U  4  0547  B 759              76
583                BER   RDERR                                        U  5  0551  B 798 L            76
584         *
585         * TEST END OF LIBRARY
586         *
587         SWICH  NOP   WTAP1                                        U  4  0556  N 580              76
588                SW    LIBSW                                        U  4  0560  , '79              76
589                C     INPUT&10,@999999@                            U  7  0564  C V10 '78           77
590                BU    WTAP1                                        U  5  0571  B 580 /             77
591                CW    LIBSW#1                                      U  4  0576  ) '79               77
592         *
593         * WRITE TAPE
594         *
595         WTAP1  WTW   OUTAP,INPUT                                  U  8  0580  L %U6 V00 W         77
596                BER   WTERR                                        U  5  0588  B 928 L            77
597         *
598         * DO NEXT BLOCK
599         *
600         REOUT  B     CLEAR                                        U  4  0593  B '21               77
601                B     COPY                                         U  4  0597  B 525               77
602         *
603         * END OF FILE
604         *
605         EOF    WTM   OUTAP                                        U  5  0601  U %U6 M             78
606                BW    ISMOR,EOFSW#1                                U  8  0606  V 727 '80 1         78
607                B     CLEAR                                        U  4  0614  B '21               78
608                LCA   ENDUP,3998                                   U  7  0618  L /39 I98           78
609                BW    ERASE,UPDSW                                  U  8  0625  V 637 /26 1        78
610                B     HALT1                                        U  4  0633  B 669               78
611         *
612         * ERASE TAPE
613         *
614         ERASE  SKP   OUTAP                                        U  5  0637  U %U6 E             79
615                WT    OUTAP,INPUT                                  U  8  0642  M %U6 V00 W         79
616                BCE   HALT1,SKPCT-1,2                              U  8  0650  B 669 '81 2         79
617                A     &1,SKPCT#2                                   U  7  0658  A '71 '82           79
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD

618                B     ERASE                                        U  4  0665  B 637               79
619         *
620         * END OF COPY RUN
621         *
622         HALT1  MCW   @1401 AUTOCODER SYSTEM COPIED ON TAPE UNIT 6@,243  U  7  0669  M /25 243     79
623                W                                                  U  1  0676  2                   80
624                CC    1                                            U  2  0677  F 1                 80
625                BW    CPYND,UPDSW#1                                U  8  0679  V 692 /26 1         80
626                RWD   OUTAP                                        U  5  0687  U %U6 R             80
627         CPYND  RWD   SYSTP                                        U  5  0692  U %U1 R             80
628                H     0,122                                        U  7  0697  . 000 122           80
629                B     CLEAR                                        U  4  0704  B '21               80
630                S     SKPCT                                        U  4  0708  S '82               81
631                MCW   @N@,SWICH                                    U  7  0712  M /27 556          81
632                SW    EOFSW                                        U  4  0719  , '80               81
633                B     COPY                                         U  4  0723  B 525               81
634         *
635         * SET UP COPY OF REST OF SYSTEM
636         *
637         ISMOR  BW    BDEOF,LIBSW                                  U  8  0727  V 750 '79 1         81
638                CW    EOFSW                                        U  4  0735  ) '80               81
639                MCW   @B@,SWICH                                    U  7  0739  M /28 556          81
640                B     REOUT                                        U  4  0746  B 593               82
641         *
642         * FALSE END OF FILE
643         *
644         BDEOF  BSP   OUTAP                                        U  5  0750  U %U6 B             82
645                B     REOUT                                        U  4  0755  B 593               82
646         *
647         * TEST FOR NOISE RECORDS
648         *
649         NOISE  SBR   NOSXT&3                                      U  4  0759  H 797               82
650                SBR   XR2                                          U  4  0763  H 094               82
651                MZ    &9,XR2                                       U  7  0767  Y /29 094           82
652         NOIS2  BCE   4000-26&X2,INPUT&13,}                        U  8  0774  B IP4 V13 } GMARK   82
653                CHAIN 12                                           U                   MACRO
654                BCE                                                U  1  0782  B           GEN     83
655                BCE                                                U  1  0783  B           GEN     83
656                BCE                                                U  1  0784  B           GEN     83
657                BCE                                                U  1  0785  B           GEN     83
658                BCE                                                U  1  0786  B           GEN     83
659                BCE                                                U  1  0787  B           GEN     83
660                BCE                                                U  1  0788  B           GEN     83
661                BCE                                                U  1  0789  B           GEN     84
662                BCE                                                U  1  0790  B           GEN     84
663                BCE                                                U  1  0791  B           GEN     84
664                BCE                                                U  1  0792  B           GEN     84
665                BCE                                                U  1  0793  B           GEN     84
666         NOSXT  B     0                                            U  4  0794  B 000               84
667         *
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

668         * READ REDUNDANCY ROUTINE
669         *
670         RDERR   SBR   RDXT&3                                    U   4  0798  H 855              84
671                 SBR   XR3                                       U   4  0802  H 099              85
672                 MZ    &9,XR3                                    U   7  0806  Y /29 099          85
673                 MCW   4000-24&X3,RDTRY&7                        U   7  0813  M IG6 846          85
674                 MN    RDTRY&3,BSP1&3                            U   7  0820  D 842 830          85
675         BSP1    BSP   SYSTP                                     U   5  0827  U %U1 B            85
676                 MCW   &9,RDCT#1                                 U   7  0832  M /29 /30          85
677         RDTRY   RT    SYSTP,0                                   U   8  0839  M %U1 000 R        86
678                 BER   *&5                                       U   5  0847  B 856 L            86
679         RDXT    B     0                                         U   4  0852  B 000              86
680                 MN    RDTRY&3,BSP2&3                            U   7  0856  D 842 866          86
681         BSP2    BSP   SYSTP                                     U   5  0863  U %U1 B            86
682                 S     &1,RDCT                                   U   7  0868  S '71 /30          86
683                 BWZ   RDTRY,RDCT,B                              U   8  0875  V 839 /30 B        87
684                 MN    RDTRY&3,*&7                               U   7  0883  D 842 896          87
685                 H     0,190                                     U   7  0890  . 000 190          87
686                 MCW   RDTRY&7,*&8                               U   7  0897  M 846 911          87
687                 RT    SYSTP,0                                   U   8  0904  M %U1 000 R        87
688                 BSS   BSP1,E                                    U   5  0912  B 827 E            88
689                 H     0,111                                     U   7  0917  . 000 111          88
690                 B     RDXT                                      U   4  0924  B 852              88
691         *
692         * WRITE REDUNDANCY ROUTINE
693         *
694         WTERR   SBR   WTXT&3                                    U   4  0928  H 998              88
695                 SBR   XR3                                       U   4  0932  H 099              88
696                 MZ    &9,XR3                                    U   7  0936  Y /29 099          88
697                 MCW   4000-6&X3,WTTRY&7                         U   7  0943  M II4 989          88
698                 MN    WTTRY&3,BSP3&3                            U   7  0950  D 985 960          89
699         BSP3    BSP   OUTAP                                     U   5  0957  U %U6 B            89
700                 SKP   SYSTP                                     U   5  0962  U %U1 E            89
701                 BCE   SUBCT,WTCT-1,1                           U   8  0967  B 999 /31 1        89
702                 A     &1,WTCT#2                                 U   7  0975  A '71 /32          89
703         WTTRY   WT    OUTAP,0                                   U   8  0982  M %U6 000 W        90
704                 BER   BSP3                                      U   5  0990  B 957 L            90
705         WTXT    B     0                                         U   4  0995  B 000              90
706         SUBCT   S     WTCT                                      U   4  0999  S /32              90
707                 MN    WTTRY&3,*&7                               U   7  1003  D 985 '16          90
708                 H     0,160                                     U   7  1010  . 000 160          90
709                 B     WTTRY                                     U   4  1017  B 982              90
710         *
711         * CLEAR OUTPUT AREA
712         *
713         CLEAR   SBR   CLRXT&3                                   U   4  1021  H '55              91
714                 MCW   @I99@,CLR&3                               U   7  1025  M /35 '35          91
715         CLR     CS    3999                                      U   4  1032  / I99              91
716                 SBR   CLR&3                                     U   4  1036  H '35              91
717                 C     CLR&3,&INPUT-1                            U   7  1040  C '35 /38          91
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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

718                 BU    CLR                                       U   5  1047  B '32 /           91
719         CLRXT   B     0                                         U   4  1052  B 000              91
720                 LTORG *                                         U          1056
                    DCW   @999999    HEADR@                       U  15  1070            LIT     92
                    DCW   &1                                      U   1  1071            LIT     92
            BYCTU   DCW   #01                                     U   1  1072            AREA    92
                    DCW   @999999@                                U   6  1078            LIT     92
            LIBSWU  DCW   #01                                     U   1  1079            AREA    92
            EOFSWU  DCW   #01                                     U   1  1080            AREA    92
            SKPCTU  DCW   #02                                     U   2  1082            AREA    92
                    DCW   @1401 AUTOCODER SYSTEM COPIED ON TAPE UNIT 6@   U  43  1125    LIT     94
            UPDSWU  DCW   #01                                     U   1  1126            AREA    94
                    DCW   @N@                                     U   1  1127            LIT     94
                    DCW   @B@                                     U   1  1128            LIT     94
                    DCW   &9                                      U   1  1129            LIT     94
            RDCTU   DCW   #01                                     U   1  1130            AREA    95
            WTCTU   DCW   #02                                     U   2  1132            AREA    95
                    DCW   @I99@                                   U   3  1135            LIT     95
                    DCW   &INPUTU-1                               U   3  1138  U99       ADCON   95
721         ENDUP   DCW   @}@                                     U   1  1139            GMARK   95
722                 EX    0                                       U          B 000              96
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

723                JOB   AUTOCODER-PASS 1 UPDATE LIBRARY -VERSION 3 U
724         IMAGE  EQU   101                                       U      0101
725         *
726         * BEGIN UPDATE
727         *
728                ORG   INPUT                                     U           1500
729         BEGIN  RWD   SYSTP                                     U   5  1500  U %U1 R            99
730                CW    HEDSW,ENDSW                               U   7  1505  ) ?91 ?98          99
731                MCW   &IMAGE&13,NOIS2&6                         U   7  1512  M ?30 780          99
732                LCA   ENDUP,IMAGE&80                            U   7  1519  L /39 181          99
733                RT    SYSTP,IMAGE                               U   8  1526  M %U1 101 R        99
734                DCW   @N0000000000000@                          U  14  1547                    100
735                B     NOISE                                     U   4  1548  B 759             100
736                CS    IMAGE&79                                  U   4  1552  / 180             100
737                B     RDTP                                      U   4  1556  B M17             100
738         REBEG  B     READ                                      U   4  1560  B L24             100
739                BW    SERCH,INSW                                U   8  1564  V V84 ?73 1        100
740                BW    SERCH,DELSW                               U   8  1572  V V84 ?79 1        101
741                B     REBEG                                     U   4  1580  B V60             101
742         *
743         * SEARCH FOR CORRECT SUBROUTINE
744         *
745         SERCH  B     DOCTL                                     U   4  1584  B N94             101
746                C     11,@9999999@                              U   7  1588  C 011 ?36          101
747                BE    CLNUP                                     U   5  1595  B K40 S            101
748                C     8,NAME#3                                  U   7  1600  C 008 ?39          101
749                BE    FOUND                                     U   5  1607  B X30 S            102
750                BH    QUIT                                      U   5  1612  B P75 U            102
751                MCW   8,NAME                                    U   7  1617  M 008 ?39          102
752                S     SEQNO                                     U   4  1624  S A67             102
753         LOOP1  BW    HEADR,HEDSW                               U   8  1628  V W56 ?91 1        102
754                B     RDTP                                      U   4  1636  B M17             102
755                BW    HEADR,HEDSW                               U   8  1640  V W56 ?91 1        103
756         MORE   B     WTAP2                                     U   4  1648  B M95             103
757                B     LOOP1                                     U   4  1652  B W28             103
758         *
759         * HEADER LOCATED ON TAPE
760         *
761         HEADR  BW    PAST,ENDSW                                U   8  1656  V W89 ?98 1        103
762                C     IMAGE&7,NAME                              U   7  1664  C 108 ?39          103
763                BE    FOUND                                     U   5  1671  B X30 S            103
764                CW    HEDSW                                     U   4  1676  ) ?91             104
765                BL    PAST                                      U   5  1680  B W89 T            104
766                B     MORE                                      U   4  1685  B W48             104
767         *
768         * SUBROUTINE NOT ON TAPE
769         *
770         PAST   BSP   SYSTP                                     U   5  1689  U %U1 B            104
771                CS    IMAGE&79                                  U   4  1694  / 180             104
772                CW    HEDSW                                     U   4  1698  ) ?91             104
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

773                BW    UNKWN,DELSW                               U   8  1702  V Q01 ?79 1        104
774                C     22,@  @                                   U   7  1710  C 022 ?41          105
775                BU    UNKWN                                     U   5  1717  B Q01 /            105
776         BACK   B     PTCTL                                     U   4  1722  B O37             105
777                B     INSER                                     U   4  1726  B Y06             105
778         *
779         * SUBROUTINE FOUND
780         *
781         FOUND  C     22,@  @                                   U   7  1730  C 022 ?41          105
782                BU    PARTL                                     U   5  1737  B Y46 /            105
783         *
784         * DELETE AND/OR INSERT WHOLE SUBROUTINES
785         *
786         ALL    MCW   @DELET@,218                               U   7  1742  M ?46 218          105
787                B     PTCTL                                     U   4  1749  B O37             106
788                S     SEQNO                                     U   4  1753  S A67             106
789         LOOP2  B     PRINT                                     U   4  1757  B O72             106
790                B     RDTP                                      U   4  1761  B M17             106
791                BW    EXIT,HEDSW                                U   8  1765  V X77 ?91 1        106
792                B     LOOP2                                     U   4  1773  B X57             106
793         EXIT   BSP   SYSTP                                     U   5  1777  U %U1 B            106
794                CS    IMAGE&79                                  U   4  1782  / 180             107
795                CW    HEDSW                                     U   4  1786  ) ?91             107
796                BW    REBEG,DELSW                               U   8  1790  V V60 ?79 1        107
797         *
798         * INSERTION OF WHOLE SUBROUTINE
799         *
800                B     DOCTL                                     U   4  1798  B N94             107
801                B     PTCTL                                     U   4  1802  B O37             107
802         INSER  S     SEQNO                                     U   4  1806  S A67             107
803         LOOP3  B     READ                                      U   4  1810  B L24             107
804                BW    SERCH,INSW                                U   8  1814  V V84 ?73 1        108
805                BW    SERCH,DELSW                               U   8  1822  V V84 ?79 1        108
806                B     DOOUT                                     U   4  1830  B L07             108
807                B     PRINT                                     U   4  1834  B O72             108
808                B     WTAP2                                     U   4  1838  B M95             108
809                B     LOOP3                                     U   4  1842  B Y10             108
810         *
811         * DELETE AND/OR INSERT PARTS
812         *
813         PARTL  S     XR3&2                                     U   4  1846  S 101             108
814                BWZ   SOME,21,2                                 U   8  1850  V Y81 021 2        109
815                C     24,@  @                                   U   7  1858  C 024 ?41          109
816                BE    ALL                                       U   5  1865  B X42 S            109
817                A     &2,XR3                                    U   7  1870  A ?47 099          109
818                SW    23                                        U   4  1877  , 023             109
819         *
820         * SCAN FOR VALUES OF OPERANDS
821         *
822         SOME   SW    OPSW#1                                    U   4  1881  , ?48             109
```

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SEQ PG LIN  LABEL  OP    OPERANDS                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
823         TEST1  BCE   TWOOP,21&X3,,                     U   8  1885  B Z16 0B1 ,        110
824                C     22&X3,@  @                        U   7  1893  C 0B2 ?41          110
825                BE    TWOOP                             U   5  1900  B Z16 S            110
826                A     &1,XR3                            U   7  1905  A ?49 099          110
827                B     TEST1                             U   4  1912  B Y85              110
828         TWOOP  ZA    20&X3,WK1#4                       U   7  1916  ? 0B0 ?53         110
829                A     @0@,WK1                           U   7  1923  A ?54 ?53         111
830                BCE   NXTOP,21&X3,,                     U   8  1930  B Z42 0B1 ,        111
831                B     OUT                               U   4  1938  B !08             111
832         NXTOP  SW    22&X3                             U   4  1942  , 0B2             111
833                SBR   XR2                               U   4  1946  H 094             111
834         ADD    A     &1,XR3                            U   7  1950  A ?49 099          111
835                C     22&X3,@  @                        U   7  1957  C 0B2 ?41         112
836                BU    ADD                               U   5  1964  B Z50 /           112
837                ZA    20&X3,WK2#4                       U   7  1969  ? 0B0 ?58         112
838                A     @0@,WK2                           U   7  1976  A ?54 ?58         112
839                C     WK1,WK2                           U   7  1983  C ?53 ?58         112
840                BL    BADST                             U   5  1990  B Q59 T           112
841                BE    ONOP                              U   5  1995  B K20 S           113
842         IS2OP  CW    OPSW                              U   4  2000  ) ?48            113
843         CLRWM  CW    1&X2                              U   4  2004  ) 0!1            113
844         OUT    CW    23                                U   4  2008  ) 023            113
845                BW    *&8,OPSW                          U   8  2012  V !27 ?48 1       113
846                MCW   @DELET@,218                       U   7  2020  M ?63 218         113
847                B     PTCTL                             U   4  2027  B O37            113
848         *
849         * SEARCH FOR FIRST STATEMENT
850         *
851         COMP   C     WK1,SEQNO                         U   7  2031  C ?53 A67         114
852                BE    GOTIT                             U   5  2038  B !70 S           114
853                A     &1,SEQNO                          U   7  2043  A ?49 A67         114
854                B     WTAP2                             U   4  2050  B M95            114
855                B     RDTP                              U   4  2054  B M17            114
856                BW    NTFND,HEDSW                       U   8  2058  V Q84 ?91 1       114
857                B     COMP                              U   4  2066  B !31            114
858         *
859         * FIRST STATEMENT FOUND
860         *
861         GOTIT  BW    QINSR,OPSW                        U   8  2070  V J46 ?48 1       115
862         *
863         * SEARCH FOR SECOND STATEMENT
864         *
865         COMP2  B     PRINT                             U   4  2078  B O72            115
866                B     RDTP                              U   4  2082  B M17            115
867                C     WK2,SEQNO                         U   7  2086  C ?58 A67         115
868                BH    BSPC                              U   5  2093  B J10 U           115
869                BW    NTFND,HEDSW                       U   8  2098  V Q84 ?91 1       115
870                B     COMP2                             U   4  2106  B !78            116
871         *
872         * SECOND STATEMENT FOUND
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SEQ PG LIN  LABEL  OP    OPERANDS                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
873         *
874         BSPC   BSP   SYSTP                             U   5  2110  U %U1 B           116
875                CS    IMAGE&79                          U   4  2115  / 180             116
876                S     &1,SEQNO                          U   7  2119  S ?49 A67         116
877         THRU   BW    LOOP3,DELSW                       U   8  2126  V Y10 ?79 1       116
878                B     DOCTL                             U   4  2134  B N94            116
879                B     PTCTL                             U   4  2138  B O37            116
880                B     INSR&4                            U   4  2142  B J77            117
881         *
882         * TEST INSERT OR DELETE
883         *
884         QINSR  BW    INSR,INSW                         U   8  2146  V J73 ?73 1       117
885                B     PRINT                             U   4  2154  B O72            117
886                S     &1,SEQNO                          U   7  2158  S ?49 A67         117
887                CS    IMAGE&79                          U   4  2165  / 180            117
888                B     THRU                              U   4  2169  B J26            117
889         *
890         * INSERT STATEMENTS
891         *
892         INSR   B     WTAP2                             U   4  2173  B M95            117
893                B     READ                              U   4  2177  B L24            118
894                BW    SERCH,INSW                        U   8  2181  V V84 ?73 1       118
895                BW    SERCH,DELSW                       U   8  2189  V V84 ?79 1       118
896                B     DOOUT                             U   4  2197  B L07            118
897                CW    SEQSW#1                           U   4  2201  ) ?64            118
898                B     PRINT                             U   4  2205  B O72            118
899                S     &1,SEQNO                          U   7  2209  S ?49 A67         118
900                B     INSR                              U   4  2216  B J73            119
901         ONOP   BW    IS2OP,INSW                        U   8  2220  V !00 ?73 1       119
902                SW    OPSW                              U   4  2228  , ?48            119
903                B     CLRWM                             U   4  2232  B !04            119
904         *
905         * REPLICATE LIBRARY
906         *
907         REPET  B     WTAP2                             U   4  2236  B M95            119
908         CLNUP  B     RDTP                              U   4  2240  B M17            119
909                B     WTAP2                             U   4  2244  B M95            119
910                BW    FINAL,ENDSW                       U   8  2248  V K60 ?98 1       120
911                B     CLNUP                             U   4  2256  B K40            120
912         *
913         * END OF UPDATE - GO TO COPY ROUTINE
914         *
915         FINAL  WTM   OUTAP                             U   5  2260  U %U6 M          120
916                MCW   &INPUT&13,NOIS2&6                 U   7  2265  M ?67 780         120
917                CW    LIBSW,EOFSW                       U   7  2272  ) '79 '80        120
918                CW    UPDSW                             U   4  2279  ) /26            120
919                CS    332                               U   4  2283  / 332            120
920                CS                                      U   1  2287  /                121
921                CC    1                                 U   2  2288  F 1              121
922         BYP1   RT    SYSTP,IMAGE                       U   8  2290  M %U1 101 R       121
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
 923               BEF   REOUT                                     U   5  2298  B 593 K            121
 924               B     BYP1                                      U   4  2303  B K90              121
 925        *
 926        * SET UP INSERT CARD
 927        *
 928        DOOUT  SBR   OUTXT&3                                   U   4  2307  H L23              121
 929               MCW   80,IMAGE&79                               U   7  2311  M 080 180          121
 930               MCW                                            U   1  2318  M                 122
 931               MCW                                            U   1  2319  M                 122
 932        OUTXT  B     0                                         U   4  2320  B 000              122
 933        *
 934        * READ CARD SUBROUTINE
 935        *
 936        READ   SBR   CDXT&3                                    U   4  2324  H M08              122
 937               BW    RDCD,LSTSW                               U   8  2328  V L40 ?85 1        122
 938               B     CLNUP                                    U   4  2336  B K40              122
 939        RDCD   R                                               U   1  2340  1                 122
 940               CW    INSW,DELSW                               U   7  2341  ) ?73 ?79          123
 941               C     20,@INSER@                               U   7  2348  C 020 ?72          123
 942               BU    CKDEL                                    U   5  2355  B L68 /            123
 943               SW    INSW#1                                   U   4  2360  , ?73              123
 944               B     CDXT-5                                   U   4  2364  B M00              123
 945        CKDEL  C     20,@DELET@                               U   7  2368  C 020 ?78          123
 946               BU    CKREP                                    U   5  2375  B L88 /            123
 947               SW    DELSW#1                                  U   4  2380  , ?79              124
 948               B     CDXT-5                                   U   4  2384  B M00              124
 949        CKREP  C     20,@REPET@                               U   7  2388  C 020 ?84          124
 950               BE    REPET                                    U   5  2395  B K36 S            124
 951               BLC   LSTCD                                    U   5  2400  B M09 A            124
 952        CDXT   B     0                                         U   4  2405  B 000              124
 953        LSTCD  CW    LSTSW#1                                  U   4  2409  ) ?85              124
 954               B     CDXT                                     U   4  2413  B M05              125
 955        *
 956        * READ TAPE SUBROUTINE
 957        *
 958        RDTP   SBR   RTXT&3                                    U   4  2417  H M94              125
 959               RT    SYSTP,IMAGE                              U   8  2421  M %U1 101 R        125
 960               SW    IMAGE&80                                 U   4  2429  , 181              125
 961               DCW   @N0000000000@                            U  10  2442                    125
 962               B     NOISE                                    U   4  2443  B 759              125
 963               BER   RDERR                                    U   5  2447  B 798 L            125
 964               CW    HEDSW,ENDSW                              U   7  2452  ) ?91 ?98          126
 965               C     IMAGE&19,@HEADR@                         U   7  2459  C 120 ?90          126
 966               BU    RTXT                                     U   5  2466  B M91 /            126
 967               SW    HEDSW#1                                  U   4  2471  , ?91              126
 968               C     IMAGE&10,@999999@                        U   7  2475  C 111 ?97          126
 969               BU    RTXT                                     U   5  2482  B M91 /            126
 970               SW    ENDSW#1                                  U   4  2487  , ?98              126
 971        RTXT   B     0                                         U   4  2491  B 000              127
 972        *
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
 973        * WRITE TAPE SUBROUTINE
 974        *
 975        WTAP2  SBR   WT2XT&3                                   U   4  2495  H N31              127
 976               C     IMAGE&79,BLANK                           U   7  2499  C 180 ?27          127
 977               BE    WT2XT                                    U   5  2506  B N28 S            127
 978               WT    OUTAP,IMAGE                              U   8  2511  M %U6 101 W        127
 979               BER   WTERR                                    U   5  2519  B 928 L            127
 980               CS    IMAGE&79                                 U   4  2524  / 180              127
 981        WT2XT  B     0                                         U   4  2528  B 000              128
 982        *
 983        * PRINT HEADING
 984        *
 985        HEAD   SBR   HDXT&3                                    U   4  2532  H N93              128
 986               CS    332                                      U   4  2536  / 332              128
 987               CS                                             U   1  2540  /                  128
 988               MCW   @1401 AUTOCODER - LIBRARY CHANGES@,251   U   7  2541  M A30 251          128
 989               MCW   @PAGE@,275                               U   7  2548  M A34 275          128
 990               A     &1,PGNO#3                                U   7  2555  A ?49 A37          128
 991               MCS   PGNO,279                                 U   7  2562  Z A37 279          129
 992               W                                              U   1  2569  2                  129
 993               CC    K                                        U   2  2570  F K                129
 994               CS    279                                      U   4  2572  / 279              129
 995               MCW   @SEQ  LABEL  OP    OPERANDS@,227        U   7  2576  M A63 227          129
 996               W                                              U   1  2583  2                  129
 997               CC    K                                        U   2  2584  F K                129
 998               CS    228                                      U   4  2586  / 228              130
 999        HDXT   B     0                                         U   4  2590  B 000              130
1000        *
1001        * SET UP CONTROL CARD FOR PRINTING
1002        *
1003        DOCTL  SBR   CTLXT&3                                   U   4  2594  H O36              130
1004               CC    K                                        U   2  2598  F K                130
1005               CS    332                                      U   4  2600  / 332              130
1006               CS                                             U   1  2604  /                  130
1007               MCW   72,271                                   U   7  2605  M 072 271          130
1008               MCW   22,221                                   U   7  2612  M 022 221          131
1009               MCW   20,218                                   U   7  2619  M 020 218          131
1010               MCW   11,212                                   U   7  2626  M 011 212          131
1011        CTLXT  B     0                                         U   4  2633  B 000              131
1012        *
1013        * PRINT CONTROL CARD
1014        *
1015        PTCTL  SBR   PTCXT&3                                   U   4  2637  H O57              131
1016               W                                              U   1  2641  2                  131
1017               CC    J                                        U   2  2642  F J                131
1018               CS    332                                      U   4  2644  / 332              132
1019               CS                                             U   1  2648  /                  132
1020               BCV   NEWPG                                    U   5  2649  B O58 @            132
1021        PTCXT  B     0                                         U   4  2654  B 000              132
1022        *
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 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

1023         * NEW PAGE
1024         *
1025         NEWPG  SBR   NEWXT&3                                           U  4  2658  H O71              132
1026                CC    1                                                 U  2  2662  F 1                132
1027                B     HEAD                                              U  4  2664  B N32              132
1028         NEWXT  B     0                                                 U  4  2668  B 000              133
1029         *
1030         * PRINT STATEMENTS
1031         *
1032         PRINT  SBR   PTXT&3                                            U  4  2672  H P74              133
1033                SW    220,214                                           U  7  2676  , 220 214          133
1034                SW    207                                               U  4  2683  , 207              133
1035                BCE   COMNT,IMAGE&5,*                                   U  8  2687  B P32 106 *         133
1036                MCW   IMAGE&71,271                                      U  7  2695  M 172 271          133
1037                MCW   IMAGE&19,218                                      U  7  2702  M 120 218          134
1038                MCW   IMAGE&10,212                                      U  7  2709  M 111 212          134
1039         TSTSQ  BW    SEQNC,SEQSW                                       U  8  2716  V P45 ?64 1        134
1040                SW    SEQSW                                             U  4  2724  , ?64             134
1041                B     BUMP                                              U  4  2728  B P53              134
1042         COMNT  MCW   IMAGE&71,273                                      U  7  2732  M 172 273          134
1043                MCW                                                     U  1  2739  M                  134
1044                MCW                                                     U  1  2740  M                  135
1045                B     TSTSQ                                             U  4  2741  B P16              135
1046         SEQNC  MN    SEQNO,204                                         U  7  2745  D A67 204          135
1047                MCS                                                     U  1  2752  Z                  135
1048         BUMP   A     &1,SEQNO#4                                        U  7  2753  A ?49 A67          135
1049                W                                                       U  1  2760  2                  135
1050                CS    332                                               U  4  2761  / 332              135
1051                CS                                                      U  1  2765  /                  136
1052                BCV   NEWPG                                             U  5  2766  B O58 @            136
1053         PTXT   B     0                                                 U  4  2771  B 000              136
1054         *
1055         * SEQUENCE ERROR
1056         *
1057         QUIT   CS    332                                               U  4  2775  / 332              136
1058                CS                                                      U  1  2779  /                  136
1059                MCW   @INPUT CARDS OUT OF SEQUENCE - START OVER@,240    U  7  2780  M B07 240          136
1060                W                                                       U  1  2787  2                  136
1061                CC    1                                                 U  2  2788  F 1                137
1062         HALT2  H     0,133                                             U  7  2790  . 000 133          137
1063                B     HALT2                                             U  4  2797  B P90              137
1064         *
1065         * SUBROUTINE UNKNOWN
1066         *
1067         UNKWN  BWZ   ISUNK,21,2                                        U  8  2801  V Q21 021 2        137
1068                C     24,@  @                                           U  7  2809  C 024 ?41          137
1069                BE    BACK                                              U  5  2816  B X22 S            137
1070         ISUNK  MCW   @SUBROUTINE UNKNOWN@,299                          U  7  2821  M B25 299          138
1071                W                                                       U  1  2828  2                  138
1072                CC    L                                                 U  2  2829  F L                138
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 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

1073                CS    299                                               U  4  2831  / 299              138
1074         LOOP4  B     READ                                              U  4  2835  B L24              138
1075                BW    SERCH,INSW                                        U  8  2839  V V84 ?73 1        138
1076                BW    SERCH,DELSW                                       U  8  2847  V V84 ?79 1        138
1077                B     LOOP4                                             U  4  2855  B Q35              139
1078         *
1079         * BAD CONTROL CARD
1080         *
1081         BADST  MCW   @BAD STATEMENT@,299                               U  7  2859  M B38 299          139
1082                W                                                       U  1  2866  2                  139
1083                CC    L                                                 U  2  2867  F L                139
1084                CS    299                                               U  4  2869  / 299              139
1085                CW    1&X2,23                                           U  7  2873  ) 0!1 023           139
1086                B     LOOP4                                             U  4  2880  B Q35              139
1087         *
1088         * STATEMENT DOES NOT EXIST IN SUBROUTINE
1089         *
1090         NTFND  MCW   @STATEMENT DOES NOT EXIST@,299                    U  7  2884  M B62 299          140
1091                W                                                       U  1  2891  2                  140
1092                CC    L                                                 U  2  2892  F L                140
1093                CS    299                                               U  4  2894  / 299              140
1094                BW    END99,ENDSW                                       U  8  2898  V R10 ?98 1        140
1095                B     LOOP4                                             U  4  2906  B Q35              140
1096         *
1097         * END OF LIBRARY REACHED BEFORE ROUTINE FOUND
1098         *
1099         END99  MCW   @SUBROUTINE UNKNOWN@,299                          U  7  2910  M B80 299          140
1100                W                                                       U  1  2917  2                  141
1101                CC    L                                                 U  2  2918  F L                141
1102                CS    299                                               U  4  2920  / 299              141
1103                MCW   @END OF LIBRARY REACHED@,222                      U  7  2924  M C02 222          141
1104                W                                                       U  1  2931  2                  141
1105                BSP   SYSTP                                             U  5  2932  U %U1 B            141
1106                CS    IMAGE&79                                          U  4  2937  / 180              141
1107         LOOP6  B     READ                                              U  4  2941  B L24              142
1108                B     LOOP6                                             U  4  2945  B R41              142
1109                DCW   #50                                               U 50  2998                     144
1110         BLANK  DC    #29                                               U 29  3027                     145
1111                LTORG *                                                 U          3028
                    DCW   &IMAGEU&13                                        U  3  3030  114         ADCON  145
                    DCW   @999999@                                          U  6  3036              LIT    145
             NAMEU  DCW   #03                                               U  3  3039              AREA   146
                    DCW   @  @                                              U  2  3041              LIT    146
                    DCW   @DELET@                                           U  5  3046              LIT    146
                    DCW   &2                                                U  1  3047              LIT    146
             OPSWU  DCW   #01                                               U  1  3048              AREA   146
                    DCW   &1                                                U  1  3049              LIT    146
             WK1U   DCW   #04                                               U  4  3053              AREA   146
                    DCW   @0@                                               U  1  3054              LIT    147
             WK2U   DCW   #04                                               U  4  3058              AREA   147
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SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
				DCW	@DELET@	U	5	3063		LIT	147
			SEQSWU	DCW	#01	U	1	3064		AREA	147
				DCW	&INPUTU&13	U	3	3067	V13	ADCON	147
				DCW	@INSER@	U	5	3072		LIT	147
			INSWU	DCW	#01	U	1	3073		AREA	147
				DCW	@DELET@	U	5	3078		LIT	148
			DELSWU	DCW	#01	U	1	3079		AREA	148
				DCW	@REPET@	U	5	3084		LIT	148
			LSTSWU	DCW	#01	U	1	3085		AREA	148
				DCW	@HEADR@	U	5	3090		LIT	148
			HEDSWU	DCW	#01	U	1	3091		AREA	148
				DCW	@999999@	U	6	3097		LIT	148
			ENDSWU	DCW	#01	U	1	3098		AREA	149
				DCW	@1401 AUTOCODER - LIBRARY CHANGES@	U	32	3130		LIT	149
				DCW	@PAGE@	U	4	3134		LIT	149
			PGNOU	DCW	#03	U	3	3137		AREA	150
				DCW	@SEQ LABEL OP OPERANDS@	U	26	3163		LIT	150
			SEQNOU	DCW	#04	U	4	3167		AREA	150
				DCW	@INPUT CARDS OUT OF SEQUENCE - START OVER@	U	40	3207		LIT	152
				DCW	@SUBROUTINE UNKNOWN@	U	18	3225		LIT	152
				DCW	@BAD STATEMENT@	U	13	3238		LIT	152
				DCW	@STATEMENT DOES NOT EXIST@	U	24	3262		LIT	153
				DCW	@SUBROUTINE UNKNOWN@	U	18	3280		LIT	154
				DCW	@END OF LIBRARY REACHED@	U	22	3302		LIT	155
1112			3998	DCW	@}@	U	1	3998		GMARK	156
1113				EX	0	U			B 000		157

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
1114				JOB	AUTOCODER-PASS 1 OUTPUT LIBRARY -VERSION 3	U					
1115				SFX	P	P					
1116			SYSTP	EQU	%U1	P		%U1			
1117			XR1	EQU	89	P		0089			
1118			*								
1119			* BEGIN PROGRAM								
1120			*								
1121				ORG	2000	P		2000			
1122				SW	ENDOT	P	4	2000	, ?44		160
1123				LCA	ENDOT,181	P	7	2004	L ?44 181		160
1124				CS		P	1	2011	/		160
1125				CS	80	P	4	2012	/ 080		160
1126				SW	6,16	P	7	2016	, 006 016		160
1127				CS	332	P	4	2023	/ 332		160
1128				CS		P	1	2027	/		160
1129				CC	1	P	2	2028	F 1		161
1130				RWD	SYSTP	P	5	2030	U %U1 R		161
1131				RT	SYSTP,101	P	8	2035	M %U1 101 R		161
1132				CS	180	P	4	2043	/ 180		161
1133				SW	106,116	P	7	2047	, 106 116		161
1134				SW	121	P	4	2054	, 121		161
1135				BSS	DOALL,E	P	5	2058	B L28 E		161
1136			*								
1137			* PRINT AND/OR PUNCH SELECTED MACROS								
1138			*								
1139				CW	HDRSW	P	4	2063	) R32		162
1140			READ	CC	1	P	2	2067	F 1		162
1141				B	PRTHD	P	4	2069	B N59		162
1142				R		P	1	2073	1		162
1143				MCW	@2@,OPCOD	P	7	2074	M Q90 O69		162
1144				C	20,@PRINT@	P	7	2081	C 020 Q95		162
1145				BE	SELMC	P	5	2088	B J19 S		162
1146				C	20,@PUNCH@	P	7	2093	C 020 R00		163
1147				BU	ERROR	P	5	2100	B N06 /		163
1148			*								
1149			* PUNCH OPTION								
1150			*								
1151				A	&4,OPCOD	P	7	2105	A R01 O69		163
1152				MN	&4,OPSAV#1	P	7	2112	D R01 R02		163
1153			*								
1154			* SEARCH FOR MACRO								
1155			*								
1156			SELMC	C	8,NAME#3	P	7	2119	C 008 R05		163
1157				BE	TSTLC	P	5	2126	B K96 S		163
1158				MCW	20,218	P	7	2131	M 020 218		164
1159				MCW	11,212	P	7	2138	M 011 212		164
1160				BL	RDTP2	P	5	2145	B J85 T		164
1161				RWD	SYSTP	P	5	2150	U %U1 R		164
1162				LCA	ENDOT,181	P	7	2155	L ?44 181		164
1163				RT	SYSTP,101	P	8	2162	M %U1 101 R		164

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

1164                CS    180                                        P  4  2170  / 180              165
1165                SW    106,116                                    P  7  2174  , 106 116          165
1166                SW    121                                        P  4  2181  , 121              165
1167         RDTP2  RT    SYSTP,101                                  P  8  2185  M %U1 101 R        165
1168                B     NOISE                                      P  4  2193  B P67              165
1169                BER   RDERR                                      P  5  2197  B Q06 L            165
1170                C     111,@9999999@                              P  7  2202  C 111 R11          165
1171                BE    UNKN                                       P  5  2209  B L05 S            166
1172                C     120,@HEADR@                                P  7  2214  C 120 R16          166
1173                BU    RDTP2                                      P  5  2221  B J85 /            166
1174                C     8,108                                      P  7  2226  C 008 108          166
1175                BU    RDTP2                                      P  5  2233  B J85 /            166
1176         *
1177         * DESIRED MACRO FOUND
1178         *
1179                MCW   8,NAME                                     P  7  2238  M 008 R05          166
1180                CC    K                                          P  2  2245  F K                166
1181                W                                                P  1  2247  2                  167
1182                S     SEQNO                                      P  4  2248  S R48              167
1183                B     INSER                                      P  4  2252  B N17              167
1184                CC    K                                          P  2  2256  F K                167
1185         PTAGN  B     PRINT                                      P  4  2258  B N81              167
1186                RT    SYSTP,101                                  P  8  2262  M %U1 101 R        167
1187                B     NOISE                                      P  4  2270  B P67              167
1188                BER   RDERR                                      P  5  2274  B Q06 L            168
1189                C     120,@HEADR@                                P  7  2279  C 120 R21          168
1190                BU    PTAGN                                      P  5  2286  B K58 /            168
1191                BSP   SYSTP                                      P  5  2291  U %U1 B            168
1192         *
1193         * TEST END OF RUN
1194         *
1195         TSTLC  BLC   EOJOB                                      P  5  2296  B M54 A            168
1196                B     READ                                       P  4  2301  B !67              168
1197         *
1198         * MACRO NOT ON TAPE
1199         *
1200         UNKN   MCW   @UNKNOWN@,299                              P  7  2305  M R28 299          168
1201                W                                                P  1  2312  2                  169
1202                CS    299                                        P  4  2313  / 299              169
1203                MCW   @999@,NAME                                 P  7  2317  M R31 R05          169
1204                B     TSTLC                                      P  4  2324  B K96              169
1205         *
1206         * PRINT AND/OR PUNCH ALL OR PRINT HEADERS ONLY
1207         *
1208         DOALL  BSS   SETUP,D                                    P  5  2328  B L60 D            169
1209                CW    HDRSW#1                                    P  4  2333  ) R32              169
1210                BSS   *&5,G                                      P  5  2337  B L46 G            169
1211                B     SETUP                                      P  4  2342  B L60              170
1212         *
1213         * PUNCH ALL
```



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

1214         *
1215                A     &4,OPCOD                                   P  7  2346  A R01 O69          170
1216                MN    &4,OPSAV                                   P  7  2353  D R01 R02          170
1217         SETUP  B     HEAD1                                      P  4  2360  B P19              170
1218                CW    HDSW1#1                                    P  4  2364  ) R33              170
1219                B     PRTHD                                      P  4  2368  B N59              170
1220         RDTP   RT    SYSTP,101                                  P  8  2372  M %U1 101 R        170
1221                B     NOISE                                      P  4  2380  B P67              171
1222                BER   RDERR                                      P  5  2384  B Q06 L            171
1223                C     111,@9999999@                              P  7  2389  C 111 R39          171
1224                BE    EOJOB                                      P  5  2396  B M54 S            171
1225                C     120,@HEADR@                                P  7  2401  C 120 R44          171
1226                BU    DOPNT                                      P  5  2408  B M35 /            171
1227                B     INSER                                      P  4  2413  B N17              171
1228                CC    K                                          P  2  2417  F K                172
1229                SBR   PRTXT&3,*&6                                P  7  2419  H O83 M31          172
1230                BCV   NEWPG                                      P  5  2426  B O97 @            172
1231                S     SEQNO#4                                    P  4  2431  S R48              172
1232         DOPNT  B     PRINT                                      P  4  2435  B N81              172
1233                SW    106,116                                    P  7  2439  , 106 116          172
1234                SW    121                                        P  4  2446  , 121              172
1235                B     RDTP                                       P  4  2450  B L72              173
1236         *
1237         * END OF JOB
1238         *
1239         EOJOB  CS    332                                        P  4  2454  / 332              173
1240                CS                                               P  1  2458  /                  173
1241                CC    K                                          P  2  2459  F K                173
1242                MCW   @END OF LIBRARY@,214                       P  7  2461  M R62 214          173
1243                W                                                P  1  2468  2                  173
1244                CC    1                                          P  2  2469  F 1                173
1245                CS    180                                        P  4  2471  / 180              174
1246                BCE   CLRPH,OPSAV,4                              P  8  2475  B M99 R02 4        174
1247         RWD    RWD   SYSTP                                      P  5  2483  U %U1 R            174
1248         HALT   H     0,155                                      P  7  2488  . 000 155          174
1249                B     HALT                                       P  4  2495  B M88              174
1250         CLRPH  P                                                P  1  2499  4                  174
1251                SS    8                                          P  2  2500  K 8                174
1252                B     RWD                                        P  4  2502  B M83              175
1253         *
1254         * INCORRECT INPUT CARD
1255         *
1256         ERROR  H     0,144                                      P  7  2506  . 000 144          175
1257                B     TSTLC                                      P  4  2513  B K96              175
1258         INSER  SBR   INSXT&3                                    P  4  2517  H N58              175
1259                MCW   @     @,105                                P  7  2521  M R67 105          175
1260                MCW   @INSER@,120                                P  7  2528  M R72 120          175
1261                BCE   *&5,OPSAV,4                                P  8  2535  B N47 R02 4        176
1262                B     *&2                                        P  4  2543  B N48              176
1263                P                                                P  1  2547  4                  176
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 SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1264                MCW   @HEADR@,120                               P  7  2548  M R77 120          176
1265         INSXT  B     0                                         P  4  2555  B 000              176
1266         *
1267         * PRINT HEADING
1268         *
1269         PRTHD  SBR   HDXT&3                                    P  4  2559  H N80              176
1270                MCW   @SEQ  LABEL  OP    OPERANDS@,227         P  7  2563  M ?03 227          176
1271                W                                              P  1  2570  2                  177
1272                CC    K                                        P  2  2571  F K                177
1273                CS    228                                      P  4  2573  / 228              177
1274         HDXT   B     0                                         P  4  2577  B 000              177
1275         *
1276         * PRINT STATEMENT
1277         *
1278         PRINT  SBR   PRTXT&3                                   P  4  2581  H O83              177
1279                C     120,@HEADR@                              P  7  2585  C 120 ?08          177
1280                BE    DOHDR                                    P  5  2592  B O05 S            177
1281                BW    CLR,HDRSW                                P  8  2597  V O70 R32 1        178
1282         DOHDR  CS    332                                      P  4  2605  / 332              178
1283                CS                                             P  1  2609  /                  178
1284                BCE   COMNT,106,*                              P  8  2610  B O84 106 *        178
1285                MCW   172,271                                  P  7  2618  M 172 271          178
1286                MCW   120,218                                  P  7  2625  M 120 218          178
1287                MCW   111,212                                  P  7  2632  M 111 212          179
1288         DOSEQ  MN    SEQNO,204                                P  7  2639  D R48 204          179
1289                MCS                                            P  1  2646  Z                  179
1290                MN    SEQNO,104                                P  7  2647  D R48 104          179
1291                MCW                                            P  1  2654  M                  179
1292                A     &1,SEQNO                                 P  7  2655  A ?09 R48          179
1293                MCW   @ @,105                                  P  7  2662  M ?10 105          179
1294         OPCOD  W                                              P  1  2669  2                  180
1295         CLR    CS    332                                      P  4  2670  / 332              180
1296                CS                                             P  1  2674  /                  180
1297                BCV   NEWPG                                    P  5  2675  B O97 @            180
1298         PRTXT  B     0                                         P  4  2680  B 000              180
1299         COMNT  MCW   172,273                                   P  7  2684  M 172 273          180
1300                MCW                                            P  1  2691  M                  180
1301                MCW                                            P  1  2692  M                  181
1302                B     DOSEQ                                    P  4  2693  B O39              181
1303         *
1304         * START NEW PAGE
1305         *
1306         NEWPG  CC    1                                         P  2  2697  F 1                181
1307                BW    *&5,HDSW1                                P  8  2699  V P11 R33 1        181
1308                B     HEAD1                                    P  4  2707  B P19              181
1309                B     PRTHD                                    P  4  2711  B N59              181
1310                B     PRTXT                                    P  4  2715  B O80              181
1311         *
1312         * PRINT MAIN HEADING
1313         *
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 SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

1314         HEAD1  SBR   HD2XT&3                                  P  4  2719  H P66              182
1315                CS    332                                      P  4  2723  / 332              182
1316                CS                                             P  1  2727  /                  182
1317                MCW   @1401 AUTOCODER - LIBRARY@,243           P  7  2728  M ?34 243          182
1318                MCW   @PAGE@,275                               P  7  2735  M ?38 275          182
1319                A     &1,PGNO#3                                P  7  2742  A ?09 ?41          182
1320                MCS   PGNO,279                                 P  7  2749  Z ?41 279          182
1321                W                                              P  1  2756  2                  183
1322                CC    L                                        P  2  2757  F L                183
1323                CS    299                                      P  4  2759  / 299              183
1324         HD2XT  B     0                                         P  4  2763  B 000              183
1325         *
1326         * TEST FOR NOISE RECORDS
1327         *
1328         NOISE  SBR   NOSXT&3                                   P  4  2767  H Q05              183
1329                SBR   XR1                                      P  4  2771  H O89              183
1330                MZ    &9,XR1                                   P  7  2775  Y ?42 089          183
1331                BCE   4000-12&X1,113,}                         P  8  2782  B IY8 113 } GMARK  184
1332                CHAIN 12                                       P                      MACRO
1333                BCE                                            P  1  2790  B           GEN    184
1334                BCE                                            P  1  2791  B           GEN    184
1335                BCE                                            P  1  2792  B           GEN    184
1336                BCE                                            P  1  2793  B           GEN    184
1337                BCE                                            P  1  2794  B           GEN    184
1338                BCE                                            P  1  2795  B           GEN    184
1339                BCE                                            P  1  2796  B           GEN    185
1340                BCE                                            P  1  2797  B           GEN    185
1341                BCE                                            P  1  2798  B           GEN    185
1342                BCE                                            P  1  2799  B           GEN    185
1343                BCE                                            P  1  2800  B           GEN    185
1344                BCE                                            P  1  2801  B           GEN    185
1345         NOSXT  B     0                                         P  4  2802  B 000              185
1346         *
1347         * READ REDUNDANCY ROUTINE
1348         *
1349         RDERR  SBR   RDXT&3                                    P  4  2806  H Q38              186
1350         BSP    BSP   SYSTP                                     P  5  2810  U %U1 B            186
1351                MCW   &9,RDCT#1                                P  7  2815  M ?42 ?43          186
1352         RDTRY  RT    SYSTP,101                                P  8  2822  M %U1 101 R       186
1353                BER   *&5                                      P  5  2830  B Q39 L            186
1354         RDXT   B     0                                         P  4  2835  B 000              186
1355                BSP   SYSTP                                    P  5  2839  U %U1 B            186
1356                S     &1,RDCT                                  P  7  2844  S ?09 ?43          187
1357                BWZ   RDTRY,RDCT,B                             P  8  2851  V Q22 ?43 B       187
1358                H     0,191                                    P  7  2859  . 000 191          187
1359                RT    SYSTP,101                                P  8  2866  M %U1 101 R       187
1360                BSS   BSP,E                                    P  5  2874  B Q10 E            187
1361                H     0,111                                    P  7  2879  . 000 111          188
1362                B     RDXT                                     P  4  2886  B Q35              188
1363                LTORG *                                        P           2890
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 SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

                     DCW   @2@                                        P  1  2890              LIT   188
                     DCW   @PRINT@                                    P  5  2895              LIT   188
                     DCW   @PUNCH@                                    P  5  2900              LIT   188
                     DCW   &4                                         P  1  2901              LIT   188
              OPSAVP DCW   #01                                        P  1  2902              AREA  188
              NAMEP  DCW   #03                                        P  3  2905              AREA  189
                     DCW   @999999@                                   P  6  2911              LIT   189
                     DCW   @HEADR@                                    P  5  2916              LIT   189
                     DCW   @HEADR@                                    P  5  2921              LIT   189
                     DCW   @UNKNOWN@                                  P  7  2928              LIT   189
                     DCW   @999@                                      P  3  2931              LIT   189
              HDRSWP DCW   #01                                        P  1  2932              AREA  189
              HDSW1P DCW   #01                                        P  1  2933              AREA  190
                     DCW   @999999@                                   P  6  2939              LIT   190
                     DCW   @HEADR@                                    P  5  2944              LIT   190
              SEQNOP DCW   #04                                        P  4  2948              AREA  190
                     DCW   @END OF LIBRARY@                           P 14  2962              LIT   190
                     DCW   @     @                                    P  5  2967              LIT   190
                     DCW   @INSER@                                    P  5  2972              LIT   191
                     DCW   @HEADR@                                    P  5  2977              LIT   191
                     DCW   @SEQ  LABEL  OP    OPERANDS@              P 26  3003              LIT   191
                     DCW   @HEADR@                                    P  5  3008              LIT   192
                     DCW   &1                                         P  1  3009              LIT   192
                     DCW   @ @                                        P  1  3010              LIT   192
                     DCW   @1401 AUTOCODER - LIBRARY@                 P 24  3034              LIT   192
                     DCW   @PAGE@                                     P  4  3038              LIT   192
              PGNOP  DCW   #03                                        P  3  3041              AREA  192
                     DCW   &9                                         P  1  3042              LIT   192
              RDCTP  DCW   #01                                        P  1  3043              AREA  193
1364          ENDOT  DCW   @}@                                        P  1  3044              GMARK 193
1365                 EX    0                                         P           B 000             194
1366                 END   0                                         P           / 000 080
```


SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ABIT	107	ADDU	1950	AGAINR	2102	ALLU	1742	BACKU	1722	BADSTU	2859	BDEOFU	750
BEGINU	1500	BLANKU	3027	BSP	995	BSP1U	827	BSP2U	863	BSP3U	957	BSPB	698
BSPCU	2110	BSPP	2810	BUMPU	2753	BYCTB	807	BYCTU	1072	BYP1U	2290	BYPSSU	411
CARD	0	CDXTU	2405	CKDELU	2368	CKREPU	2388	CKSEQ	726	CLEAR	702	CLEARB	342
CLEARU	1021	CLNUPU	2240	CLRB	497	CLRP	2670	CLRPHP	2499	CLRU	1032	CLRWMU	2004
CLRXTU	1052	CNVRT	478	COMNTP	2684	COMNTU	2732	COMP1	429	COMP2	607	COMP2U	2078
COMPU	2031	COPYU	525	CPYNDU	692	CRDER	917	CTLXTU	2633	DELSWU	3079	DOALLP	2328
DOCOR	538	DOCTLU	2594	DOHDRP	2605	DOOUTU	2307	DOPNTP	2435	DOPSAB	1900	DOSEQ	941
DOSEQP	2639	END99U	2910	ENDOTP	3044	ENDRTR	2212	ENDSQ	962	ENDSWU	3098	ENDUPU	1139
EOFSWU	1080	EOFU	601	EOJOB	877	EOJOBP	2454	ERASEU	637	ERRORP	2506	EXITU	1777
FINALU	2260	FLOAT	406	FOUNDU	1730	GETR	2154	GETUPU	448	GMRK1B	835	GOTITU	2070
HALT	906	HALT1B	407	HALT1U	669	HALT2	930	HALT2U	2790	HALTP	2488	HD2XTP	2763
HDRSWP	2932	HDSW1P	2933	HDXTP	2577	HDXTU	2590	HEAD1P	2719	HEADRU	1656	HEADU	2532
HEDSWU	3091	HOLD5	1099	IMAGEU	101	INPUTU	1500	INSERP	2517	INSERU	1806	INSRU	2173
INSWU	3073	INSXTP	2555	IS2OPU	2000	ISMORU	727	ISUNKU	2821	LDUPDU	498	LIBRNB	521
LIBSWU	1079	LISTR	2126	LOADDB	11	LOOP1B	362	LOOP1U	1628	LOOP2B	441	LOOP2U	1757
LOOP3U	1810	LOOP4U	2835	LOOP6U	2941	LOPSAB	476	LSTCDU	2409	LSTSWU	3085	LTAPSW	2725
MACRO	792	MOREU	1648	NAMEP	2905	NAMEU	3039	NEWPGP	2697	NEWPGU	2658	NEWXTU	2668
NOBIT	106	NOIS2B	652	NOIS2U	774	NOISEB	637	NOISEP	2767	NOISEU	759	NOSXTB	672
NOSXTP	2802	NOSXTU	794	NTFNDU	2884	NXTBK	362	NXTOPU	1942	ONOPU	2220	OPCODP	2669
OPSAVP	2902	OPSWU	3048	OUTAPU	%U6	OUTPTB	558	OUTU	2008	OUTXTU	2320	PARTLU	1846
PASSAB	1650	PASTU	1689	PGNOP	3041	PGNOU	3137	PRINT	200	PRINTP	2581	PRINTU	2672
PRTHDP	2559	PRTXTP	2680	PTAGNP	2258	PTCTLU	2637	PTCXTU	2654	PTXTU	2771	QINSRU	2146
QUITU	2775	RDCDU	2340	RDCTB	812	RDCTP	3043	RDCTR	2207	RDCTU	1130	RDERRB	676
RDERRP	2806	RDERRR	2046	RDERRU	798	RDTP2P	2185	RDTPP	2372	RDTPU	2417	RDTRYB	710
RDTRYP	2822	RDTRYR	2058	RDTRYU	839	RDXTB	723	RDXTP	2835	RDXTU	852	READP	2067
READU	2324	REBEGU	1560	REOUTU	593	REPETU	2236	RETRY	1020	RTXTU	2491	RWDP	2483
SELMCP	2119	SEQER	760	SEQNCU	2745	SEQNO	1087	SEQNOP	2948	SEQNOU	3167	SEQSWU	3064
SEQXT	756	SERCHU	1584	SETUPP	2360	SETWM	596	SKPCTU	1082	SOMEU	1881	START	333
STARTR	2009	SUB1	527	SUB2	471	SUBCT	1037	SUBCTU	999	SWICHU	556	SYSTP	%U1
SYSTPB	%U1	SYSTPP	%U1	SYSTPR	%U1	SYSTPU	%U1	TEST1U	1885	THRUU	2126	TSTLCP	2296
TSTSQU	2716	TSTSSB	418	TWOOPU	1916	UNKNP	2305	UNKWNU	2801	UPDSWU	1126	WK1U	3053
WK2U	3058	WORK5	1119	WT2XTU	2528	WTAP1	675	WTAP1U	580	WTAP2	830	WTAP2U	2495
WTCT	1255	WTCTU	1132	WTERR	973	WTERRU	928	WTTM	868	WTTRYU	982	WTXT	1033
WTXTU	995	XR1	89	XR1B	89	XR1P	89	XR1U	89	XR2	94	XR2U	94
XR3	99	XR3U	99	XXXX	0	ZONE	109						

***** ** 3 Errors ERROR