

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

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|---|----|-----|-------|----------------------------------|--|-----|------|------|-------------|------|------|
| 1401 AUTOCODER-PASS 1-GENERATE SYSTEM TAPE-VERSION 3 3711L PAGE 1 | | | | | | | | | | | |
| 101 | 1 | 01 | 000 | JOB | 1401 AUTOCODER-PASS 1-GENERATE SYSTEM TAPE-VERSION 3 | | | | | | |
| 102 | 1 | 02 | | CTL | 630 1 | | | | | | |
| 103 | 1 | 03 | SYSTP | EQU | %U1 | | | | %U1 | | |
| 104 | 1 | 04 | CARD | EQU | 0 | | | | 0000 | | |
| 105 | 1 | 05 | PRINT | EQU | 200 | | | | 0200 | | |
| 106 | 1 | 06 | | ORG | 87 | | | | | 0087 | |
| 107 | 1 | 07 | XR1 | DCW | 000 | 3 | | | | | 4 |
| 108 | 1 | 08 | | DC | 00 | 2 | | | | | 4 |
| 109 | 1 | 09 | XR2 | DCW | 000 | 3 | | | | | 4 |
| 110 | 1 | 10 | | DC | 00 | 2 | | | | | 4 |
| 111 | 1 | 11 | XR3 | DCW | 000 | 3 | | | | | 4 |
| 112 | 1 | 12 | | DC | 000000 | 6 | | | | | 4 |
| 113 | 1 | 13 | ZONE | DCW | @2SKB@ | 4 | | | | | 4 |
| 114 | 1 | 14 | ABIT | EQU | ZONE-2 | | | | | | |
| 115 | 1 | 15 | NOBIT | EQU | ZONE-3 | | | | | | |
| 116 | 1 | 16 | XXXX | EQU | 0 | | | | | | |
| 117 | 1 | 17 | * | | | | | | | | |
| 118 | 1 | 18 | * | START OF MAIN LINE | | | | | | | |
| 119 | 1 | 19 | * | | | | | | | | |
| 120 | 1 | 20 | | ORG | 333 | | | | | 0333 | |
| 121 | 1 | 21 | START | RWD | SYSTP | 5 | 0333 | | U %U1 R | | 5 |
| 122 | 1 | 22 | | CC | 1 | 2 | 0338 | | F 1 | | 5 |
| 123 | 1 | 23 | | MCW | @GENERATING 1401 AUTOCODER SYSTEM@,PRINT&32 | 7 | 0340 | | M '83 232 | | 5 |
| 124 | 1 | 24 | | W | | 1 | 0347 | | 2 | | 5 |
| 125 | 1 | 25 | | CC | 1 | 2 | 0348 | | F 1 | | 5 |
| 126 | 1 | 26 | | CS | PRINT&132 | 4 | 0350 | | / 332 | | 5 |
| 127 | 1 | 27 | | CS | | 1 | 0354 | | / | | 5 |
| 128 | 1 | 28 | | MCW | CARD&75,SEQNO#4 | 7 | 0355 | | M 075 '87 | | 6 |
| 129 | 1 | 29 | * | | | | | | | | |
| 130 | 1 | 30 | * | START UP NEXT BLOCK | | | | | | | |
| 131 | 1 | 31 | * | | | | | | | | |
| 132 | 1 | 32 | NXTBK | R | | 1 | 0362 | | 1 | | 6 |
| 133 | 1 | 33 | | C | CARD&12,@CONTROL@ | 7 | 0363 | | C 012 '94 | | 6 |
| 134 | 1 | 34 | | BU | MACRO | 5 | 0370 | | B 792 / | | 6 |
| 135 | 1 | 35 | | BWZ | CKSEQ,CARD&80,2 COMMENT OUT TO TURN OFF SEQ CHK | 8 | 0375 | | V 726 080 2 | | 6 |
| 136 | 1 | 36 | | BCE | EOJOB,CARD&78,9 | 8 | 0383 | | B 877 078 9 | | 6 |
| 137 | 1 | 37 | | SW | CARD&21 | 4 | 0391 | | , 021 | | 7 |
| 138 | 1 | 38 | | ZA | CARD&25,HOLD5#5 | 7 | 0395 | | ? 025 '99 | | 7 |
| 139 | 1 | 39 | | CW | CARD&21 | 4 | 0402 | |) 021 | | 7 |
| 140 | 1 | 40 | * | | | | | | | | |
| 141 | 1 | 41 | * | FLOAT ADDRESS TO FIVE CHARACTERS | | | | | | | |
| 142 | 1 | 42 | * | | | | | | | | |
| 143 | 1 | 43 | FLOAT | BCE | *&5,HOLD5,& | 8 | 0406 | | B 418 '99 & | | 7 |
| 144 | 1 | 44 | | B | COMPL | 4 | 0414 | | B 429 | | 7 |
| 145 | 1 | 45 | | ZA | HOLD5-1,HOLD5 | 7 | 0418 | | ? '98 '99 | | 7 |
| 146 | 1 | 46 | | B | FLOAT | 4 | 0425 | | B 406 | | 7 |
| 147 | 1 | 47 | * | | | | | | | | |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|---|----|-----|-------|--|---|-----|------|------|-------------|------|------|
| 1401 AUTOCODER-PASS 1-GENERATE SYSTEM TAPE-VERSION 3 3711L PAGE 2 | | | | | | | | | | | |
| 148 | 1 | 48 | * | TEST ADDRESS AGAINST HOME ADDRESS | | | | | | | |
| 149 | 1 | 49 | * | TO DEVELOP INDEX VALUE | | | | | | | |
| 150 | 1 | 50 | * | | | | | | | | |
| 151 | 1 | 51 | COMP1 | MZ | NOBIT,HOLD5 | 7 | 0429 | | Y 106 '99 | | 8 |
| 152 | 1 | 52 | | S | XR1&2 | 4 | 0436 | | S 091 | | 8 |
| 153 | 1 | 53 | | C | HOLD5,@01500@ | 7 | 0440 | | C '99 /04 | | 8 |
| 154 | 1 | 54 | | BE | DOCOR | 5 | 0447 | | B 538 S | | 8 |
| 155 | 1 | 55 | | BH | SUB1 | 5 | 0452 | | B 527 U | | 8 |
| 156 | 1 | 56 | | S | @01500@,HOLD5 | 7 | 0457 | | S /09 '99 | | 8 |
| 157 | 1 | 57 | | MCW | @16000@,WORK5#5 | 7 | 0464 | | M /14 /19 | | 9 |
| 158 | 1 | 58 | SUB2 | S | HOLD5,WORK5 | 7 | 0471 | | S '99 /19 | | 9 |
| 159 | 1 | 59 | * | | | | | | | | |
| 160 | 1 | 60 | * | CONVERT INDEX VALUE TO 3 DIGIT MACHINE ADDRESS | | | | | | | |
| 161 | 1 | 61 | * | | | | | | | | |
| 162 | 1 | 62 | CNVRT | BAV | *&1 | 5 | 0478 | | B 483 Z | | 9 |
| 163 | 1 | 63 | | A | @96@,WORK5-3 | 7 | 0483 | | A /21 /16 | | 9 |
| 164 | 1 | 64 | | BAV | CNVRT&5 | 5 | 0490 | | B 483 Z | | 9 |
| 165 | 1 | 65 | | MZ | WORK5-4,WORK5 | 7 | 0495 | | Y /15 /19 | | 9 |
| 166 | 1 | 66 | | MN | WORK5-3,*&4 | 7 | 0502 | | D /16 512 | | 10 |
| 167 | 1 | 67 | | MZ | ZONE,WORK5-2 | 7 | 0509 | | Y 109 /17 | | 10 |
| 168 | 1 | 68 | | MCW | WORK5,XR1 | 7 | 0516 | | M /19 089 | | 10 |
| 169 | 1 | 69 | | B | DOCOR | 4 | 0523 | | B 538 | | 10 |
| 170 | 1 | 70 | SUB1 | MCW | @01500@,WORK5 | 7 | 0527 | | M /26 /19 | | 10 |
| 171 | 1 | 71 | | B | SUB2 | 4 | 0534 | | B 471 | | 10 |
| 172 | 1 | 72 | * | | | | | | | | |
| 173 | 1 | 73 | * | READ CONDENSED CARDS | | | | | | | |
| 174 | 1 | 74 | * | | | | | | | | |
| 175 | 1 | 75 | DOCOR | R | | 1 | 0538 | | 1 | | 10 |
| 176 | 1 | 76 | | MCW | @045@,XR3 | 7 | 0539 | | M /29 099 | | 11 |
| 177 | 1 | 77 | | MCW | @042@,XR2 | 7 | 0546 | | M /32 094 | | 11 |
| 178 | 1 | 78 | | BWZ | CKSEQ,CARD&80,2 COMMENT OUT TO TURN OFF SEQ CHK | 8 | 0553 | | V 726 080 2 | | 11 |
| 179 | 1 | 79 | | BCE | WTAP1,CARD&68,B | 8 | 0561 | | B 675 068 B | | 11 |
| 180 | 1 | 80 | | BCE | SETWM,CARD&40,N | 8 | 0569 | | B 596 040 N | | 11 |
| 181 | 1 | 81 | | C | CARD&46,@001@ | 7 | 0577 | | C 046 /35 | | 12 |
| 182 | 1 | 82 | | BE | SETWM | 5 | 0584 | | B 596 S | | 12 |
| 183 | 1 | 83 | | MZ | ABIT,CARD&45 | 7 | 0589 | | Y 107 045 | | 12 |
| 184 | 1 | 84 | * | | | | | | | | |
| 185 | 1 | 85 | * | SET RETURN ADDRESS | | | | | | | |
| 186 | 1 | 86 | * | | | | | | | | |
| 187 | 1 | 87 | SETWM | MCW | &DOCOR,CARD&71 | 7 | 0596 | | M /38 071 | | 12 |
| 188 | 1 | 88 | | MCW | @B@ | 4 | 0603 | | M /39 | | 12 |
| 189 | 1 | 89 | * | | | | | | | | |
| 190 | 1 | 90 | * | INDEX WORD MARK ADDRESSES | | | | | | | |
| 191 | 1 | 91 | * | | | | | | | | |
| 192 | 1 | 92 | COMP2 | C | XR2,@063@ | 7 | 0607 | | C 094 /42 | | 12 |
| 193 | 1 | 93 | | BE | CARD&40 | 5 | 0614 | | B 040 S | | 13 |
| 194 | 1 | 94 | | A | &7,XR3 | 7 | 0619 | | A /43 099 | | 13 |
| 195 | 1 | 95 | | A | &7,XR2 | 7 | 0626 | | A /43 094 | | 13 |
| 196 | 1 | 96 | | C | CARD&1&X2,@040@ | 7 | 0633 | | C 011 /46 | | 13 |
| 197 | 1 | 97 | | BE | *&8 | 5 | 0640 | | B 652 S | | 13 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-------|---------------------------|-----|------|-----------|-------------|-------|------|
| 198 | 1 | 98 | | MZ | ABIT,CARD&X2 | 7 | 0645 | Y 107 | 010 | | 13 |
| 199 | 1 | 99 | | C | CARD&1&X3,@040@ | 7 | 0652 | C 0?1 /46 | | | 14 |
| 200 | 2 | 00 | | BE | COMP2 | 5 | 0659 | B 607 | S | | 14 |
| 201 | 2 | 01 | | MZ | ABIT,CARD&X3 | 7 | 0664 | Y 107 | 0?0 | | 14 |
| 202 | 2 | 02 | | B | COMP2 | 4 | 0671 | B 607 | | | 14 |
| 203 | 2 | 03 | | * | | | | | | | |
| 204 | 2 | 04 | | * | WRITE CORE ON TAPE | | | | | | |
| 205 | 2 | 05 | | * | | | | | | | |
| 206 | 2 | 06 | WTAP1 | LCA | @}@,3998 | 7 | 0675 | L /47 | I98 | | 14 |
| 207 | 2 | 07 | | WTW | SYSTP,1500 | 8 | 0682 | L &U1 | V00 W | | 14 |
| 208 | 2 | 08 | | BER | WTERR | 5 | 0690 | B 973 | L | | 15 |
| 209 | 2 | 09 | | * | | | | | | | |
| 210 | 2 | 10 | | * | CLEAR INPUT AREA | | | | | | |
| 211 | 2 | 11 | | * | | | | | | | |
| 212 | 2 | 12 | | MCW | @I99@,CLEAR&3 | 7 | 0695 | M /50 | 705 | | 15 |
| 213 | 2 | 13 | CLEAR | CS | XXXX | 4 | 0702 | / | 000 | | 15 |
| 214 | 2 | 14 | | SBR | CLEAR&3 | 4 | 0706 | H | 705 | | 15 |
| 215 | 2 | 15 | | C | CLEAR&3,@U99@ | 7 | 0710 | C 705 /53 | | | 15 |
| 216 | 2 | 16 | | BU | CLEAR | 5 | 0717 | B 702 / | | | 15 |
| 217 | 2 | 17 | | B | NXTBK | 4 | 0722 | B 362 | | | 15 |
| 218 | 2 | 18 | | * | | | | | | | |
| 219 | 2 | 19 | | * | CHECK CARD SEQUENCE | | | | | | |
| 220 | 2 | 20 | | * | | | | | | | |
| 221 | 2 | 21 | CKSEQ | SBR | SEQXT&3 | 4 | 0726 | H | 759 | | 16 |
| 222 | 2 | 22 | | A | &1,SEQNO | 7 | 0730 | A /54 | '87 | | 16 |
| 223 | 2 | 23 | | C | CARD&75,SEQNO | 7 | 0737 | C 075 | '87 | | 16 |
| 224 | 2 | 24 | | MCW | CARD&75,SEQNO | 7 | 0744 | M 075 | '87 | | 16 |
| 225 | 2 | 25 | | BU | SEQR | 5 | 0751 | B 760 / | | | 16 |
| 226 | 2 | 26 | SEQXT | B | XXXX | 4 | 0756 | B 000 | | | 16 |
| 227 | 2 | 27 | | * | | | | | | | |
| 228 | 2 | 28 | | * | CARD SEQUENCE ERROR | | | | | | |
| 229 | 2 | 29 | | * | | | | | | | |
| 230 | 2 | 30 | SEQR | MCW | CARD&80,PRINT&80 | 7 | 0760 | M 080 | 280 | | 17 |
| 231 | 2 | 31 | | 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 | 2 | 32 | | MCW | @SEQUENCE ERROR@,PRINT&98 | 7 | 0773 | M /68 | 298 | | 18 |
| 239 | 2 | 33 | | W | 0,176 | 1 | 0780 | 2 | | | 18 |
| 240 | 2 | 34 | | H | 0,176 | 7 | 0781 | . 000 | 176 | | 18 |
| 241 | 2 | 35 | | B | DOSEQ | 4 | 0788 | B 941 | | | 18 |
| 242 | 2 | 36 | | * | | | | | | | |
| 243 | 2 | 37 | | * | PROCESS MACRO LIBRARY | | | | | | |
| 244 | 2 | 38 | | * | | | | | | | |
| 245 | 2 | 39 | MACRO | NOP | CRDER | 4 | 0792 | N | 917 | | 18 |
| 246 | 2 | 40 | | C | CARD&20,@HEADR@ | 7 | 0796 | C 020 /73 | | | 18 |
| 247 | 2 | 41 | | BU | CRDER | 5 | 0803 | B 917 / | | | 18 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-------|--|-----|------|-----------|-------------|------|------|
| 248 | 2 | 42 | | BWZ | CKSEQ,CARD&80,2 COMMENT OUT TO TURN OF SEQ CHK | 8 | 0808 | V 726 | 080 2 | | 19 |
| 249 | 2 | 43 | | MCW | @B@,MACRO | 7 | 0816 | M /39 | 792 | | 19 |
| 250 | 2 | 44 | | LCA | @}@,81 | 7 | 0823 | L /47 | 081 | | 19 |
| 251 | 2 | 45 | | * | | | | | | | |
| 252 | 2 | 46 | | * | WRITE SKELETON INSTRUCTIONS ON TAPE | | | | | | |
| 253 | 2 | 47 | | * | | | | | | | |
| 254 | 2 | 48 | WTAP2 | WT | SYSTP,CARD&1 | 8 | 0830 | M &U1 | 001 W | | 19 |
| 255 | 2 | 49 | | BER | WTERR | 5 | 0838 | B 973 | L | | 19 |
| 256 | 2 | 50 | | C | CARD&11,@999999@ | 7 | 0843 | C 011 /79 | | | 20 |
| 257 | 2 | 51 | | BE | WTM | 5 | 0850 | B 868 | S | | 20 |
| 258 | 2 | 52 | | R | | 1 | 0855 | 1 | | | 20 |
| 259 | 2 | 53 | | BWZ | CKSEQ,CARD&80,2 COMMENT OUT TO TURN OF SEQ CHK | 8 | 0856 | V 726 | 080 2 | | 20 |
| 260 | 2 | 54 | | B | WTAP2 | 4 | 0864 | B 830 | | | 20 |
| 261 | 2 | 55 | WTTM | WTM | SYSTP | 5 | 0868 | U &U1 | M | | 20 |
| 262 | 2 | 56 | | B | NXTBK | 4 | 0873 | B 362 | | | 20 |
| 263 | 2 | 57 | | * | | | | | | | |
| 264 | 2 | 58 | | * | END OF GENERATION | | | | | | |
| 265 | 2 | 59 | | * | | | | | | | |
| 266 | 2 | 60 | EOJOB | WTM | SYSTP | 5 | 0877 | U &U1 | M | | 21 |
| 267 | 2 | 61 | | RWD | SYSTP | 5 | 0882 | U &U1 | R | | 21 |
| 268 | 2 | 62 | | CW | @}@ | 4 | 0887 |) /47 | | | 21 |
| 269 | 2 | 63 | | CS | PRINT&132 | 4 | 0891 | / | 332 | | 21 |
| 270 | 2 | 64 | | CS | | 1 | 0895 | / | | | 21 |
| 271 | 2 | 65 | | MCW | @1401 AUTOCODER SYSTEM GENERATED ON TAPE UNIT 1@,246 | 7 | 0896 | M S25 | 246 | | 21 |
| 272 | 2 | 66 | | W | | 1 | 0903 | 2 | | | 21 |
| 273 | 2 | 67 | | CC | 1 | 2 | 0904 | F 1 | | | 22 |
| 274 | 2 | 68 | | * | | | | | | | |
| 275 | 2 | 69 | | * | FINAL HALT | | | | | | |
| 276 | 2 | 70 | | * | | | | | | | |
| 277 | 2 | 71 | HALT | H | 0,142 | 7 | 0906 | . 000 | 142 | | 22 |
| 278 | 2 | 72 | | B | HALT | 4 | 0913 | B 906 | | | 22 |
| 279 | 2 | 73 | | * | | | | | | | |
| 280 | 2 | 74 | | * | MISSING CONTROL CARD | | | | | | |
| 281 | 2 | 75 | | * | | | | | | | |
| 282 | 2 | 76 | | CRDER | CS PRINT&132 | 4 | 0917 | / | 332 | | 22 |
| 283 | 2 | 77 | | CS | | 1 | 0921 | / | | | 22 |
| 284 | 2 | 78 | | MCW | @SYSTEM CONTROL CARD MISSING@,PRINT&27 | 7 | 0922 | M S52 | 227 | | 22 |
| 285 | 2 | 79 | | W | | 1 | 0929 | 2 | | | 22 |
| 286 | 2 | 80 | HALT2 | H | 0,177 | 7 | 0930 | . 000 | 177 | | 23 |
| 287 | 2 | 81 | | B | HALT2 | 4 | 0937 | B 930 | | | 23 |
| 288 | 2 | 82 | | * | | | | | | | |
| 289 | 2 | 83 | | * | AFTER SEQUENCE ERROR, CHECK BALANCE OF DECK | | | | | | |
| 290 | 2 | 84 | | * | | | | | | | |
| 291 | 2 | 85 | DOSEQ | R | | 1 | 0941 | 1 | | | 23 |
| 292 | 2 | 86 | | BWZ | CKSEQ,CARD&80,2 | 8 | 0942 | V 726 | 080 2 | | 23 |
| 293 | 2 | 87 | | BCE | ENDSQ,CARD&78,9 | 8 | 0950 | B 962 | 078 9 | | 23 |
| 294 | 2 | 88 | | B | DOSEQ | 4 | 0958 | B 941 | | | 23 |
| 295 | 2 | 89 | ENDSQ | H | 0,152 | 7 | 0962 | . 000 | 152 | | 23 |
| 296 | 2 | 90 | | B | ENDSQ | 4 | 0969 | B 962 | | | 24 |
| 297 | 2 | 91 | | * | | | | | | | |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-----|--|-----|----|------|-------------|-------|------|
| 298 | 2 | 92 | * | | WRITE REDUNDANCY ROUTINE | | | | | | |
| 299 | 2 | 93 | * | | | | | | | | |
| 300 | 2 | 94 | WTERR | SBR | WTVT&3 | 4 | | 0973 | H '36 | | 24 |
| 301 | 2 | 95 | | SBR | XR3 | 4 | | 0977 | H 099 | | 24 |
| 302 | 2 | 96 | | MZ | &9.XR3 | 7 | | 0981 | Y S53 099 | | 24 |
| 303 | 2 | 97 | | MCW | 4000-6&X3,RETRY&7 | 7 | | 0988 | M I14 '27 | | 24 |
| 304 | 2 | 98 | BSP | BSP | SYSTP | 5 | | 0995 | U %U1 B | | 24 |
| 305 | 2 | 99 | | SKP | SYSTP | 5 | | 1000 | U %U1 E | | 24 |
| 306 | 3 | 00 | | BCE | SUBCT,WTC1-1,1 | 8 | | 1005 | B '37 S54 1 | | 25 |
| 307 | 3 | 01 | | A | &1,WTC2 | 7 | | 1013 | A /54 S55 | | 25 |
| 308 | 3 | 02 | RETRY | WT | SYSTP,XXXX | 8 | | 1020 | M %U1 000 W | | 25 |
| 309 | 3 | 03 | | BER | BSP | 5 | | 1028 | B 995 L | | 25 |
| 310 | 3 | 04 | WTVT | B | XXXX | 4 | | 1033 | B 000 | | 25 |
| 311 | 3 | 05 | SUBCT | S | WTVT | 4 | | 1037 | S S55 | | 25 |
| 312 | 3 | 06 | | H | 0,161 | 7 | | 1041 | 000 161 | | 26 |
| 313 | 3 | 07 | | 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 | @j@ | 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 | 3 | 08 | | EX | START | | | | B 333 | | 34 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-----|----------------------------------|-----|----|------|-------------|------|---------|
| 315 | 3 | 09 | | JOB | AUTOCODER-PASS 1 SELECT PROGRAM | | | | -VERSION 3 | | |
| 316 | 3 | 10 | | SFX | B | | | | | | |
| 317 | 3 | 11 | PASSA | EQU | 1650 | B | | 1650 | | | |
| 318 | 3 | 12 | DOPSA | EQU | 1900 | B | | 1900 | | | |
| 319 | 3 | 13 | SYSTP | EQU | %U1 | B | | %U1 | | | |
| 320 | 3 | 14 | * | | | | | | | | |
| 321 | 3 | 15 | * | | BRANCH FROM TAPE LOAD ROUTINE | | | | | | |
| 322 | 3 | 16 | * | | | | | | | | |
| 323 | 3 | 17 | | ORG | 1 | B | | | 0001 | | |
| 324 | 3 | 18 | | B | 333 | B | 4 | 0001 | B 333 | | 37 ADDR |
| 325 | 3 | 19 | | H | +,-3 | B | 4 | 0005 | . 005 | | 37 ADDR |
| 326 | 3 | 20 | LOADD | DCW | @599@ | B | 3 | 0011 | | | 37 ADDR |
| 327 | 3 | 21 | | ORG | 87 | B | | | 0087 | | |
| 328 | 3 | 22 | XR1 | DCW | 000 | B | 3 | 0089 | | | 38 |
| 329 | 3 | 23 | | DC | 00 | B | 2 | 0091 | | | 38 |
| 330 | 3 | 24 | | DCW | 000 | B | 3 | 0094 | | | 38 |
| 331 | 3 | 25 | | DC | 00 | B | 2 | 0096 | | | 38 |
| 332 | 3 | 26 | | DCW | 000 | B | 3 | 0099 | | | 38 |
| 333 | 3 | 27 | | DC | 00 | B | 2 | 0101 | | | 38 |
| 334 | 3 | 28 | * | | | | | | | | |
| 335 | 3 | 29 | * | | BEGIN PROGRAM | | | | | | |
| 336 | 3 | 30 | * | | | | | | | | |
| 337 | 3 | 31 | | ORG | 333 | B | | | 0333 | | |
| 338 | 3 | 32 | | BER | HALT1 | B | 5 | 0333 | B 407 L | | 39 |
| 339 | 3 | 33 | | SW | GMRK1 | B | 4 | 0338 | , 835 | | 39 |
| 340 | 3 | 34 | CLEAR | CS | 3999 | B | 4 | 0342 | / 199 | | 39 |
| 341 | 3 | 35 | | SBR | CLEAR&3 | B | 4 | 0346 | H 345 | | 39 |
| 342 | 3 | 36 | | C | CLEAR&3,@U99@ | B | 7 | 0350 | C 345 787 | | 39 |
| 343 | 3 | 37 | | BU | CLEAR | B | 5 | 0357 | B 342 / | | 39 |
| 344 | 3 | 38 | * | | | | | | | | |
| 345 | 3 | 39 | * | | GET PAST LIBRARY | | | | | | |
| 346 | 3 | 40 | * | | | | | | | | |
| 347 | 3 | 41 | LOOP1 | SW | GMRK1 | B | 4 | 0362 | , 835 | | 39 |
| 348 | 3 | 42 | | RT | SYSTP,GMRK1-21 | B | 8 | 0366 | M %U1 814 R | | 40 |
| 349 | 3 | 43 | | C | GMRK1-2,@999999 HEADR@ | B | 7 | 0374 | C 833 802 | | 40 |
| 350 | 3 | 44 | | BU | LOOP1 | B | 5 | 0381 | B 362 / | | 40 |
| 351 | 3 | 45 | | SW | GMRK1 | B | 4 | 0386 | , 835 | | 40 |
| 352 | 3 | 46 | | RT | SYSTP,GMRK1-1 | B | 8 | 0390 | M %U1 834 R | | 40 |
| 353 | 3 | 47 | | BEF | TSTSS | B | 5 | 0398 | B 418 K | | 40 |
| 354 | 3 | 48 | | B | LOOP1 | B | 4 | 0403 | B 362 | | 41 |
| 355 | 3 | 49 | * | | | | | | | | |
| 356 | 3 | 50 | * | | REDUNDANCY ON TAPE LOAD | | | | | | |
| 357 | 3 | 51 | * | | | | | | | | |
| 358 | 3 | 52 | HALT1 | H | 0,199 | B | 7 | 0407 | . 000 199 | | 41 |
| 359 | 3 | 53 | | B | HALT1 | B | 4 | 0414 | B 407 | | 41 |
| 360 | 3 | 54 | TSTSS | BSS | LIBRN,F | B | 5 | 0418 | B 521 F | | 41 |
| 361 | 3 | 55 | * | | | | | | | | |
| 362 | 3 | 56 | * | | RETRIEVE PASS 2 FOR ASSEMBLY RUN | | | | | | |
| 363 | 3 | 57 | * | | | | | | | | |
| 364 | 3 | 58 | | SW | GMRK1 | B | 4 | 0423 | , 835 | | 41 |

| AUTOCODER-PASS 1 SELECT PROGRAM | | | | -VERSION 3 | 3712L | PAGE 7 | | | |
|---------------------------------|----|-----|---------------------------|------------|-------|--------|-------------|------|------|
| SEQ | PG | LIN | LABEL OP OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
| 365 | 3 | 59 | LCA GMRK1,3998 | B | 7 | 0427 | L 835 I98 | | 41 |
| 366 | 3 | 60 | MCW &PASSA&13,NOIS2&6 | B | 7 | 0434 | M 805 658 | | 41 |
| 367 | 3 | 61 | * | | | | | | |
| 368 | 3 | 62 | * GET PAST LIBRARIAN | | | | | | |
| 369 | 3 | 63 | * | | | | | | |
| 370 | 3 | 64 | LOOP2 BCE LOPSA,BYCT,4 | B | 8 | 0441 | B 476 807 4 | | 42 |
| 371 | 3 | 65 | SW 3998 | B | 4 | 0449 | , I98 | | 42 |
| 372 | 3 | 66 | RTW SYSTP,PASSA | B | 8 | 0453 | L %U1 W50 R | | 42 |
| 373 | 3 | 67 | B NOISE | B | 4 | 0461 | B 637 | | 42 |
| 374 | 3 | 68 | A &1,BYCT#1 | B | 7 | 0465 | A 806 807 | | 42 |
| 375 | 3 | 69 | B LOOP2 | B | 4 | 0472 | B 441 | | 42 |
| 376 | 3 | 70 | * | | | | | | |
| 377 | 3 | 71 | * PASS 2 FOUND | | | | | | |
| 378 | 3 | 72 | * | | | | | | |
| 379 | 3 | 73 | LOPSA RTW SYSTP,PASSA | B | 8 | 0476 | L %U1 W50 R | | 43 |
| 380 | 3 | 74 | B NOISE | B | 4 | 0484 | B 637 | | 43 |
| 381 | 3 | 75 | BER RDERR | B | 5 | 0488 | B 676 L | | 43 |
| 382 | 3 | 76 | CW GMRK1 | B | 4 | 0493 |) 835 | | 43 |
| 383 | 3 | 77 | CLR CS PASSA-1 | B | 4 | 0497 | / W49 | | 43 |
| 384 | 3 | 78 | SBR CLR&3 | B | 4 | 0501 | H 500 | | 43 |
| 385 | 3 | 79 | C CLR&3,LOADD | B | 7 | 0505 | C 500 011 | | 43 |
| 386 | 3 | 80 | BU CLR | B | 5 | 0512 | B 497 / | | 44 |
| 387 | 3 | 81 | B DOPSA | B | 4 | 0517 | B 200 | | 44 |
| 388 | 3 | 82 | * | | | | | | |
| 389 | 3 | 83 | * LIBRARY RUN | | | | | | |
| 390 | 3 | 84 | * | | | | | | |
| 391 | 3 | 85 | LIBRN MCW @!13@,NOIS2&6 | B | 7 | 0521 | M 810 658 | | 44 |
| 392 | 3 | 86 | CW GMRK1 | B | 4 | 0528 |) 835 | | 44 |
| 393 | 3 | 87 | BSS OUTPT,B | B | 5 | 0532 | B 558 B | | 44 |
| 394 | 3 | 88 | * | | | | | | |
| 395 | 3 | 89 | * RETRIEVE UPDATE PROGRAM | | | | | | |
| 396 | 3 | 90 | * | | | | | | |
| 397 | 3 | 91 | RTW SYSTP,2000 | B | 8 | 0537 | L %U1 100 R | | 44 |
| 398 | 3 | 92 | B NOISE | B | 4 | 0545 | B 637 | | 44 |
| 399 | 3 | 93 | BER RDERR | B | 5 | 0549 | B 676 L | | 45 |
| 400 | 3 | 94 | B 2000 | B | 4 | 0554 | B 100 | | 45 |
| 401 | 3 | 95 | * | | | | | | |
| 402 | 3 | 96 | * RETRIEVE OUTPUT PROGRAM | | | | | | |
| 403 | 3 | 97 | * | | | | | | |
| 404 | 3 | 98 | OUTPT RTW SYSTP,2000 | B | 8 | 0558 | L %U1 100 R | | 45 |
| 405 | 3 | 99 | B NOISE | B | 4 | 0566 | B 637 | | 45 |
| 406 | 4 | 00 | SW GMRK1 | B | 4 | 0570 | , 835 | | 45 |
| 407 | 4 | 01 | LCA GMRK1,3998 | B | 7 | 0574 | L 835 I98 | | 45 |
| 408 | 4 | 02 | RTW SYSTP,2000 | B | 8 | 0581 | L %U1 100 R | | 46 |
| 409 | 4 | 03 | B NOISE | B | 4 | 0589 | B 637 | | 46 |
| 410 | 4 | 04 | RTW SYSTP,2000 | B | 8 | 0593 | L %U1 100 R | | 46 |
| 411 | 4 | 05 | B NOISE | B | 4 | 0601 | B 637 | | 46 |
| 412 | 4 | 06 | SW 3998 | B | 4 | 0605 | , I98 | | 46 |
| 413 | 4 | 07 | RTW SYSTP,2000 | B | 8 | 0609 | L %U1 100 R | | 46 |
| 414 | 4 | 08 | B NOISE | B | 4 | 0617 | B 637 | | 47 |

| AUTOCODER-PASS 1 SELECT PROGRAM | | | | -VERSION 3 | 3712L | PAGE 8 | | | |
|---------------------------------|----|-----|---------------------------|------------|-------|--------|-------------|-------|------|
| SEQ | PG | LIN | LABEL OP OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
| 415 | 4 | 09 | BER RDERR | B | 5 | 0621 | B 676 L | | 47 |
| 416 | 4 | 10 | CW GMRK1,3998 | B | 7 | 0626 |) 835 I98 | | 47 |
| 417 | 4 | 11 | B 2000 | B | 4 | 0633 | B 100 | | 47 |
| 418 | 4 | 12 | * | | | | | | |
| 419 | 4 | 13 | * TEST FOR NOISE RECORDS | | | | | | |
| 420 | 4 | 14 | * | | | | | | |
| 421 | 4 | 15 | NOISE SBR NOSXT&3 | B | 4 | 0637 | H 675 | | 47 |
| 422 | 4 | 16 | SBR XR1 | B | 4 | 0641 | H 089 | | 47 |
| 423 | 4 | 17 | MZ &9,XR1 | B | 7 | 0645 | Y 811 089 | | 47 |
| 424 | 4 | 18 | NOIS2 BCE 4000-12&X1,0,} | B | 8 | 0652 | B IY8 000 } | GMARK | 48 |
| 425 | 4 | 19 | CHAIN 12 | B | 1 | 0660 | B | MACRO | 48 |
| 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 | 4 | 20 | NOSXT B 0 | B | 4 | 0672 | B 000 | | 49 |
| 439 | 4 | 21 | * | | | | | | |
| 440 | 4 | 22 | * READ REDUNDANCY ROUTINE | | | | | | |
| 441 | 4 | 23 | * | | | | | | |
| 442 | 4 | 24 | RDERR SBR XR1 | B | 4 | 0676 | H 089 | | 50 |
| 443 | 4 | 25 | SBR RDXT&3 | B | 4 | 0680 | H 726 | | 50 |
| 444 | 4 | 26 | MZ &9,XR1 | B | 7 | 0684 | Y 811 089 | | 50 |
| 445 | 4 | 27 | MCW 4000-10&X1,RDTRY&7 | B | 7 | 0691 | M I20 717 | | 50 |
| 446 | 4 | 28 | BSP BSP SYSTP | B | 5 | 0698 | U %U1 B | | 50 |
| 447 | 4 | 29 | MCW &9,RDCT#1 | B | 7 | 0703 | M 811 812 | | 50 |
| 448 | 4 | 30 | RDTRY RTW SYSTP,0 | B | 8 | 0710 | L %U1 000 R | | 51 |
| 449 | 4 | 31 | BER *&5 | B | 5 | 0718 | B 727 L | | 51 |
| 450 | 4 | 32 | RDXT B 0 | B | 4 | 0723 | B 000 | | 51 |
| 451 | 4 | 33 | BSP SYSTP | B | 5 | 0727 | U %U1 B | | 51 |
| 452 | 4 | 34 | S &1,RDCT | B | 7 | 0732 | S 806 812 | | 51 |
| 453 | 4 | 35 | BWZ RDTRY,RDCT,B | B | 8 | 0739 | V 710 812 B | | 51 |
| 454 | 4 | 36 | H 0,191 | B | 7 | 0747 | . 000 191 | | 52 |
| 455 | 4 | 37 | MCW RDTRY&7,*&8 | B | 7 | 0754 | M 717 768 | | 52 |
| 456 | 4 | 38 | RTW SYSTP,0 | B | 8 | 0761 | L %U1 000 R | | 52 |
| 457 | 4 | 39 | BSS BSP,E | B | 5 | 0769 | B 698 E | | 52 |
| 458 | 4 | 40 | H 0,111 | B | 7 | 0774 | . 000 111 | | 52 |
| 459 | 4 | 41 | B RDXT | B | 4 | 0781 | B 723 | | 52 |
| 460 | 4 | 42 | 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 | 4 | 43 | | DCW | #22 | B | 22 | 0834 | | | 54 |
| 462 | 4 | 44 | GMRK1 | DCW | @}@ | B | 1 | 0835 | | GMARK | 54 |
| 463 | 4 | 45 | | EX | 0 | B | | | B 000 | | 55 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|--------|-------|----------------------------------|------------|----|------|-------------|-------|------|
| 464 | 4 | 46 | | JOB | AUTOCODER-PASS 1 RETRIEVE UPDATE | -VERSION 3 | B | | | | |
| 465 | 4 | 47 | | SFX | R | R | | | | | |
| 466 | 4 | 48 | SYSTP | EQU | %U1 | R | | %U1 | | | |
| 467 | 4 | 49 | LTAPSW | EQU | 2725 | R | | 2725 | | | |
| 468 | 4 | 50 | | ORG | 2000 | R | | | 2000 | | |
| 469 | 4 | 51 | | BSS | LIST,G | R | 5 | 2000 | B J26 G | | 58 |
| 470 | 4 | 52 | | CW | ENDRT | R | 4 | 2005 |) K12 | | 58 |
| 471 | 4 | 53 | START | RTW | SYSTP,1 | R | 8 | 2009 | L %U1 001 R | | 58 |
| 472 | 4 | 54 | | BCE | START,013,} | R | 8 | 2017 | B 109 013 } | GMARK | 58 |
| 473 | 4 | 55 | | 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 | 4 | 56 | | BER | RDERR | R | 5 | 2037 | B 146 L | | 60 |
| 487 | 4 | 57 | | B | 333 | R | 4 | 2042 | B 333 | | 60 |
| 488 | 4 | 58 | RDERR | BSP | SYSTP | R | 5 | 2046 | U %U1 B | | 60 |
| 489 | 4 | 59 | | MCW | &9,RDCT#1 | R | 7 | 2051 | M K06 K07 | | 60 |
| 490 | 4 | 60 | RDTRY | RTW | SYSTP,1 | R | 8 | 2058 | L %U1 001 R | | 60 |
| 491 | 4 | 61 | | BER | *&5 | R | 5 | 2066 | B 175 L | | 61 |
| 492 | 4 | 62 | | B | 333 | R | 4 | 2071 | B 333 | | 61 |
| 493 | 4 | 63 | | BSP | SYSTP | R | 5 | 2075 | U %U1 B | | 61 |
| 494 | 4 | 64 | | S | &1,RDCT | R | 7 | 2080 | S K08 K07 | | 61 |
| 495 | 4 | 65 | | BWZ | RDTRY,RDCT,B | R | 8 | 2087 | V 158 K07 B | | 61 |
| 496 | 4 | 66 | | H | 0,191 | R | 7 | 2095 | . 000 191 | | 61 |
| 497 | 4 | 67 | AGAIN | RTW | SYSTP,1 | R | 8 | 2102 | L %U1 001 R | | 62 |
| 498 | 4 | 68 | | BSS | RDERR,E | R | 5 | 2110 | B 146 E | | 62 |
| 499 | 4 | 69 | | H | 0,111 | R | 7 | 2115 | . 000 111 | | 62 |
| 500 | 4 | 70 | | B | 333 | R | 4 | 2122 | B 333 | | 62 |
| 501 | 4 | 71 | LIST | SW | ENDRT | R | 4 | 2126 | , K12 | | 62 |
| 502 | 4 | 72 | | LCA | ENDRT,1998 | R | 7 | 2130 | L K12 298 | | 62 |
| 503 | 4 | 73 | | RTW | SYSTP,333 | R | 8 | 2137 | L %U1 333 R | | 63 |
| 504 | 4 | 74 | | BEF | GET | R | 5 | 2145 | B 054 K | | 63 |
| 505 | 4 | 75 | | B | LIST | R | 4 | 2150 | B J26 | | 63 |
| 506 | 4 | 76 | GET | BSP | SYSTP | R | 5 | 2154 | U %U1 B | | 63 |
| 507 | 4 | 77 | | BSP | SYSTP | R | 5 | 2159 | U %U1 B | | 63 |
| 508 | 4 | 78 | | CW | ENDRT,1998 | R | 7 | 2164 |) K12 298 | | 63 |
| 509 | 4 | 79 | | SW | LTAPSW | R | 4 | 2171 | , P25 | | 64 |
| 510 | 4 | 80 | | MCW | @333@,RDTRY&6 | R | 7 | 2175 | M K11 164 | | 64 |
| 511 | 4 | 81 | | MCW | @333@,AGAIN&6 | R | 7 | 2182 | M K11 J08 | | 64 |
| 512 | 4 | 82 | | RTW | SYSTP,333 | R | 8 | 2189 | L %U1 333 R | | 64 |
| 513 | 4 | 83 | | BER | RDERR | R | 5 | 2197 | B 146 L | | 64 |

| AUTOCODER-PASS 1 RETRIEVE UPDATE | | | | -VERSION 3 | 3713L | PAGE 11 | | |
|----------------------------------|----|-----|----------|------------|--------|---------|------------------|----------|
| SEQ | PG | LIN | LABEL OP | OPERANDS | SFX CT | LOCN | INSTRUCTION TYPE | CARD |
| 514 | 4 | 84 | B | 333 | R | 4 2202 | B 333 | 64 |
| 515 | 4 | 85 | LTORG | * | R | | 2206 | |
| | | | DCW | &9 | R | 1 2206 | | LIT 64 |
| | | | RDCTR | #01 | R | 1 2207 | | AREA 64 |
| | | | DCW | &1 | R | 1 2208 | | LIT 65 |
| | | | DCW | @333@ | R | 3 2211 | | LIT 65 |
| 516 | 4 | 86 | ENDRT | DCW @} @ | R | 1 2212 | | GMARK 65 |
| 517 | 4 | 87 | EX | 0 | R | | B 000 | 66 |

| AUTOCODER-PASS 1 COPY SYSTEM TAPE | | | | -VERSION 3 | 3714L | PAGE 12 | | |
|-----------------------------------|----|-----|----------|-----------------------------------|------------|---------|------------------|------|
| SEQ | PG | LIN | LABEL OP | OPERANDS | SFX CT | LOCN | INSTRUCTION TYPE | CARD |
| 518 | 4 | 88 | JOB | AUTOCODER-PASS 1 COPY SYSTEM TAPE | -VERSION 3 | R | | |
| 519 | 4 | 89 | SFX | U | U | | | |
| 520 | 4 | 90 | ORG | 87 | U | | 0087 | |
| 521 | 4 | 91 | XR1 | DCW 000 | U | 3 0089 | | 69 |
| 522 | 4 | 92 | | DC 00 | U | 2 0091 | | 69 |
| 523 | 4 | 93 | XR2 | DCW 000 | U | 3 0094 | | 69 |
| 524 | 4 | 94 | | DC 00 | U | 2 0096 | | 69 |
| 525 | 4 | 95 | XR3 | DCW 000 | U | 3 0099 | | 69 |
| 526 | 4 | 96 | | DC 00 | U | 2 0101 | | 69 |
| 527 | 4 | 97 | SYSTP | EQU %U1 | U | %U1 | | |
| 528 | 4 | 98 | OUTAP | EQU %U6 | U | %U6 | | |
| 529 | 4 | 99 | INPUT | EQU 1500 | U | 1500 | | |
| 530 | 5 | 00 | * | | | | | |
| 531 | 5 | 01 | * | BEGIN PROGRAM | | | | |
| 532 | 5 | 02 | * | | | | | |
| 533 | 5 | 03 | ORG | 333 | U | | 0333 | |
| 534 | 5 | 04 | SW | ENDUP | U | 4 0333 | , /39 | 70 |
| 535 | 5 | 05 | RWD | SYSTP | U | 5 0337 | U %U1 R | 70 |
| 536 | 5 | 06 | RWD | OUTAP | U | 5 0342 | U %U6 R | 70 |
| 537 | 5 | 07 | CC | 1 | U | 2 0347 | F 1 | 70 |
| 538 | 5 | 08 | CS | 332 | U | 4 0349 | / 332 | 70 |
| 539 | 5 | 09 | CS | | U | 1 0353 | / | 70 |
| 540 | 5 | 10 | B | CLEAR | U | 4 0354 | B '21 | 70 |
| 541 | 5 | 11 | BSS | COPY,C | U | 5 0358 | B 525 C | 71 |
| 542 | 5 | 12 | * | | | | | |
| 543 | 5 | 13 | * | RETRIEVE UPDATE PROGRAM | | | | |
| 544 | 5 | 14 | * | | | | | |
| 545 | 5 | 15 | RTW | SYSTP,INPUT | U | 8 0363 | L %U1 V00 R | 71 |
| 546 | 5 | 16 | SBR | XR1 | U | 4 0371 | H 089 | 71 |
| 547 | 5 | 17 | MN | 0&X1 | U | 4 0375 | D 0'0 | 71 |
| 548 | 5 | 18 | SW | | U | 1 0379 | , | 71 |
| 549 | 5 | 19 | DCW | @N0000@ | U | 5 0384 | | 71 |
| 550 | 5 | 20 | B | NOISE | U | 4 0385 | B 759 | 71 |
| 551 | 5 | 21 | BER | RDERR | U | 5 0389 | B 798 L | 72 |
| 552 | 5 | 22 | WTW | OUTAP,INPUT | U | 8 0394 | L %U6 V00 W | 72 |
| 553 | 5 | 23 | BER | WTERR | U | 5 0402 | B 928 L | 72 |
| 554 | 5 | 24 | B | CLEAR | U | 4 0407 | B '21 | 72 |
| 555 | 5 | 25 | BYPSS | RTW SYSTP,INPUT | U | 8 0411 | L %U1 V00 R | 72 |
| 556 | 5 | 26 | C | INPUT&19,@999999 HEADR@ | U | 7 0419 | C V19 '70 | 72 |
| 557 | 5 | 27 | BU | BYPSS | U | 5 0426 | B 411 / | 73 |
| 558 | 5 | 28 | RTW | SYSTP,INPUT | U | 8 0431 | L %U1 V00 R | 73 |
| 559 | 5 | 29 | BEF | GETUP | U | 5 0439 | B 448 K | 73 |
| 560 | 5 | 30 | B | BYPSS | U | 4 0444 | B 411 | 73 |
| 561 | 5 | 31 | GETUP | BCE LDUPD, BYCT, 3 | U | 8 0448 | B 498 '72 3 | 73 |
| 562 | 5 | 32 | RTW | SYSTP,INPUT | U | 8 0456 | L %U1 V00 R | 73 |
| 563 | 5 | 33 | DCW | @N0000000000000@ | U | 14 0477 | | 74 |
| 564 | 5 | 34 | B | NOISE | U | 4 0478 | B 759 | 74 |
| 565 | 5 | 35 | BER | RDERR | U | 5 0482 | B 798 L | 74 |
| 566 | 5 | 36 | A | &1, BYCT#1 | U | 7 0487 | A '71 '72 | 74 |
| 567 | 5 | 37 | B | GETUP | U | 4 0494 | B 448 | 74 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-------|---------------------|-----|----|------|-------------|------|------|
| 668 | 6 | 26 | * | READ | REDUNDANCY ROUTINE | | | | | | |
| 669 | 6 | 27 | * | | | | | | | | |
| 670 | 6 | 28 | RDERR | SBR | RDXT&3 | U | 4 | 0798 | H 855 | | 84 |
| 671 | 6 | 29 | | SBR | XR3 | U | 4 | 0802 | H 099 | | 85 |
| 672 | 6 | 30 | | MZ | &9, XR3 | U | 7 | 0806 | Y /29 099 | | 85 |
| 673 | 6 | 31 | | MCW | 4000-24&X3, RDTRY&7 | U | 7 | 0813 | M IG6 846 | | 85 |
| 674 | 6 | 32 | | MN | RDTRY&3, BSP1&3 | U | 7 | 0820 | D 842 830 | | 85 |
| 675 | 6 | 33 | BSP1 | BSP | SYSTP | U | 5 | 0827 | U &U1 B | | 85 |
| 676 | 6 | 34 | | MCW | &9, RDCT#1 | U | 7 | 0832 | M /29 /30 | | 85 |
| 677 | 6 | 35 | RDTRY | RT | SYSTP, 0 | U | 8 | 0839 | M &U1 000 R | | 86 |
| 678 | 6 | 36 | | BER | *&5 | U | 5 | 0847 | B 856 L | | 86 |
| 679 | 6 | 37 | RDXT | B | 0 | U | 4 | 0852 | B 000 | | 86 |
| 680 | 6 | 38 | | MN | RDTRY&3, BSP2&3 | U | 7 | 0856 | D 842 866 | | 86 |
| 681 | 6 | 39 | BSP2 | BSP | SYSTP | U | 5 | 0863 | U &U1 B | | 86 |
| 682 | 6 | 40 | | S | &1, RDCT | U | 7 | 0868 | S '71 /30 | | 86 |
| 683 | 6 | 41 | | BWZ | RDTRY, RDCT, B | U | 8 | 0875 | V 839 /30 B | | 87 |
| 684 | 6 | 42 | | MN | RDTRY&3, *&7 | U | 7 | 0883 | D 842 896 | | 87 |
| 685 | 6 | 43 | | H | 0, 190 | U | 7 | 0890 | . 000 190 | | 87 |
| 686 | 6 | 44 | | MCW | RDTRY&7, *&8 | U | 7 | 0897 | M 846 911 | | 87 |
| 687 | 6 | 45 | | RT | SYSTP, 0 | U | 8 | 0904 | M &U1 000 R | | 87 |
| 688 | 6 | 46 | | BSS | BSP1, E | U | 5 | 0912 | B 827 E | | 88 |
| 689 | 6 | 47 | | H | 0, 111 | U | 7 | 0917 | . 000 111 | | 88 |
| 690 | 6 | 48 | | B | RDXT | U | 4 | 0924 | B 852 | | 88 |
| 691 | 6 | 49 | * | | | | | | | | |
| 692 | 6 | 50 | * | WRITE | REDUNDANCY ROUTINE | | | | | | |
| 693 | 6 | 51 | * | | | | | | | | |
| 694 | 6 | 52 | WTERR | SBR | WTXT&3 | U | 4 | 0928 | H 998 | | 88 |
| 695 | 6 | 53 | | SBR | XR3 | U | 4 | 0932 | H 099 | | 88 |
| 696 | 6 | 54 | | MZ | &9, XR3 | U | 7 | 0936 | Y /29 099 | | 88 |
| 697 | 6 | 55 | | MCW | 4000-6&X3, WTRY&7 | U | 7 | 0943 | M I14 989 | | 88 |
| 698 | 6 | 56 | | MN | WTRY&3, BSP3&3 | U | 7 | 0950 | D 985 960 | | 89 |
| 699 | 6 | 57 | BSP3 | BSP | OUTAP | U | 5 | 0957 | U &U6 B | | 89 |
| 700 | 6 | 58 | | SKP | SYSTP | U | 5 | 0962 | U &U1 E | | 89 |
| 701 | 6 | 59 | | BCE | SUBCT, WTCT-1, 1 | U | 8 | 0967 | B 999 /31 1 | | 89 |
| 702 | 6 | 60 | | A | &1, WTCT#2 | U | 7 | 0975 | A '71 /32 | | 89 |
| 703 | 6 | 61 | WTRY | WT | OUTAP, 0 | U | 8 | 0982 | M &U6 000 W | | 90 |
| 704 | 6 | 62 | | BER | BSP3 | U | 5 | 0990 | B 957 L | | 90 |
| 705 | 6 | 63 | WTXT | B | 0 | U | 4 | 0995 | B 000 | | 90 |
| 706 | 6 | 64 | SUBCT | S | WTCT | U | 4 | 0999 | S /32 | | 90 |
| 707 | 6 | 65 | | MN | WTRY&3, *&7 | U | 7 | 1003 | D 985 '16 | | 90 |
| 708 | 6 | 66 | | H | 0, 160 | U | 7 | 1010 | . 000 160 | | 90 |
| 709 | 6 | 67 | | B | WTRY | U | 4 | 1017 | B 982 | | 90 |
| 710 | 6 | 68 | * | | | | | | | | |
| 711 | 6 | 69 | * | CLEAR | OUTPUT AREA | | | | | | |
| 712 | 6 | 70 | * | | | | | | | | |
| 713 | 6 | 71 | CLEAR | SBR | CLRXT&3 | U | 4 | 1021 | H '55 | | 91 |
| 714 | 6 | 72 | | MCW | @I99@, CLR&3 | U | 7 | 1025 | M /35 '35 | | 91 |
| 715 | 6 | 73 | CLR | CS | 3999 | U | 4 | 1032 | / 199 | | 91 |
| 716 | 6 | 74 | | SBR | CLR&3 | U | 4 | 1036 | H '35 | | 91 |
| 717 | 6 | 75 | | C | CLR&3, &INPUT-1 | U | 7 | 1040 | C '35 /38 | | 91 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|--------|-------|---|-----|----|------|-------------|-------|------|
| 718 | 6 | 76 | | BU | CLR | U | 5 | 1047 | B '32 / | | 91 |
| 719 | 6 | 77 | CLRXT | B | 0 | U | 4 | 1052 | B 000 | | 91 |
| 720 | 6 | 78 | | 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 | 6 | 79 | ENDUP | DCW | @}@ | U | 1 | 1139 | | GMARK | 95 |
| 722 | 6 | 80 | | EX | 0 | U | | | B 000 | | 96 |

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|---------------------------------|----|-----|---------------------------------|---------------------------------|------------|---------|-------------|-------------|------|
| SEQ | PG | LIN | LABEL OP | OPERANDS | SFX CT | LOCN | INSTRUCTION | TYPE | CARD |
| 723 | 6 | 81 | JOB | AUTOCODER-PASS 1 UPDATE LIBRARY | -VERSION 3 | U | | | |
| 724 | 6 | 82 | IMAGE EQU | 101 | U | | 0101 | | |
| 725 | 6 | 83 | * | | | | | | |
| 726 | 6 | 84 | * BEGIN UPDATE | | | | | | |
| 727 | 6 | 85 | * | | | | | | |
| 728 | 6 | 86 | ORG | INPUT | U | | 1500 | | |
| 729 | 6 | 87 | BEGIN RWD | SYSTP | U | 5 | 1500 | U %U1 R | 99 |
| 730 | 6 | 88 | CW | HEDSW,ENDSW | U | 7 | 1505 |) ?91 ?98 | 99 |
| 731 | 6 | 89 | MCW | &IMAGE&13,NOIS2&6 | U | 7 | 1512 | M ?30 780 | 99 |
| 732 | 6 | 90 | LCA | ENDUP, IMAGE&80 | U | 7 | 1519 | L /39 181 | 99 |
| 733 | 6 | 91 | RT | SYSTP, IMAGE | U | 8 | 1526 | M %U1 101 R | 99 |
| 734 | 6 | 92 | DCW | @N00000000000000@ | U | 14 | 1547 | | 100 |
| 735 | 6 | 93 | B | NOISE | U | 4 | 1548 | B 759 | 100 |
| 736 | 6 | 94 | CS | IMAGE&79 | U | 4 | 1552 | / 180 | 100 |
| 737 | 6 | 95 | B | RDTP | U | 4 | 1556 | B M17 | 100 |
| 738 | 6 | 96 | REBEG B | READ | U | 4 | 1560 | B L24 | 100 |
| 739 | 6 | 97 | BW | SERCH,INSW | U | 8 | 1564 | V V84 ?73 1 | 100 |
| 740 | 6 | 98 | BW | SERCH,DELSW | U | 8 | 1572 | V V84 ?79 1 | 101 |
| 741 | 6 | 99 | B | REBEG | U | 4 | 1580 | B V60 | 101 |
| 742 | 7 | 00 | * | | | | | | |
| 743 | 7 | 01 | * SEARCH FOR CORRECT SUBROUTINE | | | | | | |
| 744 | 7 | 02 | * | | | | | | |
| 745 | 7 | 03 | SERCH B | DOCTL | U | 4 | 1584 | B N94 | 101 |
| 746 | 7 | 04 | C | 11,@9999999@ | U | 7 | 1588 | C 011 ?36 | 101 |
| 747 | 7 | 05 | BE | CLNUP | U | 5 | 1595 | B K40 S | 101 |
| 748 | 7 | 06 | C | 8,NAME#3 | U | 7 | 1600 | C 008 ?39 | 101 |
| 749 | 7 | 07 | BE | FOUND | U | 5 | 1607 | B X30 S | 102 |
| 750 | 7 | 08 | BH | QUIT | U | 5 | 1612 | B P75 U | 102 |
| 751 | 7 | 09 | MCW | 8,NAME | U | 7 | 1617 | M 008 ?39 | 102 |
| 752 | 7 | 10 | S | SEQNO | U | 4 | 1624 | S A67 | 102 |
| 753 | 7 | 11 | LOOP1 BW | HEADR,HEDSW | U | 8 | 1628 | V W56 ?91 1 | 102 |
| 754 | 7 | 12 | B | RDTP | U | 4 | 1636 | B M17 | 102 |
| 755 | 7 | 13 | BW | HEADR,HEDSW | U | 8 | 1640 | V W56 ?91 1 | 103 |
| 756 | 7 | 14 | MORE B | WTAP2 | U | 4 | 1648 | B M95 | 103 |
| 757 | 7 | 15 | B | LOOP1 | U | 4 | 1652 | B W28 | 103 |
| 758 | 7 | 16 | * | | | | | | |
| 759 | 7 | 17 | * HEADER LOCATED ON TAPE | | | | | | |
| 760 | 7 | 18 | * | | | | | | |
| 761 | 7 | 19 | HEADR BW | PAST,ENDSW | U | 8 | 1656 | V W89 ?98 1 | 103 |
| 762 | 7 | 20 | C | IMAGE&7,NAME | U | 7 | 1664 | C 108 ?39 | 103 |
| 763 | 7 | 21 | BE | FOUND | U | 5 | 1671 | B X30 S | 103 |
| 764 | 7 | 22 | CW | HEDSW | U | 4 | 1676 |) ?91 | 104 |
| 765 | 7 | 23 | BL | PAST | U | 5 | 1680 | B W89 T | 104 |
| 766 | 7 | 24 | B | MORE | U | 4 | 1685 | B W48 | 104 |
| 767 | 7 | 25 | * | | | | | | |
| 768 | 7 | 26 | * SUBROUTINE NOT ON TAPE | | | | | | |
| 769 | 7 | 27 | * | | | | | | |
| 770 | 7 | 28 | PAST BSP | SYSTP | U | 5 | 1689 | U %U1 B | 104 |
| 771 | 7 | 29 | CS | IMAGE&79 | U | 4 | 1694 | / 180 | 104 |
| 772 | 7 | 30 | CW | HEDSW | U | 4 | 1698 |) ?91 | 104 |

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| SEQ | PG | LIN | LABEL OP | OPERANDS | SFX CT | LOCN | INSTRUCTION | TYPE | CARD |
| 773 | 7 | 31 | BW | UNKWN,DELSW | U | 8 | 1702 | V Q01 ?79 1 | 104 |
| 774 | 7 | 32 | C | 22,@ @ | U | 7 | 1710 | C 022 ?41 | 105 |
| 775 | 7 | 33 | BU | UNKWN | U | 5 | 1717 | B Q01 / | 105 |
| 776 | 7 | 34 | BACK B | PTCTL | U | 4 | 1722 | B 037 | 105 |
| 777 | 7 | 35 | B | INSER | U | 4 | 1726 | B Y06 | 105 |
| 778 | 7 | 36 | * | | | | | | |
| 779 | 7 | 37 | * SUBROUTINE FOUND | | | | | | |
| 780 | 7 | 38 | * | | | | | | |
| 781 | 7 | 39 | FOUND C | 22,@ @ | U | 7 | 1730 | C 022 ?41 | 105 |
| 782 | 7 | 40 | B | PARTL | U | 5 | 1737 | B Y46 / | 105 |
| 783 | 7 | 41 | * | | | | | | |
| 784 | 7 | 42 | * DELETE AND/OR INSERT WHOLE SUBROUTINES | | | | | | |
| 785 | 7 | 43 | * | | | | | | |
| 786 | 7 | 44 | ALL MCW | @DELETE@,218 | U | 7 | 1742 | M ?46 218 | 105 |
| 787 | 7 | 45 | B | PTCTL | U | 4 | 1749 | B 037 | 106 |
| 788 | 7 | 46 | S | SEQNO | U | 4 | 1753 | S A67 | 106 |
| 789 | 7 | 47 | LOOP2 B | PRINT | U | 4 | 1757 | B 072 | 106 |
| 790 | 7 | 48 | B | RDTP | U | 4 | 1761 | B M17 | 106 |
| 791 | 7 | 49 | BW | EXIT,HEDSW | U | 8 | 1765 | V X77 ?91 1 | 106 |
| 792 | 7 | 50 | B | LOOP2 | U | 4 | 1773 | B X57 | 106 |
| 793 | 7 | 51 | EXIT BSP | SYSTP | U | 5 | 1777 | U %U1 B | 106 |
| 794 | 7 | 52 | CS | IMAGE&79 | U | 4 | 1782 | / 180 | 107 |
| 795 | 7 | 53 | CW | HEDSW | U | 4 | 1786 |) ?91 | 107 |
| 796 | 7 | 54 | BW | REBEG,DELSW | U | 8 | 1790 | V V60 ?79 1 | 107 |
| 797 | 7 | 55 | * | | | | | | |
| 798 | 7 | 56 | * INSERTION OF WHOLE SUBROUTINE | | | | | | |
| 799 | 7 | 57 | * | | | | | | |
| 800 | 7 | 58 | B | DOCTL | U | 4 | 1798 | B N94 | 107 |
| 801 | 7 | 59 | B | PTCTL | U | 4 | 1802 | B 037 | 107 |
| 802 | 7 | 60 | INSER S | SEQNO | U | 4 | 1806 | S A67 | 107 |
| 803 | 7 | 61 | LOOP3 B | READ | U | 4 | 1810 | B L24 | 107 |
| 804 | 7 | 62 | BW | SERCH,INSW | U | 8 | 1814 | V V84 ?73 1 | 108 |
| 805 | 7 | 63 | BW | SERCH,DELSW | U | 8 | 1822 | V V84 ?79 1 | 108 |
| 806 | 7 | 64 | B | DOOUT | U | 4 | 1830 | B L07 | 108 |
| 807 | 7 | 65 | B | PRINT | U | 4 | 1834 | B 072 | 108 |
| 808 | 7 | 66 | B | WTAP2 | U | 4 | 1838 | B M95 | 108 |
| 809 | 7 | 67 | B | LOOP3 | U | 4 | 1842 | B Y10 | 108 |
| 810 | 7 | 68 | * | | | | | | |
| 811 | 7 | 69 | * DELETE AND/OR INSERT PARTS | | | | | | |
| 812 | 7 | 70 | * | | | | | | |
| 813 | 7 | 71 | PARTL S | XR3&2 | U | 4 | 1846 | S 101 | 108 |
| 814 | 7 | 72 | BWZ | SOME,21,2 | U | 8 | 1850 | V Y81 021 2 | 109 |
| 815 | 7 | 73 | C | 24,@ @ | U | 7 | 1858 | C 024 ?41 | 109 |
| 816 | 7 | 74 | BE | ALL | U | 5 | 1865 | B X42 S | 109 |
| 817 | 7 | 75 | A | &2,XR3 | U | 7 | 1870 | A ?47 099 | 109 |
| 818 | 7 | 76 | SW | 23 | U | 4 | 1877 | , 023 | 109 |
| 819 | 7 | 77 | * | | | | | | |
| 820 | 7 | 78 | * SCAN FOR VALUES OF OPERANDS | | | | | | |
| 821 | 7 | 79 | * | | | | | | |
| 822 | 7 | 80 | SOME SW | OPSW#1 | U | 4 | 1881 | , ?48 | 109 |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-----|-----------------------------|-----|----|------|-------------|------|------|
| 823 | 7 | 81 | TEST1 | BCE | TWOOP,21&X3,, | U | 8 | 1885 | B 216 0B1 , | | 110 |
| 824 | 7 | 82 | | C | 22&X3,@ @ | U | 7 | 1893 | C 0B2 ?41 | | 110 |
| 825 | 7 | 83 | | BE | TWOOP | U | 5 | 1900 | B 216 S | | 110 |
| 826 | 7 | 84 | | A | &1, XR3 | U | 7 | 1905 | A ?49 099 | | 110 |
| 827 | 7 | 85 | | B | TEST1 | U | 4 | 1912 | B Y85 | | 110 |
| 828 | 7 | 86 | TWOOP | ZA | 20&X3,WK1#4 | U | 7 | 1916 | ? 0B0 ?53 | | 110 |
| 829 | 7 | 87 | | A | @0@,WK1 | U | 7 | 1923 | A ?54 ?53 | | 111 |
| 830 | 7 | 88 | | BCE | NXTOP,21&X3,, | U | 8 | 1930 | B 242 0B1 , | | 111 |
| 831 | 7 | 89 | | B | OUT | U | 4 | 1938 | B 108 | | 111 |
| 832 | 7 | 90 | NXTOP | SW | 22&X3 | U | 4 | 1942 | , 0B2 | | 111 |
| 833 | 7 | 91 | | SBR | XR2 | U | 4 | 1946 | H 094 | | 111 |
| 834 | 7 | 92 | ADD | A | &1, XR3 | U | 7 | 1950 | A ?49 099 | | 111 |
| 835 | 7 | 93 | | C | 22&X3,@ @ | U | 7 | 1957 | C 0B2 ?41 | | 112 |
| 836 | 7 | 94 | | BU | ADD | U | 5 | 1964 | B 250 / | | 112 |
| 837 | 7 | 95 | | ZA | 20&X3,WK2#4 | U | 7 | 1969 | ? 0B0 ?58 | | 112 |
| 838 | 7 | 96 | | A | @0@,WK2 | U | 7 | 1976 | A ?54 ?58 | | 112 |
| 839 | 7 | 97 | | C | WK1,WK2 | U | 7 | 1983 | C ?53 ?58 | | 112 |
| 840 | 7 | 98 | | BL | BADST | U | 5 | 1990 | B Q59 T | | 112 |
| 841 | 7 | 99 | | BE | ONOP | U | 5 | 1995 | B K20 S | | 113 |
| 842 | 8 | 00 | IS2OP | CW | OPSW | U | 4 | 2000 |) ?48 | | 113 |
| 843 | 8 | 01 | CLRWM | CW | 1&X2 | U | 4 | 2004 |) 011 | | 113 |
| 844 | 8 | 02 | OUT | CW | 23 | U | 4 | 2008 |) 023 | | 113 |
| 845 | 8 | 03 | | BW | *&8,OPSW | U | 8 | 2012 | V 127 ?48 1 | | 113 |
| 846 | 8 | 04 | | MCW | @DELET@,218 | U | 7 | 2020 | M ?63 218 | | 113 |
| 847 | 8 | 05 | | B | PTCTL | U | 4 | 2027 | B 037 | | 113 |
| 848 | 8 | 06 | | * | | | | | | | |
| 849 | 8 | 07 | | * | SEARCH FOR FIRST STATEMENT | | | | | | |
| 850 | 8 | 08 | | * | | | | | | | |
| 851 | 8 | 09 | COMP | C | WK1,SEQNO | U | 7 | 2031 | C ?53 A67 | | 114 |
| 852 | 8 | 10 | | BE | GOTIT | U | 5 | 2038 | B 170 S | | 114 |
| 853 | 8 | 11 | | A | &1,SEQNO | U | 7 | 2043 | A ?49 A67 | | 114 |
| 854 | 8 | 12 | | B | WTAP2 | U | 4 | 2050 | B M95 | | 114 |
| 855 | 8 | 13 | | B | RDTP | U | 4 | 2054 | B M17 | | 114 |
| 856 | 8 | 14 | | BW | NTFND,HEDSW | U | 8 | 2058 | V Q84 ?91 1 | | 114 |
| 857 | 8 | 15 | | B | COMP | U | 4 | 2066 | B 131 | | 114 |
| 858 | 8 | 16 | | * | | | | | | | |
| 859 | 8 | 17 | | * | FIRST STATEMENT FOUND | | | | | | |
| 860 | 8 | 18 | | * | | | | | | | |
| 861 | 8 | 19 | GOTIT | BW | QINSR,OPSW | U | 8 | 2070 | V J46 ?48 1 | | 115 |
| 862 | 8 | 20 | | * | | | | | | | |
| 863 | 8 | 21 | | * | SEARCH FOR SECOND STATEMENT | | | | | | |
| 864 | 8 | 22 | | * | | | | | | | |
| 865 | 8 | 23 | COMP2 | B | PRINT | U | 4 | 2078 | B 072 | | 115 |
| 866 | 8 | 24 | | B | RDTP | U | 4 | 2082 | B M17 | | 115 |
| 867 | 8 | 25 | | C | WK2,SEQNO | U | 7 | 2086 | C ?58 A67 | | 115 |
| 868 | 8 | 26 | | BH | BSPC | U | 5 | 2093 | B J10 U | | 115 |
| 869 | 8 | 27 | | BW | NTFND,HEDSW | U | 8 | 2098 | V Q84 ?91 1 | | 115 |
| 870 | 8 | 28 | | B | COMP2 | U | 4 | 2106 | B 178 | | 116 |
| 871 | 8 | 29 | | * | | | | | | | |
| 872 | 8 | 30 | | * | SECOND STATEMENT FOUND | | | | | | |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|-----|----|-----|-------|-----|------------------------------------|-----|----|------|-------------|------|------|
| 873 | 8 | 31 | | * | | | | | | | |
| 874 | 8 | 32 | BSPC | BSP | SYSTP | U | 5 | 2110 | U ?U1 B | | 116 |
| 875 | 8 | 33 | | CS | IMAGE&79 | U | 4 | 2115 | / 180 | | 116 |
| 876 | 8 | 34 | | S | &1,SEQNO | U | 7 | 2119 | S ?49 A67 | | 116 |
| 877 | 8 | 35 | THRU | BW | LOOP3,DELSW | U | 8 | 2126 | V Y10 ?79 1 | | 116 |
| 878 | 8 | 36 | | B | DOCTL | U | 4 | 2134 | B N94 | | 116 |
| 879 | 8 | 37 | | B | PTCTL | U | 4 | 2138 | B 037 | | 116 |
| 880 | 8 | 38 | | B | INSR&4 | U | 4 | 2142 | B J77 | | 117 |
| 881 | 8 | 39 | | * | | | | | | | |
| 882 | 8 | 40 | | * | TEST INSERT OR DELETE | | | | | | |
| 883 | 8 | 41 | | * | | | | | | | |
| 884 | 8 | 42 | QINSR | BW | INSR, INSW | U | 8 | 2146 | V J73 ?73 1 | | 117 |
| 885 | 8 | 43 | | B | PRINT | U | 4 | 2154 | B 072 | | 117 |
| 886 | 8 | 44 | | S | &1,SEQNO | U | 7 | 2158 | S ?49 A67 | | 117 |
| 887 | 8 | 45 | | CS | IMAGE&79 | U | 4 | 2165 | / 180 | | 117 |
| 888 | 8 | 46 | | B | THRU | U | 4 | 2169 | B J26 | | 117 |
| 889 | 8 | 47 | | * | | | | | | | |
| 890 | 8 | 48 | | * | INSERT STATEMENTS | | | | | | |
| 891 | 8 | 49 | | * | | | | | | | |
| 892 | 8 | 50 | INSR | B | WTAP2 | U | 4 | 2173 | B M95 | | 117 |
| 893 | 8 | 51 | | B | READ | U | 4 | 2177 | B L24 | | 118 |
| 894 | 8 | 52 | | BW | SERCH, INSW | U | 8 | 2181 | V V84 ?73 1 | | 118 |
| 895 | 8 | 53 | | BW | SERCH, DELSW | U | 8 | 2189 | V V84 ?79 1 | | 118 |
| 896 | 8 | 54 | | B | DOOUT | U | 4 | 2197 | B L07 | | 118 |
| 897 | 8 | 55 | | CW | SEQSW#1 | U | 4 | 2201 |) ?64 | | 118 |
| 898 | 8 | 56 | | B | PRINT | U | 4 | 2205 | B 072 | | 118 |
| 899 | 8 | 57 | | S | &1,SEQNO | U | 7 | 2209 | S ?49 A67 | | 118 |
| 900 | 8 | 58 | | B | INSR | U | 4 | 2216 | B J73 | | 119 |
| 901 | 8 | 59 | ONOP | BW | IS2OP, INSW | U | 8 | 2220 | V 100 ?73 1 | | 119 |
| 902 | 8 | 60 | | SW | OPSW | U | 4 | 2228 | , ?48 | | 119 |
| 903 | 8 | 61 | | B | CLRWM | U | 4 | 2232 | B 104 | | 119 |
| 904 | 8 | 62 | | * | | | | | | | |
| 905 | 8 | 63 | | * | REPLICATE LIBRARY | | | | | | |
| 906 | 8 | 64 | | * | | | | | | | |
| 907 | 8 | 65 | REPET | B | WTAP2 | U | 4 | 2236 | B M95 | | 119 |
| 908 | 8 | 66 | CLNUP | B | RDTP | U | 4 | 2240 | B M17 | | 119 |
| 909 | 8 | 67 | | B | WTAP2 | U | 4 | 2244 | B M95 | | 119 |
| 910 | 8 | 68 | | BW | FINAL, ENDSW | U | 8 | 2248 | V K60 ?98 1 | | 120 |
| 911 | 8 | 69 | | B | CLNUP | U | 4 | 2256 | B K40 | | 120 |
| 912 | 8 | 70 | | * | | | | | | | |
| 913 | 8 | 71 | | * | END OF UPDATE - GO TO COPY ROUTINE | | | | | | |
| 914 | 8 | 72 | | * | | | | | | | |
| 915 | 8 | 73 | FINAL | WTM | OUTAP | U | 5 | 2260 | U ?U6 M | | 120 |
| 916 | 8 | 74 | | MCW | &INPUT&13,NOIS2&6 | U | 7 | 2265 | M ?67 780 | | 120 |
| 917 | 8 | 75 | | CW | LIBSW, EOFSW | U | 7 | 2272 |) '79 '80 | | 120 |
| 918 | 8 | 76 | | CW | UPDSW | U | 4 | 2279 |) /26 | | 120 |
| 919 | 8 | 77 | | CS | 332 | U | 4 | 2283 | / 332 | | 120 |
| 920 | 8 | 78 | | CS | | U | 1 | 2287 | / | | 121 |
| 921 | 8 | 79 | | CC | 1 | U | 2 | 2288 | F 1 | | 121 |
| 922 | 8 | 80 | BVP1 | RT | SYSTP, IMAGE | U | 8 | 2290 | M ?U1 101 R | | 121 |

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| 923 | 8 | 81 | BEF REOUT | U | 5 | 2298 B 593 K | 121 |
| 924 | 8 | 82 | B BYD1 | U | 4 | 2303 B K90 | 121 |
| 925 | 8 | 83 | * SET UP INSERT CARD | | | | |
| 926 | 8 | 84 | * SET UP INSERT CARD | | | | |
| 927 | 8 | 85 | * SET UP INSERT CARD | | | | |
| 928 | 8 | 86 | DOOUT SBR OUTXT&3 | U | 4 | 2307 H L23 | 121 |
| 929 | 8 | 87 | MCW 80, IMAGE&79 | U | 7 | 2311 M 080 180 | 121 |
| 930 | 8 | 88 | MCW | U | 1 | 2318 M | 122 |
| 931 | 8 | 89 | MCW | U | 1 | 2319 M | 122 |
| 932 | 8 | 90 | OUTXT B 0 | U | 4 | 2320 B 000 | 122 |
| 933 | 8 | 91 | * READ CARD SUBROUTINE | | | | |
| 934 | 8 | 92 | * READ CARD SUBROUTINE | | | | |
| 935 | 8 | 93 | * READ CARD SUBROUTINE | | | | |
| 936 | 8 | 94 | READ SBR CDXT&3 | U | 4 | 2324 H M08 | 122 |
| 937 | 8 | 95 | BW RDCD, LSTSW | U | 8 | 2328 V L40 ?85 1 | 122 |
| 938 | 8 | 96 | B CLNUP | U | 4 | 2336 B K40 | 122 |
| 939 | 8 | 97 | RDCD R | U | 1 | 2340 1 | 122 |
| 940 | 8 | 98 | CW INSW, DELSW | U | 7 | 2341) ?73 ?79 | 123 |
| 941 | 8 | 99 | C 20, @INSER@ | U | 7 | 2348 C 020 ?72 | 123 |
| 942 | 9 | 00 | BU CKDEL | U | 5 | 2355 B L68 / | 123 |
| 943 | 9 | 01 | SW INSW#1 | U | 4 | 2360 , ?73 | 123 |
| 944 | 9 | 02 | B CDXT-5 | U | 4 | 2364 B M00 | 123 |
| 945 | 9 | 03 | CKDEL C 20, @DELET@ | U | 7 | 2368 C 020 ?78 | 123 |
| 946 | 9 | 04 | BU CKREP | U | 5 | 2375 B L88 / | 123 |
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| 949 | 9 | 07 | CKREP C 20, @REPET@ | U | 7 | 2388 C 020 ?84 | 124 |
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| 952 | 9 | 10 | CDXT B 0 | U | 4 | 2405 B 000 | 124 |
| 953 | 9 | 11 | LSTCD CW LSTSW#1 | U | 4 | 2409) ?85 | 124 |
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| 956 | 9 | 14 | * READ TAPE SUBROUTINE | | | | |
| 957 | 9 | 15 | * READ TAPE SUBROUTINE | | | | |
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| 960 | 9 | 18 | SW IMAGE&80 | U | 4 | 2429 , 181 | 125 |
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| 962 | 9 | 20 | B NOISE | U | 4 | 2443 B 759 | 125 |
| 963 | 9 | 21 | BER RDERR | U | 5 | 2447 B 798 L | 125 |
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| 965 | 9 | 23 | C IMAGE&19, @HEADR@ | U | 7 | 2459 C 120 ?90 | 126 |
| 966 | 9 | 24 | BU RTXT | U | 5 | 2466 B M91 / | 126 |
| 967 | 9 | 25 | SW HEDSW#1 | U | 4 | 2471 , ?91 | 126 |
| 968 | 9 | 26 | C IMAGE&10, @9999999@ | U | 7 | 2475 C 111 ?97 | 126 |
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| 970 | 9 | 28 | SW ENDSW#1 | U | 4 | 2487 , ?98 | 126 |
| 971 | 9 | 29 | RTXT B 0 | U | 4 | 2491 B 000 | 127 |
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| 974 | 9 | 32 | * WRITE TAPE SUBROUTINE | | | | |
| 975 | 9 | 33 | WTAP2 SBR WT2XT&3 | U | 4 | 2495 H N31 | 127 |
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| 978 | 9 | 36 | WT OUTAP, IMAGE | U | 8 | 2511 M %U6 101 W | 127 |
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| 983 | 9 | 41 | * PRINT HEADING | | | | |
| 984 | 9 | 42 | * PRINT HEADING | | | | |
| 985 | 9 | 43 | HEAD SBR HDXT&3 | U | 4 | 2532 H N93 | 128 |
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| 1001 | 9 | 59 | * SET UP CONTROL CARD FOR PRINTING | | | | |
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| | | | | DCW | #2 | U | 1 | 3047 | | LIT | 146 |
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| 1180 | 11 | 38 | | CC | K | P | 2 | 2245 | F K | | 166 |
| 1181 | 11 | 39 | | W | | P | 1 | 2247 | 2 | | 167 |
| 1182 | 11 | 40 | | S | SEQNO | P | 4 | 2248 | S R48 | | 167 |
| 1183 | 11 | 41 | | B | INSER | P | 4 | 2252 | B N17 | | 167 |
| 1184 | 11 | 42 | | CC | K | P | 2 | 2256 | F K | | 167 |
| 1185 | 11 | 43 | PTAGN | B | PRINT | P | 4 | 2258 | B N81 | | 167 |
| 1186 | 11 | 44 | | RT | SYSTP,101 | P | 8 | 2262 | M %U1 101 R | | 167 |
| 1187 | 11 | 45 | | B | NOISE | P | 4 | 2270 | B P67 | | 167 |
| 1188 | 11 | 46 | | BER | RDERR | P | 5 | 2274 | B Q06 L | | 168 |
| 1189 | 11 | 47 | | C | 120,@HEADR@ | P | 7 | 2279 | C 120 R21 | | 168 |
| 1190 | 11 | 48 | | BU | PTAGN | P | 5 | 2286 | B K58 / | | 168 |
| 1191 | 11 | 49 | | BSP | SYSTP | P | 5 | 2291 | U %U1 B | | 168 |
| 1192 | 11 | 50 | | * | | | | | | | |
| 1193 | 11 | 51 | | * | TEST END OF RUN | | | | | | |
| 1194 | 11 | 52 | | * | | | | | | | |
| 1195 | 11 | 53 | TSTLC | BLC | EOJOB | P | 5 | 2296 | B M54 A | | 168 |
| 1196 | 11 | 54 | | B | READ | P | 4 | 2301 | B :67 | | 168 |
| 1197 | 11 | 55 | | * | | | | | | | |
| 1198 | 11 | 56 | | * | MACRO NOT ON TAPE | | | | | | |
| 1199 | 11 | 57 | | * | | | | | | | |
| 1200 | 11 | 58 | UNKN | MCW | @UNKNOWN@,299 | P | 7 | 2305 | M R28 299 | | 168 |
| 1201 | 11 | 59 | | W | | P | 1 | 2312 | 2 | | 169 |
| 1202 | 11 | 60 | | CS | 299 | P | 4 | 2313 | / 299 | | 169 |
| 1203 | 11 | 61 | | MCW | @999@,NAME | P | 7 | 2317 | M R31 R05 | | 169 |
| 1204 | 11 | 62 | | B | TSTLC | P | 4 | 2324 | B K96 | | 169 |
| 1205 | 11 | 63 | | * | | | | | | | |
| 1206 | 11 | 64 | | * | PRINT AND/OR PUNCH ALL OR PRINT HEADERS ONLY | | | | | | |
| 1207 | 11 | 65 | | * | | | | | | | |
| 1208 | 11 | 66 | DOALL | BSS | SETUP,D | P | 5 | 2328 | B L60 D | | 169 |
| 1209 | 11 | 67 | | CW | HDRSW#1 | P | 4 | 2333 |) R32 | | 169 |
| 1210 | 11 | 68 | | BSS | %5,G | D | 5 | 2337 | B L46 G | | 169 |
| 1211 | 11 | 69 | | B | SETUP | P | 4 | 2342 | B L60 | | 170 |
| 1212 | 11 | 70 | | * | | | | | | | |
| 1213 | 11 | 71 | | * | PUNCH ALL | | | | | | |

| SEQ | PG | LIN | LABEL | OP | OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
|------|----|-----|-------|-------|----------------------|-----|----|------|-------------|------|------|
| 1214 | 11 | 72 | | * | | | | | | | |
| 1215 | 11 | 73 | | A | &4,OPCOD | P | 7 | 2346 | A R01 069 | | 170 |
| 1216 | 11 | 74 | | MN | &4,OPSAV | P | 7 | 2353 | D R01 R02 | | 170 |
| 1217 | 11 | 75 | SETUP | B | HEAD1 | P | 4 | 2360 | B P19 | | 170 |
| 1218 | 11 | 76 | | CW | HDSW1#1 | P | 4 | 2364 |) R33 | | 170 |
| 1219 | 11 | 77 | | B | PRTHD | P | 4 | 2368 | B N59 | | 170 |
| 1220 | 11 | 78 | RDTP | RT | SYSTP,101 | P | 8 | 2372 | M %U1 101 R | | 170 |
| 1221 | 11 | 79 | | B | NOISE | P | 4 | 2380 | B P67 | | 171 |
| 1222 | 11 | 80 | | BER | RDERR | P | 5 | 2384 | B Q06 L | | 171 |
| 1223 | 11 | 81 | | C | 111,@999999@ | P | 7 | 2389 | C 111 R39 | | 171 |
| 1224 | 11 | 82 | | BE | EOJOB | P | 5 | 2396 | B M54 S | | 171 |
| 1225 | 11 | 83 | | C | 120,@HEADR@ | P | 7 | 2401 | C 120 R44 | | 171 |
| 1226 | 11 | 84 | | BU | DOPNT | D | 5 | 2408 | B M35 / | | 171 |
| 1227 | 11 | 85 | | B | INSER | P | 4 | 2413 | B N17 | | 171 |
| 1228 | 11 | 86 | | CC | K | P | 2 | 2417 | F K | | 172 |
| 1229 | 11 | 87 | | SBR | PRYXT&3,*&6 | P | 7 | 2419 | H 083 M31 | | 172 |
| 1230 | 11 | 88 | | BCV | NEWPG | P | 5 | 2426 | B 097 @ | | 172 |
| 1231 | 11 | 89 | | S | SEQNO#4 | P | 4 | 2431 | S R48 | | 172 |
| 1232 | 11 | 90 | | B | PRINT | P | 4 | 2435 | B N81 | | 172 |
| 1233 | 11 | 91 | | SW | 106,116 | P | 7 | 2439 | , 106 116 | | 172 |
| 1234 | 11 | 92 | | SW | 121 | P | 4 | 2446 | , 121 | | 172 |
| 1235 | 11 | 93 | | B | RDTP | P | 4 | 2450 | B L72 | | 173 |
| 1236 | 11 | 94 | | * | | | | | | | |
| 1237 | 11 | 95 | | * | END OF JOB | | | | | | |
| 1238 | 11 | 96 | | * | | | | | | | |
| 1239 | 11 | 97 | EOJOB | CS | 332 | P | 4 | 2454 | / 332 | | 173 |
| 1240 | 11 | 98 | | CS | | P | 1 | 2458 | / | | 173 |
| 1241 | 11 | 99 | | CC | K | P | 2 | 2459 | F K | | 173 |
| 1242 | 12 | 00 | | MCW | @END OF LIBRARY@,214 | P | 7 | 2461 | M R62 214 | | 173 |
| 1243 | 12 | 01 | | W | | P | 1 | 2468 | 2 | | 173 |
| 1244 | 12 | 02 | | CC | 1 | P | 2 | 2469 | F 1 | | 173 |
| 1245 | 12 | 03 | | CS | 180 | P | 4 | 2471 | / 180 | | 174 |
| 1246 | 12 | 04 | | BCE | CLRPH,OPSAV,4 | P | 8 | 2475 | B M99 R02 4 | | 174 |
| 1247 | 12 | 05 | RWD | RWD | SYSTP | P | 5 | 2483 | U %U1 R | | 174 |
| 1248 | 12 | 06 | HALT | H | 0,155 | P | 7 | 2488 | . 000 155 | | 174 |
| 1249 | 12 | 07 | | B | HALT | P | 4 | 2495 | B M88 | | 174 |
| 1250 | 12 | 08 | CLRPH | P | | P | 1 | 2499 | 4 | | 174 |
| 1251 | 12 | 09 | | SS | 8 | P | 2 | 2500 | K 8 | | 174 |
| 1252 | 12 | 10 | | B | RWD | P | 4 | 2502 | B M83 | | 175 |
| 1253 | 12 | 11 | | * | | | | | | | |
| 1254 | 12 | 12 | | * | INCORRECT INPUT CARD | | | | | | |
| 1255 | 12 | 13 | | * | | | | | | | |
| 1256 | 12 | 14 | ERROR | H | 0,144 | P | 7 | 2506 | . 000 144 | | 175 |
| 1257 | 12 | 15 | | B | TSTLC | P | 4 | 2513 | B K96 | | 175 |
| 1258 | 12 | 16 | | INSER | SBR INSXT&3 | P | 4 | 2517 | H N58 | | 175 |
| 1259 | 12 | 17 | | MCW | @,105 | P | 7 | 2521 | M R67 105 | | 175 |
| 1260 | 12 | 18 | | MCW | @INSER@,120 | P | 7 | 2528 | M R72 120 | | 175 |
| 1261 | 12 | 19 | | BCE | %5,OPSAV,4 | P | 8 | 2535 | B N47 R02 4 | | 176 |
| 1262 | 12 | 20 | | B | *&2 | P | 4 | 2543 | B N48 | | 176 |
| 1263 | 12 | 21 | | P | | P | 1 | 2547 | 4 | | 176 |

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|---------------------------------|----|-----|---------------------------------|------------|-------|---------|-------------|------|------|
| SEQ | PG | LIN | LABEL OP OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
| 1264 | 12 | 22 | MCW @HEADR@,120 | P | 7 | 2548 | M R77 120 | | 176 |
| 1265 | 12 | 23 | INSXT B 0 | P | 4 | 2555 | B 000 | | 176 |
| 1266 | 12 | 24 | * | | | | | | |
| 1267 | 12 | 25 | * PRINT HEADING | | | | | | |
| 1268 | 12 | 26 | * | | | | | | |
| 1269 | 12 | 27 | PRTHD SBR HDXT&3 | P | 4 | 2559 | H N80 | | 176 |
| 1270 | 12 | 28 | MCW @SEQ LABEL OP OPERANDS@,227 | P | 7 | 2563 | M ?03 227 | | 176 |
| 1271 | 12 | 29 | W | P | 1 | 2570 | 2 | | 177 |
| 1272 | 12 | 30 | CC K | P | 2 | 2571 | F K | | 177 |
| 1273 | 12 | 31 | CS 228 | P | 4 | 2573 | / 228 | | 177 |
| 1274 | 12 | 32 | HDXT B 0 | P | 4 | 2577 | B 000 | | 177 |
| 1275 | 12 | 33 | * | | | | | | |
| 1276 | 12 | 34 | * PRINT STATEMENT | | | | | | |
| 1277 | 12 | 35 | * | | | | | | |
| 1278 | 12 | 36 | PRINT SBR PRTXT&3 | P | 4 | 2581 | H 083 | | 177 |
| 1279 | 12 | 37 | C 120,@HEADR@ | P | 7 | 2585 | C 120 ?08 | | 177 |
| 1280 | 12 | 38 | BE DOHDR | P | 5 | 2592 | B 005 S | | 177 |
| 1281 | 12 | 39 | BW CLR, HDRSW | P | 8 | 2597 | V 070 R32 1 | | 178 |
| 1282 | 12 | 40 | DOHDR CS 332 | P | 4 | 2605 | / 332 | | 178 |
| 1283 | 12 | 41 | CS | P | 1 | 2609 | / | | 178 |
| 1284 | 12 | 42 | BCE COMNT,106,* | P | 8 | 2610 | B 084 106 * | | 178 |
| 1285 | 12 | 43 | MCW 172,271 | P | 7 | 2618 | M 172 271 | | 178 |
| 1286 | 12 | 44 | MCW 120,218 | P | 7 | 2625 | M 120 218 | | 178 |
| 1287 | 12 | 45 | MCW 111,212 | P | 7 | 2632 | M 111 212 | | 179 |
| 1288 | 12 | 46 | DOSEQ MN SEQNO,204 | P | 7 | 2639 | D R48 204 | | 179 |
| 1289 | 12 | 47 | MCS | P | 1 | 2646 | Z | | 179 |
| 1290 | 12 | 48 | MN SEQNO,104 | P | 7 | 2647 | D R48 104 | | 179 |
| 1291 | 12 | 49 | MCW | P | 1 | 2654 | M | | 179 |
| 1292 | 12 | 50 | A &1,SEQNO | P | 7 | 2655 | A ?09 R48 | | 179 |
| 1293 | 12 | 51 | MCW @ @,105 | P | 7 | 2662 | M ?10 105 | | 179 |
| 1294 | 12 | 52 | OPCOD W | P | 1 | 2669 | 2 | | 180 |
| 1295 | 12 | 53 | CLR CS 332 | P | 4 | 2670 | / 332 | | 180 |
| 1296 | 12 | 54 | CS | P | 1 | 2674 | / | | 180 |
| 1297 | 12 | 55 | BCV NEWPG | P | 5 | 2675 | B 097 @ | | 180 |
| 1298 | 12 | 56 | PRTXT B 0 | P | 4 | 2680 | B 000 | | 180 |
| 1299 | 12 | 57 | COMNT MCW 172,273 | P | 7 | 2684 | M 172 273 | | 180 |
| 1300 | 12 | 58 | MCW | P | 1 | 2691 | M | | 180 |
| 1301 | 12 | 59 | MCW | P | 1 | 2692 | M | | 181 |
| 1302 | 12 | 60 | B DOSEQ | P | 4 | 2693 | B 039 | | 181 |
| 1303 | 12 | 61 | * | | | | | | |
| 1304 | 12 | 62 | * START NEW PAGE | | | | | | |
| 1305 | 12 | 63 | * | | | | | | |
| 1306 | 12 | 64 | NEWPG CC 1 | P | 2 | 2697 | F 1 | | 181 |
| 1307 | 12 | 65 | BW *&5,HDSW1 | P | 8 | 2699 | V P11 R33 1 | | 181 |
| 1308 | 12 | 66 | B HEAD1 | P | 4 | 2707 | B P19 | | 181 |
| 1309 | 12 | 67 | B PRTHD | P | 4 | 2711 | B N59 | | 181 |
| 1310 | 12 | 68 | B PRTXT | P | 4 | 2715 | B 080 | | 181 |
| 1311 | 12 | 69 | * | | | | | | |
| 1312 | 12 | 70 | * PRINT MAIN HEADING | | | | | | |
| 1313 | 12 | 71 | * | | | | | | |

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|---------------------------------|----|-----|------------------------------------|------------|-------|---------|-------------|-------|------|
| SEQ | PG | LIN | LABEL OP OPERANDS | SFX | CT | LOCN | INSTRUCTION | TYPE | CARD |
| 1314 | 12 | 72 | HEAD1 SBR HD2XT&3 | P | 4 | 2719 | H P66 | | 182 |
| 1315 | 12 | 73 | CS 332 | P | 4 | 2723 | / 332 | | 182 |
| 1316 | 12 | 74 | CS | P | 1 | 2727 | / | | 182 |
| 1317 | 12 | 75 | MCW @1401 AUTOCODER - LIBRARY@,243 | P | 7 | 2728 | M ?34 243 | | 182 |
| 1318 | 12 | 76 | MCW @PAGE@,275 | P | 7 | 2735 | M ?38 275 | | 182 |
| 1319 | 12 | 77 | A &1,PGNO#3 | P | 7 | 2742 | A ?09 ?41 | | 182 |
| 1320 | 12 | 78 | MCS PGNO,279 | P | 7 | 2749 | Z ?41 279 | | 182 |
| 1321 | 12 | 79 | W | P | 1 | 2756 | 2 | | 183 |
| 1322 | 12 | 80 | CC L | P | 2 | 2757 | F L | | 183 |
| 1323 | 12 | 81 | CS 299 | P | 4 | 2759 | / 299 | | 183 |
| 1324 | 12 | 82 | HD2XT B 0 | P | 4 | 2763 | B 000 | | 183 |
| 1325 | 12 | 83 | * | | | | | | |
| 1326 | 12 | 84 | * TEST FOR NOISE RECORDS | | | | | | |
| 1327 | 12 | 85 | * | | | | | | |
| 1328 | 12 | 86 | NOISE SBR NOSXT&3 | P | 4 | 2767 | H Q05 | | 183 |
| 1329 | 12 | 87 | SBR XR1 | P | 4 | 2771 | H 089 | | 183 |
| 1330 | 12 | 88 | MZ &9,XR1 | P | 7 | 2775 | Y ?42 089 | | 183 |
| 1331 | 12 | 89 | BCE 4000-12&x1,113,} | P | 8 | 2782 | B IY8 113 } | GMARK | 184 |
| 1332 | 12 | 90 | 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 | 12 | 91 | NOSXT B 0 | P | 4 | 2802 | B 000 | | 185 |
| 1346 | 12 | 92 | * | | | | | | |
| 1347 | 12 | 93 | * READ REDUNDANCY ROUTINE | | | | | | |
| 1348 | 12 | 94 | * | | | | | | |
| 1349 | 12 | 95 | RDERR SBR RDXT&3 | P | 4 | 2806 | H Q38 | | 186 |
| 1350 | 12 | 96 | BSP BSP SYSTP | P | 5 | 2810 | U ?U1 B | | 186 |
| 1351 | 12 | 97 | MCW &9,RDCT#1 | P | 7 | 2815 | M ?42 ?43 | | 186 |
| 1352 | 12 | 98 | RDTRY RT SYSTP,101 | P | 8 | 2822 | M ?U1 101 R | | 186 |
| 1353 | 12 | 99 | BER *&5 | P | 5 | 2830 | B Q39 L | | 186 |
| 1354 | 13 | 00 | RDXT B 0 | P | 4 | 2835 | B 000 | | 186 |
| 1355 | 13 | 01 | BSP SYSTP | P | 5 | 2839 | U ?U1 B | | 186 |
| 1356 | 13 | 02 | S &1,RDCT | P | 7 | 2844 | S ?09 ?43 | | 187 |
| 1357 | 13 | 03 | BWZ RDTRY,RDCT,B | P | 8 | 2851 | V Q22 ?43 B | | 187 |
| 1358 | 13 | 04 | H 0,191 | P | 7 | 2859 | . 000 191 | | 187 |
| 1359 | 13 | 05 | RT SYSTP,101 | P | 8 | 2866 | M ?U1 101 R | | 187 |
| 1360 | 13 | 06 | BSS BSP,E | P | 5 | 2874 | B Q10 E | | 187 |
| 1361 | 13 | 07 | H 0,111 | P | 7 | 2879 | . 000 111 | | 188 |
| 1362 | 13 | 08 | B RDXT | P | 4 | 2886 | B Q35 | | 188 |
| 1363 | 13 | 09 | 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 |
| | HDSWIP | 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 13 10 | ENDOT | DCW | @}@ | P 1 | 3044 | GMARK 193 |
| 1365 13 11 | EX | 0 | | | | B 000 194 |
| 1366 13 12 | END | 0 | | | | / 000 080 |

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|---------------------------------|---------|--------|---------|------------|---------|---------|---------|--------|---------|--------|---------|--------|---------|
| 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 | BYPIU | 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 | CLRPHU | 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 | CRDR | 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 | HDXTU | 2577 | HDXTU | 2590 | HEAD1P | 2719 | HEADRU | 1656 | HEADU | 2532 |
| HDSWU | 3091 | HOLD5 | 1099 | IMAGEU | 101 | INPUU | 1500 | INSERP | 2517 | INSERU | 1806 | INSRU | 2173 |
| INSWU | 3073 | INSXTP | 2555 | ISZOPU | 2000 | ISMORU | 727 | ISUNKU | 2821 | LDDPDU | 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 |
| NOXSTP | 2802 | NOXSTU | 794 | NTFNDU | 2884 | NXTBK | 362 | NXTOPU | 1942 | ONOPU | 2220 | OPCODP | 2669 |
| OPSAVP | 2902 | OPSWU | 3048 | OUTAPU | 406 | 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 | PXTXU | 2771 | QINSRU | 2146 |
| QUITU | 2775 | RDCDU | 2340 | RDCTB | 812 | RDCTP | 3043 | RDCTR | 2207 | RDCTU | 1130 | RDERRB | 676 |
| RDERRP | 2806 | RDERRR | 2046 | RDERRU | 798 | RDT2P | 2185 | RDTTP | 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 | RNDP | 2483 |
| SELMCP | 2119 | SEQER | 760 | SEQNCU | 2745 | SEQNO | 1087 | SEQNOP | 2948 | SEQNOU | 3167 | SEQSWU | 3064 |
| SEQXT | 756 | SERCHU | 1584 | SETUPP | 2360 | SETWM | 596 | SKPC2U | 1082 | SOMEU | 1881 | START | 333 |
| STARTR | 2009 | SUB1 | 527 | SUB2 | 471 | SUBCT | 1037 | SUBCTU | 999 | SWICHU | 556 | SYSTP | 401 |
| SYSTPB | 401 | SYSTPP | 401 | SYSTPR | 401 | SYSTPU | 401 | TEST1U | 1885 | THRUU | 2126 | TSTLCP | 2296 |
| TSTSQU | 2716 | TSTSSB | 418 | TWOOPU | 1916 | UNKNP | 2305 | UNKNWU | 2801 | UPDSWU | 1126 | WK1U | 3053 |
| WK2U | 3058 | WORK5 | 1119 | WTX2TU | 2528 | WTAP1 | 675 | WTAP1U | 580 | WTAP2 | 830 | WTAP2U | 2495 |
| WTCT | 1255 | WTCTU | 1132 | WTERR | 973 | WTERRU | 928 | WTM | 868 | WTTRYU | 982 | WTXT | 1033 |
| WXTU | 995 | XR1 | 89 | XR1B | 89 | XR1P | 89 | XR1U | 89 | XR2 | 94 | XR2U | 94 |
| XR3 | 99 | XR3U | 99 | XXXX | 0 | ZONE | 109 | | | | | | |

***** ** 3 Errors ERROR