

R00001 WE ARE DEEPLY INDEBTED TO THE ONE, THE ONLY, THE GREAT JOHN SHAW FOR THE FOLLOWING STRONG MAGIC.....
R0002 JSOCTL

0003 SETLOC,IC 0 B1

0004 MASKGRP,1 S,0 F,0

R0005 YUL SYSTEM PASS 1 READS CARDS ONLY (NEW ASSEMBLY), OR MERGES CARDS WITH SYPT OR SYLT RECORDS (REVI-
R0007 SION OR VERSION ASSEMBLY). ONE-SHOT MODIFICATION OF SUBPROGRAMS WILL BE ALLOWED SOME DAY, CARDS BEING MERGED
R0009 WITH SYLT RECORDS BUT NO PERMANENT CHANGES BEING MADE IN THE SYLT. CORRECT ORDERING OF CARD NUMBERS IS REQUIRED
R0011 (ON PAIN OF CUSSING IN NEW ASSEMBLY, OR REJECTION OF ALL INPUT IN REVISION OR VERSION ASSEMBLY).

R0015 PASS 1 COPIES SYPTSAVES AND SYLTSAVES FROM TAPE 1 TO TAPE 3, AND BYPTSAVES FROM TAPE 1 TO TAPE 4.
R0017 IT ALSO WRITES POP0 (PASS ONE PROGRAM OUTPUT) RECORDS ON TAPE 2. ITS CHIEF OPERATIONS ON SOME IMPORTANT TYPES
R0019 OF CARDS ARE LISTED BELOW:

R0020 1) INSTRUCTIONS AND CONSTANTS. PROCESSING OF LOCATION FIELD (GENERALLY AFFECTING THE LOCATION COUNTER)
R0022 AND DEFINITION OF LOCATION SYMBOL ARE DONE. FIXED MEMORY IS RESERVED AS NEEDED. LEFTOVERS ARE
R0024 MARKED AS SUCH. 15 BITS OF CODED INFORMATION (MOSTLY OF CODE) ARE ATTACHED TO INSTRUCTION CARDS.

R0026 2) IS,=,EQUALS. AN ATTEMPT IS MADE TO DEFINE THE LOCATION SYMBOL BY EVALUATING THE ADDRESS FIELD.
R0028 FAILURE OF THIS OPERATION BY REASON OF AN UNDEFINED ADDRESS SYMBOL "NEARLY DEFINES" THE SYMBOL.

R0030 3) ERASE. ERASABLE MEMORY IS RESERVED AS REQUESTED, EXCEPT FOR LEFTOVER ERASE CARDS.

R0032 4) OTHER CLERICAL CODES. THESE GENERALLY HAVE THEIR EFFECT IN PASS 1 (E.G. MANIPULATING THE LOCATION
R0034 COUNTER).

P0035 INTERPASS STORAGE. 53 WORDS.

| | | | |
|-------|------------|---------|----|
| 0036 | PROG NAME | RESERVE | 1 |
| 0037 | NEXT NAME | RESERVE | 1 |
| 0038 | SWITCH | RESERVE | 1 |
| 0039 | L OLD LINE | RESERVE | 1 |
| 0040 | OLD LINE | RESERVE | 16 |
| 0041 | PAGE HEAD | RESERVE | 16 |
| 0042 | PAGE NO | RESERVE | 1 |
| 0044 | SYM PLACE | RESERVE | 1 |
| 0045 | SYM TAB XS | RESERVE | 1 |
| 0046 | L COP BUFS | RESERVE | 1 |
| 0048 | MID POINT | RESERVE | 1 |
| 0049 | LIN COUNT | RESERVE | 1 |
| 0050 | N WD RECS | RESERVE | 1 |
| 0051 | E SYLT BAN | RESERVE | 1 |
| 0052 | L PROG FIL | RESERVE | 1 |
| 0053 | N LINES | RESERVE | 1 |
| 0054 | L COMP NAM | RESERVE | 1 |
| 0055 | N COPIES | RESERVE | 1 |
| 0056 | PAPER PLY | RESERVE | 1 |
| 00561 | ERR PAGES | RESERVE | 1 |
| 00562 | N ERR LINS | RESERVE | 1 |
| 00563 | L AUTH NAM | RESERVE | 1 |
| 00564 | SORS NAME | RESERVE | 1 |
| 00565 | COMPUTER | RESERVE | 1 |
| 00568 | SEG OWNER | RESERVE | 1 |
| 00569 | SUBSTRAB | RESERVE | 8 |

R0057 THE FOLLOWING INSTRUCTION IS PLACED AT THE BASE ADDRESS (10077) OF PASS 1 FOR CONVENIENCE.

0059 YUL PASS 1 TS P1 MASKS Z, MXR INISH P1 INITIALIZATION CONTINUED ON PAGE 66.

R006004 SIMULATED EXTENDED TS ROUTINE, PLACED HERE TO TAKE ADVANTAGE OF THE 7.

| | | | | | | |
|-------|-----|-----------|------------|--------|-------|-------------------------------------|
| 00601 | ETS | EQUALS | YUL PASS 1 | | | |
| 00602 | | SWS, C7T8 | ETS | 12 | C,+2 | C ADDRESS OF REGISTER TO BE LOADED. |
| 00604 | | EX | N,AU1 | CAC 3 | ETS | C INPUT IS 16 BITS. |
| 00606 | | EBA | ETS | BIT 25 | Z,0 | C OUTPUT IS 24 BITS. |
| 00608 | | NA | Z,CSH | Z,SC | N,AU2 | C |
| 00609 | | TX | Z,AU2 | - | Z,SC | S EXIT IN SAME MODE AS ENTRY. |

P0061 TRANSFER VECTOR ENTRIES 69 ONWARD. (TRANSFER VECTOR BEGINS WITH PROGNAME.)

| | | | |
|--------|------------|-----|---------|
| 006104 | BIT 32 | DEC | -1 0000 |
| 006108 | BIT 45 NOT | OCT | -177767 |
| 006112 | TWO | OCT | -2 |
| 006116 | NINE | DEC | -9 |

| | | | |
|--------|-----------|-----|---------|
| 00612 | FREE NTRY | OCT | -133760 |
| 006124 | FREE EXIT | OCT | -133760 |
| 006128 | SAPD NTRY | OCT | - 33777 |

| | | | | | |
|--------|-----------|----------|----------------|----------|------------------------|
| 006132 | P1 MASKS | MASKBASE | S,0 | F,0 | CAC2 HOLDS L NEXT SUB. |
| 006134 | END PARAS | DEC | +GGGG | | |
| 006136 | END YJL | ALF,3 | END YUL PASS 1 | PASS 1 # | |

R00614 ROUTINE FOR ALL UNMANAGEABLE TROUBLES.

| | | | | | | |
|--------|----------|--------|----------|-----|---------|-------------------------------------|
| 006144 | DISASTER | MPC, H | Z,1 | 301 | MON PCR | IMITATE THE ACTION OF A BACKGROUND. |
| 006148 | | ALF | DISASTER | | | |

R006152 SUBROUTINE TO DELIVER THE NAME OF A FREE BUFFER IN AU1. SLEEPS WHILE WAITING IF NEED BE. COSEQUENCE IN AND OUT.

| | | | | | | | |
|--------|-----------|----------|-----------|------------|-----------|---|--------------------------------------|
| 006156 | GRAB FREE | TS | Z,CSH | Z,AJ2 | C,+3 | C | SAVE RETURN ADDRESS. |
| 00616 | | TS | N,R7 | Z,AJ1 | C,+4 | C | FETCH NAME OF BUFFER. |
| 006164 | | TS | Z,SC | Z,AJ1 | CSC SLEEP | S | SLEEP IF THERE ARE NO FREE BUFFERS. |
| 006168 | | TS | FREE EXIT | Z,R7 | - | C | |
| 006172 | | SSL, ONE | N,R7 | 16 | C,-3 | C | TEST WHETHER THERE IS A FREE BUFFER. |
| 006176 | | TS | BIT 32 | N,R7,1 | - | C | PLANT BUSY FLAG IN FREE LIST. |
| 00618 | | EX | Z,R7 | BIT 45 NOT | FREE EXIT | C | MODULATE FREE LIST EXIT POINTER. |
| 006184 | | TX | Z,AU2 | - | Z,CSC | C | |

R006188 CLOSED SUBROUTINE TO DEMOTE A BUFFER IN JOINT STATUS TO INPUT OR SAVE STATUS, OR FREE A BUFFER WITHOUT JOINT
R006192 STATUS. IF BUFFER IS KNOWN NOT TO BE IN JOINT STATUS, ENTER AT SET FREE. PROVIDE BUFFER NAME IN Z,SH.

| | | | | | | | |
|--------|------------|----|-----------|------------|-------------|---|--|
| 006196 | FREE IN SV | TS | JOINT XIT | Z,R7 | - | C | |
| 0062 | | LA | Z,SH | N,R7 | C,+2 | C | BRANCH IF BUFFER MIGHT BE IN JOINT STAT. |
| 006204 | | TS | FREE NTRY | Z,R7 | SET FREE +1 | C | OTHERWISE PUT NAME INTO FREE LIST. |
| 006208 | | LA | N,R7 | Z,SH | DISJOINT | C | BRANCH IF BUFFER IS IN JOINT STATUS. |
| 006212 | SET FREE | TS | FREE NTRY | Z,R7 | - | C | OTHERWISE PUT NAME INTO FREE LIST. |
| 006216 | | TS | Z,SH | N,R7,1 | - | C | |
| 00622 | | EX | Z,R7 | BIT 45 NOT | FREE NTRY | C | MODULATE FREE LIST ENTRY POINTER. |
| 006224 | | TS | Z,SC | Z,CSC | MON WAKE | C | |
| 006228 | DISJOINT | TS | ZERO | N,R7,1 | - | C | REPLACE IN JOINT LIST WITH VOID FLAG. |
| 006232 | | SM | Z,R7 | BIT 46 R | JOINT XIT | S | MODULATE JOINT LIST EXIT POINTER, EXIT. |

R006236 MINOR SUBROUTINE TO SLEEP IN COSEQUENCE MODE.

| | | | | | | | |
|--------|-----------|----|-------|------|-----------|---|--|
| 00624 | CSC SLEEP | TS | - | - | MON SLEEP | C | |
| 006244 | | TS | Z,AU1 | Z,SC | N,SH | C | |

P006248* MASKS FOR MAIN PART OF PASS 1.

006249*

DELETE

| | | | |
|------|-----------|--------|-------|
| 0063 | B·BIT2 | OCT | 2 |
| 0064 | MERJ MODE | EQUALS | BIT 2 |
| 0065 | B·BIT3 | OCT | 1 |
| 0066 | TAPE KEPT | EQUALS | BIT 3 |
| 0067 | B·BIT5 | OCT | 02 |
| 0068 | KNOW SUBS | EQUALS | BIT 5 |
| 0069 | B·BIT5 | OCT | 01 |
| 0070 | CORRECT | EQUALS | BIT 6 |

FIELD AND SHIFT MASKS 1-4.

| | | | |
|------|---------|-----|------|
| 0072 | B·BIT8 | OCT | 002 |
| 0074 | B·BIT9 | OCT | 001 |
| 0075 | B·BIT10 | OCT | 0004 |
| 0076 | B·BIT11 | OCT | 0002 |

FIELD AND SHIFT MASKS 5-8.

| | | | |
|------|---------|-----|---------|
| 0078 | B·BIT12 | OCT | 0001 |
| 0079 | B·BIT13 | OCT | 0000 4 |
| 0080 | B·BIT14 | OCT | 0000 2 |
| 0081 | B·BIT16 | OCT | 0000 04 |

FIELD AND SHIFT MASKS 9-12.

| | | | |
|------|---------|-----|-------|
| 0083 | B·BIT37 | OCT | -4000 |
| 0084 | B·BIT43 | OCT | -40 |
| 0085 | B·B235 | OCT | 21 |
| 0086 | B·B3T5 | OCT | 17 |

FIELD AND SHIFT MASKS 13-16.

| | | | |
|------|----------|--------|------------|
| 0088 | B·B8B17 | OCT | 0020 02 |
| 0089 | B·B12314 | OCT | 0001 2 |
| 0090 | B·B25T27 | OCT | -7000 0000 |
| 0091 | L STYPE | EQUALS | B25T27 |
| 0092 | B·CHAR7 | OCT | -7700 |

FIELD AND SHIFT MASKS 17-20.

| | | | |
|------|---------|--------|---------|
| 0094 | B·D8 | DEC | -G 0000 |
| 0095 | B·D12 | DEC | -G |
| 0096 | B·CHAR1 | OCT | 77 |
| 0097 | CD TYPE | EQUALS | CHAR1 |
| 0098 | B·CHAR2 | OCT | 0077 |

FIELD AND SHIFT MASKS 21-24.

| | | | |
|------|---------|--------|---------------------|
| 0100 | B·CHAR8 | OCT | -77 |
| 0101 | B·C1T5 | OCT | 7777 7777 7777 |
| 0102 | B·C2T7 | OCT | 0077 7777 7777 77 |
| 0103 | B·C2T8 | OCT | 0077 7777 7777 7777 |
| 0104 | FIX MAG | EQUALS | C2T8 |

FIELD AND SHIFT MASKS 25-28.

| | | | |
|------|------------|--------|---------------|
| 0106 | B·CAC3 | DEC | -GGGG |
| 0107 | B·CACN | OCT | 0 |
| 0108 | ALF MASK | EQUALS | CACN |
| 0109 | B·SPECMAG | OCT | -7 7777 |
| 0110 | B·DATEMASK | OCT | -77 7700 7777 |

FIELD AND SHIFT MASKS 29-32.

P0112 SHIFT MASKS, PASS 1.

| | | | |
|------|------------|-----|---------------------|
| 0113 | S•BIT1 | OCT | 4 |
| 0114 | S•BIT46R | OCT | -4 |
| 0115 | S•B5T5 | OCT | 03 |
| 0116 | S•B19T25 | OCT | 0000 0077 4 |
| 0118 | S•B22T25 | OCT | 0000 0007 4 |
| 0119 | S•B22T32 | OCT | 0000 0007 7760 |
| 0120 | S•B25T30 | OCT | -7700 0000 |
| 0121 | S•B26T30 | OCT | -3700 0000 |
| 0123 | S•C7T8 | OCT | -7777 |
| 0124 | S•D7 | DEC | -60 0000 |
| 0125 | S•CAC23 | DEC | -GGGG GGGG |
| 0126 | S•CAC2 | DEC | 0000 GGGG |
| 0128 | S•CAC12 | DEC | GGGG GGGG |
| 0129 | S•ONE | OCT | -1 |
| 0130 | S•ONES | DEC | GGGG GGGG GGGG |
| 0131 | S•OCTMASK | OCT | -7777 7770 |
| 0133 | S•YYN\YYYY | OCT | 7777 0000 7777 7777 |
| 0134 | S•THREAD10 | OCT | -3776 |
| 0135 | S•D4 | DEC | 000G |
| 0136 | S•PROGSUB | OCT | 001 |
| 0138 | S•B7T13 | OCT | 00774 |
| 0139 | S•KNEWSUBS | OCT | 02 |
| 0140 | S•CAC3R | OCT | -177777 |
| 0141 | S•BIT 36R | OCT | -1 0000 |
| 0142 | S•C1T4 | OCT | 7777 7777 |
| 0143 | S•BIT44 | OCT | -20 |
| 0144 | S•BIT4 | OCT | 04 |
| 0146 | S•B38T48 | OCT | -3777 |
| 0147 | S•LOW5 | OCT | -37 |
| 0148 | S•BIT12R | OCT | 0001 |
| 0149 | S•C5T8 | DEC | -GGG GGG |
| 0150 | S•AC02 | OCT | 0007 |

SHIFT MASKS 33-36.

SHIFT MASKS 37-40.

SHIFT MASKS 41-44.

SHIFT MASKS 45-48.

SOME PARAPROGRAM FIELD MASKS.

P0151 DEFINITIONS OF SYMBOLS, CONSTANTS, VARIABLE AND TEMPORARY STORAGES, ETC. FOR THE MAIN (GROUP A) PART
R0153 OF PASS 1. THIS PAGE: ASSIGNMENTS AND VARIABLE STORAGE RESERVATIONS.

| | | | |
|--------|------------|---------|-------|
| 0155 | HEALTH | ASSIGN | 0,0 |
| 0156 | CARDNO WD | ASSIGN | 0,1 |
| 0157 | LOC FIELD | ASSIGN | 0,2 |
| 0158 | OP FIELD | ASSIGN | 0,3 |
| 0159 | ADDRESS 1 | ASSIGN | 0,4 |
| 0160 | ADDRESS 2 | ASSIGN | 0,5 |
| 0161 | DATE WORD | ASSIGN | 0,9 |
| 016105 | PHI TAPE | ASSIGN | 7,1 |
| 01611 | MON SVACH | ASSIGN | 7,2 |
| 0162 | MON PEEK | ASSIGN | 7,3 |
| 0163 | EOR | ASSIGN | 7,4 |
| 0164 | PHI LOAD | ASSIGN | 7,7 |
| 0166 | MON READ | ASSIGN | 7,15 |
| 0168 | MON S ENTR | ASSIGN | 7,40 |
| 016802 | MON A2D | ASSIGN | 7,41 |
| 0169 | BASE ADDR | ASSIGN | 7,47 |
| 016904 | MON WAKE | ASSIGN | 7,99 |
| 016905 | DISCAP | ASSIGN | 7,114 |
| 016906 | MON SLEEP | ASSIGN | 7,166 |
| 016909 | DISC STAT | ASSIGN | 7,210 |
| 01691 | MON TYPER | ASSIGN | 7,215 |
| 016915 | MON PCR | ASSIGN | 7,220 |
| 016916 | DISC CHEK | ASSIGN | 7,221 |
| 01692 | MON TADDR | ASSIGN | 7,223 |
| 01695 | DISC READ | ASSIGN | 7,239 |
| 0171 | RL CD HLTH | RESERVE | 1 |
| 0172 | REAL CARD | RESERVE | 10 |
| 0173 | PROC RTRN | RESERVE | 1 |
| 0174 | CARD NO | RESERVE | 1 |
| 0175 | CN LIMIT | RESERVE | 1 |
| 0176 | COMMON | RESERVE | 10 |
| 0177 | TP CD HLTH | RESERVE | 1 |
| 0178 | TAPE CARD | RESERVE | 10 |
| 0179 | FIELD COD | RESERVE | 2 |
| 0180 | ADR WD | RESERVE | 2 |
| 0181 | SAVE LOC | RESERVE | 1 |
| 0182 | LOC VALUE | RESERVE | 1 |
| 0184 | LOC CTR | RESERVE | 1 |
| 0185 | POB PLACE | RESERVE | 1 |
| 0186 | INB PLACE | RESERVE | 1 |
| 0187 | POPO BUFF | RESERVE | 1 |
| 0188 | END POBUF | RESERVE | 1 |
| 0190 | END TYP TA | RESERVE | 1 |
| 0191 | MERJ RTRN | RESERVE | 1 |
| 0192 | AVAIL MSK | RESERVE | 1 |
| 0193 | DIG FILE | RESERVE | 8 |

P0194 NUMERIC CONSTANTS -- FIRST OF TWO PAGES.

| | | | |
|-------|-----------|-----|------------------------------|
| 0195 | BIT 20 | DEC | 00001 |
| 0196 | (REMARK) | OCT | 06 |
| 0197 | BIT 45 | DEC | -8 |
| 0199 | B43T44 | OCT | -60 |
| 01999 | BIT 23 | OCT | 0000 0002 |
| 0200 | BIT 24 | OCT | 0000 0001 |
| 0203 | SIX | OCT | -6 |
| 0204 | REAL CDNO | OCT | 0 |
| 0205 | BIT 7 | OCT | 004 |
| 0207 | TAPE CDNO | OCT | 0 |
| 0208 | (DELETE) | OCT | 05 |
| 0209 | (RIGHT P) | OCT | 07 |
| 0211 | (MEMORY) | OCT | 11 |
| 0212 | SPEC SIGN | OCT | -10 0000 |
| 0213 | STARMSKS | OCT | 77, 0077, 0000 77, 0000 0077 |
| 0214 | | OCT | -7700 0000, -77 0000 |
| 0215 | (INSTR) | OCT | 12 |
| 0216 | (ILLOP) | OCT | 13 |
| 0217 | (DECM) | OCT | 14 |
| 0218 | (OCTAL) | OCT | 15 |
| 0219 | XFORMS | DEC | 468 9B5 318 G |
| 02195 | | DEC | 47C DEG 42F 2 |
| 0220 | | DEC | 47C DEG 42F 2 |
| 02205 | | DEC | C7C DE6 42C 4 |
| 0221 | | DEC | C7C DE7 42C 4 |
| 02215 | | DEC | 07C DEG 62G G |
| 0222 | | DEC | 37C DEG 42C 7 |
| 02225 | | DEC | 37C DEG 42C 7 |
| 0223 | | DEC | 1CC FFG C2C C |
| 02235 | | DEC | 3DF DFG D2F D |
| 0224 | | DEC | 3EF FEG E2F E |
| 02245 | | DEC | 1CC FFG C2C C |
| 0225 | | DEC | 3DF DFG D2F D |
| 02255 | | DEC | 3EF FEG E2F E |
| 0226 | | DEC | 1FF FFG F2F F |
| 02265 | | DEC | 1GG GGG G2G G |

P0227 NUMERIC CONSTANTS -- SECOND OF TWO PAGES.

| | | | |
|--------|-----------|-----|------------|
| 022799 | LAST CDNO | ALF | 00000000 |
| 0228 | TYPE E | OCT | -4000 0000 |
| 0229 | TYPE F | OCT | -2000 0000 |
| 0230 | TYPE N | OCT | -1000 0000 |

TYPE E TERMINATES A2D CONV OF LAST CDNO.

| | | | |
|-------|-----------|-----|----------|
| 0231 | (EQUALS) | OCT | 16 |
| 0232 | B5 B8 B10 | OCT | 0224 |
| 0233 | BIT 15 | OCT | 0000 1 |
| 02335 | BIT 31 | OCT | -40 0000 |
| 0238 | THREE | OCT | -3 |

| | | | |
|-------|-----------|-----|-----|
| 0239 | (2DECML) | OCT | 22 |
| 0240 | (HEAD) | OCT | 24 |
| 0241 | (2LATE) | OCT | 25 |
| 0242 | (BLOCK) | OCT | 23 |
| 0243 | (SUBRO) | OCT | 26 |
| 02431 | (NW INST) | OCT | 27 |
| 02432 | (EVEN) | OCT | 30 |
| 02433 | (COUNT) | OCT | 31 |
| 02434 | (INCINS) | OCT | 042 |

LIKE AN ACCEPTOR WITH A DEFECT: No @.

| | | | |
|-------|------------|-------|-----------------|
| 02435 | (SEGNJM) | OCT | 32 |
| 0244 | MAX CARDN | DEC | 0999898 |
| 0245 | DEC ALF M1 | DEC | -GG0 000 GG0 |
| 0246 | DEC ALF M2 | DEC | 03D 03D 03D 03D |
| 0247 | B24 B32 | OCT | -1 0020 0000 |
| 0248 | B8T48 | DEC | -1GG GGGG GGGG |
| 0250 | C253 | FXBIN | -253 |
| 0251 | BIT 17 | DEC | 0000 8 |
| 02511 | BIT 18 | OCT | 0000 01 |
| 02512 | BIT 19 | OCT | 0000 004 |
| 0252 | 3 D8 | DEC | -30000 |
| 0253 | 5D8 | DEC | -5 0000 |
| 0254 | DD8 | DEC | -D 0000 |
| 0255 | B25T25 | OCT | -6000 0000 |
| 02561 | BAD1 3ITS | DEC | 00277 |

P0257 ALPHABETIC CONSTANTS -- FIRST OF TWO PAGES.

| | | | |
|-------|-----------|-------|--|
| 02571 | PARP NAME | ALF | ????PAS1 |
| 02572 | PASS 2 | ALF | YULPASS2 |
| 02573 | P1 EPILOG | ALF | YULENDP1 |
| 0258 | (END OF) | ALF | 00000000 |
| 0259 | END OF 1 | OCT | 7611 1111 1111 1150 |
| 0260 | | ALF,4 | |
| 0261 | | ALF,4 | |
| 0262 | BLANKS | ALF | |
| 0263 | BLOTS | ALF | ■■■■■■■ |
| 0264 | W INSERT | ALF | INSERT |
| 0265 | AMPRSANS | ALF | 88888888 |
| 0266 | A999999 | ALF | 09999990 |
| 0267 | W MODIFY | ALF | MODIFY |
| 0268 | ASTRISKS | ALF | ***** |
| 0269 | W SQBRMIN | ALF | 0SEQBRK- |
| 0270 | W CARDNO | ALF | CARDNO |
| 02701 | W CARDNS | ALF | CARDNS |
| 0271 | W CORRECT | ALF | CORRECT |
| 0272 | W CHANGE | ALF | CHANGE |
| 0273 | END ERR M | ALF,5 | 20000000<■■■■■THE FOLLOWING CARDS ARE |
| 0274 | | ALF,5 | REJECTED BECAUSE THEY COULDN'T BE MERGED |
| 0275 | | ALF | : |
| 0276 | INC INSRT | ALF,4 | E■■■■■AINCOMPLETE INSERTION |

P0277 ALPHABETIC CONSTANTS -- SECOND OF TWO PAGES.

| | | | |
|-------|------------|-------|---|
| 0278 | DOLLARS | ALF | \$\$\$\$\$\$\$\$ |
| 0279 | W DELETE | ALF | DELETE |
| 0280 | W PRESERV | ALF | PRESERVE |
| 0281 | DASHES | ALF | ----- |
| 0282 | WH PLY MSG | ALF,2 | WHAT PLY PAPER%% |
| 02821 | WAA 10060 | ALF,3 | W A A10060 000000P |
| 0283 | OP SLP MSG | ALF,2 | OPERATOR ASLEEP |
| 0284 | W THROUGH | ALF | THROUGH |
| 0285 | W TO | ALF | TO |
| 0286 | W SEQ3RAK | ALF | SEQBREAK |
| 02862 | W SEQ3RK | ALF | SEQBRK |
| 0287 | W MEMORY | ALF | MEMORY |
| 02875 | W SEGNUM | ALF | SEGNUM |
| 0288 | W THRU | ALF | THRU |
| 0289 | W BEGIN | ALF | BEGIN |
| 02891 | W END | ALF | END |
| 0290 | W ST TYPES | ALF,3 | ERASABLEFIXED SPEC/NON |
| 0291 | HEAD | ALF | |
| 0292 | W ANYWHAR | ALF | ANYWHERE |
| 0293 | W LOG | ALF | LOG |
| 0294 | W OUTDSEQ | ALF | OUTOFSEQ |
| 0295 | TASK REJ | ALF,5 | E*****THIS TASK IS REJECTED. RESUBMIT |
| 0296 | | ALF,5 | CORRECTED DECK WITH SAME DIRECTOR CARD. |
| 0297 | W WITH | ALF | WITH |
| 0298 | POINT C1 | ALF | . |
| 0299 | W OWNER EQ | ALF,2 | OWNER = ???????? |

P0300 ADDRESS CONSTANTS.

| | | | | | | |
|------|------------|-----|------|--|------------|------------------|
| 0301 | L END OF | CAC | 9216 | | (END OF) | ALSO R COLUMN 1. |
| 0303 | L END P1 | CAC | 8192 | | END PASS 1 | ALSO Q COLUMN 1. |
| 0305 | L GET REAL | CAC | 7168 | | GET REAL | ALSO P COLUMN 1. |
| 0307 | L END ERRM | CAC | 3072 | | END ERR M | ALSO L COLUMN 1. |
| 0309 | L COMP CNS | CAC | 1024 | | COMP CDNS | ALSO J COLUMN 1. |

| | | | | | | |
|-------|------------|---------|--|--|--------------|---|
| 03101 | L SEND DEL | SPEC | | | SEND DELF | |
| 0311 | L CARD W9 | SPEC | | | REAL CARD +9 | |
| 0312 | L SUB RJUS | SPEC | | | SUB RJUST | |
| 0313 | ST TAB MAX | SPEC*B5 | | | 927 | - |

| | | | | | | |
|------|------------|---------|-------|--------------|--------------|---|
| 0314 | SOURCE | CAC | 15043 | TAPE CARD -1 | REAL CARD -1 | |
| 0315 | N L CHAR 6 | SPEC | | | STARMSKS +5 | - |
| 0316 | L NEXT SUB | RESERVE | 1 | | | |
| 0317 | L XFORMS | SPEC | | | XFORMS | |

| | | | | | | |
|-------|------------|---------|--|--|-----------|--|
| 0318 | L DIG FILE | SPEC | | | DIG FILE | |
| 0319 | L SYM THR | SPEC*B5 | | | 836 | |
| 03191 | LL SUB TAB | SPEC*B5 | | | 849 | |
| 0320 | L TYP TAB | SPEC*B5 | | | 900 | |
| 0321 | L AV TABLE | SPEC*B4 | | | DAMN ZERO | |

| | | | | | | |
|--------|------------|---------|--|------------|-----------|--|
| 0322 | L PRSV CNS | CAC | | INSRT LUP | PRESERVE | |
| 032201 | L INSRT LP | EQUALS | | L PRSV CNS | | |
| 0323 | L END THR | SPEC*B7 | | | 6 | |
| 0324 | MON WAA | SPEC*B7 | | | 600 | |
| 0326 | L LAST CNO | SPEC | | | LAST CDNO | |
| 0327 | L DISASTR | SPEC | | | DISASTER | |

0322.9 L DIRECTY SPEC, B7 DAMN ZERO

| | | | | | | |
|------|------------|---------|--------|--------------|--------------|------------------|
| 0333 | JOINT XIT | OCT | -33757 | | | |
| 0334 | RL TYP TAB | SPEC*B2 | | | 2000 | |
| 0335 | L FIND CDN | SPEC | | | FIND CDNO | |
| 0336 | L BOT+ CDS | CAC | 24576 | TAPE CARD +1 | REAL CARD +1 | ALSO Y COLUMN 1. |

P0338 EQUIVALENCES.

| | | | |
|-------|------------|--------|--------------|
| 0339 | ZERO | EQUALS | (END OF) |
| 0340 | CHAR 5 | EQUALS | STAR MSKS +5 |
| 0341 | (MODIFY) | EQUALS | BIT 6 |
| 0342 | (CARD NO) | EQUALS | B5T6 |
| 0343 | P COLUMN 1 | EQUALS | L GET REAL |
| 0344 | L COLUMN 1 | EQUALS | L END ERR M |
| 03441 | T COLUMN 1 | EQUALS | W THRU |
| 0345 | R COLUMN 1 | EQUALS | L END OF |
| 0346 | LOW LIM | EQUALS | ADR WD |
| 0347 | HI LIM | EQUALS | ADR WD +1 |
| 0348 | (ALIREM) | EQUALS | BIT 3 |
| 0349 | TN MASK | EQUALS | COMMON +8 |
| 0350 | COUNT FLD | EQUALS | B25T30 |
| 0351 | J COLUMN 1 | EQUALS | L COMP CNS |
| 0352 | LOC STATE | EQUALS | COMMON +9 |
| 0353 | (SETLOC) | EQUALS | B3T6 |
| 0354 | INRECNT | EQUALS | SUBSTRAB +5 |
| 0355 | LOC LJC | EQUALS | COMMON +7 |
| 0356 | (ERASE) | EQUALS | BIT 2 |
| 0358 | (OCTAL) | EQUALS | B2B6 |
| 0359 | TEN C1 | EQUALS | (INSTR) |
| 0360 | DAMN ZERO | EQUALS | 0 |
| 0361 | INPUT NAM | EQUALS | SUBSTRAB +6 |
| 0362 | AFIELD | EQUALS | COMMON +4 |
| 0363 | EIGHT | EQUALS | BIT 45 |
| 0364 | UNSIG NUM | EQUALS | (BLOCK) |
| 0365 | DC1 | EQUALS | (HEAD) |
| 0366 | ALF 9 C1 | EQUALS | (MEMORY) |
| 0367 | CHAR5 | EQUALS | B25T30 |
| 0368 | ALF9C2 | EQUALS | END OF 1 |
| 0369 | BIT 25 | EQUALS | TYPE E |
| 0370 | DEC ALF M3 | EQUALS | AMPRSANS |
| 0373 | B5 Z8 B10 | EQUALS | W LOG |
| 0374 | A COLUMN 1 | EQUALS | B2B6 |
| 0375 | END SY TAB | EQUALS | L AV TABLE |
| 0376 | Y COLUMN 1 | EQUALS | L BOTH CDS |
| 0377 | EQUALS C1 | EQUALS | (ILLOP) |
| 03771 | (ACCEPT) | EQUALS | BIT 4 |
| 03772 | THREA) 11 | EQUALS | B38T48 |
| 0378 | ZX | EQUALS | 8 |
| 03781 | SPRA | EQUALS | 128 |
| 03782 | SPRAMRI | EQUALS | 384 |
| 0380 | OCT 4J00 | EQUALS | BIT 37 |
| 0381 | 2 D8 | EQUALS | BIT 31 |

P0440 GET REAL IS NORMALLY THE CHIEF NODE OF PASS 1. OCCASIONALLY MERGE CONTROL PROCEDURES TAKE OVER,
R0442 ACCEPTING OR REJECTING TAPE CARDS.

| | | | | | | |
|------|----------|--------------|----------|------|-----------|--|
| 0443 | GET REAL | TS | - | - | GET CARD | GET A CARD AND BRANCH ON NO END OF FILE. |
| 0445 | | TS | L END OF | Z,X0 | TP RJNDJT | RUN OUT TAPE CARDS AT END OF FILE. |
| 0447 | MODE 01 | NA, MERJMODE | SWITCH | ONES | MODIF CHK | BRANCH IF IN MAIN PART OF NEW PROGRAM. |
| 0449 | | NA, TAPEKEPT | SWITCH | ZERO | MODIF CHK | BRANCH IF A TAPE CARD IS WAITING. |
| 0451 | | TS | Z,SC,19 | Z,S3 | GET TAPE | C GET TAPE CARD. |

R0453 FALL THROUGH ON END OF FILE. TAB TO MODIF CHK NORMALLY.

| | | | | | | |
|-------|--|-----------|------------|------|-----------|---|
| 04532 | | NA, BIT8 | SWITCH | ONES | C,+2 | BRANCH IF NOT FREEZING SUBROUTINES. |
| 04534 | | TS | L END OF | Z,X0 | SEND POPO | C |
| 0454 | | TS | L END ERRM | Z,X0 | SEND POPO | C TAPE CARDS RAN OUT BEFORE REAL CARDS. |
| 0456 | | SWE, CAC3 | SOURCE | 16 | Z,X0 | PREPARE TO CUSS REMAINING REAL CARDS. |

| | | | | | | |
|-------|-----------|-------------|--------------|------------|--------------|---|
| 0458 | HEAVE HD | TN | RL CD HLTH | 11 | TP CD HLTH | MOVE CARD OUT OF HARM'S WAY. |
| 0460 | | TS, CD TYPE | (MODIFY) | TP CD HLTH | GET CARD | |
| 0461 | | TS, D12 | EIGHT | TAPE CARD | LAST BARF | SET UP PAGE SKIP ON END OF FILE. |
| 04622 | | TS, D12 | TWO | TAPE CARD | SEND POPO | C ALL REJECTS BUT LAST ARE SPACED 2. |
| 04624 | | NA, CHAR1 | REAL CARD | BLANKS | LAST BARF -1 | |
| 04626 | | LA, D12 | NINE | REAL CARD | LAST BARF -1 | |
| 04628 | | NA, C2T7 | REAL CARD +2 | W DELETE | C,+2 | BAR FALSE DISORDER CUSS WHEN REJECTING |
| 0463 | | TS | LAST CDNO | REAL CDNO | HEAVE HD | DELETE CARDS. |
| 04632 | | NA, C2T7 | REAL CARD +2 | W CARDNO | LAST BARF -1 | |
| 04634 | | TS | MON WAA | Z,X6 | MCCD ADRF +1 | |
| 04636 | | NA | FIELD COD | BIT 2 | LAST BARF -1 | |
| 04638 | | TX | CN LIMIT | - | REAL CDNO | DITTO FOR CARDNO CARDS. |
| 0464 | | TS | REAL CDNO | LAST CDNO | HEAVE HD | |
| 0465 | LAST BARF | TS | END YUL +2 | END YUL +1 | SEND POPO | C SET UP TYPED CUSS AND SEND LAST REJECT. |
| 0467 | | TX | L END P1 | - | Z,SC | |

R0468 AS WE ARRIVE AT MODIF CHK WE ALWAYS HAVE ONE REAL CARD AND ONE TAPE CARD READY TO BE SERVICED.

| | | | | | | |
|------|-----------|-----------|--------------|-----------|-----------|--|
| 0470 | MODIF CHK | NA, C2T7 | REAL CARD +2 | W MODIFY | NO MODIFY | SEE IF OPERATION CODE OF REAL CARD IS |
| 0472 | | NA, CHAR1 | REAL CARD | BLANKS | NO MODIFY | "MODIFY". |
| 0474 | | LA, D12 | NINE | REAL CARD | NO MODIFY | BUT DON'T BE FOOLED BY A REMARKS CARD. |

| | | | | | | |
|------|---------|--------------|----------|------|------------|---------------------------------------|
| 0478 | | TX | (MODIFY) | - | RL CD HLTH | INDICATE CARD TYPE. |
| 0480 | MODE 02 | NA, MERJMODE | SWITCH | ZERO | TP MODIFY | WHEN MERGING, RUN TO NEXT SUBROUTINE. |

R0482 WHEN IN MAIN PART OF NEW PROGRAM, SEND THE "MODIFY" CARD, CREATE AND SEND THE "END OF" CARD MADE UP BY PASS 0, AND PROCESS THE LATTER.

| | | | | | | |
|------|-----------|----|------------|-----------|------------|--|
| 0484 | | TS | Z,SC | PROC RTRN | PROC REAL | |
| 0486 | | TN | (END OF) | 11 | RL CD HLTH | |
| 0488 | REGLR NEW | TS | L GET REAL | PROC RTRN | PROC REAL | |

| | | | | | | |
|------|-----------|----|-----------|----------|-----------|---|
| 0490 | TP MODIFY | TX | Z,SC,1 | - | PROC RTRN | SET UP SEARCH FOR "END OF" CARD. |
| 0492 | | TS | L DISASTR | Z,S3 | GET TAPE | C GET ANOTHER TAPE CARD IF NOT FOUND YET. |
| 0494 | | NA | TAPE CARD | END OF 1 | PROC TAPE | |

| | | | | | | |
|------|--|----|------------|-----------|-----------|--|
| 0495 | | TS | Z,SC | PROC RTRN | PROC REAL | PROCESS "MODIFY" JUST BEFORE "END OF". |
| 0497 | | TS | L GET REAL | PROC RTRN | PROC TAPE | |

| | | | | | | |
|------|-----------|--------------|--------|------|-----------|--|
| 0498 | NO MODIFY | NA, MERJMODE | SWITCH | ONES | REGLR NEW | PROCESS REAL CARD WITH NO FURTHER ADD. |
|------|-----------|--------------|--------|------|-----------|--|

P0500 COMP CDNS IS THE HEART OF THE MERGING PROCESS. IF THE TAPE CARD IS CHOSEN, IT CANNOT BE AN "END OF" CARD.

0502 COMP CDNS LA REAL CDNO TAPE CDNO KEEP TAPE BRANCH IF REAL CARD COMES FIRST.
 0504 TS Z,SC PROC RTRN PROC TAPE SINCE THE LAST CARD OF A TAPE FILE IS
 0506 TS L COMP CNS Z,SC GET TAPE C NUMBERED 999999, WE GUARANTEE NO EOF.

R0508 AT THIS POINT, THE REAL CARD IS OF PRIMARY INTEREST. EITHER IT IS A MERGE CONTROL CARD (OTHER THAN "MODIFY") OR
 R0510 IT PRECEDES THE TAPE CARD, OR REPLACES IT. THE MERGE CONTROL CODES ARE CARDNO (CHANGE OR CORRECT A CARD NUMBER)
 R0512 AND DELETE. A CARD WITH "=" IN COLUMN 1 ACCEPTS A LIKE-NUMBERED CARD WITH THE SAME CONTENTS OF COLUMNS 9-80.

0514 KEEP TAPE SM SWITCH TAPE KEPT SWITCH INDICATE THAT A TAPE CARD IS WAITING.
 05152 LA, D12 NINE REAL CARD NOT MCCD RIGHT PRINT CAN'T BE MERGE CONTROL CARD.
 0516 NA, CHAR1 REAL CARD EQUALS C1 NOT ACCEPT BRANCH IF NOT AN ACCEPTOR CARD.

0518 TS, CD TYPE (ACCEPT) RL CD HLTH TEST MCCD C REJECT IF DISORDERED CARD NUMBER.
 0520 TS BLANKS COMMON PROC REA C MAKE X0 POINT TO THE REAL CARD.
 0521 TS, C2T7 REAL CARD COMMON ANAL SJBF C ANALYZE CARD NUMBER FIELD.
 05222 SS ZERO BIT 9 HEALTH DISABLE COMPLAINT ABOUT "D" ERROR.
 0523 NA COMMON W LOG NOT EQ LOG BRANCH IF NOT ACCEPTING A LOG CARD.
 05241 NA, DATEMASK REAL CARD +8 BLANKS C,+2 BRANCH IF DASHES SHOULD BE PUT IN DATE.
 0525 TS CHAR1 MERJ RTRN ACCEPT PREPARE TO LOOK AT COLUMN 1.
 05261 SS DASHES CHAR 6 REAL CARD +8
 05262 TS, CHAR1 DASHES REAL CARD +9 C,-2
 0527 NOT EQ LOG TS ZERO MERJ RTRN ACCEPT

0528 ACC NEXT TS Z,SC PROC RTRN PROC TAPE
 0529 TS L DISASTR Z,53 GET TAPE C ACCEPT A CARD AND GET ANOTHER.

0531 ACCEPT NA TAPE CARD END OF 1 C,+2
 0532 TS, BIT 10 ONES RL CD HLTH BAD MERGE ILLEGAL TO ACCEPT AN "END OF" CARD THUS.

0534 NA TAPE CDNO REAL CDNO ACC NEXT DEMAND EQUALITY OF FORMAL CARD NUMBER.
 05351 TX MERJ RTRN - ALF MASK
 0536 NA, ALFMASK TAPE CARD W LOG ACC NEXT BRANCH IF TAPE CARD SHOULD BE LOG.
 0538 SWE, CAC3 L BOTH CDS 16 Z,AU1
 0539 TX L BOTH CDS - Z,AU2
 0540 NA N,AU1,1 N,AJ2 ACC NEXT BRANCH IF DIFFERENCE IN COLS. 9-80.
 0542 NA Z,AU2,1 L CARD W9 C,-1

0543 NA, CHAR1 TAPE CARD W LOG C,+2
 0544 LA ALF MASK ZERO ACC NEXT BR IF IS LOG BUT SHOULD NOT BE.

0546 MARK CARD SM TAPE CARD BIT 44 TAPE CAR MARK CARD AS ACCEPTED.
 0548 TS SOURCE Z,X0 SEND POPN C SEND ACCEPTOR CARD.
 0550 TS L GET REAL PROC RTRN PROC TAPE PROCESS ACCEPTED CARD, GET ANOTHER REAL.

P05511 PROCEDURE TO DETECT AND PROCESS REQUESTS FOR CHANGING OR CORRECTING CARD NUMBERS, USING THE "CARDNO" CODE. THE
 R05513 "CARDNS" CODE IS SIMILAR, BUT STARTS RENUMBERING FROM THAT VALUE UNTIL THE NEXT LOG CARD. "PRESERVE CARDNS"
 R05515 TURNS OFF RENUMBERING. IF "RENUMBER" SUBDIRECTOR WAS USED, IT RESUMES AFTER THE REIGN OF ANY "CARDNS" CODE.

| | | | | | | | |
|--------|-----------|-------------|--------------|--------------|--------------|---|--|
| 0552 | NOT ACEPT | NA, CHAR1 | REAL CARD | BLANKS | NOT MCCD | | BRANCH IF CANNOT BE MERGE CONTROL CARD. |
| 05542 | | NA, C2T7 | REAL CARD +2 | W CARDNS | CARDNO CQ | | BRANCH IF NOT A "CARDNS" CODE. |
| 05544 | | NA | REAL CARD +1 | W PRESERV | CARDNO CQ +1 | | |
| 055444 | | TX, CD TYPE | (CARDNO) | - | RL CD HLTH | | |
| 05545 | | NA | REAL CARD +3 | BLANKS | TEST MCCD -2 | | |
| 05546 | | NA | REAL CARD +4 | BLANKS | TEST MCCD -2 | | |
| 05547 | | NA, CHAR2 | RL CD HLTH | ZERO | BAD MERGE | | REJECT "PRESERVE CARDNS" FOR ANY DEFECT. |
| 05548 | | TS | L PRSV CNS | MERJ RTRN | FIND CDNO | | CONTINUED ON FOLLOWING PAGE. |
| 0555 | CARDNO CQ | NA, C2T7 | REAL CARD +2 | W CARDNO | DELETE CQ | | BRANCH IF NOT A "CARDNO" CODE. |
| 0557 | | TS | REAL CARD +1 | COMMON | ANAL SUBF | C | ANALYZE LOCATION FIELD. |
| 0559 | | NA | COMMON | W CORRECT | C,+3 | | |
| 0560 | | SM | SWITCH | CORRECT | SWITCH | | SET UP SEARCH FOR BAD CARD NUMBER IF |
| 0562 | | TS | ZERO | RL CD HLTH | C,+4 | | "CORRECT" BUT NEVER CUSS THIS CARD NO. |
| 0564 | | NA | COMMON | W CHANGE | C,+2 | | |
| 0565 | | TS, CORRECT | ZERO | SWITCH | C,+2 | | SEEK OK CARD NUMBER IF "CHANGE". |
| 0567 | | SM | RL CD HLTH | BIT 8 | RL CD HLTH | | CUSS BAD LOCATION FIELD. |
| 0569 | | TS, CD TYPE | (CARDNO) | RL CD HLTH | MCCD ADRF | | NOTE TYPE, ANALYZE ADDRESS FIELD. |
| 0571 | | LA | FIELD COD | BIT 2 | C,+2 | | |
| 0572 | | TS, BIT 9 | ONES | RL CD HLTH | BAD MERGE | | CUSS BAD ADDRESS FIELD. |
| 0574 | | LA | FIELD COD | BIT 3 | C,-1 | | |
| 0576 | TEST MCCD | NA, CHAR2 | RL CD HLTH | ZERO | BAD MERGE | | REJECT "CARDNO" FOR ANY SIN. |
| 0579 | | TS | Z,SC | MERJ RTRN | FIND CDNO | | SET UP CARD WHOSE NUMBER IS TO BE CHGD. |
| 0581 | CHANGE | TS, C2T7 | CN LIMIT | TAPE CARD | MARK CARD | C | CHANGE EXTERNAL CARD NUMBER. |
| 0582 | | NA, CHAR1 | TAPE CARD | L COLUMN 1 | C,+3 | | ON LOG CARD, CHANGE IS SUPERFICIAL ONLY. |
| 0583 | | NA, C2T7 | TAPE CARD | ZERO | SEND CCNO | | |
| 0584 | | TS, C2T7 | BLANKS | TAPE CARD | SEND CCNO | | ..THOUGH SQB SETTING IS BLANKED, |
| 0585 | | SS | ZERO | BIT 43 | TAPE CARD | | CLEAR POSSIBLE SEQUENCE BREAK BIT. |
| 0586 | | TX | CN LIMIT | - | TAPE CDNO | | CHANGE INTERNAL CARD NUMBER. |
| 0587 | | NA | TAPE CDNO | BIT 6 | SEND CCNO | | IF SEQ. BR., SET EXTERNAL CARD NUMBER TO |
| 0588 | | SM | TAPE CARD | W SQRMIN | TAPE CARD | | SEQBRK AND SET BIT 43. |
| 0589 | SEND CCNO | TS | SOURCE | Z,X0 | SEND POPO | C | SEND "CARDNO", "CARDNS", OR "DELETE". |
| 0590 | | NA, C2T7 | REAL CARD +2 | W CARDNO | C,+2 | | BRANCH IF A SECTION WAS RENUMBERED. |
| 05901 | | TS, C2T7 | TAPE CDNO | REAL CDNO | MARK CARD +2 | | NEW NUMBER IS CRITERION FOR NEXT REAL. |
| 059014 | | LA | SWITCH | BIT 1 | C,+2 | | IF RENUMBERING IS NOW UNDER WAY, COMPARE |
| 059016 | | EX | FIELD COD +1 | C2T7 | LAST CDNO | | NEW NUMBER WITH LAST CARD'S RENJMBER. |
| 05902 | | TS | N,SC,2 | RNUM TEST | ACC NEXT | C | PROCESS CARD WITH RENUMBERING DISABLED. |
| 0591 | | TX | C,+1 | - | RNUM TEST | C | RESTORE RENUMBERING TEST TO NORMAL. |
| 05912 | | LA | BIT 1 | SWITCH | REM CHECK | C | |
| 0592 | | TS | L LAST CNO | Z,X4 | MON A2D | | SET UP FOR PARTIAL RENUMBERING. |
| 0593 | RENUMBER | RESERVE | 1 | | | | |
| 0594 | | EX | REAL CDNO | C2T7 | LAST CDNO | | FOR CARDNS, KEEP OLD SEQUENCE CRITERION. |
| 0595 | | LA | BIT 1 | SWITCH | GET REAL | | EXIT IF RENUMBERING IS NOW UNDER WAY. |
| 0596 | | SM | SWITCH | BIT 1 | SWITCH | | CALL FOR PARTIAL RENUMBERING. |
| 0597 | | TS | C,+1 | RESTART N +1 | GET REAL | | MAKE IT STOP AFTER FIRST LOG CARD. |
| 0598 | | TS | ZERO | RENJMBER | NON RNUM +1 | C | |

P06031 PROCEDURE TO DETECT AND PROCESS "DELETE" CARDS.

| | | | | | | | |
|---|------------|--------------|--------------|--------------|--------------|---|--|
| 0604 | DELETE: CQ | NA, C2T7 | REAL CARD +2 | W DELETE | INSERT CQ | | BRANCH IF NOT A "DELETE" CODE. |
| 0606 | | NA | REAL CARD +1 | W OUTOFSEQ | C,+4 | | BRANCH IF LOCATION FIELD NOT "OUTOFSEQ". |
| 0608 | | SM | SWITCH | CORRECT | SWITCH | | SET UP SEARCH FOR BAD CARD NUMBER. |
| 0610 | | TS | ZERO | RL CD HLTH | C,+4 | | NEVER CUSS THIS CARD NUMBER. |
| 0612 | | TS, BIT 8 | ONES | RL CD HLTH | C,+2 | | CUSS BAD LOCATION FIELD. |
| 0614 | | NA | REAL CARD +1 | BLANKS | C,-1 | | |
| 0615 | | SS | ZERO | CORRECT | SWITCH | | SET UP SEARCH FOR OK CARD NUMBER. |
| 0617 | | TS, CD TYPE | (DELETE) | RL CD HLTH | MCCD ADRE | | ANALYZE ADDRESS FIELD. |
| 0619 | | NA | FIELD COD | ZERO | DEL SEVR | | BRANCH IF ADDRESS NOT BLANK. |
| 0621 | | NA, CHAR2 | RL CD HLTH | ZERO | DELE FAIL +1 | | REJECT SINGLETON DELETE FOR BAD CARD NO. |
| 0622 | | TS | L SEND DEL | MERJ RTRN | FIND CDNO | | GO FIND SINGLE CARD TO BE DELETED. |
| 0623 | DEL SEVRL | LA | ONES | FIELD COD | C,+2 | | BRANCH IF MEANINGLESS ADDRESS FIELD. |
| 0625 | | LA | BIT 1 | FIELD COD | C,+2 | | BRANCH IF ADR FIELD FORMAT OK. |
| 0627 | | TS, BIT 9 | ONES | RL CD HLTH | DELE FAIL +1 | | CUSS BAD ADDRESS FIELD. |
| 0629 | | NA | REAL CDNO | BIT 6 | OK DELE 0 -1 | | BRANCH IF FIRST CARDNO IS NOT SEQ BREAK. |
| 0631 | | NA | CN LIMIT | BIT 6 | OK DELE 0 | | BRANCH IF 2ND CARDNO IS NOT SEQ BREAK. |
| 0633 | | TS, BIT 12 | ONES | RL CD HLTH | DELE FAIL +1 | | CUSS IF 1ST CARDN NOT LESS THAN 2ND. |
| 0634 | | LA | CN LIMIT | REAL CDNO | C,-1 | | |
| 0635 | OK DELE 0 | NA, CHAR2 | RL CD HLTH | ZERO | DELE FAIL +1 | | REJECT "DELETE" CARD FOR ANY SIV. |
| 0637 | | TS | Z,SC | MERJ RTRN | FIND CDNO | | SET UP CARD TO BE DELETED. |
| 06382 | | TS | Z,SC | MERJ RTRN | GET TAPE | C | FETCH NEXT CARD TO LOOK AT NUMBER. |
| 0639 | | LA | CN LIMIT | TAPE CDNO | C,+2 | | |
| 0640 | | TS | MERJ RTRN | Z,SC | GET TAPE | C | DELETE TAPE CARD AND GET ANOTHER. |
| 0642 | | NA | CN LIMIT | TAPE CDNO | DELE FAIL | | SECOND NUMBER MUST MATCH EXISTING ONE. |
| 0644 | SEND DELE | TS | LAST CDNO | REAL CDNO | SEND CCNO | C | SEND "DELETE" CARD. |
| 06452 | | NA | TAPE CARD | END OF 1 | C,+2 | | ALLOW DELETION OF ANY BUT "END OF" CARD. |
| 06454 | | TS, TAPEKEPT | ONES | SWITCH | GET REAL | | KEEP IT AND MAYBE INSERT BEFORE IT. |
| 0646 | | TS, TAPEKEPT | ZERO | SWITCH | GET REAL | | END OF DELETION PROCESS. |
| 06471 | DELE FAIL | SM | RL CD HLTH | BIT 11 | RL CD HLTH | | |
| 06472 | | TS | LAST CDNO | REAL CDNO | BAD MERGE | | |
| R06473 END OF "PRESERVE CARDS" ROUTINE, CARRIED OVER FROM PRECEDING PAGE. | | | | | | | |
| 06474 | PRESErVE | LA | SWITCH | BIT 1 | MARK CARD +1 | | EXIT QUIETLY IF RENUMBERING ALREADY OFF. |
| 064745 | | LA | REAL CDNO | FIELD COD +1 | BAD PRESV | | BRANCH IF PRESERVATION CAUSES DISORDER. |
| 06475 | | SS | ZERO | BIT 1 | SWITCH | | |
| 06476 | | NA | RESTART N +1 | REST REST | MARK CARD +1 | | EXIT IF RENUMBERING WAS IN LOG SEC ONLY. |
| 06477 | | TS | C,+1 | RENJMALL | MARK CARD +1 | | MODIFY LOG CARD ROUTINE TO START RENJM. |
| 06478 | | TS | ZERO | RENJMALL | RENUMBER +3 | C | |
| 06479 | BAD PRESV | TS, CHAR2 | BIT 7 | RL CD HLTH | BAD MERGE | | |

P0648 PROCEDURE TO DETECT AND PROCESS "INSERT" CARDS.

| | | | | | | | |
|--------|-----------|-------------|--------------|--------------|---------------|---|--|
| 064803 | INSERT CQ | NA, C2T7 | REAL CARD +2 | W INSERT | NOT MCCD | | |
| 064806 | | TS | REAL CARD +1 | COMMON | ANAL SUBE | C | LOCATION FIELD MUST BE "BEGIN" OR "END". |
| 064812 | | NA | COMMON | W BEGIN | BAD INSTL | | REQUIRED OUTSIDE OF INSERTION MODE. |
| 064818 | INS ADDR | TS, CD TYPE | (CARDNO) | RL CD HLTH | MCCD ADDR | | PASS 2 PROCESSING IS SAME AS FOR CARDNO. |
| 064824 | | NA | FIELD COD | ZERO | BAD INSTL +1 | | BRANCH IF THERE IS A CARD NUMBER CHANGE. |
| 06483 | | SSL, ONE | SWITCH | 47 | C,+1 | | "BRANCH" IF RENUMBERING IS NOW ON. |
| 064836 | | TS | REAL CDNO | CN LIMIT | BAD INSTL +2 | | NO RENUM, NO CHANGE: USE INSERT CARD NO. |
| 064842 | | TS | ONES | CN LIMIT | BAD INSTL +2 | | RENUM, NO CHANGE: USE CURRENT R=NUMBER. |
| 064848 | BAD INSTL | TS, BIT 8 | ONES | RL CD HLTH | INS ADDR | | |
| 064851 | | NA | FIELD COD | BIT 3 | TEST MCCD -2 | | REJECT IF MEANINGLESS ADDRESS FIELD. |
| 064857 | | NA, CHAR2 | RL CD HLTH | ZERO | BAD MERGE | | REJECT INSERT CARD FOR ANY DEFECT. |
| 064863 | | NA | REAL CDNO | TAPE CDNO | C,+3 | | |
| 064866 | | LA | END OF 1 | TAPE CARD | C,+2 | | INSERTED CARDS CANNOT REPLACE "END OF". |
| 064872 | | SS | ZERO | TAPE KEPT | SWITCH | | REPLACE OLD CARD BY INSERTED CARDS. |
| 064878 | | TS | SOURCE | Z,X0 | SEND POPN | C | SEND "BEGIN INSERT" CARD. |
| 064884 | | NA | RESTART N +1 | REST REST | C,+2 | | |
| 064887 | | SWS, BIT45R | SWITCH | 45 | SWITCH | | SHOW THAT RENUMBERING, IF ON, IS TOTAL. |
| 064893 | | TS | REST REST | RESTART N +1 | RENUMBER +3 | C | TURN ON RENUMBERING IN "TOTAL" MODE. |
| 064899 | | LA | ONES | CN LIMIT | INSRT LUD | | BRANCH IF CURRENT RENUMBER WILL DO. |
| 064905 | | TS | - | - | GET CARD | | |
| 064908 | | TS | (INCINS) | RL CD HLTH | BAD MERGE -2 | | REJECT IF GOT END OF CARD INPUT FILE. |
| 064914 | | SS | CN LIMIT | C2T7 | REAL CARD | | APPLY SPECIFIED OR IMPLIED NUMBER. |
| 06492 | | NA, CHAR1 | REAL CARD | L COLUMN 1 | C,+2 | | |
| 064923 | | TS, C2T7 | BLANKS | REAL CARD | SEND INS1 | | INSERTED LOG CARDS GET BLANKS IN CC 2-7. |
| 064929 | | SS | ZERO | BIT 43 | REAL CARD | | CLEAR SEQUENCE BREAK BIT FROM NON-LOGS. |
| 064935 | | TS | CN LIMIT | REAL CDNO | BAD INSA 2 +1 | C | CLEAR OUT-OF-SEQUENCE BIT. |
| 064938 | | NA | REAL CDNO | BIT 6 | SEND INS1 | | |
| 064941 | | SM | REAL CARD | W SBRMIN | REAL CARD | | SPECIFIED SEQ. BRK. GETS "SEQBRK". |
| 064947 | SEND INS1 | TS | RENUMBER -3 | RNUM TEST | TP RUNOUT +1 | C | PROCESS 1ST INSERTED CARD W/ RENUM OFF. |
| 064953 | | EX | CN LIMIT | C2T7 | LAST CDNO | | |
| 064956 | | TS | L LAST CNO | Z,X4 | MON A2D | | |
| 064959 | | RESERVE | 1 | | | | |
| 064962 | | TS | C,-1 | RENJMBER | RENUMBER +1 | C | SET RENUMBERING GOING WITH NEW NUMBER. |

P064968 PROCEDURE DURING INSERTION MODE: IGNORE CARD NUMBER ERRORS, SEARCH FOR "END INSERT" CARD, AND PROCESS REAL CRDS.

| | | | | | | | |
|--------|------------|-------------|--------------|--------------|--------------|---|--|
| 064974 | INSRT LUP | TS | - | - | GET CARD | | |
| 064977 | | TS | (INCINS) | RL CD HLTH | BAD MERGE -2 | | REJECT IF "END INSERT" CARD IS MISSING. |
| 064983 | | NA, CHAR1 | REAL CARD | BLANKS | PROC INS | | |
| 064986 | | LA, D12 | NINE | REAL CARD | PROC INS | | |
| 064989 | | NA, C2T7 | REAL CARD +2 | W INSERT | PROC INS | | BRANCH IF INSERTED CARD IS NOT "INSERT". |
| 064995 | | TS | REAL CARD +1 | COMMON | ANAL SUBF | C | |
| 064998 | | NA | COMMON | W END | BAD INSL 2 | | REQUIRED WHILE IN INSERTION MODE. |
| 065004 | | NA | REAL CARD +3 | BLANKS | BAD INSA 2 | | |
| 065007 | | NA | REAL CARD +4 | BLANKS | BAD INSA 2 | | ADDR FLD OF "END INSERT" MUST BE BLANK. |
| 065013 | | TS, CD TYPE | (CARDNO) | RL CD HLTH | C,+3 | | |
| 065016 | BAD INSL 2 | TS, BIT8 | ONES | RL CD HLTH | C,-3 | | |
| 065019 | BAD INSA 2 | TS, BIT9 | ONES | RL CD HLTH | C,-2 | | |
| 065022 | | SS | ZERO | BIT 7 | RL CD HLTH | | CLEAR OUT-OF-SEQUENCE BIT. |
| 065028 | | NA, CHAR2 | RL CD HLTH | ZERO | BAD MERGE | | REJECT "END INSERT" FOR ANY DEFECT. |
| 065034 | | SSL, ONE | SWITCH | 2 | C,+1 | | "BRANCH" IF TOTAL RENUMBERING WAS ON. |
| 06504 | | TS | DELETE CQ -1 | RESTART N +1 | C,+2 | | ENTER PARTIAL RENUMBERING MODE. |
| 065046 | | SS | ZERO | BIT 46R | SWITCH | | |
| 065049 | | TS | L GET REAL | Z,SC | SEND POP0 | C | SEND "END INSERT", LEAVE INSERTION MODE. |
| 065055 | PROC INS | TX | ZERO | - | LAST CDNO | | |
| 065058 | | SWE, CAC3 | L INSR LP | 32 | PROC RTRN | | |
| 065061 | | TS | ZERO | RL CD HLTH | PROC REAL | | NORMAL PROCESSING FOR INSERTED CARDS. |
| 065067 | REST REST | TS | ZERO | RENJMBER | MOVE POP0 | C | OCCUPIES RESTART N +1 IN TOTAL RENUM. |
| 06509 | | TN | INC INSR | 4 | REAL CARD | | AT BAD MERGE -2, SET BAD-INSERT CJSJ. |
| 065093 | | MT | BLANKS | 6 | N,AU2,1 | | |

R0651 COMMON PROCEDURE WHEN MERGING IS GIVEN UP FOR LOST FOR ANY REASON.

| | | | | | | | |
|-------|-----------|--------------|------------|------------|-------------|---|---|
| 0652 | BAD MERGE | TS | SOURCE | Z,X0 | SEND POP0 | C | SEND BAD MERGE CONTROL CARD. |
| 06531 | | SS | BLANKS | CHAR 8 | REAL CARD | | |
| 06532 | | S, MON TYPFR | REAL CARD | SPRA +56 | - | | TYPE MOST OF GUILTY CARD. |
| 0654 | | TN | TASK REJ | 10 | REAL CARD | | |
| 0655 | | TS | END ERR M | RL CD HLTH | SEND POP0 | C | ANNOUNCE REJECTION OF TASK. |
| 0664 | | TS | Z,SC | PROC RTRN | PROC TAPE | | LOOP TO ACCEPT REMAINING TAPE CARDS. |
| 0667 | | TS | Z,SC,3 | Z,53 | GET TAPE | C | ACCEPT ALL TAPE CARDS. |
| 0669 | | TS | - | - | GET CARD | | SEE WHETHER TO THROW OUT REMAINING REAL |
| 0671 | | TS | END YUL +2 | END YUL +1 | END PASS 1 | | CARDS, BEING CAREFUL NOT TO ANNOUNCE |
| 0673 | | TS | REAL CDNO | LAST CDNO | HEAVE HO -2 | | SAME IF THERE ARE NONE. |
| 0675 | | TS | - | - | PROC TAPE | | |

P0676 SUBROUTINE IN PASS 1 TO FIND THE TAPE CARD TO WHICH A MERGE CONTROL CARD REFERS. ENTER WITH RETURN

R0678 PRESET IN MERJ RTRN. EXITS TO BAD MERGE IF NO EXACT CARD NUMBER MATCH IS FOUND BEFORE A SEQUENCE BREAK.

| | | | | | | |
|------|-----------|-------------|-----------|------------|---------------|--|
| 0680 | FIND CDNO | NA | TAPE CDNO | BIT 6 | TC NOT SQB | BRANCH IF TAPE CARD NOT SEQUENCE BREAK. |
| 0682 | | LA | END OF 1 | TAPE CARD | TC NOT SQB -1 | ALWAYS ILLEGAL TO FIND AN "END OF" CARD. |
| 0684 | | NA | TAPE CDNO | REAL CDNO | C,+3 | BRANCH IF REAL CARD NOT SEQUENCE BREAK. |
| 0686 | | NA, CORRECT | SWITCH | ONES | CDN FOUND | BRANCH IF NOT SEEKING BAD CARD NUMBER. |
| 0688 | | TS, BIT 8 | ONES | RL CD HLTH | BAD MERGE | CUSS ILLEGAL LOCATION FIELD. |

| | | | | | | |
|------|--|------------|------|------------|-----------|-----------------------------|
| 0690 | | TS, BIT 10 | ONES | RL CD HLTH | BAD MERGE | CUSS FAILURE TO FIND MATCH. |
|------|--|------------|------|------------|-----------|-----------------------------|

| | | | | | | |
|------|------------|-------------|------------|-----------|--------------|--|
| 0692 | TC NOT SQB | NA | TAPE CDNO | REAL CDNO | PASS TAPE | BRANCH IF NO MATCH YET. |
| 0694 | | NA, CORRECT | SWITCH | ZERO | CDN FOUND +1 | BRANCH IF LOOKING FOR BAD CARD NUMBER. |
| 0696 | | NA | TP CD HLTH | ZERO | PASS TAPE | BAD CARD NUMBER IMPLIES NO MATCH. |

| | | | | | | |
|------|-----------|----|-----------|---|------|--------------------|
| 0698 | CDN FOUND | TX | MERJ RTRN | - | Z,SC | SUCCESSFUL RETURN. |
|------|-----------|----|-----------|---|------|--------------------|

| | | | | | | |
|------|--|----|------------|------|------|---------------------------------------|
| 0700 | | NA | TP CD HLTH | ZERO | C,-1 | BRANCH IF DESIRED BAD CARD NO. FOUND. |
|------|--|----|------------|------|------|---------------------------------------|

| | | | | | | |
|------|-----------|----|------------|-----------|-----------|---------------------------------------|
| 0702 | PASS TAPE | TS | Z,SC | PROC RTRN | PROC TAPE | C PROCESS A TAPE CARD AND LOOK AGAIN. |
| 0703 | | TS | L FIND CDN | Z,SC | GET TAPE | |

R0704 TP RJVOUT IS A (HAPPY) PROCEDURE WHEN REAL CARDS RUN OUT FIRST.

| | | | | | | |
|-------|-----------|--------------|----------|-----------|--------------|--------------------------------------|
| 07041 | TP RJVOUT | NA, MERJMODE | SWITCH | ZERO | C,+2 | BRANCH IF MERGING. |
| 07042 | | TS | Z,SC | PROC RTRN | PROC REAL +1 | PROCESS NEWLY CREATED "END OF" CARD. |
| 07043 | | WA | Z,SC | ONE | PROC RTRN | |
| 07044 | | NA, TAPEKEPT | SWITCH | ZERO | PROC TAPE | PROCESS TAPE CARD IF AVAILABLE. |
| 07045 | | TS | L END P1 | Z,SC | GET TAPE | FETCH FINAL TAPE CARDS. |
| 07046 | | TS | - | - | PROC TAPE | |

R07047 FINAL SEQUENCE CHECKING BEFORE PROCESSING. SEE NEXT PAGE.

| | | | | | | |
|--------|------------|----------|---------|-----------|-----------|---|
| 070475 | VS LAST CN | LA, C2T7 | CARD NO | LAST CDNO | C,+2 | C BRANCH IF POSSIBLE SEQUENCE ERROR. |
| 07048 | | SS | Z,CSC,2 | BIT 7 | HEALTH | C CLEAR POSSIBLE ERROR BIT, TAB TO EXIT. |
| 070485 | | LA | BIT 6 | CARD NO | C,-1 | C ALL IS WELL IF THIS CARD IS A SEQ. BRK. |
| 07049 | | SM | HEALTH | BIT 7 | HEALTH | C INDICATE CARD NUMBER OUT OF SEQUENCE. |
| 070495 | | EX | CARD NO | C2T7 | LAST CDNO | S SET UP NEXT CRITERION AND RETURN. |

R0705 WE GET TO NOT MCCD FOR EVERY REAL CARD THAT IS NOT A MERGE CONTROL CARD.

| | | | | | | |
|-------|----------|--------------|------------|------------|-----------|--|
| 0706 | NOT MCCD | LA | RL CD HLTH | ZERO | C,+2 | |
| 0707 | | TS, CD TYPE | END ERR M | RL CD HLTH | BAD MERGE | CARD NO. ERROR IN REVISION CARDS IS BAD. |
| 0709 | | NA | REAL CDNO | TAPE CDNO | REGLR NEW | BRANCH IF REAL CARD PRECEDES TAPE CARD. |
| 07101 | | NA, CHAR1 | REAL CARD | T COLUMN 1 | C,+2 | |
| 07102 | | TS, CHAR1 | L COLUMN 1 | REAL CARD | REGLR NEW | FORCE SAME IF REAL CARD IS "TUCK-IN". |
| 0711 | | LA | END OF 1 | TAPE CARD | REGLR NEW | FORCE SAME IF TAPE CARD IS "END OF". |
| 0713 | | TS, TAPEKEPT | ZERO | SWITCH | REGLR NEW | OTHERWISE REPLACE TAPE CARD WITH REAL. |

P0715 INTRODUCTION TO THE PROCESSING OF A TAPE CARD. RETURN HAS BEEN SET UP BEFOREHAND.

| | | | | | | | |
|------|-----------|--------------|-----------|---------|------------|---|--|
| 0717 | PROC TAPE | SWE, CAC3 | SOURCE | 16 | Z,X0 | | SET UP ADDRESS OF TAPE CARD. |
| 0719 | | TS | TAPE CDNO | CARD NO | VS LAST CN | C | FINAL CHECK ON TAPE CARD NO. SEQUENCE. |
| 0721 | | TS, TAPEKEPT | ZERO | SWITCH | PROCESS | | UNKEEP AND PROCESS TAPE CARD. |

R0723 INTRODUCTION TO THE PROCESSING OF A REAL CARD. RETURN HAS BEEN SET UP BEFOREHAND.

| | | | | | | | |
|------|-----------|----|-----------|---------|------------|---|--|
| 0725 | PROC REAL | TX | SOURCE | - | Z,X0 | | SET UP ADDRESS OF REAL CARD. |
| 0727 | | TS | REAL CDNO | CARD NO | VS LAST CN | C | FINAL CHECK ON REAL CARD NO. SEQUENCE. |

R0729 PROCESSING OF ALL BUT MERGE CONTROL CARDS BEGINS HERE.

| | | | | | | | |
|------|---------|-------------|-----------|--------|-----------|--|-----------------------------------|
| 0730 | PROCESS | NA, D12 | CARDNO WD | NINE | NOT RIGHT | | BRANCH IF NOT A RIGHT PRINT CARD. |
| 0732 | | TS, CD TYPE | (RIGHTP) | HEALTH | XMIT RTRN | | XMIT RTRN SENDS POPO AND RETURNS. |

| | | | | | | | |
|------|-----------|-------------|-----------|------------|-----------|--|----------------------------------|
| 0734 | NOT RIGHT | NA, CHAR1 | CARDNO WD | R COLUMN 1 | C,+2 | | |
| 0735 | | TS, CD TYPE | (REMARK) | HEALTH | XMIT RTRN | | REMARKS CARD WITH R IN COLUMN 1. |

| | | | | | | | |
|------|--|-------------|-----------|------------|-----------|--|--|
| 0737 | | NA, CHAR1 | CARDNO WD | A COLUMN 1 | C,+2 | | |
| 0738 | | TS, CD TYPE | (ALIREM) | HEALTH | XMIT RTRN | | ALIGNED REMARKS CARD WITH "A" IN COL. 1. |

| | | | | | | | |
|------|--|-------------|-----------|------------|-----------|--|----------------------------------|
| 0740 | | NA, CHAR1 | CARDNO WD | P COLUMN 1 | C,+2 | | |
| 0741 | | TS, CD TYPE | (REMARK) | HEALTH | XMIT RTRN | | REMARKS CARD WITH P IN COLUMN 1. |

| | | | | | | | |
|-------|----------|--------------|-----------|--------------|-----------|--|---|
| 0743 | RENUMALL | NA, CHAR1 | CARDNO WD | L COLUMN 1 | NOT 9RAPI | | SEE PRESERVE CARDNS. |
| 07435 | | PR | | | | | BRANCH IF DASHES SHOULD BE PUT IN DATE. |
| 0744 | | NA, DATEMASK | DATE WORD | BLANKS | C,+2 | | REMARKS CARD (LOG CARD). |
| 0746 | | SSL, ONE | CARDNO WD | 4 | UNMKD LOG | | |
| 0748 | | SS | DASHES | CHAR6 | DATE WORD | | |
| 0749 | | TS, CHAR1 | DASHES | DATE WORD +1 | C,-2 | | |

| | | | | | | | |
|-------|-----------|-------------|----------|--------|-----------|---|---|
| 07492 | UNMKD LOG | TS | (ACCEPT) | HEALTH | SEND POPO | C | SEND A DUMMY ACCEPTOR AHEAD OF A MARKED |
| 07494 | | TS | (REMARK) | HEALTH | XMIT RTRN | | LOG CARD ENTERING AS A MEMBER OF A |
| 07496 | | NA, KNOWSJS | SWITCH | ZERO | C,-2 | | CALLED SUBRO; PASS 2 MARK WILL BE "@". |
| 07498 | | TS | (REMARK) | HEALTH | XMIT RTRN | | |

| | | | | | | | |
|------|-----------|-------------|-----------|----------|--------|--|--|
| 0750 | NOT 9RAPL | NA | CARDNO WD | END OF 1 | C,+2 | | CHECK FOR "END OF" INFORMATION FROM TAPE |
| 0752 | | TS, CD TYPE | (END OF) | HEALTH | END OF | | OR (NEW PROGRAM OR SUBRO) FROM PASS 0. |

| | | | | | | | |
|-------|-----------|-------------|-----------|----------|-----------|---|------------------------|
| 07538 | XMIT RTRN | NA, CD TYPE | HEALTH | (MODIFY) | NON REM | | CHECK FOR MODIFY CARD. |
| 0754 | | TS | PROC RTRN | Z,SC | SEND POPO | C | |

R0755 NON REM CONSTITUTES AN EARLY PERIOD PROCEDURE, SINCE MEMORY CARDS ARE ALLOWED ONLY UNTIL THE
 R0757 FIRST CARD WHICH IS NOT A REMARKS OR RIGHT PRINT CARD OR A MEMORY CARD. IN SEGMENT ASSEMBLIES, ONE SEGNUM CARD
 R0759 IS REQUIRED IN THE EARLY PERIOD. THESE EARLY PERIOD OP CODES MUST BE DISCOVERED AT NON REM OR SEGNUM 0.

| | | | | | | | |
|------|---------|---------|----------|----------|----------|--|---------------------------------|
| 0760 | NON REM | NA,C2T7 | OP FIELD | W MEMORY | SEGNJM 0 | | BRANCH IF EARLY PERIOD IS OVER. |
|------|---------|---------|----------|----------|----------|--|---------------------------------|

P0762 TWO PAGES OF PROCESSING FOR FIXED MEMORY, ERASABLE MEMORY, OR SPEC/NON MEMORY CODE CARDS.

| | | | | | | | |
|------|------------|-------------|--------------|---------------|---------------|---|--|
| 0764 | | TS | Z,SC | Z,X4 | ADR FIELD | | DECODE ADDRESS FIELD. |
| 0766 | | LA | ONES | FIELD COD | BAD MEM AD | | ABORT IF MEANINGLESS ADDRESS FIELD. |
| 0768 | | NA, B2B6 | FIELD COD | ONES | BAD MEM AD | | REJECT IF 1ST SUBFIELD NOT UNSIGNED NUM. |
| 0773 | | SWS, CAC2 | ADR WD | 16,L | HEALTH | | STORE LOWER LIMIT. |
| 0775 | | NA | FIELD COD +1 | ZERO | C,+2 | | BRANCH IF THERES A SIGNED NUMERIC PART. |
| 0777 | | TS | ADR WD | ADR WD +1 | WHICH MEM | | UPPER AND LOWER LIMITS ARE EQUAL. |
| 0782 | | NA, BIT 5 | FIELD COD +1 | ZERO | WHICH MEM -1 | | MINUS MEANS THRU IN THIS CASE. |
| 0784 | | LA, FIX MAG | LOW LIM | HI LIM | WHICH MEM | | NEW NAMES FOR ADR WD AND ADR WD +1. |
| 0786 | BAD MEM AD | TS, BIT 11 | ONES | HEALTH | MEM EXIT | | PROCEDURE WHEN ADDRESS IS MEANINGLESS. |
| 0788 | | TS, BIT 12 | ONES | HEALTH | MEM EXIT | | PROCEDURE WHEN ADDRESS IS TOO BIG. |
| 0790 | | BA | ADR WD | ADR WD +1 | ADR WD +1 | | FORM UPPER LIMIT WHEN MODIFIER IS PLUS. |
| 0792 | WHICH MEM | LA, FIX MAG | ADR LIMIT | HI LIM | BAD MEM AD +1 | | BRANCH IF UPPER TOO BIG FOR MACHINE. |
| 0794 | | SS | HI LIM | CAC3 | HEALTH | | STORE UPPER LIMIT. |
| 0796 | | TS | LOC FIELD | COMMON | ANAL SUBF | C | |
| 0797 | | NA | FIELD COD | BIT 1 | NO MEM TYP | | REJECT IF NOT SYMBOLIC. |
| 0799 | | TS | L TYP TAB | Z,X4 | SET M TYDE | C | |
| 0800 | | NN | LOW LIM | ZERO | LL NZ | | |
| 0801 | | TS | Z,X4 | Z,X5 | LL ZERO | | |
| 0802 | SET M TYPE | NA | COMMON | W ST TYPES | C,+2 | C | |
| 0803 | | SWS, LSTYPE | ONE | 25 | ADR WD +1 | | ATTACH ERASABLE CODE TO UPPER LIMIT. |
| 0805 | | NA | COMMON | W ST TYPES +1 | C,+2 | C | |
| 0806 | | SWS, LSTYPE | ONE | 26 | ADR WD +1 | | ATTACH FIXED CODE TO UPPER LIMIT. |
| 0808 | | NA | COMMON | W ST TYPES +2 | C,+2 | C | |
| 0809 | | SWS, LSTYPE | ONE | 27 | ADR WD +1 | | ATTACH SPEC/NON CODE TO UPPER LIMIT. |
| 0811 | NO MEM TYP | TS, BIT 8 | ONES | HEALTH | MEM EXIT | | REJECT ILL-FORMED MEMORY CARD. |
| 0813 | LL ZERO | LA, CAC3 | 4,0 | HI LIM | C,+2 | | DOES REQ COVER ALL 1ST PRESENT CATEGORY. |
| 0815 | | TS | ZERO | COMMON | CHECK TM1 | | NO, IT COVERS LESS. |
| 0817 | | TS, LSTYPE | HI LIM | 4,0 | FIND TM +1 | | PUT REQ TYPE IN 1ST CATEGORY. |
| 0819 | LL NZ | WD | LOW LIM | ONE | LOW LIM | | USE REDUCED LOWER LIMIT. |
| 0821 | | LA, CAC3 | LOW LIM | 4,0 | C,+2 | | FIND FIRST CATEGORY AFFECTED BY REQUEST. |
| 0823 | | TS | Z,X4,1 | - | C,-1 | | |
| 0824 | FIND TM | TS | Z,X4 | Z,X5 | CHK HI LIM | | BEGIN SEARCH FOR LAST AFFECTED CATEGORY. |
| 0826 | | NA | Z,X6,1 | END TYP TA | CHK HI LIM | | BRANCH IF UPPER LIMIT ISNT MAX ADDRESS. |
| 0828 | | NA | Z,X4 | END TYP TA | CHK HI LIM -2 | | BR IF REQ COVERS MORE THAN FINAT CATEG. |
| 0830 | | NA, LSTYPE | HI LIM | 4,0 | C,+2 | | BRANCH IF REQUEST IS NON-TRIVIA. |

P0832 EXIT FOR MEMORY CARDS WITH ANY FAULT.

| | | | | | | |
|------|------------|---------------|------------|------------|---------------|---|
| 0833 | MEM EXIT | TS, CD TYPE | (MEMORY) | HEALTH | XMIT RTRN | |
| 0834 | | BS | ZERO | ONE | COMMON | PREPARE TO LENGTHEN TABLE BY 1 PLACE. |
| 0836 | | TS | CAC3 | TN MASK | COMPUTE N -1 | PREPARE TO USE LOWER LIMIT. |
| 0838 | | TX | END TYP TA | - | Z,X6 | UNDO INCREMENT. |
| 0840 | | TS, LSTYPE | HI LIM | 6,0 | C,+2 | ATTACH REQ TYPE TO FINAL CATEGORY. |
| 0842 | CHK HI LIM | LA, CAC3 | 6,0 | HI LIM | FIND TM +1 | SEARCH FOR LAST AFFECTED CATEGORY. |
| 0844 | | BS | Z,X6 | Z,X4 | COMMON | COMPUTE DIRECTION AND EXTENT OF SHIFT. |
| 0846 | | NA, LSTYPE | HI LIM | 4,0 | CHECK TM2 | BRANCH IF NO TYPE MATCH ON LOWER SIDE. |
| 0848 | CHECK TM1 | NA, LSTYPE | HI LIM | 6,0 | C,+2 | BR IF TYPE MATCH ON LOWER, NOT UPPER. |
| 0850 | | TS | ZERO | TN MASK | CHECK TM > +3 | USE NEITHER LIMIT IF BOTH TYPE MATCHES. |
| 0852 | | TX | HI LIM | - | LOW LIM | USE UPPER LIMIT ONLY. |
| 0854 | | TS | ONES | TN MASK | C,+3 | |
| 0855 | CHECK TM2 | TX | CAC3 | - | TN MASK | USE LOWER LIMIT NORMALLY. |
| 0857 | | NA, LSTYPE | HI LIM | 6,0 | C,+3 | BR IF NO TYPE MATCH EITHER SIDE. |
| 0859 | | BS | COMMON | ONE | COMMON | INCREMENT EXTENT OF SHIFT. |
| 0861 | | TS | ZERO | TN MASK +1 | COMPUTE N | USE LOWER LIMIT ONLY. |
| 0863 | | BS | COMMON | TWO | COMMON | INCREASE EXTENT OF SHIFT BY 2. |
| 0865 | | TX | ONES | - | TN MASK +1 | USE UPPER LIMIT NORMALLY. |
| 0867 | COMPUTE N | LA, CAC3 | COMMON | ZERO | MOV TABLE +1 | BRANCH IF EXTENT OF SHIFT IS ZERO. |
| 0869 | | BS | Z,X6 | END TYP TA | COMMON +1 | THE NUMBER OF WORDS SHIFTED IS THE |
| 0871 | | BS | COMMON +1 | ONE | COMMON +1 | NUMBER OF CATEGORIES FROM THE LAST |
| 0873 | | SWS, COUNTFLD | COMMON +1 | 18,L | MOV TABLE | AFFECTED CATEGORY ONWARD. |
| 0875 | | LN | COMMON | ZERO | SHORTEN | BRANCH TO COMPRESS TABLE. |
| 0877 | LENGTHEN | WD | END TYP TA | SPEC SIGN | Z,X6 | FORM NEGATIVE ADDRESSES TO SHIFT FWD. |
| 0879 | | WA | Z,X6 | COMMON | Z,CSC | |
| 0880 | | LA | Z,CSC | ST TAB MAX | MOV TABLE | |
| 0881 | | TS, BIT 13 | ONES | HEALTH | MEM EXIT | BAD EXIT IF LENGTHENING GOES TOO FAR. |
| 0883 | SHORTEN | WD | Z,X6 | COMMON | Z,CSC | FORM POSITIVE ADDRESSES TO SHIFT BWD. |
| 0885 | MOV TABLE | TN | N,X6 | 0 | N,CSC | SHIFT PART OF TABLE AS DESCRIBED. |
| 0887 | | SS | LOW LIM | TN MASK | N,X4,1 | FILL IN LOWER LIMIT OF REQ. |
| 0889 | | SS | HI LIM | TN MASK +1 | N,X4 | FILL IN UPPER LIMIT OF REQ. |
| 0891 | | BS | END TYP TA | COMMON | END TYP TA | COMPUTE NEW END OF TABLE. |
| 0893 | | TS, CD TYPE | (MEMORY) | HEALTH | XMIT RTRN | |

P089301 PROCEDURE TO RESPOND TO THE OP CODE "SEGNUM", WHICH MUST OCCUR ONCE IN THE EARLY PERIOD OF A SEGMENT
R089303 ASSEMBLY. ITS FUNCTION IS TO NAME THE PROGRAM THAT THE SEGMENT IS TO RUN WITH, THAT IS, THE PROGRAM THAT "OWNS"
R089305 THE SEGMENT. THE RESULT OF THIS PROCESSING IS TO GARNISH THE ASSEMBLY LISTING WITH THE NAME OF THE OWNER, AND
R089307 PLACE THE NAME OF THE OWNER INTO SEG OWNER, WHERE THE TAPE-READING GROUP WILL FIND IT AND ENTER THAT PROGRAM'S
R089309 ENTIRE SYMBOL TABLE INTO THE SEGMENT ASSEMBLY.

| | | | | | | | |
|-------------------|-------------|------------------|-------------------|----------------------|-----------------------------|---|-------------------|
| 08931 | SEGNUM Q | NA, C2T7 | OP FIELD | W SEGNUM | END EARLY | IF NOT MEMORY OR SEGNUM, END EARLY PER. | |
| 089314 | | EX | SWITCH | BIT 7 | COMMON | | |
| 089316 | | LA | COMMON | ZERO | END EARLY | BAD NEWS IF NOT SEGMENT ASSEMBLY. | |
| 08932 | | TS | LOC FIELD | COMMON | ANAL SUBF | C LOC FIELD SHOULD NAME OWNING PROGRAM. | |
| 089324 | | TX, CD TYPE | (SEGNUM) | - | HEALTH | | |
| 089326 | | NA | FIELD COD | BIT 1 | BAD SEGNO | NAME OF OWNER MUST LOOK LIKE A SYMBOL. | |
| 08933 | | TX | L COMP NAM | - | Z,X4 | | |
| 089332 | | SWS, THREAD10 | N,X4 | 12 | Z,X4 | POINT TO NAME OF THIS SEGMENT. | |
| 089336 | | NA | Z,X4 | L END THR | C,+3 | BRANCH TO CONTINUE SEARCH FOR OWNER. | |
| 08934 | BAD SEGNO | SS | ZERO | BIT 7 | SWITCH | ABANDON ATTEMPT AT SEGMENT ASSEMBLY. | |
| 089344 | | TS, BIT 8 | ONES | HEALTH | END SEGNO | CUSS AND DO IT AS PROGRAM ASSEMBLY. | |
| 089348 | | SS | 4,1 | THREAD10 | Z,X4 | FOLLOW THREAD TO NEXT PROG OR SEG. | |
| 089352 | | NA | N,X4 | COMMON | BAD SEGNO -2 | BRANCH IF DIDN'T FIND NAME OF OWNER. | |
| 089356 | | SWS, C7T8 | 4,1 | 24 | HEALTH | FIRST ASSUME THAT OWNER HAS NO SUBRODS. | |
| 08936 | | SSL, ONE | 4,1 | 23 | C,+1 | C BRANCH TO GET REV NUMBER IF IT DOES. | |
| 089364 | | SSL, ONE | 4,1 | 12 | C,+3 | | |
| 089366 | | SS SM | HEALTH | L DIRECTY | THREAD TO HEALTH | Z,X4 | 2, AUI |
| 089368 | | SWS, C7T8 | N,X4 | 36 | HEALTH | S FETCH REV NO FROM 1ST SUB THREAD WORD. | |
| 089372 | | TS | COMMON | SEG OWNER | C,+2 | IF PROGRAM, IT'S A PROPER OWNER. | |
| 089376 | | TS | - | - | BAD SEGNO | IF SUBROUTINE, IT AIN'T. | |
| 08938 * | | TX | W OWNER EQ | - | OLD LINE +14 | | |
| 089382 | | TX | SEG OWNER | - | OLD LINE +15 | ANNOUNCE OWNER ON COVER SHEET. | |
| 089386 | | SWS, CHAR3 | SEG OWNER | A,1,L | PAGE HEAD +13 | | |
| 089388* | | SWS, CHAR1 | SEG OWNER | A,1,L | PAGE HEAD +14 | | |
| 08939 * | | SWS, C2T7 | SEG OWNER | A,1,L | PAGE HEAD +14 | DECORATE PAGE HEAD SIMILARLY. | |
| 089394 | END SEGNO | TS | LATE MEM | SEGNUM Q +3 | XMIT RTRN | ALLOW JUST ONE SEGNUM CARD PER SEGMENT. | |

P0894 END EARLY IS EXECUTED AS SOON AS A CARD IS FOUND WHICH DOES NOT BELONG TO THE EARLY PERIOD.

0896 END EARLY TX CHECK OP - NON REM INHIBIT SPECIAL CHECK FOR "MEMORY" CODE.

R0898 GENERAL OPERATION CODE CHECKING BEGINS HERE.

| | | | | | | | |
|------|----------|----------|-----------|--------|-----------|---|-------------------------------|
| 0899 | CHECK OP | TS | BLANKS | COMMON | C,+1 | | |
| 0900 | | TS, C2T7 | OP FIELD | COMMON | ANAL SUBF | C | ANALYZE OPERATION CODE FIELD. |
| 0902 | | LA | FIELD COD | ZERO | OP SEARCH | | |

| | | | | | | | |
|------|--|----|------------|-------|------------|--|----------------------------------|
| 0903 | | NA | FIELD COD | BIT 1 | NON SYM OP | | BRANCH IF OP FIELD NOT SYMBOLIC. |
| 0905 | | TS | N L CHAR 6 | Z,53 | SYMBOL OP | | INITIALIZE ASTERISK SEARCH. |

| | | | | | | | |
|------|------------|-------------|-----------|------------|----------|--|--|
| 0907 | NON SYM OP | NA, BIT6 | FIELD COD | ONES | ILLEGOP | | SIGNED NUMERIC OP IS ILLEGAL. |
| 0909 | SHIFT NOP | SPS, B22T32 | COMMON +1 | 0 | HEALTH | | SHIFT COUNT IS FILLED IN WHEN LOADING. |
| 0911 | | LN | COMMON +1 | MAX NUM OP | INSTRUCT | | BRANCH IF NUM OP HAS OK SIZE. |

| | | | | | | | |
|-------|---------|-------------|---------|-----------|--------------|---|--------------------------------------|
| 09122 | ILLEGOP | SS | TYPE F | L STYPE | SWITCH | | |
| 0913 | | TS | ZERO | LOC STATE | BLNK LOCN | C | |
| 0917 | | TS, CD TYPE | (ILLOP) | HEALTH | REG INCON +1 | | ADVANCE LOC CTR FOR ILLEGAL OP CODE. |

| | | | | | | | |
|------|-----------|-------------|--------|----------|--------|--|---------------------------------------|
| 0919 | | NA, ALFMASK | COMMON | BLANKS | C,+2 | | BRANCH WHEN RIGHTMOST NBC FOUND. |
| 0921 | SYMBOL OP | TS | N,53,1 | ALF MASK | C,-1 | | FIND RIGHTMOST NBC BY SHIFTING MASK. |
| 0923 | | NA, ALFMASK | COMMON | ASTRISKS | C,+3 | | BRANCH IF THERE IS NO RIGHT ASTERISK. |
| 0925 | | SM | HEALTH | BIT 11 | HEALTH | | SIGNAL ASTERISK FOUND. |
| 0927 | | SS | BLANKS | ALF MASK | COMMON | | BLANK OUT SAME. |

| | | | | | | | |
|------|-----------|-------------|-----------|----|------|--|-------------------------------------|
| 0929 | OP SEARCH | TX | M OP THRS | - | Z,X4 | | |
| 0930 | | SWS, B22T25 | COMMON | 17 | C,+1 | | USE BITS 5-8 OF OPERATION SYMBOL TO |
| 0932 | | SWE, ONES | 4,0 | 0 | Z,X4 | | INDEX INTO NON-THREADED LIST. |

| | | | | | | | |
|------|----------|------------|--------|------|---------|--|-------------------------------------|
| 0934 | | TX | Z,5C,1 | - | - | | |
| 0935 | SPECL OP | LA | N,X4,1 | ZERO | ILLEGOP | | ZERO WORD SIGNIFIES END OF SUBLIST. |
| 0937 | | NA, C1T6 | COMMON | 4,0 | C,-1 | | OP CODE TABLE SEARCH. |
| 0939 | | NA, BIT 37 | 4,0 | ZERO | C,+2 | | BRANCH ON MACHINE CODE FOUND. |

| | | | | | | | |
|------|--|----|------|--------|------|--|--|
| 0941 | | SS | N,X4 | B38T48 | Z,5C | | GO TO APPROPRIATE CLERICAL CODE ROUTINE. |
|------|--|----|------|--------|------|--|--|

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|------|----------|-------------|------|------|--------|--|---|
| 0943 | OP FOUND | SWS, B22T32 | N,X4 | 16,L | HEALTH | | STORE OP CODE XLATION AND CONTROL INFO. |
|------|----------|-------------|------|------|--------|--|---|

R0945 PASS 1 PROCESSING FOR INSTRUCTIONS AND SINGLE-PRECISION CONSTANTS.

| | | | | | | | |
|------|----------|-------------|---------|--------|------|--|--|
| 0946 | INSTRJCT | TS, CD TYPE | (INSTR) | HEALTH | C,+3 | | |
|------|----------|-------------|---------|--------|------|--|--|

| | | | | | | | |
|------|---------|-------------|---------|--------|------|--|--|
| 0947 | DECIMAL | TS, CD TYPE | (DECML) | HEALTH | C,+2 | | |
|------|---------|-------------|---------|--------|------|--|--|

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|------|-------|-------------|---------|---|--------|--|--|
| 0948 | OCTAL | TX, CD TYPE | (OCTAL) | - | HEALTH | | |
|------|-------|-------------|---------|---|--------|--|--|

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|------|--|-----------|-----------|------------|-----------|---|--|
| 0949 | | SS | TYPE F | L STYPE | SWITCH | | ALL INSTRS AND CONSTS GO INTO FIXED MEM. |
| 0951 | | NA, CHAR1 | CARDNO WD | J COLUMN 1 | REG INCON | | BRANCH IF NOT LEFTOVER. |
| 0953 | | TS | Z,5C,1 | - | LFTVR LOC | C | TRANSLATE LOCATION FIELD. |

| | | | | | | | |
|------|-----------|----|--------|-----------|----------|---|-----------------------------------|
| 0955 | REG INCON | TS | ZERO | LOC STATE | LOCATION | C | TRANSLATE REGULAR LOCATION FIELD. |
| 0957 | | SM | HEALTH | LOC STATE | HEALTH | | STORE RESULTS OF TRANSLATION. |

| | | | | | | | |
|------|--|----|---|---|-----------|--|--|
| 0959 | | TS | - | - | XMIT RTRN | | |
|------|--|----|---|---|-----------|--|--|

P0960 PROCEDURES FOR THE CLERICAL FUNCTIONS REPRESENTED BY "IS", "=", OR "EQUALS" (AND ITS VARIANTS "=PLUS"
 R0962 AND "=MINUS"), AND BY "LOC" OR "SETLOC". THESE CODES MAY HAVE ANY ADDRESS FORMAT ACCEPTABLE FOR INSTRUCTIONS,
 R0964 EXCEPT THAT ANY ADDRESS SYMBOL IN A SETLOC CARD MUST BE PREDEFINED. THE "=PLUS" AND "=MINUS" CODES DIFFER FROM
 R0966 "EQUALS" ONLY IN ADDING OR SUBTRACTING THE LOCATION COUNTER TO (FROM) THE ADDRESS FIELD VALUE. IF EQUALS FAILS
 R0968 TO DEFINE ITS LOCATION SYMBOL BY REASON OF AN UNDEFINED (NOT ILL-DEFINED) ADDRESS SYMBOL, IT KEEPS THE MODIFIER,
 R0970 AND PASS 1.5 TRIES TO MAKE THE DEFINITION, UNTIL WHICH TIME THE SYMBOL IS SAID TO BE NEARLY DEFINED. THE
 R0972 ADDRESS GENERATED FOR SETLOC MUST BE IN FIXED OR GENERAL ERASABLE MEMORY. SETLOC FAILURE LEAVES LOC CTR ALONE.

| | | | | | | |
|--------|------------|-------------|--------------|-----------|---------------|--|
| 0974 | IS EQJALS | TS | ZERO | LOC LOC | C,+3 | ENTRY FOR IS, =, EQUALS. |
| 09742 | EQJ MINUS | TS | LOC CTR | LOC LOC | C,+2 | ENTRY FOR =MINUS. |
| 09744 | EQJ PLUS | BS | ZERO | LOC CTR | LOC LOC | ENTRY FOR =PLUS. |
| 0975 | | TS, CD TYPE | (EQUALS) | HEALTH | C,+3 | |
| 0976 | SETLOC | TX, CD TYPE | (SETLOC) | - | HEALTH | ENTRY FOR LOC, SETLOC. |
| 09772 | | TX | ZERO | - | LOC LOC | |
| 0978 | | NA, BIT 11 | HEALTH | ZERO | ILLEGOP | ASTERISK MAKES ILLEGAL OP. |
| 0982 | DECOD ADR | TS | Z,SC | Z,X4 | ADR FIELD | DECODE ADDRESS FIELD. |
| 0984 | | NA | FIELD COD | ONES | C,+2 | |
| 0985 | | TS, BIT 13 | ONES | HEALTH | NO ADDRESS | ABORT IF MEANINGLESS ADDRESS FIELD. |
| 09862 | | LA, FIX MAG | ONES | LOC LOC | CH IL SIZE +1 | BAD LOC CTR KILLS =PLUS AND =MINUS NOW. |
| 098622 | | NA | FIELD COD | ZERO | COMBIN LC -1 | |
| 098624 | | TS | B2 B6 | FIELD COD | BAD LOC Q C | IF BLANK ADR FIELD, FAKE UP ABSOLUTE. |
| 098626 | | BS | ZERO | LOC CTR | ADR WD | |
| 09864 | | TX | BIT 2 | - | FIELD COD +1 | |
| 09865 | | TS | LOC LOC | ADR WD +1 | COMBIN LC +1 | FAKE UP A MODIFIER IF IT LACKS ONE. |
| 098655 | | LA | FIELD COD +1 | ZERO | C,-2 | |
| 09866 | COMBIN LC | BA | ADR WD +1 | LOC LOC | ADR WD +1 | COMBINE LOC CTR WITH EXISTING MODIFIER. |
| 09867 | | SWS, BITS | ADR WD +1 | 1 | FIELD COD +1 | SET UP SIGN OF NET MODIFIER. |
| 0987 | | LA, B2B6 | ONES | FIELD COD | IL MODIF Q | BRANCH IF MAIN PART IS UNSIGNED NUMERIC. |
| 0999 | | LA | BIT 1 | FIELD COD | SYM IS LOC | BRANCH IF ADDRESS FIELD CONTAINS A SYM. |
| 1001 | BAD LOC Q | LA | ONES | LOC CTR | CH IL SIZE +1 | BRANCH IF LOCATION COUNTER IS BAD. |
| 1002 | | BS | ADR WD | LOC CTR | ADR WD | FORM ADDRESS RELATIVE TO L.C. SETTING. |
| 1004 | IL MODIF Q | BA | ADR WD | ADR WD +1 | ADR WD | ADD MODIFIER PART TO UNSIGNED NUMERIC. |
| 1006 | | TS | ADR WD | LOC LOC | CH IL SIZE | GO TO TEST SIZE OF NUM + MODIFIER. |

P10079 EXAMINE CONDITION OF ADDRESS SYMBOL IN EQJALS OR SETLOC.

| | | | | | | | |
|-------|------------|------------|-----------|-----------|-----------|---|--|
| 1008 | SYM IS LOC | TS | ADR WD | COMMON | ANAL SYMR | C | ANALYZE ADDRESS SYMBOL HISTORY. |
| 1010 | | NA | COMMON +2 | ONES | C,+2 | | |
| 1011 | | TS, BIT16 | ONES | HEALTH | NO ADRESS | | EXIT IF SYMBOL TABLE IS FULL. |
| 10128 | | FBS | Z,X2 | BIT 25 | ETS | | |
| 1013 | | SWS, CAC2 | ETS | 16,L | HEALTH | | STORE ADDRESS OF ADDRESS SYMBOL. |
| 1015 | | LA | 3 D8 | COMMON +2 | C,+3 | | |
| 10151 | | LA | COMMON +2 | ZERO | C,+2 | | |
| 1016 | | TS, BIT 12 | ONES | HEALTH | NO ADRESS | | SIGNAL ADDRESS NEARLY DEFINED. |
| 1018 | | SWE, D12 | COMMON +2 | 16 | Z,S0 | | USE HEALTH OF SYMBOL... |
| 1020 | FIND XFRM | WA | Z,S0 | L XFORMS | Z,S0 | | ...TO FIND TRANSFORM. |
| 1022 | | SSL, ONE | N,S0 | 44 | C,+1 | | TEST PREDEFINITION BIT. |
| 1024 | | TS, BIT 11 | ONES | HEALTH | NO ADRESS | | SIGNAL ADDRESS UNDEFINED AS YET. |
| 1026 | | SSL, ONE | N,S0 | 45 | C,+1 | | TEST DEF/NO-DEF BIT. |
| 1028 | | TS, BIT 14 | ONES | HEALTH | NO ADRESS | | SHOW OVERSIZE/ILL-DEFINED ADDR SYMBOL. |

| | | | | | | | |
|------|--|----|-----------|-----------|---------|--|------------------------------------|
| 1032 | | EX | COMMON +2 | CAC3 | LOC LOC | | |
| 1038 | | BS | LOC LOC | ADR WD +1 | LOC LOC | | ADD MODIFIER TO SYMBOL DEFINITION. |

R10391 CHECK ON SIZE OF ADDRESS FIELD VALUE, AND, IF SETLOC, ON MEMORY TYPE AND CONFLICT AS WELL.

| | | | | | | | |
|------|------------|-------------|-----------|----------|-----------|---|--|
| 1040 | CH IL SIZE | LA, FIX MAG | LOC LOC | MAX ISEQ | C,+2 | | |
| 1041 | | TS, BIT 14 | ONES | HEALTH | NO ADRESS | | OVERSIZE FROM ALL PATHS BUT UNDEF. |
| 1045 | | SS | LOC LOC | CAC3 | HEALTH | | |
| 1046 | | LA, CD TYPE | HEALTH | (EQJALS) | ISEQ LSYM | | BRANCH FOR NORMAL IS,= PATH. |
| 1048 | | TX | L TYP TAB | - | Z,X5 | | |
| 1049 | | LA, CAC3 | HEALTH | 5,0 | C,+2 | | LOOK UP MEMORY TYPE FOR SETLOC. |
| 1051 | | TS | Z,X5,1 | - | C,-1 | | |
| 1052 | | NA, L STYPE | 5,0 | TYPE N | C,+2 | | |
| 1053 | | TS, BIT 10 | ONES | HEALTH | NO SETLOC | | SIGNAL SETLOC TO SPEC/NON MEMORY. |
| 1055 | | EX | HEALTH | CAC3 | LOC CTR | | CHIEF NORMAL ACTION OF SETLOC. |
| 1057 | ND SETLOC | NA | LOC FIELD | BLANKS | C,+2 | | |
| 1058 | | TS | PROC RTRN | Z,SC | SEND POPN | C | AS PER XMIT RTRN. |
| 1060 | | TS, BIT 8 | ONES | HEALTH | XMIT RTRN | | CUSS ABOUT NON-BLANK LOC FIELD IN LOC. |
| 1071 | NO ADRESS | NA, CD TYPE | HEALTH | (EQJALS) | NO SETLOC | | MAKE FAULTY SETLOC VOID. |
| 1073 | | TS | ONES | LOC LOC | ISEQ LSYM | | SIGNAL NO DEFINITION FOR LOCSYM OF IS,=. |

R10751 CONFLICT-CHECKING LOOP FOR POSTDEFINITION OF LEFTOVERS BY IS OR = (CALLED FROM LEFTYPER-1).

| | | | | | | | |
|--------|-----------|-----|-----------|--------|--------------|---|---------------------------------------|
| 10753 | ISL CONFQ | TS | COMMON +2 | Z,AJ1 | C,+3 | | |
| 10754 | | LA | HI LIM | Z,AJ1 | IT IS | | EXIT (SO IS CHANGED IF ANY CONFLICT). |
| 107542 | | WA | Z,AU1 | ONE | Z,AU1 | | |
| 10755 | | TS | Z,AU1 | COMMON | AVAIL 2 | C | SCAN FORWARD THROUGH LEFTOVER BLOCK. |
| 10756 | | LA | BIT 32 | COMMON | ISL CONFQ +1 | | BRANCH IF NO CONFLICT THIS TIME. |
| 10757 | | TS | Z,SC | Z,S0 | ISL CONFQ +1 | | FORCE SPECIAL TRANSFORM IF CONFLICT. |
| 10758 | | DEC | -B00 000 | | | | |

P1076 THE FOLLOWING SECTION DEALS WITH THE LOCATION SYMBOL OF AN IS, =, OR EQUALS CARD ACCORDING TO THE DISPOSITION OF
R1078 THE ADDRESS FIELD.

| | | | | | | | |
|-------|------------|-------------|-----------|-----------|--------------|---|--|
| 1079 | ISEQ LSYM | TS | LOC FIELD | COMMON | ANAL SUBF | C | ANALYZE LOCATION FIELD OF IS, =, EQUALS. |
| 1081 | | NA | FIELD COD | BIT 1 | XMIT RTRN | | SIGNAL ERROR IF NOT SYMBOLIC, AND EXIT. |
| 1083 | | TS, BIT8 | ONES | HEALTH | ANAL SYMB | C | SIGNAL SYMB LOCN, GET SYMBOL HISTORY. |
| 10842 | | NA | COMMON +2 | ONES | C,+3 | | |
| 1085 | | SM | HEALTH | BIT 15 | HEALTH | | |
| 1086 | | TS | PROC RTRN | Z,SC | SEND POPN | C | ABORT IF SYMBOL TABLE IS FULL. |
| 1088 | | TS | COMMON | COMMON +1 | FIND XFRM -1 | C | |
| 1089 | | TX | Z,1 | - | COMMON +3 | C | SAVE SYMBOL, GET ADDRESS OF TRANSFORM. |
| 10901 | | LA | COMMON +2 | 2 D8 | IT IS -1 | | |
| 10932 | | NA, D8 | COMMON +2 | 5D8 | IT IS -1 | | BRANCH IF LOC SYM WAS NOT LEFTOVER. |
| 10934 | | NA | LOC LOC | ONES | C,+3 | | BRANCH IF AN OK DEFINITION WAS MADE. |
| 10936 | | SM | N,X2 | D4 | N,X2 | | THROW UP HANDS IF EQUALS FAILED TO DEF. |
| 1094 | | TS | - | - | NOT OK DEF | | |
| 1098 | | SSL, ONE | COMMON +2 | 15 | C,+1 | | |
| 1099 | | TS | TYPE F | COMMON | C,+2 | | WHEN SYMBOL GOES WITH LEFTO CON OR INST. |
| 1101 | | TX | TYPE E | - | COMMON | | WHEN SYMBOL GOES WITH LEFTOVER ERASE. |
| 1103 | | TX | L TYP TAB | - | Z,X5 | | |
| 1104 | | LA, CAC3 | LOC LOC | 5,0 | C,+2 | | BRANCH WHEN MEMORY TYPE IS KNOWN. |
| 1106 | | TS | Z,X5,1 | - | C,-1 | | |
| 1107 | | NA, LSTYPE | 5,0 | COMMON | LEFTYPER | | BR IF LEFTOVER EQUATED TO WRONG TYPE. |
| 1109 | | EX | COMMON +2 | SPEC MAG | COMMON | | |
| 1110 | | WA, FIX MAG | COMMON | LOC LOC | HI LIM | | FORM END OF LEFTOVER BLOCK. |
| 1112 | | LA, CAC3 | HI LIM | 5,0 | ISL CONF | | BR IF MEM TYPE OK FOR WHOLE BLOCK. |
| 1114 | LEFTYPER | TS, D8 | DD8 | COMMON +2 | IT IS +1 | | INDICATE TYPE ERROR IN SYMBOL TABLE. |
| 1116 | NOT OK DEF | NA, BIT 13 | HEALTH | ONES | C,+2 | | |
| 1117 | | TS, D8 | ONES | COMMON +2 | END IS | | MEANINGLESS ADDRESS MAKES HEALTH = G. |
| 1119 | | NA, BIT 14 | HEALTH | ONES | C,+3 | | |
| 1120 | EQ OVSZ | SWS, D8 | N,50 | D,1,L | COMMON +2 | | USE TRANSFORMS FOR OVERSIZE DEFINITION. |
| 1122 | | TS | - | - | END IS | | |

P1123 IF THE ONLY TROUBLE WITH AN EQUALS CARD IS AN UNDEFINED ADDRESS SYMBOL, MAKE PASS 1.5 TRY TO FIX IT UP.

| | | | | | |
|--------|-------------|------------|-----------|------------|--|
| 11235 | LA, FIX MAG | ADR WD +1 | SPEC MAG | C,+2 | |
| 11236 | TS, BIT 14 | ONES | HEALTH | EQ OVSZ | BEING SIGNED, MODIFIER IS 15 BITS. |
| 11238 | SWE, CAC3 | ADR WD +1 | 1,L | COMMON +2 | STORE MODIFIER WITH SIGN AT RIGHT END. |
| 1124 | DEFINER Q | SWE, CAC3 | HEALTH | 16 | ETS |
| 11242 | SWS, CAC12 | ETS | 32,L | COMMON +3 | |
| 11243 | LA | ETS | ZERO | NEARLY | BRANCH IF DEFINER DIDN'T FIT IN TABLE. |
| 112445 | EBA | ETS | BIT 25 | Z,X5 | |
| 11245 | SWS, CAC2 | 5,1 | 16,L | COMMON +3 | DEFINER'S 1ST DEFINEE IS OUR CO-DEFINEE. |
| 112465 | EBS | Z,X2 | BIT 25 | ETS | |
| 11247 | SS | ETS | CAC3 | 5,1 | THIS SYM IS NOW DEFINER'S 1ST DEFINEE. |
| 11251 | LA | N,X2 | CAC3 | NEARLY | BRANCH IF THIS IS THE FIRST DEFINITION. |
| 11252 | LA | END SY TAB | SYM PLACE | NEARLY | |
| 112522 | NA | SYM PLACE | SPEC MAG | C,+2 | |
| 112524 | WA | SYM PLACE | THREE | SYM PLACE | SKIP OVER 32K STOPPER. |
| 11253 | WA, CAC3 | SYM PLACE | ONE | 5,1 | THIS MULT. DEF. WILL GET A NEW HOME. |
| 11254 | S, ETS | 3,0 | ZX +4 | C,+1 | POINT TO MULT. DEF. INTRODUCTION. |
| 11255 | LA | CAC12 | 4,2 | NEARLY | BRANCH IF IT REALLY IS ONE. |
| 11256 | WA | SYM PLACE | BIT 46R | ETS | THIS IS THE SECOND DEFINITION, SO MAKE |
| 112564 | NA | ETS | SPEC SIGN | C,+2 | ROOM FOR THE MULT. DEF. INTRODUCTION. |
| 112566 | WA | ETS | THREE | ETS | SKIP OVER 32K STOPPER. |
| 11257 | LA | END SY TAB | ETS | NEARLY | |
| 11258 | SS | ETS | CAC3 | 5,1 | INTRO. POINTS TO THIS DEF (NOW CURRENT). |
| 1126 | NEARLY | SS | N,50 | COMMON +2 | USE UNDEFINITION TRANSFORMS. |
| 1128 | TS | - | - | END IS | |
| 11282 | LA | ONES | LOC LOC | NOT OK DEF | BRANCH IF NO OK DEFINITION. |
| 1129 | IT IS | SWS, D8 | N,50 | D,1 | COMMON +2 |
| 1131 | SS | LOC LOC | CAC3 | COMMON +2 | USE NORMAL IS,=,EQUALS TRANSFORM. |
| 11318 | END IS | TX | BIT 8 | - | LOC STATE |
| 1132 | TS | Z,SC | Z,X5 | SY DEF XIT | STORE ENTRY IN SYMBOL TABLE. |
| 11332 | NA, B8B17 | LOC STATE | ONES | XMIT RTRN | EXIT UNLESS LOC SYMBOL FAILED TO FIT. |
| 11334 | NA, CD TYPE | HEALTH | (ERASE) | C,+2 | BRANCH IF OP CODE IS EQUALS. |
| 11336 | TS, BIT16 | ONES | HEALTH | XMIT RTRN | SHOW UNFITTING OF ERASE LOC SYM. |
| 11338 | SM | HEALTH | BIT 15 | HEALTH | SHOW UNFITTING OF EQUALS LOC SYM. |
| 1134 | TS | - | - | XMIT RTRN | |

P1135 PROCEDURE TO HANDLE THE CLERICAL CODE ..ERASE.. IF THE ADDRESS FIELD IS BLANK OR SIGNED NUMERIC, THE
R1137 LOCATION COUNTER GIVES THE LOWER LIMIT AND IS ADVANCED TO HIGH LIMIT +1.

| | | | | | | |
|------|------------|-------------|--------------|-----------|------------|--|
| 1138 | ERASE | TX, CD TYPE | (ERASE) | - | HEALTH | |
| 1139 | | NA, BIT 11 | HEALTH | ZERO | ILLEGOP | ASTERISK MAKES ILLEGAL OP. |
| 1141 | | TS | Z,SC | Z,X4 | ADR FIELD | DECODE ADDRESS FIELD. |
| 1143 | | NA | FIELD COD | ONES | C,+2 | |
| 1144 | ERAS WHAT | TS, BIT 11 | ONES | HEALTH | ER LOC SYM | WHEN ADDRESS IS MEANINGLESS. |
| 1146 | | NA, B2B6 | FIELD COD | ONES | NOT ERANU | BRANCH IF NO U/S NUMERIC PART. |
| 1148 | | NA | FIELD COD +1 | ZERO | C,+2 | |
| 1149 | | TS | ADR WD | ADR WD +1 | CH ER SIZE | LONE NUMERIC IS BOTH LIMITS. |
| 1151 | | LA | ADR WD +1 | BIT 7 | ERAS THRU | MINUS SIGN ON MODIFIER MEANS THRU. |
| 1153 | | BA | ADR WD +1 | ADR WD | ADR WD +1 | FOR PLUS MODIFIER, UPPER LIMIT IS SUM. |
| 1155 | | TS | - | - | CH ER SIZE | |
| 1156 | ERAS THRU | BS | ZERO | ADR WD +1 | ADR WD +1 | UPPER LIMIT IS NEGATIVE OF MODIFIER. |
| 1158 | | LA | ADR WD | ADR WD +1 | CH ER SIZE | BRANCH IF LIMITS ARE IN OK ORDER. |
| 1160 | | TS, BIT 12 | ONES | HEALTH | ER LOC SYM | BAD NEWS WHEN LOWER LIMIT IS GREATER. |
| 1162 | NOT ERA NU | NA | FIELD COD | BIT 1 | NOT ERSYM | |
| 1163 | | NA | ADR WD | W ANYWHAR | ERAS WHAT | ERROR IF SYMBOL IS NOT ..ANYWHERE.. |
| 1165 | | SM | HEALTH | BIT 15 | HEALTH | MARK CARD AS LEFTOVER. |
| 1167 | | NA | FIELD COD +1 | ZERO | C,+2 | |
| 1168 | | TS | ZERO | HI LIM | ERA LEFTO | WHEN SYMBOL IS ALONE. |
| 1170 | | LA | ADR WD +1 | BIT 7 | ERAS WHAT | BAD NEWS WHEN MODIFIER IS MINUS. |
| 1174 | | LA, FIX MAG | ADR WD +1 | SPEC MAG | ERA LEFTO | BRANCH IF MODIFIER HAS OK SIZE. |
| 1176 | | TS, BIT 12 | ONES | HEALTH | ER LOC SYM | WHEN LEFTOVER BLOCK LENGTH TOO BIG. |
| 1178 | NOT ERSYM | LA | ONES | LOC CTR | C,-1 | CHECK FOR ILLEGAL LOC CNTR VALJE. |
| 1181 | | NA | FIELD COD | ZERO | C,+2 | BRANCH IF ADDRESS FIELD IS NOT BLANK. |
| 1183 | | TS | BIT 1 | HI LIM | LC LOW LIM | ERASE CURRENT LOCATION ONLY. |
| 1185 | | NA | FIELD COD +1 | ZERO | C,+2 | |
| 1187 | | TS | ADR WD | HI LIM | C,+2 | BRANCH IF THERES 2 SIGNED NUMERIC PARTS. |
| 1188 | | BA | ADR WD | ADR WD +1 | HI LIM | |
| 1189 | LC LOW LIM | SM | LOC CTR | BIT 1 | LOW LIM | AREA BEGINS WITH LOC CNTR VALUE ANYHOW. |
| 1191 | | LN | HI LIM | ONE | C,+2 | NEGATIVE UPPER LIMIT MEANS THROJGH HERE. |
| 1193 | | BA | HI LIM | LOW LIM | HI LIM | OTHERWISE HI LIM GAVE REL ADRES OF END. |
| 1195 | | SS | LOW LIM | CHAR 1 | HI LIM | ENSURE POSITIVE UPPER LIMIT. |
| 1197 | | LA | LOW LIM | HI LIM | C,+2 | BRANCH IF LIMITS ARE IN OK ORDER. |
| 1199 | | TS, BIT 12 | ONES | HEALTH | ER LOC SYM | |
| 1201 | | LA, FIX MAG | ADR LIMIT | HI LIM | C,-1 | ERROR IF UPPER LIM TOO BIG FOR MACHINE. |
| 1203 | | WA, FIX MAG | HI LIM | ONE | LOC CTR | FOR BLANK OR SIGNED NUM ADDRESSES ONLY. |

P1207 CHECK ADDRESS VALUES FOR SIZE, MEMORY TYPE, AND CONFLICT WITH OTHER ERASE CARDS.

| | | | | | | | |
|-------|------------|-------------|-----------|-----------|--------------|---|---|
| 1209 | CH ER SIZE | LA, FIX MAG | HI LIM | MAX ISEQ | C,+2 | | |
| 1210 | | TS, BIT12 | ONES | HEALTH | ER LOC SYM | | WHEN ADDRESS SIZE(S) ARE WRONG. |
| 1212 | | LA | ONES | LOW LIM | C,-1 | | |
| 1213 | | SS | HI LIM | CAC3 | HEALTH | | |
| 1214 | | SWS, CAC2 | LOW LIM | 16,L | HEALTH | | PUT LIMITS INTO CARD. |
| 1216 | | TX | L TYP TAB | - | Z,X5 | | |
| 1217 | | LA, CAC3 | LOW LIM | 5,0 | C,+2 | | LOOK UP MEMORY TYPE OF LOWER LIMIT. |
| 1219 | | TS | Z,X5,1 | - | C,-1 | | |
| 1220 | | NA, LSTYPE | 5,0 | TYPE E | ERA TYPO | | ERROR IF LOWER NOT ERASABLE. |
| 1222 | | LA, CAC3 | HI LIM | 5,0 | C,+2 | | OK IF HIGH LIMIT IN SAME CATEGORY. |
| 1224 | ERA TYPO | TS, BIT13 | ONES | HEALTH | ER LOC SYM | | |
| 1225 | | EX | LOW LIM | FIX MAG | LOC LOC | | |
| 1226 | ERA CNFG | TS | LOC LOC | COMMON | AVAIL2 | C | CHECK AVAILABILITY OF BLOCK. |
| 12272 | | WA | LOC LOC | ONE | LOC LOC | | |
| 1228 | | LA | BIT 32 | COMMON | C,+2 | | |
| 1229 | | SM | HEALTH | BIT 14 | HEALTH | | SIGNAL CONFLICT. |
| 1231 | | LA, FIX MAG | LOC LOC | HI LIM | ERA CNFG | | |
| 1232 | ER LOC SYM | TS | LOC FIELD | COMMON | ANAL SUBF | C | ANALYZE LOCATION FIELD OF NON-LEFTOVER. |
| 1234 | | LA | FIELD COD | ZERO | XMIT RTRN | | OK EXIT IF BLANK. |
| 1236 | | LA | FIELD COD | BIT 1 | C,+3 | | BRANCH IF SYMBOLIC. |
| 1238 | | NA, B2B6 | FIELD COD | ONES | XMIT RTRN | | OK EXIT IF SIGNED NUMERIC. |
| 1240 | B16(H) | TS, BIT 15 | ONES | HEALTH | XMIT RTRN | | ERROR EXIT IF UNSIGNED NUMERIC. |
| 1242 | | TS, BIT8 | ONES | HEALTH | ANAL SYMB | C | ANALYZE LOCATION SYMBOL. |
| 1245 | | LA | ONES | COMMON +2 | B16(H) | | ERROR EXIT IF SYMBOL TABLE IS FULL. |
| 1252 | | TS | COMMON | COMMON +1 | FIND XFRM -1 | C | SAVE SYMBOL, ISOLATE OLD HEALTH. |
| 1253 | | WA | Z,50 | L XFORMS | Z,50 | | GET ADDRESS OF LOCATION TRANSFORMS. |
| 1255 | | NA, BIT11 | HEALTH | ONES | C,+2 | | |
| 1256 | | TS, D8 | ONES | COMMON +2 | END IS | | SYMBOL HEALTH BECOMES G IF ILLEG. ADR. |

P12575 SELECT AND APPLY TRANSFORM FOR ERASE LOCATION SYMBOL.

| | | | | | | |
|------|------------|---------|-----------|-----------|--|--|
| 1258 | NA, BIT 12 | HEALTH | ONES | C,+3 | | |
| 1259 | SWS, D8 | N,S0 | D,5 | COMMON +2 | | USE TRANSFORM FOR OVERSIZE ASSIGNMENT. |
| 1261 | TS | - | - | END IS | | |
| 1262 | NA, BIT13 | HEALTH | ONES | C,+3 | | |
| 1263 | SWS, D8 | N,S0 | D,4 | COMMON +2 | | USE TRANSFORM FOR MEMORY TYPE ERROR. |
| 1265 | TS, CAC3 | LOW LIM | COMMON +2 | END IS | | |
| 1266 | NA, BIT 14 | HEALTH | ONES | C,+3 | | |
| 1267 | SWS, D8 | N,S0 | D,3 | COMMON +2 | | USE TRANSFORM FOR CONFLICT. |
| 1269 | TS, CAC3 | LOW LIM | COMMON +2 | END IS | | |
| 1270 | SWS, D8 | N,S0 | D,6 | COMMON +2 | | USE NORMAL ERASE TRANSFORM. |
| 1272 | TS, CAC3 | LOW LIM | COMMON +2 | END IS | | |

R1273 PROCEDURE TO HANDLE THE LOCATION FIELD OF A LEFTOVER ERASE CARD.

| | | | | | | |
|-------|------------|-------------|-----------|-----------|--------------|---|
| 1274 | ERA LEFTO | SS | HI LIM | SPEC MAG | HEALTH | |
| 1275 | | TS | LOC FIELD | COMMON | ANAL SUBF | C |
| 1276 | | NA | FIELD COD | BIT 1 | XMIT RTRN | |
| 1278 | | TS, BIT8 | ONES | HEALTH | ANAL SYMB | C |
| 1280 | | LA | ONES | COMMON +2 | B16(H) | ERROR EXIT IF SYMBOL TABLE FULL. |
| 12812 | | TX | COMMON | - | COMMON +1 | SAVE SYMBOL FOR SY DEF XIT. |
| 1282 | | LA | 3 D8 | COMMON +2 | PRED ELEF | BRANCH IF SYMBOL IS PREDEFINED. |
| 12822 | | LA | COMMON +2 | ZERO | GOT ELEFP -2 | |
| 1283 | | SM | HEALTH | BIT 10 | HEALTH | SIGNAL PREDEFINITION FAILURE. |
| 12842 | ERA LEF MD | SS | ZERO | CAC3 | HEALTH | IF ERASABLE LEFTO IS MULTIPLY DEFINED, |
| 1285 | | TS | D8 | COMMON +2 | END IS | MAKE HEALTH G AND EXIT. |
| 12885 | | SWE, CAC23 | M ELEFTOP | 16 | COMMON +2 | GET MACHINE'S ERAS LEFTO PARAMETERS. |
| 1289 | | TX | M ELEFTOP | - | Z,SC | VISIT MACHINE'S OWN ROUTINE. |
| 12895 | GOT ELEFP | SWS, B26T30 | COMMON +2 | 8 | C,+1 | USE (16 - MODULARITY) AS SHIFT COUNT. |
| 1290 | | SWE, CAC3 | CAC3 | | CACN | FORM LEFTOVER BLOCK SIZE LIMIT. |
| 12905 | | LA, SPECMA3 | HI LIM | CACN | ANYWHA OK | BRANCH IF GOOD ERASABLE LEFTOVER. |
| 1291 | | SWE, ONES | EIGHT | 16,L | COMMON +2 | BLOCK SIZE TOO BIG CAUSES ILL-DEF SYM. |
| 12915 | | SS | ZERO | CAC23 | HEALTH | |
| 1292 | | TS, BIT12 | ONES | HEALTH | END IS | |
| 12925 | ANYWHA OK | SM | COMMON +2 | HI LIM | COMMON +2 | PUT BLOCK SIZE INTO SYM TAB AND HEALTH. |
| 1293 | | TS, SPECMA3 | HI LIM | HEALTH | END IS | |
| 12935 | PRED ELEF | HA | HEALTH | BIT 15 | HEALTH | REMOVE LEFTOVER STATUS. |
| 1294 | | LA | 5 D8 | COMMON +2 | ERA LEF MD | BRANCH IF BAD MULTIPLE DEFINITION. |
| 12945 | | EX | COMMON +2 | CAC3 | LOW LIM | |
| 1295 | | WA, CAC3 | LOW LIM | HEALTH | HI LIM | |
| 12955 | | WD | COMMON +2 | 3 D8 | COMMON +2 | SET UP QUANTITIES AS FOR NON-LEFTOVER |
| 12965 | | TS, CAC3 | ZERO | HEALTH | CH ER SIZE | ERASE AND REJOIN MAIN SEQUENCE. |

P1297 PASS 1 PROCESSING FOR DOUBLE PRECISION CONSTANTS. RESERVES AND TESTS ONE LOCATION IN ADDITION TO
 R1299 THAT REFERENCED BY THE REGULAR LOCATION TRANSLATION PROCEDURE.

| | | | | | | |
|-------|------------|-------------|----------------|------------|------------|---|
| 1300 | 2OCTAL | TS, CD TYPE | (2OCTAL) | HEALTH | C,+2 | |
| 1301 | 2DECIMAL | TX, CD TYPE | (2DECML) | - | HEALTH | |
| 1302 | | TX | ONES | - | SAVE LOC | SET UP LATER TEST. |
| 1304 | | SS | TYPE F | L STYPE | SWITCH | |
| 1305 | | NA, CHAR1 | CARDNO WD | J COLUMN 1 | REG DPCON | BRANCH IF NOT LEFTOVER. |
| 1307 | | SM | HEALTH | ONE | HEALTH | BLOCK LENGTH -1. |
| 1309 | | TS | Z,SC,1 | - | LFTVR LOC | C TRANSLATE LEFTOVER LOCATION FIELD. |
| 1311 | REG DPCON | TS | ZERO | LOC STATE | LOCATION | C TRANSLATE REGULAR LOCATION FIELD. |
| 1313 | | SM | HEALTH | LOC STATE | HEALTH | |
| 1314 | | NA, B12B14 | HEALTH | ZERO | XMIT RTRN | EXIT IF LEFTOVER OR OVERSIZE LOCATION. |
| 1316 | | LA | ONES | SAVE LOC | C,+2 | BRANCH IF LOC CTR WAS NOT SAVED. |
| 1318 | | WA, CAC3 | HEALTH | ONE | LOC CTR | |
| 1319 | | TS | LOC CTR | LOC VALUE | INCR LCTR | C |
| 1321 | | LA | LOC VALUE | MAX LOC | C,+3 | BRANCH IF SIZE OF 2ND LOC IS OK. |
| 1323 | | SM | HEALTH | BIT 14 | HEALTH | |
| 1324 | | TS | ONES | LOC CTR | DP LOC END | WHEN 2ND LOC VALUE IS TOO BIG. |
| 13252 | | SSL, ONE | HEALTH | 33 | C,+1 | BRANCH IF 1ST LOC IN BAD MEMORY TYPE. |
| 1326 | | NA, CAC3 | HEALTH | 5,0 | CONFQ 2 | BRANCH IF 1ST LOC NOT END OF CATEGORY. |
| 1328 | | SM | HEALTH | BIT 15 | HEALTH | WHICH WOULD MEAN TYPE ERROR ON AT LEAST |
| 1330 | | NA, B8B17 | HEALTH | BIT 8 | DP LOC END | ONE OF THE LOCATIONS. |
| 1332 | | SWS, D7 | N,X2 | D,3 | C,+1 | IF LOC IS SYMBOLIC AND IN TABLE, USE THE |
| 1334 | | SWS, D4 | N,SC,8 | 0 | N,X2 | DP TYPE ERROR TRANSFORMATION. |
| 1336 | | DEC | GFFD FF9F D900 | | | |
| 1337 | CONFQ 2 | TS | LOC VALUE | COMMON | AVAIL2 | C TEST AND RESERVE 2ND LOCATION. |
| 1339 | | LA | BIT 32 | COMMON | DP LOC END | BRANCH IF IT WAS AVAILABLE. |
| 1341 | | SM | HEALTH | BIT 16 | HEALTH | |
| 1342 | | NA, B8B17 | HEALTH | BIT 8 | DP LOC END | |
| 1343 | | SWS, D7 | N,X2 | D,3 | C,+1 | WITH SAME CONDITIONS AS FOR TYPE I ERROR, |
| 1345 | | SWS, D4 | N,SC,1 | 0 | N,X2 | USE DP CONFLICT TRANSFORM. |
| 1347 | | DEC | GFEF FBFF EB00 | | | |
| 1348 | DP LOC END | LA | ONES | SAVE LOC | XMIT RTRN | EXIT IF LOC CTR WAS NOT SAVED. |
| 1350 | | TS | SAVE LOC | LOC CTR | XMIT RTRN | RESTORE LOC CTR AND EXIT. |

R135105 PASS 1 PROCEDURE FOR AN EVEN CARD. INCREMENTS LOCATION COUNTER IF IT IS ODD.

| | | | | | | |
|--------|-----------|-------------|-----------|---------|------------|---|
| 13511 | EVEN | NA, BIT 11 | HEALTH | ZERO | ILLEGOP | ASTERISK MAKES ILLEGAL OP. |
| 13512 | | NA | ADDRESS 1 | BLANKS | NB EVELOC | |
| 13513 | | NA | ADDRESS 2 | BLANKS | NB EVELOC | |
| 13514 | | LA | MAX LOC | LOC CTR | C,+2 | BRANCH IF LOC CTR ALREADY AT MAXIMUM. |
| 13515 | | SSL, ONE | LOC CTR | 0 | C,+2 | C |
| 13516 | | SWS, BIT 14 | LOC CTR | 34,L | HEALTH | MAYBE CUSS ATTEMPT TO FLY OFF THE END. |
| 13517 | | TS, CD TYPE | (EVEN) | HEALTH | C,+2 | |
| 13518 | | WA | LOC CTR | ONE | LOC CTR | S LOCATION IS ODD, SO ADD ONE. |
| 135185 | | TS | LOC CTR | LOC LOC | CH IL SIZE | |
| 13519 | NB EVELOC | TS, BIT 13 | ONES | HEALTH | EVEN +3 | CUSS MILDLY AT NON-BLANK ADDRESS FIELD. |

P1352 PASS 1 PROCESSING FOR A BLOCK CARD. NO SYMBOLIC SUBFIELD IS ALLOWED IN THE ADDRESS FIELD, AND THE
 R1354 MODIFIER, IF THERE IS ONE, MUST BE POSITIVE AND LESS THAN THE BLOCK SIZE FOR THE COMPUTER. THE ABSOLUTE PART,
 R1356 IF THERE IS ONE, MUST BE A VALID BLOCK NUMBER IN FIXED OR ERASABLE.

| | | | | | | |
|-------|------------|--------------|--------------|--------------|--------------|--|
| 1357 | BLOCK | NA, BIT 11 | HEALTH | ZERO | ILLEGOP | ASTERISK MAKES ILLEGAL OP. |
| 1359 | | TS | Z,SC | Z,X4 | ADR FIELD | DECODE ADDRESS FIELD. |
| 1361 | | LA | ONES | FIELD COD | ILFO BLOK | WHEN ADDRESS FIELD IS MEANINGLESS. |
| 1362 | | LA | FIELD COD | ZERO | BLANK BLK | BRANCH IF ADDRESS FIELD IS BLANK. |
| 13621 | | NA, B2B6 | FIELD COD | BIT 2 | BLOK SHIF -1 | BRANCH UNLESS MAIN PART IS SIGNED NUM. |
| 13622 | | NA | FIELD COD +1 | ZERO | C,+2 | BRANCH IF THERE ARE 2 SIGNED NUM PARTS. |
| 13623 | | TS | ADR WD | ADR WD +1 | C,+2 | |
| 13624 | | BA | ADR WD | ADR WD +1 | ADR WD +1 | COLLECT MODIFIER AS MINOR PART OF ADDR. |
| 13625 | BLANK BLK | NA | LOC CTR | ONES | C,+2 | |
| 13626 | | TS, BIT14 | ONES | HEALTH | BLOCK LOC | CANNOT EVALUATE REL TO BAD LOCATION. |
| 13627 | | TX | LOC CTR | - | LOC VALUE | |
| 13628 | | SS | ZERO | BLOK ONES | LOC VALUE | SET LOC VALUE TO BEGINNING OF BANK. |
| 13629 | | TS | FIELD COD | FIELD COD +1 | BLOK SHIF +1 | SHOW WHETHER MODIFIER IS PRESENT. |
| 1363 | | NA, B2B6 | FIELD COD | ONES | ILFO BLOK | WHEN THERE IS NO NUMERIC PART. |
| 1365 | BLOK SHIF | SPE, FIX MAG | ADR WD | 0 | LOC VALUE | SHIFT AMOUNT SUPPLIED BY INITIALIZATION. |
| 1367 | | LA | FIELD COD +1 | ZERO | CH BL SIZE | BRANCH IF THERE IS NO MODIFIER. |
| 1369 | | LA | ADR WD +1 | BIT 7 | ILFO BLOK | ERROR IF MODIFIER IS MINUS. |
| 1371 | | LA, FIXMAG | ADR WD +1 | BLOK ONES | C,+2 | BRANCH IF MODIFIER LESS THAN BLOCK SIZE. |
| 1373 | ILFO BLOK | TS, BIT 12 | ONES | HEALTH | BLOCK LOC | ILLEGAL ADDRESS FIELD FORMAT EXIT. |
| 1375 | | BS | LOC VALUE | ADR WD +1 | LOC VALUE | ADD MODIFIER TO SHIFTED NUMERIC. |
| 1379 | CH BL SIZE | LA | LOC VALUE | MAX LOC | C,+2 | |
| 1380 | | TS, BIT 11 | ONES | HEALTH | BLOCK LOC | EXIT FOR NO SUCH BLOCK. |
| 1382 | | TX | L TYP TAB | - | Z,X5 | |
| 1383 | | LA, CAC3 | LOC VALUE | 5,0 | C,+2 | LOOK UP MEMORY TYPE. |
| 1385 | | TS | Z,X5,1 | - | C,-1 | |
| 1386 | | NA, LSTYPE | 5,0 | TYPE N | C,+2 | BRANCH IF IN FIXED OR ERASABLE. |
| 1388 | | TS, BIT 13 | ONES | HEALTH | BLOCK LOC | MEMORY TYPE ERROR EXIT. |
| 1390 | | TX | LOC VALUE | - | Z,X4 | |
| 1391 | | SM | LOC VALUE | BLOK ONES | LOC VALUE | FORM END OF MAJOR BLOCK. |
| 1393 | | LA, CAC3 | LOC VALUE | 5,0 | C,+2 | BRANCH IF MAJOR BLOCK END COMES FIRST. |
| 1395 | | EX | N,X5 | CAC3 | LOC VALUE | WHEN MINOR BLOCK END COMES FIRST. |
| 1397 | | TS | Z,X4 | COMMON | AVAIL1 | C NON-DESTRUCTIVE AVAILABILITY TEST. |
| 1399 | | LA | BIT 32 | COMMON | GOOD BLOK | BRANCH IF AVAILABLE. |
| 14001 | | WA | Z,X4 | ONE | Z,X4 | |
| 1401 | | LA | Z,X4 | LOC VALUE | C,-3 | |
| 1402 | | TS, BIT 10 | ONES | HEALTH | BLOCK LOC | WHEN BLOCK IS FULL. |
| 1404 | GOOD BLOK | SM | HEALTH | Z,X4 | HEALTH | STORE FOUND ADDRESS. |
| 1406 | | TX | Z,X4 | - | LOC CTR | SET LOC CTR ACCORDINGLY. |
| 1408 | BLOCK LOC | NA | LOC FIELD | BLANKS | C,+2 | |
| 1409 | | TS, CD TYPE | (BLOCK) | HEALTH | XMIT RTRN | |
| 1410 | | TS, BIT 8 | ONES | HEALTH | C,-1 | SIGNAL NON-BLANK LOCATION FIELD. |

P1412 PASS 1 PROCESSING OF A HEAD OR TAIL CARD. RIGHT-JUSTIFIES LOCATION FIELD AND USES RIGHTMOST CHARAC-
 R1414 TER, EVEN IF BLANK.

| | | | | | | |
|------|-----------|-------------|-----------|--------|-----------|----------------------------|
| 1415 | HEAD TAIL | NA, BIT 11 | HEALTH | ZERO | ILLEGOP | ASTERISK MAKES ILLEGAL OP. |
| 1417 | | TX | LOC FIELD | - | HEAD | |
| 1418 | | TX | BIT 45 | - | Z,50 | LOOP LIMIT IS 8. |
| 1420 | | NA, CHAR8 | HEAD | BLANKS | C,+3 | |
| 1421 | | SWS, ONES | HEAD | A,1 | HEAD | RIGHT-JUSTIFY. |
| 1423 | | NA | Z,50,1 | ONE | C,-2 | |
| 1424 | | SS | HEAD | CHAR 8 | HEALTH | STORE HEAD IN POPO. |
| 1431 | | TS, CD TYPE | (HEAD) | HEALTH | XMIT RTRN | |

R1432 PROCEDURE FOR MEMORY OR SEGNUM CARDS THAT ARRIVE TOO LATE.

| | | | | |
|------|----------|---------------------|--------|-----------|
| 1433 | LATE MEM | TS, CD TYPE (2LATE) | HEALTH | XMIT RTRN |
|------|----------|---------------------|--------|-----------|

R1434 PROCEDURES FOR FIRST "END OF" CARD AND SUBSEQUENT "END OF" CARDS.

| | | | | | | | |
|--------|------------|--------------|------------|---------|---------------|---|--|
| 1436 | END OF | TS | SEND ENDO | END OF | END EARLY | C | AT FIRST SUCH CARD, WAKE RD1 AND TELL |
| 1438 | | TS, KNOWSJS | ONES | SWITCH | MON WAKE | C | IT THE SUBROUTINES ARE KNOWN. |
| 1440 | | SS | ZERO | BIT 1 | SWITCH | | PROHIBIT RENUMBERING IN SUBROUTINES. |
| 14402 | | TX | BIT 24 | - | B24 B32 | | TURN OFF DIRECT BIT FOR SUBRO DIRECTORY. |
| 14404 | | TS | LL SUB TAB | Z,X4 | ST SUB THR | C | INITIALIZE THREAD TO CURRENT SUBROUTINE. |
| 1441 | | TX | ZERO | - | REAL CDNN | | PREVENT FALSE ALARMS IN REJECTION. |
| 14412 | | NA, BIT11 | SWITCH | ZERO | SEND ENDO | | USE EXISTING "END OF" CARD FOR REPRINT. |
| 1442 | | NA, MERJMODE | SWITCH | ONES | SEND ENDO | | WHEN REVISING, FIRST "END OF" CARD MUST |
| 1444 | | TN | (END OF) | 11 | HEALTH | | BE REPLACED BY THE ONE MADE BY PASS 0. |
| 1446 | SEND ENDO | TS | LL SUB TAB | Z,X5 | SEND ENDO +1 | | THIS ALONE FOR 2ND "END OF" ET SEQ. |
| 144612 | | EBA | N,X5 | BIT 25 | Z,X5 | | |
| 144614 | | LA | ONES | N,X5 | ST SUB THR +1 | | |
| 14462 | | SS | ZERO | BIT 24 | N,X5,1 | | WIPE OUT CURRENT-PROG/SUB CALL BIT |
| 14464 | | S, ETS | 5,0 | ZX +5 | C,+1 | | IN SUBROUTINE DIRECTORY ENTRIES. |
| 14466 | | NA | N,X5 | ONES | C,-2 | | BRANCH IF MORE SUBS IN THIS ASSEMBLY. |
| 144672 | | S, ETS | L NEXT SUB | ZX +4 | C,+1 | | POINT TO NEXT SUBROUTINE TO ENTER ASSY. |
| 144674 | | SWE, CHAR3 | N,X4 | A,3 | HEAD | | ESTABLISH HEAD SPECIFIED IN CALL. |
| 144676 | | SSL, ONE | N,X4,1 | 25 | C,+1 | | "BRANCH" IF THERE IS A GOOD BASE ADDR. |
| 144678 | | TS | ONES | LOC CTR | C,+2 | | |
| 14468 | | SWE, CAC3 | N,X4 | 16 | LOC CTR | | |
| 144682 | ST SUB THR | TX | N,X4 | - | L NEXT SUB | | LEAVE POINTER TO FOLLOWING SUBROUTINE. |
| 144684 | | NA, BIT8 | SWITCH | ONES | XMIT RTRN | | EXIT VIA SEND POPO UNLESS FREEZING SUBS. |
| 144686 | | TX | PROC RTRN | - | Z,5C | | OTHERWISE KILL INTERMEDIATE "END OF'S. |

P1447 PASS 1 PROCESSING OF A SUBROUTINE CALL CARD. EXTRACTS A SUBROUTINE NAME AND AN OPTIONAL HEAD DESIGNATION FROM THE ADDRESS FIELD, ENTERS THE SUBROUTINE NAME AND BASE ADDRESS IN THE AD HOC SUBROUTINE DIRECTORY, R14471 AND MARKS THE SUBROUTINE ACTIVE OR INACTIVE. ALSO USES THE BASE ADDRESS TO DEFINE THE SYMBOL, IF ANY, IN THE R144715 LOCATION FIELD.

| | | | | | | | |
|--------|------------|---------------|------------|-----------|---------------|---|--|
| 14472 | SUBRO | TX, CD TYPE | (SUBRO) | - | HEALTH | | |
| 14473 | | TX, BIT11 | ZERO | - | HEALTH | | ASTERISK BIT HAS A DIFFERENT USE HERE. |
| 144732 | | LA | END OF | SEND ENDO | ILLEGOP | | SNUB SUBRO CARDS AFTER 1ST "END OF". |
| 14474 | | NA, BIT 9 | SWITCH | ZERO | ILLEGOP | | FOR NOW, FORBID SUBROS TO CALL SUBROS. |
| 14476 | | NA | ADDRESS 2 | BLANKS | SUB RJUST -1 | | |
| 14477 | | NA | ADDRESS 1 | BLANKS | C,+2 | | ADDRESS FIELD ALL BLANK IS BAD. |
| 14479 | SUB AD ILF | TS, BIT12 | ONES | HEALTH | BAD SBCAL | | |
| 1448 | | TX | BLANKS | - | AFIELD | | |
| 14481 | | TS | ADDRESS 1 | AFIELD +1 | SUB RJUST | | |
| 14482 | | TN | ADDRESS 1 | 2 | AFIELD | | |
| 14483 | SUB RJUST | NA, CHAR8 | AFIELD +1 | BLANKS | C,+2 | | RIGHT-JUSTIFY ADDRESS IN AFIELD. |
| 14485 | | TS | L SUB RJUS | Z,SC | 2SRT 1C | C | |
| 14486 | CUR HED SB | SWE, CHAR5 | HEAD | A,3,L | COMMON +2 | | ASSIGN PREVAILING HEAD TO SUBROUTINE. |
| 14488 | | NA, CHAR7 | AFIELD +1 | BLANKS | SNAM SIZ Q | | BRANCH IF NO HEAD WAS GIVEN IN ADDRESS. |
| 1449 | | SWE, CHAR5 | AFIELD +1 | A,3,L | COMMON +2 | | USE LONELY CHAR AT RIGHT AS HEAD FOR SB. |
| 14492 | | SS | BLANKS | CHAR 8 | AFIELD +1 | | |
| 14493 | | NA | AFIELD | BLANKS | SUB LJUST | | |
| 14494 | | NA | AFIELD +1 | BLANKS | SNAM SIZ Q +1 | | BRANCH UNLESS 1-CHAR UNHEADED SUB NAME. |
| 14496 | | SWS, CHAR1 | COMMON +3 | A,4,L | AFIELD | | PUT SUBROUTINE NAME BACK. |
| 14498 | | TS | Z,SC,8 | - | CUR HED SB | C | RESTORE PREV. HEAD, TAB TO ST SUBNAM. |
| 1450 | S NAM SIZQ | NA | AFIELD | BLANKS | SUB AD ILF | | BRANCH IF SUBRO NAME OVER 8 CHARACTERS. |
| 14502 | | TX | AFIELD +1 | - | AFIELD | | |
| 14503 | | TX | BLANKS | - | AFIELD +1 | | |
| 14504 | SUB LJUST | NA, CHAR1 | AFIELD | BLANKS | ST SUBNAM | | LEFT-JUSTIFY SUBROUTINE NAME. |
| 14506 | | SWS, ONES | AFIELD | A,1,L | AFIELD | | |
| 14507 | | SWS, ONES | AFIELD +1 | A,1,L | AFIELD +1 | | |
| 14508 | | SS | AFIELD +1 | CHAR 8 | AFIELD | | |
| 14509 | | TS, CHAR8 | BLANKS | AFIELD +1 | SUB LJUST | | |
| 1451 | ST SUBNAM | NA | AFIELD +1 | BLANKS | SUB AD ILF | | BRANCH IF SUBROUTINE NAME OVER 8 CHARS. |
| 14512 | | TX | L COMP NAM | - | Z,X4 | | |
| 14513 | | SWS, THREAD10 | N,X4 | 12 | Z,X4 | | POINT TO 1ST PROG/SUBRO OF MACHINE. |
| 14515 | | TX | LL SUB TAB | - | Z,X6 | | POINT TO ORIGIN OF SUBRO DIRECTORY. |
| 14517 | | S, ETS | 6,0 | ZX +5 | MOR SUBS Q +3 | | POINT TO FIRST CALLED SUBROUTINE. |

P145185 LOOK JP THE SUBROUTINE NAME IN THE TAPE DIRECTORY AND THE AD HOC DIRECTORY SIMULTANEOUSLY.

| | | | | | | |
|--------|------------|---------------|------------|------------|------------|--|
| 14519 | SUB LUKUP | NA | Z,AU1 | Z,X4 | NOT IN DIR | COMPARE AD HOC DIRECTORY WITH TAPE DIR. |
| 14521 | | NA | N,AU1 | AFIELD | NEXT DSUB | COMPARE WITH SUBROUTINE BEING CALLED. |
| 14523 | | SM | HEALTH | BIT 13 | HEALTH | CUSS MULTIPLE CALLS FROM ONE PROGRAM. |
| 14525 | | TX | CHAR 5 | - | ALF MASK | |
| 14526 | | NA, ALF MASK | COMMON +3 | 5,1 | C,+2 | BRANCH IF HEAD DESIGNATIONS CONFLICT. |
| 14528 | BAD SBCAL | TS | ZERO | Z,X2 | SUBRO LOC | SHOW THAT THERE IS NO BASE ADDRESS. |
| 1453 | | SM | HEALTH | BIT 19 | HEALTH | |
| 14531 | | TS | ZERO | Z,X2 | SUBRO LOC | |
| 14532 | NEXT DSUB | EBA | Z,X5 | ONE | Z,X6 | |
| 14533 | | S, ETs | 6,0 | ZX +5 | C,+1 | ADVANCE ONE PLACE IN AD HOC DIRECTORY. |
| 14535 | MOR SJBS Q | SWS, THREAD10 | 4,1 | 0 | Z,X4 | ADVANCE ONE PLACE IN TAPE DIRECTORY. |
| 14537 | | NA | Z,X4 | L END THR | C,+2 | BRANCH IF THERE ARE MORE SUBS OR PROGS. |
| 14539 | | TS, BIT11 | ONES | HEALTH | BAD SB CAL | CUSS UNRECOGNIZED SUBROUTINE NAME. |
| 14541 | | SSL, BIT45R | 4,1 | 10 | MOR SJBS Q | "BRANCH" IF PROGRAM, NOT SUBROUTINE. |
| 14543 | | TS | N,X5 | Z,AJ1 | SUB LUKUP | FETCH THREAD FROM AD HOC DIRECTORY. |
| 14545 | NOT IN DIR | NA | N,X4 | AFIELD | MOR SJBS Q | COMPARE TAPE DIRECTORY SUBRO WITH CALL. |
| 14547 | | SWS, B22T32 | Z,X4 | 16,L | HEALTH | THREAD HEALTH TO TAPE FILE DIRECTORY. |
| 14549 | | SWS, BIT13 | 4,1 | 35,L | HEALTH | MAYBE CUSS MULTIPLE CALLS FROM 1 PROG. |
| 14551 | | SM | 4,1 | ONE | 4,1 | SHOW THAT THIS SUBROUTINE IS CALLED. |
| 14553 | | NA | SYM PLACE | END SY TAB | C,+3 | BRANCH IF THERE'S ROOM FOR AD HOC ENTRY. |
| 14555 | | SM | HEALTH | BIT 18 | HEALTH | CUSS NO ROOM IN SYM TAB FOR AD HOC SUB. |
| 14557 | | TS | ZERO | Z,X2 | SUBRO LOC | |
| 14558 | | SM | COMMON +3 | Z,X4 | COMMON | |
| 14559 | | SM | COMMON | B24 B32 | COMMON | CREATE WORD 1 OF AD HOC SUBRO DIRECTORY. |
| 14561 | | TS | L PROG FIL | Z,X3 | C,+2 | |
| 14562 | | SSL, ONE | 3,1 | 23 | C,+2 | A PROG WHO HAD NO SUBS HAS ONLY ACTIVES. |
| 14564 | | TX | L END THR | - | Z,X2 | |
| 14565 | ACTIV SUB | TS | BIT 31 | COMMON +2 | SUBRO DIR | PREPARE ACTIVE-SUBROUTINE BIT. |
| 145662 | | LA, CHAR7 | ASTRISKS | OP FIELD | C,-1 | OP CODE "SUBRO*" DEMANDS PRINTING. |

P145665 SCAN PROGRAM'S TREE OF SUBROUTINE THREADS TO FIND ACTIVE SUBROUTINES.

| | | | | | | | |
|-------|------------|--------------|--------|-----------|--------------|---|--|
| 14567 | | SWS,THREAD11 | 3,1 | 24 | Z,X3 | | POINT TO FIRST SUBRO THREAD WORD. |
| 14569 | THREAD 20 | SWS,THREAD10 | N,X3 | 24 | Z,X2 | | FOLLOW THREAD AND POINT TO A SUBROUTINE. |
| 14571 | | SSL, ONE | N,X3 | 24 | SJB THRD 0 | C | TEST OBSOLETING-THREAD BIT. |
| 14573 | | NA, BIT13 | 3,0 | ZERO | ACTIV SJR | | TEST LAST-THREAD-IN-TREE BIT. |
| 14575 | | SWS,THREAD10 | N,X3 | 12 | Z,X2 | | |
| 14576 | | SSL, ONE | N,X3 | 12 | SJB THRD 0 | C | |
| 14578 | | SSL, ONE | N,X3 | 23 | ACTIV SJR -1 | C | |
| 14579 | | NA, BIT37 | 3,0 | ONES | THREAD 10 | | DITTO FOR THIRD THREAD IN THREAD WORD. |
| 14581 | | SS | N,X3 | THREAD 10 | Z,X2 | | |
| 14582 | | SSL, ONE | N,X3 | 0 | SJB THRD 0 | C | |
| 14583 | | TS | BIT 31 | COMMON +2 | SUBRO DIR | C | DITTO FOR FOURTH THREAD IN THREAD WORD. |
| 14585 | THREAD 10 | SS | N,X3 | THREAD 11 | Z,X3 | | FOLLOW THREAD TO THE NEXT THREAD WORD. |
| 14587 | | SWS,THREAD10 | N,X3 | 36 | Z,X2 | | |
| 14588 | | SSL, ONE | N,X3 | 36 | SJB THRD 0 | C | TEST OBSOLETING BIT OF FIRST THREAD. |
| 1459 | | TS | - | - | THREAD 20 | | (THERE'S ALWAYS A 2ND THD AFTER A 1ST). |
| 14592 | SUB THRD 0 | TS | ZERO | COMMON +2 | C,+2 | C | ENTER HERE ON INACTIVE SUBRO. |
| 14594 | | TX | BIT 31 | - | COMMON +2 | C | ENTER HERE ON ACTIVE SUBROUTINE. |
| 14596 | | NA | Z,X2 | Z,X4 | N,SC,1 | C | EXIT IF NOT THE SUBRO NOW BEING CALLED. |

R145975 STORE FINISHED ENTRY IN AD HOC SUBROUTINE DIRECTORY AND PROCESS LOCATION FIELD, CHECKING CONFLICT OF 1ST LOC.

| | | | | | | | |
|--------|-----------|-------------|--------------|------------|--------------|---|--|
| 14599 | SUBRO DIR | SM | COMMON | COMMON +2 | COMMON | C | |
| 145992 | | NA, BIT8 | SWITCH | ONES | C,+2 | C | BRANCH IF NOT FREEZING SUBROUTINES. |
| 145994 | | TS, CHAR1 | R COLUMN 1 | CARDNO WD | XMIT RTRN | | OTHERWISE MAKE SUBRO CARDS INTO REMARKS. |
| 145998 | | EBA | Z,X6 | ZERO | Z,X3 | C | |
| 1460 | | TS | Z,CSC | Z,SC | NEW UNSYM | C | STORE AD HOC SUBROUTINE ENTRY IN SYMTAB. |
| 14602 | | TS, CHAR1 | END ERR M +1 | SYM OR NOT | CLR COMM 2 | C | RESTORE SYMBOL SUBROUTINE. |
| 14604 | SUBRO LOC | EBA | Z,X2 | ZERO | LOC LOC | | |
| 14605 | | WD | OK L TYPE | ONE | OK L TYPE | | MODIFY LOCATION ROUTINE SO AS NOT TO |
| 14607 | | TS, L STYPE | TYPE F | SWITCH | REG INCON | C | RESERVE ANY LOCATIONS, WHILE CHECKING. |
| 14609 | | WA | OK L TYPE | ONE | OK L TYPE | | |
| 1461 | | LA | LOC LOC | ZERO | SUBRO XIT | | |
| 146105 | | LA | ONES | LOC CTR | REG INCON +1 | | EXIT NOW IF NO GOOD LOCATION. |
| 14611 | | EBS | LOC LOC | ONE | Z,X2 | | POINT TO SUBROUTINE DIRECTORY ENTRY. |
| 146115 | | SM | N,X2 | BIT 23 | N,X2,1 | | SHOW THAT THERE IS A BASE ADDRESS. |
| 14613 | | SWS, CAC2 | LOC STATE | 16,L | N,X2 | | STORE BASE ADDRESS IN AD HOC SUBRO NTRY. |
| 14615 | SUBRO XIT | TS | LOC VALUE | LOC CTR | REG INCON +1 | | |

R14616 TRIVIAL SUBROUTINE TO INCREMENT LOC CTR UNLESS IT IS BAD.

| | | | | | | | |
|-------|-----------|----|---------|---------|---------|---|--|
| 14617 | INCR LCTR | LA | ONES | LOC CTR | N,SC,1 | C | |
| 14618 | | WA | LOC CTR | ONE | LOC CTR | S | |

P14619 SUBROUTINE IN PASS 1 TO BREAK DOWN THE ADDRESS FIELD OF A MERGE CONTROL CARD, THAT IS, WITH AN OP
R1463 CODE OF "CARDNO" OR "DELETE". USES THE SENTENCE READER. SETS UP FIELD COD AND CNLIMIT AS FOLLOWS:

R1465 FIELD ALL BLANK FIELD COD=0
R1466 "THROJGH" WITH NUMBER FIELD COD=B1, CNLIMIT=NUMBER
R14661 "THRJ" WITH NUMBER FIELD COD=B1, CNLIMIT=NUMBER
R14665 "TO" WITH NUMBER FIELD COD=B2, CNLIMIT=NUMBER
R1467 "WITH" WITH NUMBER FIELD COD=B3, CNLIMIT=NUMBER

R1468 THE NUMBER IN THE ADDRESS FIELD MAY BE "SEQBREAK" OR "SEQBRK" CAUSING CNLIMIT TO BECOME ALF 10000000, OR UP TO 6
R1470 DECIMAL DIGITS WITH AN OPTIONAL DECIMAL POINT. IF THE POINT IS PRESENT, THERE MAY BE UP TO FOUR DIGITS TO ITS
R1472 LEFT AND UP TO TWO DIGITS ON ITS RIGHT. IF THE POINT IS ABSENT AND THERE ARE FOUR DIGITS OR LESS, THE POINT IS
R1474 ASSUMED TO BE AT THEIR IMMEDIATE RIGHT. IF THE POINT IS ABSENT AND THERE ARE FIVE OR SIX DIGITS, THE POINT IS
R1476 ASSUMED TO FOLLOW THE FOURTH DIGIT. AT LEAST ONE BLANK OR OTHER TERMINATOR MUST SEPARATE THE TWO SUBFIELDS, BUT
R1478 NO IMBEDDED BLANKS ARE ALLOWED IN EITHER SUBFIELD. IF ANY OF THESE RULES ARE VIOLATED OR THERE IS A THIRD
R1480 SUBFIELD, FIELD COD IS SET TO ALL ONES AND THE CARD IS IGNORED AND CUSSD AT FOR A MEANINGLESS ADDRESS FIELD.
R1482 THE NUMBER SET UP IN CNLIMIT IS STANDARDIZED TO SIX DIGITS THUS: ALF ONNNNN0, WITH A POINT ASSUMED AFTER CHAR5.

| | | | | | | |
|-------|-----------|--------------|--------------|-----------|---------------|--|
| 1484 | MCCD ADRF | TX | MON WAA | - | Z,X6 | |
| 1485 | | TN | REAL CARD +3 | 2 | 6,2 | |
| 1486 | | SM | CHAR1 | Z,SH | 6,4 | |
| 1488 | | TS | - | - | MON SENTR | SLYLY HIDE RETURN ADDRESS. SET UP AND CALL SENTENCE READER. |
| 1491 | | NA | 6,16 | BLANKS | C,+3 | |
| 1492 | | NA, CHAR1 | 6,18 | ONES | BAD MCCD | CUSS IF CONTAINS TERMINATOR ONLY. |
| 1494 | | TS | ZERO | FIELD COD | MCAF DONE | EXIT IF ADDRESS FIELD ALL BLANK. |
| 1496 | | NA, CHAR1 | 6,18 | BLANKS | BAD MCCD | |
| 1497 | | NA, CHAR1 | 6,21 | ONES | BAD MCCD | CUSS UNWANTED TERMINATORS. |
| 1499 | | NA | 6,16 | W THROUGH | C,+2 | |
| 1500 | | TS | BIT 1 | FIELD COD | MCCD NUMR | |
| 1501 | | NA | 6,16 | W THRU | C,+2 | |
| 1502 | | TS | BIT 1 | FIELD COD | MCCD NUMR | SIGNIFY THROUGH AND GO TO FIND NUMBER. |
| 15032 | | NA | 6,16 | W WITH | C,+2 | |
| 15034 | | TS | BIT 3 | FIELD COD | MCCD NUMR | SIGNIFY WITH. |
| 1504 | | NA | 6,16 | W TO | BAD MCCD | |
| 1505 | | TX | BIT 2 | - | FIELD COD | SIGNIFY TO. |
| 1507 | MCCD NUMB | NA | 6,19 | W SEQBRK | C,+2 | |
| 1508 | | TS | BIT 6 | CN LIMIT | MCAF DONE | |
| 15092 | | NA | 6,19 | W SEQBRK | C,+2 | |
| 15094 | | TS | BIT 6 | CN LIMIT | MCAF DONE | EXIT WHEN NUMBER IS SEQUENCE BREAK. |
| 1510 | | TX | CHAR 6 | - | ALF MASK | |
| 1511 | | LA | ONES | 6,19 | BAD MCCD | |
| 1512 | | LA, ALF MASK | 6,21 | ZERO | BAD MCCD | BAD EXIT WHEN NUMBER IS MISSING. |
| 1514 | | TX | BIT 46R | - | Z,S3 | COUNTER OF DIGITS BEFORE POINT. |
| 1516 | | TX | ZERO | - | CN LIMIT | |
| 1517 | | LA, ALF MASK | 6,21 | SPEC MAG | NEX CN DIG +1 | LENGTH OF NUMBER MAY BE UP TO SEVEN. |
| 1519 | BAD MCCD | TS | ONES | FIELD COD | MCAF DONE | SIGNIFY MEANINGLESS FIELD AND EXIT. |

P1521 LOOP TO ANALYZE CARD NUMBER IN ADDRESS FIELD.

| | | | | | | |
|------|------------|------------|----------|-------|------------|------------------------------------|
| 1522 | NEX CN DIG | SWS, ONES | 6,19 | A,1,L | 6,19 | MOVE NEXT CHARACTER INTO POSITION. |
| 1524 | | LA, CHAR1 | TEN C1 | 6,19 | PT BLANK | BRANCH IF NOT A DIGIT. |
| 1526 | | LA | Z,S3,1 | ZERO | FRAC CN +2 | BRANCH IF THIS THE FIFTH DIGIT. |
| 1528 | | SWS, ONES | CN LIMIT | A,1,L | CN LIMIT | MOVE UP PREVIOUS DIGITS. |
| 1530 | | SWS, CHAR5 | 6,19 | A,4 | CN LIMIT | PLANT A BEFORE-POINT DIGIT. |
| 1532 | | TS | - | - | NEX CN DIG | |

R1533 IF THE FIFTH OR EARLIER CHARACTER IS NOT A DIGIT, IT MUST BE A DECIMAL POINT OR A BLANK.

| | | | | | | |
|------|-----------|--------------|---------|----------|--------------|----------------------------------|
| 1535 | PT BLANK | NA, CHAR1 | 6,19 | POINT C1 | END MCCDA | |
| 1536 | FRAC CN | SWS, ONES | 6,19 | A,1,L | 6,19 | |
| 1537 | | LA, CHAR1 | TEN C1 | 6,19 | END MCCDA | |
| 1538 | | SWS, ALFMASK | 6,19 | A,5 | CN LIMIT | PLANT FIRST DIGIT AFTER POINT. |
| 1540 | | SWS, ONES | 6,19 | A,1,L | 6,19 | |
| 1541 | | LA, CHAR1 | TEN C1 | 6,19 | END MCCDA | |
| 1542 | | SWS, CHAR7 | 6,19 | A,6 | CN LIMIT | PLANT SECOND DIGIT AFTER POINT. |
| 1544 | | SWS, ONES | 6,19 | A,1,L | 6,19 | |
| 1545 | END MCCDA | NA, CHAR1 | 6,19 | BLANKS | BAD MCCD | BAD EXIT IF QUEER CHARACTER. |
| 1547 | | NA | 6,22 | ONES | BAD MCCD | BAD EXIT IF THIRD SUBFIELD. |
| 1549 | | LA, C2T7 | A999999 | CN LIMIT | MCCD NUMB +1 | CHECK FOR 999999 SEQUENCE BREAK. |
| 1551 | MCAF DONE | TX | 6,4 | - | Z,SC | |

P1567 SUBROUTINE IN PASS 1 TO GET A REAL CARD. NORMALLY PERFORMS CARD NUMBER CHECKING. RESPONSE TO YUL
 R1569 DIRECTOR OR MONITOR CARD (END OF FILE SITUATIONS) IS TO PEEK ONLY.
 R1575 RETURNS TO L+1 ON END OF FILE, OR TO L+2 OTHERWISE, WITH CARD IMAGE IN REAL CARD.

| | | | | | | | |
|-------|-----------|-------------|-----------|------------|------------|---|--|
| 15762 | GET CARD | WA | SOURCE | ONE | Z,X4 | | |
| 1577 | | TS | Z,SH | Z,X5 | MON PEEK | C | SAVE RETURN AND PEEK AT CARD. |
| 1579 | | NA, CHAR1 | 4,0 | Y COLUMN 1 | ENDJOB Q | | BRANCH IF NOT A YUL DIRECTOR CARD. |
| 1581 | | SWS, BIT4 | Z,SC,1 | 19 | SWITCH | | SHOW THAT ANOTHER TASK FOLLOWS. |
| 1603 | ENDJOB Q | NA, CHAR1 | 4,0 | ASTRISKS | C,+2 | | BRANCH IF NOT ANY KIND OF END OF FILE. |
| 1605 | | TS | BIT 6 | REAL CDND | N,X5 | | END OF FILE EXIT AFTER PEEK AT MON CARD. |
| 16062 | | NA, BIT11 | SWITCH | ZERO | 5,0 | | SEE NO INPUT IF REPRINTING. |
| 1607 | | S, MON READ | REAL CARD | - | - | | |
| 1608 | | NA, CHAR8 | REAL CARD | BLANKS | C,+2 | | |
| 1609 | | TS, CHAR8 | ONE | REAL CARD | ACCEPT CD | | INSERT UPSPACE 1 FOR BLANK. |
| 16102 | | NA, CHAR8 | REAL CARD | BIT 43 | C,+2 | | |
| 16104 | | TS, CHAR8 | TWO | REAL CARD | ACCEPT CD | | ASSUME MINUS IS A FAT-FINGERING OF 2. |
| 1611 | | LA, D12 | REAL CARD | NINE | C,+2 | | |
| 1612 | | TS, CHAR8 | BIT 45 | REAL CARD | ACCEPT CD | | INSERT FORM SKIP FOR NON-NUMERIC. |
| 1614 | | SS | ZERO | B43T44 | REAL CARD | | CLEAR ZONE BITS OF VERTICAL FORMAT. |
| 1618 | ACCEPT CD | SWS, BIT 44 | SWITCH | 42 | REAL CARD | | MARK ALL CARDS ENTERING DURING MERGING. |
| 1620 | | LA, CHAR1 | REAL CARD | BLANKS | C,+4 | | BRANCH IF COLUMN 1 HAS 00-15. |
| 1622 | | LA, B3T6 | REAL CARD | ZERO | C,+2 | | BLOT OUT 20, 40, OR 60. |
| 1624 | | LA, B3T6 | REAL CARD | ALF 9 C1 | C,+3 | | ALLOW ANY LETTER IN COLUMN 1. |
| 1626 | | TS, CHAR1 | BLOTS | REAL CARD | C,+2 | | BLOT OUT UNDESIRABLE COLUMN 1 CONTENTS. |
| 1628 | | LA, CHAR1 | REAL CARD | (INSTR) | C,-1 | | ALLOW 13, 14, AND 15. |
| 1630 | | TX | ZERO | - | RL CD HLTH | | |

P1639 CARD NUMBER SEQUENCE CHECKING AND SEQUENCE BREAK ANALYSIS.

| | | | | | | |
|-------|------------|--------------|--------------|------------|--------------|--|
| 1640 | | SWE, YNNYYYY | REAL CARD | A,3 | CARD NO | ISOLATE CARD NO. FOR SEQ. BRK. ANALYSIS. |
| 1642 | | TS | SIX | Z,X4 | CDNO CHEK +1 | |
| 1643 | CDNO CHEK | SWS, ONES | CARD NO | A,1 | CARD NO | |
| 1644 | | LA, CHAR2 | CARD NO | ALF 9 C2 | C,+3 | BRANCH IF CHARACTER IS NUMERIC. |
| 1646 | | NA, CHAR2 | CARD NO | BLANKS | SEQ BREAK -1 | BRANCH IF CHARACTER IS NOT NUM OR BLANK. |
| 1648 | | SS | ZERO | CHAR2 | CARD NO | SUBSTITUTE ZERO FOR BLANK. |
| 1650 | | NA | Z,X4,1 | ONE | CDNO CHEK | |
| 1651 | | LA | A999999 | CARD NO | SEQ BREAK | CARD NUMBER 999999 IS A SEQUENCE BREAK. |
| 16522 | | LA, D12 | NINE | REAL CARD | TEST ORDR | DO NOT TEST COLUMN 1 OF RIGHT PRINT. |
| 1653 | | NA, CHAR1 | REAL CARD | L COLUMN 1 | RC NOT LOG | A LOG CARD IS AN AUTOMATIC SEQ. BREAK. |
| 16542 | | TS, C2T7 | BLANKS | REAL CARD | SEQ BREAK | REMOVE CONFUSING INFO FROM LOG CARD. |
| 16544 | | LA, CHAR1 | REAL CARD | EQUALS C1 | SEQ BREAK | ALLOW FOR "LOG" IN COL 2-7 OF ACCEPTOR. |
| 16546 | | TS, C2T7 | ZERO | REAL CARD | CDNO CHEK -2 | SHOW ILLEGAL NUMBER FIELD BY ZERO. |
| 16548 | | NA, C2T7 | REAL CARD | W SQBRMIN | C,-2 | "SEQBRK" IS ONLY NON-NUMERIC ALLOWED. |
| 1655 | SEQ BREAK | SM | REAL CARD | BIT 43 | REAL CARD | INSERT SEQUENCE BREAK BIT IN CARD. |
| 1657 | | TS | BIT 6 | REAL CDNO | 5,1 | SET UP CRITERION AFTER SEQUENCE BREAK. |
| 16581 | RC NOT LOG | NA, CHAR1 | REAL CARD | T COLUMN 1 | C,+2 | BRANCH IF NOT TINS (TUCK IN NEW SECTION) |
| 16583 | | TS, C2T7 | BLANKS | REAL CARD | SEQ BREAK | ...WHICH IS AN INCIPIENT LOG CARD. |
| 16585 | | NA, CHAR1 | REAL CARD | BLANKS | TEST ORDR | |
| 16587 | | NA, C2T7 | REAL CARD +2 | W MODIFY | TEST ORDR | |
| 16588 | | WA | SOURCE | ONE | Z,X4 | |
| 16589 | | TS, C2T7 | BLANKS | REAL CARD | SEQ BREAK | OP CODE "MODIFY" IS AUTOMATIC SEQ. BRK. |
| 1659 | TEST ORDR | LA, C2T7 | CARD NO | REAL CDNO | DISORDER | |
| 1660 | | TX, C2T7 | CARD NO | - | REAL CARD | KEEP NORMAL FORM OF CARD NUMBER ON TAPE. |
| 1662 | | TS | CARD NO | REAL CDNO | 5,1 | SET UP NEXT CRITERION. |
| 1664 | DISORDER | TS | BIT 7 | RL CD HLTH | TEST ORDR +1 | |

P1665 SUBROUTINE IN PASS 1 TO GET AN INPUT CARD IMAGE FROM TAPE VIA RD1. TO INDICATE EOF ACTION, ENTRY IS
 R1667 TS L EOF EXIT Z,S3 GET TAPE C (L EOF EXIT MIGHT WELL BE Z,SC,1).
 R1669 IGNORES END SYPT ENTIRELY, RETURNS EOF-WISE ON END SYLT, RETURNS EOF-WISE ON END BYPT AND ANY SUBSEQUENT CALLS.
 R1671 LOOKS FOR A BUFFERFUL NO SOONER THAN IT NEEDS IT, AND FREES A BUFFER, WAKING PARAPROGRAM RD1.
 R1673 AS SOON AS THE LAST CARD HAS BEEN DELIVERED. CHECKS FOR SEQUENCE BREAK OR SEQUENCE ERROR.

| | | | | | | | |
|--------|------------|------------|---------------|------------|--------------|---|--|
| 1675 | GET TAPE | TX | N,CSC,2 | - | GET TAPE | C | INITIAL, OR BUFFER-SEEKING, MODE. |
| 1677 | | TS | INB PLACE | Z,X4 | MOVE TPIN | C | |
| 1679 | | TS | Z,SC | Z,AJ1 | CSC SLEEP | S | |
| 1681 | | LA | N,R5 | ZERO | C,-1 | C | GO TO SLEEP IF NO INPUT RECORD READY. |
| 1683 | | TX | N,R5 | - | Z,X4 | C | |
| 1684 | | LA, D8 | 4,0 | ZERO | IN CHECKI | C | BRANCH IF RECORD LACKS EOF BANNER BITS. |
| 1685 | | TS | ZERO | C,+0 | TPIN EXIT -2 | C | DISMISS END SYLT BUFFER, SET FOR EOFRI. |
| 16852 | | TX | EOR OR EOF +3 | - | GET TAPE | C | DISMISS EOFRI BUFFER, SET TRIVIAL EXIT. |
| 1686 | EOR OR EOF | TS | N,R5 | Z,CSC | C,+1 | S | |
| 1687 | | TS | ZERO | N,R5,1 | FREE IN CV | C | DEMOTE OR FREE BUFFER. |
| 1688 | | SS | ZERO | BIT 46 R | Z,R5 | S | |
| 1689 | | TS | Z,S3 | Z,SC | MON WAKE | C | REMOVE BUFFER FROM INPUT LIST, WAKE RD1. |
| 1690 | IN CHECK | LA | N,X4,1 | CHAR 5 | MOVE TPIN +1 | C | BR IF NO COMP NAME: MUST BE XFER INPUT. |
| 1691 | | TX | CIT4 | - | CAC N | C | SYNTHETIC MASK FOR INPUT RECD COUNTER. |
| 1692 | | NA | N,X4 | INPJT NAM | C,+2 | C | BRANCH IF STARTING PROGRAM OR NEW SUBRO. |
| 1693 | | TS | N,X4,1 | INPJT NAM | C,+3 | C | |
| 1694 | | NA | HEALTH | ZERO | DISASTER | C | LAST CARD SHOULD HAVE BEEN "END OF". |
| 1695 | | TS, CACN | ZERO | INRECNT | C,-2 | C | RESET COUNT OF RECDS IN PROG OR SJBRD. |
| 1696 | | LA, CACN | 4,0 | ZERO | MOVE TPIN | C | ACCEPT UN-NUMBERED (OLD) RECORDS. |
| 1697 | | WA | INRECNT | BIT 15 | INRECNT | C | |
| 1698 | | NA, CACN | 4,0 | INRECNT | DISASTER | C | BRANCH IF INCOMING RECORD NO. IS WRONG. |
| 1699 | MOVE TPIN | TS | Z,SC | INB PLACE | UNSQUEEZ | S | SHIFT TO SEQUENCE MODE TO RESTORE BLANX. |
| 16994 | | WA | GET TAPE +1 | TWO | GET TAPE | C | SET SWITCH FOR TRANSFERRED INPJT. |
| 16996 | | TN | N,X4,10 | 11 | TAPE CARD -1 | C | INPUT FROM DISC IS NOT SQUEEZED. |
| 16998 | | TS | B5 B8 B10 | CACN | C,+2 | C | |
| 169985 | | SWS, BIT44 | Z,CSC,1 | 16 | TAPE CARD | C | CLEAR ASTERISK IF FETCHING MAIN INPUT, |
| 16999 | | NA, CACN | SWITCH | B5 Z8 B10 | C,-1 | C | FREEZING SUBROUTINES, OR NOT REVISING. |
| 1700 | | TX | ZERO | - | TP CD HLTH | C | |
| 1701 | | NA, BIT 43 | TAPE CARD | ONES | C,+2 | C | BRANCH IF NO SEQUENCE BREAK. |
| 1703 | | TS | BIT 6 | TAPE CDND | TEST EOR | C | SET UP POST-BREAK CRITERION. |
| 1705 | | LA, C2T7 | TAPE CARD | TAPE CDND | C,+3 | C | BRANCH IF SEQUENCE ERROR. |
| 1707 | | TX | ZERO | - | TAPE CDND | C | |
| 1708 | | TS, C2T7 | TAPE CARD | TAPE CDND | TEST EOR | C | SET UP NEW CRITERION. |
| 1710 | | TS | BIT 7 | TP CD HLTH | C,-2 | C | PUT SEQUENCE ERROR BIT IN HEALTH. |
| 1712 | TEST EOR | NA | 4,2 | EOR | TPIN EXIT | C | BRANCH IF NOT END OF RECORD. |
| 1714 | | TX | Z,SC | - | Z,S3 | C | SET UP END-OF-RECORD EXIT. |
| 1715 | | TS | C,+1 | GET TAPE | EOR OR EOF | C | SET UP BUFFER-SEEKING MODE. |
| 1717 | | TX | N,CSC,2 | - | GET TAPE | C | |
| 1719 | TPIN EXIT | TX | Z,X4 | - | INB PLACE | C | MARK PLACE IN BUFFER AND EXIT. |

P172001 PROCEDURE TO RECONSTITUTE CARD IMAGES BY RESTORING BLANK WORDS. A CARD IMAGE IS REPRESENTED BY A CODE WORD FOLLOWED BY THE NON-BLANK WORDS IN THE CARD. BITS 48-39 OF THE CODE WORD CORRESPOND TO THE 10 WORDS OF THE CARD, R172005 1 INDICATING A BLANK WORD AND 0 INDICATING A NON-BLANK WORD TO BE OBTAINED FROM THE CONDENSED RECORD. THE R172007 AVERAGE RUNNING TIME OF A JUMP TABLE "SUBROUTINE" IS 9 MEMORY CYCLES.

| | | | | | | | |
|--------|----------|-----------|------------|------|---------------|---|--|
| 172008 | UNSQJEEZ | TS | N,X4 | Z,SH | C,+3 | C | SAVE INDICATOR BITS. |
| 17201 | | SWE, CAC3 | L TAP CARD | 32 | Z,X5 | | |
| 172011 | | MT | BLANKS | 10 | N,X6,1 | | INITIAL CONDITION OF CARD IMAGE. |
| 172013 | | TX | L TAP CARD | - | Z,X6 | S | |
| 172014 | | SSL, LOW5 | N,X4,1 | 0 | EXPANDER | C | RECONSTITUTE FIRST HALF OF CARD. |
| 172016 | | SWE, CAC3 | L TAP CARD | 16 | Z,X6 | | |
| 172017 | | SSL, LOW5 | Z,SH | 5 | EXPANDER | C | RECONSTITUTE SECOND HALF OF CARD. |
| 172019 | | TS | INB PLACE | Z,SC | MOVE TPIIN +3 | C | RETURN TO CSC MODE TO PROCESS TAPE CARD. |

| | | | | | | | |
|--------|----------------|----------|--------------|-----------|--|--|--|
| 172021 | L TAP CARD CAC | EXPANDER | TAPE CARD +5 | TAPE CARD | | | |
|--------|----------------|----------|--------------|-----------|--|--|--|

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|--------|----------|----------|--------|-----|--------|---|--|
| 172022 | | SETLOC,5 | 1024 | B7 | | | |
| 172023 | EXPANDER | MT | N,X4,1 | 5 | N,X6,1 | | |
| 172024 | | TN | N,X4,4 | 4 | 6,1 | | |
| 172025 | | TX | N,X4,1 | - | N,X6 | C | |
| 172026 | | TN | N,X4,3 | 3 | 6,2 | | |
| 172027 | | TX | N,X4,1 | - | N,X6 | C | |
| 172028 | | TS | N,X4,1 | 6,1 | C,+2 | C | |
| 172029 | | TX | N,X4,1 | - | N,X6 | C | |
| 17203 | | TN | N,X4,2 | 2 | 6,3 | | |
| 172031 | | TX | N,X4,1 | - | N,X6 | C | |
| 172032 | | TS | N,X4,1 | 6,1 | C,+2 | C | |
| 172033 | | MT | N,X4,1 | 3 | N,X6,2 | | |
| 172034 | | TS | N,X4,1 | 6,2 | C,+4 | C | |
| 172035 | | TX | N,X4,1 | - | N,X6 | C | |
| 172036 | | TS | N,X4,1 | 6,1 | C,+2 | C | |
| 172037 | | MT | N,X4,1 | 2 | N,X6,4 | | |
| 172038 | | TX | N,X4,1 | - | 6,4 | | |

| | | | | | | | |
|--------|--|----|--------|-----|--------|---|--|
| 172039 | | MT | N,X4,1 | 4 | N,X6,1 | | |
| 17204 | | TN | N,X4,3 | 3 | 6,1 | | |
| 172041 | | TX | N,X4,1 | - | N,X6 | C | |
| 172042 | | TN | N,X4,2 | 2 | 6,2 | | |
| 172043 | | TX | N,X4,1 | - | N,X6 | C | |
| 172044 | | TS | N,X4,1 | 6,1 | C,+2 | C | |
| 172045 | | MT | N,X4,1 | 2 | N,X6,3 | | |
| 172046 | | TX | N,X4,1 | - | 6,3 | | |
| 172047 | | MT | N,X4,1 | 3 | N,X6,1 | | |
| 172048 | | TN | N,X4,2 | 2 | 6,1 | | |
| 172049 | | MT | N,X4,1 | 2 | N,X6,2 | | |
| 17205 | | TX | N,X4,1 | - | 6,2 | | |
| 172051 | | MT | N,X4,1 | 2 | N,X6,1 | | |
| 172052 | | TX | N,X4,1 | - | 6,1 | | |
| 172053 | | TX | N,X4,1 | - | N,X6 | | |
| 172054 | | TX | - | - | - | | |

| | | | | | | | |
|--------|----------|----------|-----|--|--|--|--|
| 172055 | | SETLOC,1 | | | | | |
| 172056 | EXPANDER | ASSIGN | 5,0 | | | | |

P1721 SUBROUTINE IN PASS 1 TO TRANSMIT AN 11-WORD POPO (PASS ONE PROGRAM OUTPUT) TO WWT FOR WRITING ON TAPE
 R1723 2. LOOKS FOR A FREE BUFFER NO SOONER THAN IT NEEDS IT, AND PUTS A BUFFER INTO SAPO (SAVE & PASS 1 PROG OUTPUT)
 R1725 STATUS AS SOON AS IT IS FULL. EXPECTS INPUT TO START IN N,X0. ENTER WITH COSEQUENCE CALL. IF BIT 1 OF SWITCH
 R17261 IS ON, RENUMBERS MOST CARDS, STARTING OVER AT EACH LOG CARD.

| | | | | | | | |
|--------|-----------|--------------|------------|------------|--------------|---|--|
| 1727 | SEND POPO | TS | N,CSC,1 | SEND POPO | GRAB FREE | C | INITIAL, OR BUFFER-SEEKING, MODE. |
| 1729 | | TS | POB PLACE | Z,X4 | RNUM TEST | C | |
| 1731 | | TX | ZERO | - | N,AU1 | C | PUT POPO FLAG IN FIRST WORD OF BUFFER. |
| 1733 | | TX | Z,AU1,1 | - | POPO BUFF | C | |
| 1741 | | WA | Z,AU1 | C253 | END POBUF | C | COMPUTE END OF BUFFER. |
| 1743 | | TS | Z,AU1 | Z,X4 | RNUM TEST | C | |
| 17432 | NON RNUM | LA | (CARD NO) | N,X0 | MOVE POPO | C | BRANCH IF MERGE CONTROL CARD. |
| 17434 | | SS | Z,CSC,1 | BIT 1 | SWITCH | C | SHUT OFF RENUMBERING ON BAD MERGE. |
| 17436 | RNUM TEST | LA | BIT 1 | SWITCH | REM CHECK | C | BRANCH IF RENUMBERING IS ON. |
| 1744 | MOVE POPO | TN | N,X0 | 11 | N,X4,11 | C | |
| 1745 | | NA | Z,X4 | END POBUF | POPO EXIT | C | BRANCH IF BUFFER IS NOT FULL. |
| 1747 | | TX | POPO BUFF | - | Z,SH | C | |
| 1748 | | CC | N,SH | - | N,X4 | C | |
| 1749 | | TX | N,CSC,3 | - | SEND POPO | C | SET UP BUFFER-SEEKING MODE. |
| 1750 | | TS | N,CSC,1 | SEND POPO | GRAB FREE | C | |
| 1751 | | LA | N,R7 | ZERO | C,+3 | C | BRANCH IF SAPO LIST NOT FULL. |
| 1752 | | TS | Z,SC | Z,AJ1 | CSC SLEEP | S | OTHERWISE SLEEP UNTIL THERE'S A VACANCY. |
| 1753 | | TS | SAPO NTRY | Z,R7 | C,-2 | C | |
| 1755 | | TS | POPO BUFF | N,R7,1 | - | C | PUT BUFFER INTO SAPO STATUS. |
| 1756 | | SM | Z,R7 | BIT 46 R | SAPO NTRY | C | |
| 1757 | | TS | Z,SC | Z,CSC | MON WAKE | C | MODULATE SAPO ENTRY POINTER AND EXIT. |
| 1761 | POPO EXIT | TX | Z,X4 | - | POB PLACE | C | MARK PLACE IN BUFFER AND EXIT. |
| 176203 | REM CHECK | LA | (RIGHT P) | N,X0 | RNUM CARD | C | GO TO RENUMBER MOST CARD TYPES. |
| 17621 | | NA, CHAR1 | 0,0 | (REMARK) | NON RNUM | C | BR IF MERGE CONTROL OR MERGE ERROR CARD. |
| 176216 | | NA, CHAR1 | 0,1 | L COLUMN 1 | RNUM CARD | C | BRANCH TO RENUMBER NON-LOG REMARKS. |
| 176223 | RESTART N | TX | ZERO | - | FIELD CDD +1 | C | |
| 176224 | | TS | ZERO | RENJMBER | MOVE POPO | C | RESTART NUMBER SEQUENCE AFTER LOG ETC. |
| 17623 | RNUM CARD | SS | ZERO | BIT 7 | N,X0 | C | WIPE OUT OBSOLETE SEQUENCE ERROR BIT. |
| 176236 | | LA | RENUMBER | MAX CARDN | C,+3 | C | |
| 17624 | | SM | 0,1 | BIT 43 | 0,1 | C | |
| 176243 | | TS, C2T7 | W SQBR MIN | 0,1 | RESTART N | C | GENERATE SEQBREAK AFTER CARD 9998.98. |
| 17625 | | DA | RENUMBER | BIT 20 | RENUMBER | C | |
| 176252 | | SS | ZERO | BIT 43 | 0,1 | C | ERASE OLD SEQUENCE BREAK FLAG. |
| 176255 | | TX | RENUMBER | - | POB PLACE | C | |
| 17626 | | SWS, C5T8 | POB PLACE | 8 | POB PLACE | C | |
| 176265 | | TX | DEC ALF M1 | - | ALF MASK | C | |
| 17627 | | SWS, ALFMASK | POB PLACE | 4 | POB PLACE | C | |
| 176275 | | TX | DEC ALF M2 | - | ALF MASK | C | |
| 17628 | | SWS, ALFMASK | POB PLACE | 2 | POB PLACE | C | |
| 176285 | | TX | DEC ALF M3 | - | ALF MASK | C | |
| 17629 | | SWE, ALFMASK | POB PLACE | 2 | POB PLACE | C | CONVERT NEW CARD NUMBER TO ALPHABETIC. |
| 176293 | | TX | POB PLACE | - | FIELD CDD +1 | C | |
| 176295 | | TS, C2T7 | POB PLACE | 0,1 | MOVE POPO | C | PLANT IT AND GO TO MOVE CARD. |

P1763 SUBROUTINE IN PASS 1 TO TRANSLATE A LOCATION FIELD WHOSE VALUE IS TO BE DETERMINED IN PASS 1.

R1765 WITH DESIRED MEMORY TYPE CODE IN BITS 25-27 OF SWITCH, ENTRY IS

R1766 TS ZERO LOC STATE LOCATION C OR TO BLNK LOCN IF THE LOCATION FIELD

R1768 IS TO BE CONSIDERED BLANK. INCREMENTS LOC CTR AFTER USE. SETS THE LOC CTR TO ALL ONES IN CASE OF

R1770 OVERSIZE DEFINITION. RETURNS IN LOC STATE THE FOLLOWING INFORMATION....

R1771 BIT 8 -- 1 IF LOCATION FIELD IS SYMBOLIC.

R1772 BIT 10 -- 1 IF AN ATTEMPTED PREDEFINITION OF THE LOC SYMBOL FAILED.

R1773 BIT 14 -- 1 IF AN OVERSIZE DEFINITION WAS GIVEN.

R1774 BIT 15 -- 1 IF LOCATION IS IN WRONG MEMORY TYPE.

R1775 BIT 16 -- 1 IF LOCATION CONTENTS ARE IN CONFLICT.

R1776 BIT 17 -- 1 IF THE LOCATION SYMBOL WAS LOST DUE TO A FULL SYMBOL TABLE.

R1777 BITS 33-48 -- LOCATION VALUE AS AN INTEGER, OR -0 IF OVERSIZE DEFINITION.

R1779 IF THE LOCATION IS SYMBOLIC, THE TRANSFORMED SYMBOL HEALTH IS STORED.

1780 BLNK LOCN TX LXFOMS - Z,S0 C INITIALIZE TRANSFORM ADDRESS.
1782 TS Z,SC Z,X6 BLANK LOC SET RETURN, CONSIDER LOCATION BLANK.

1784 LOCATION TS Z,SC Z,X6 C,+1 SET RETURN, CHANGE TO SC.
1786 TS LOC FIELD COMMON ANAL SUBF C ANALYZE LOCATION FIELD.
1788 TX L XFORMS - Z,S0 INITIALIZE TRANSFORM ADDRESS.
1790 LA FIELD COD ZERO BLANK LOC BRANCH IF FIELD IS BLANK.

1792 NA FIELD COD BIT 1 NJM LOC BRANCH IF LOC FIELD IS NUMERIC.

1794 SM LOC STATE BIT 8 LOC STATE SIGNAL SYMBOLIC LOC.
1796 TS L SYM THR Z,X5 ANAL SYMB +1 C ANALYZE HISTORY OF SYMBOL.

1798 NA COMMON +2 ONES C,+3
17982 SM LOC STATE BIT 17 LOC STATE COMMON+2 IS ALL ONES IF SYM TAB FULL.
1800 TS - - BLANK LOC IN WHICH CASE TREAT LOC AS BLANK.

1802 SWE, D12 COMMON +2 16 LOC VALJE USING OLD SYMBOL HEALTH AS REL ADDRESS..
1804 WA Z,S0 LOC VALUE Z,S0 GET ADDRESS OF TRANSFORM WORD.
1809 SWS, D8 N,S0 D,6 COMMON +2 STORE TRANSFORMED SYMBOL HEALTH.
1811 TS COMMON COMMON +1 BLANK LOC SAVE SYMBOL FOR SY DEF XIT.

1816 NUM LOC NA, BIT6 FIELD COD ONES BLANK LOC TREAT SIGNED NUMERIC LOC AS BLANK.
1818 TX LOC CTR - FIELD COD +1 IN CASE OF ILL-TYPE INSTANT SETLOC.
1820 EX COMMON +1 FIX MAG LOC CTR USE EXPLICIT DEFINITION TO RESET L.C.

1823 BLANK LOC TS LOC CTR LOC VALUE INCR LCTR C
1825 TX ONES - FIELD COD +1 SHOW NO INSTANT SETLOC.
1827 LA LOC VALUE MAX LOC OK L SIZE

1828 BAD L SIZE TX ONES LOC CTR
1830 SM LOC STATE BIT 14 LOC STATE SIGNAL OVERSIZE.
1832 SWS, D8 N,S0 D,5 COMMON +2 USE OVERSIZE TRANSFORM ON SYMBOL HEALTH.
1834 TS ZERO LOC VALUE LOC EXIT -2

P18345 CHECK OTHER QUALITIES OF A LOCATION VALUE OF USABLE SIZE.

| | | | | | | | |
|-------|------------|------------|--------------|--------------|------------|---|---|
| 1835 | OK L SIZE | TX | L TYP TAB | - | Z,X5 | | |
| 1836 | | LA, CAC3 | LOC VALUE | 5,0 | C,+2 | | LOOK UP MEMORY TYPE. |
| 1838 | | TS | Z,X5,1 | - | C,-1 | | |
| 1839 | | NA, LSTYPE | 5,0 | SWITCH | BAD L TYPE | | BRANCH IF TYPE DOESNT MATCH THAT SUPPLYD. |
| 1841 | | NA | N,S0 | XFORMS +5 | OK L TYPE | | BRANCH IF OLD HEALTH WAS NOT LEFTOVER. |
| 1843 | | SSL, ONE | COMMON +2 | 15 | C,+2 | | SIGN BIT TELLS WHETHER FIXED OR ERASABL. |
| 1845 | | TS | Z,SH | Z,SC | BAD L TYPE | C | TYPE TROUBLE FOR SYM ONLY, THEN CHEK AV. |
| 1847 | | TS | TYPE F | COMMON | C,+2 | | |
| 1848 | | TX | TYPE E | - | COMMON | | CHOOSE CRITERION FOR LEFTOVER TYPE. |
| 1850 | | NA, LSTYPE | COMMON | SWITCH | C,-3 | | BRANCH IF LEFTOVER USED WRONG MEM TYPE. |
| 1852 | OK L TYPE | TS | LOC VALUE | COMMON | AVAIL 2 | C | TEST AVAILABILITY AND LEAVE RESERVED. |
| 1854 | | LA | BIT 32 | COMMON | LOC EXIT | | BITS 1-32 = 0 IF CONFLICT. |
| 1856 | | SWS, D8 | N,S0 | D,3 | COMMON +5 | | USE CONFLICT TRANSFORM ON SYMBOL HEALTH. |
| 1858 | | TS, BIT16 | ONES | LOC STATE | LOC EXIT | | SIGNAL CONFLICT AND SKIP TO LOC EXIT. |
| 1860 | BAD L TYPE | SWS, D8 | N,S0 | D,4 | COMMON +2 | | USE BAD TYPE TRANSFORM ON SYMBOL HEALTH. |
| 1862 | | SM | LOC STATE | BIT 15 | LOC STATE | | SIGNAL WRONG MEMORY TYPE. |
| 18632 | | LA | ONES | FIELD COD +1 | LOC EXIT | | EXIT IF THERE WAS NO INSTANT SETLOC. |
| 18634 | | TS | FIELD COD +1 | LOC CTR | BLANK LOC | C | RESTORE LOC CTR AFTER ILL-TYPE NUM LOC. |
| 1864 | LOC EXIT | SM | LOC STATE | LOC VALUE | LOC STATE | | |
| 1865 | | NA, BIT 8 | LOC STATE | ONES | 6,0 | | EXIT IF LOCATION WASNT SYMBOLIC. |
| 1867 | | SS | LOC VALUE | CAC3 | COMMON +2 | | |

P18671 EVERY SYMBOL DEFINED OR NEARLY DEFINED IN PASS 1 COMES THROUGH SY DEF XIT.

| | | | | | | |
|--------|---------------|------------|------------|--------------|-----------|--|
| 18672 | SY DEF XIT TN | COMMON +1 | 2 | COMMON | | |
| 18674 | LA | N,X2 | CAC3 | ONLY DEF | | BRANCH IF THIS IS THE FIRST DEFINITION. |
| 186752 | SWE, D12 | N,X2 | D,8 | Z,50 | | GET TRANSFORMS FOR HEALTH OF 1ST DEF. |
| 186756 | WA | Z,50 | L XFORMS | Z,50 | | |
| 18676 | S, ETS | 3,0 | ZX +4 | C,+1 | | POINT TO SYMBOL OR TO MULT DEF FLAG. |
| 18678 | LA | CAC12 | 4,2 | ALREDY MD | | BRANCH IF THIS IS THE 3RD OR SUBSEQ DEF. |
| 186792 | SWS, D4 | N,50 | D,6,L | N,X2 | | SHOW MULTIPLE DEFINITION ON 1ST ENTRY. |
| 1868 | LA | SYM PLACE | END SY TAB | 4TH DIMEN | | BRANCH IF THERE IS MORE ROOM IN SYM TAB. |
| 18682 | MD UNFITS | SM | LOC STATE | LOC STATE | | LOCATION-SYMBOL-DIDN'T-FIT-IN-TABLE FLG. |
| 18686 | TS | Z,X6 | Z,50 | FULLNESS | C | COUNT UNFITTING SYMBOL AND EXIT. |
| 186884 | 4TH DIMEN | NA | SYM PLACE | SPEC MAG | C,+2 | |
| 186886 | WA | SYM PLACE | THREE | SYM PLACE | S | SKIP OVER 32K STOPPER. |
| 186888 | EBA | SYM PLACE | BIT 25 | Z,X2 | | |
| 18689 | TN | N,X4 | 3 | N,X2,1 | | MOVE MULT. DEF. SYMBOL INTO THE 4TH DIM. |
| 1869 | SM | CAC12 | SYM PLACE | 4,2 | | CONVERT OLD ENTRY INTO MULT DEF FLAG. |
| 18692 | TS, CAC3 | SYM PLACE | 2,0 | 4TH DIMEN +1 | C | FIRST MULT DEF SYM POINTS TO SELF. |
| 18695 | ALREDY MD | LA | END SY TAB | SYM PLACE | MD UNFITS | BRANCH IF SYMBOL TABLE IS FULL. |
| 186965 | NA | SYM PLACE | SYM PLACE | SPEC MAG | C,+2 | |
| 18697 | WA | SYM PLACE | THREE | SYM PLACE | | SKIP OVER 32K STOPPER. |
| 186975 | SM | CAC12 | SYM PLACE | 4,2 | | MAKE MULT DEF FLAG POINT TO LATEST DEF. |
| 18698 | TX | N,X2 | - | Z,X4 | | |
| 186985 | SS | SYM PLACE | CAC3 | N,X2 | | MULTIPLE DEFS ARE THREADED IN A CIRCLE. |
| 18699 | EBA | SYM PLACE | BIT 25 | Z,X2 | | |
| 1870 | TS | COMMON | N,X2,1 | 4TH DIMEN +1 | C | EXTEND LIST INTO THE 4TH DIMENSION. |
| 18702 | TX | Z,X4 | - | N,X2 | | MULT. DEF. SYMS ARE THREADED IN A RING. |
| 187032 | EX | COMMON +3 | CAC 12 | COMMON +3 | | NEW MULDEF CAN'T DEF EARLIER NEAR DEFS. |
| 18704 | ONLY DEF | SWS, CAC12 | COMMON +1 | 16,L | N,X2 | NEW SYMBOL HEALTH AND VALUE TO SYM TAB. |
| 18706 | TS | COMMON +3 | 2,1 | N,X6 | | MAY STORE NEAR-DEF SYM'S CAC-WD. EXIT. |

P1871 SUBROUTINE IN PASS 1 TO TRANSLATE THE LOCATION FIELD OF A WILD CARD (LEFTOVER INSTRUCTION OR CONST.
 R1873 ANT). BIT 48 OF HEALTH SHOULD CONTAIN A 0 FOR SINGLE PRECISION OR A 1 FOR DOUBLE PRECISION. IF THE FIELD IS
 R1875 SYMBOLIC AND UNDEFINED, THE SYMBOL BECOMES LEFTOVER CONSTANT AND BIT 12 OF LOC STATE IS SET TO 1. IF THE FIELD
 R1877 IS UNSIGNED NUMERIC OR A SYMBOL PREDEFINED BY IS OR =, THE LOCATION IS ASSIGNED ACCORDINGLY WITHOUT DISTURBING
 R1879 THE LOCATION COUNTER, AND BIT 12 OF LOC STATE IS SET TO 0. IF THE FIELD IS BLANK OR SIGNED NUMERIC OR A SYMBOL
 R1881 DEFINED BY OTHER THAN IS OR =, THE LEFTOVER STATUS IS REJECTED ENTIRELY, BITS 12 AND 13 OF LOC STATE ARE SET TO
 R1883 01, AND THE REGULAR INSTRUCTION PROCEDURE IS USED. THIS LAST PROCEDURE IS ALSO FOLLOWED IF THE FIELD IS A
 R1885 NEW SYMBOL FOR WHICH THERE IS NO ROOM IN THE SYMBOL TABLE. OTHER OUTPUT IS IN LOC STATE AS PER REGULAR LOCN.

| | | | | | | |
|-------|------------|-------------|------------|------------|--------------|---|
| 1887 | LFTVR LOC | TS | Z,SC | Z,X4 | C,+1 | SET RETURN AND GET INTO SEQUENCE MODE. |
| 1889 | | SS | TYPE F | L STYPE | SWITCH | SPECIFY FIXED MEMORY. |
| 1891 | | TX | BIT 12 | - | LOC STATE | INDICATE LEFTOVER (TENTATIVELY). |
| 1893 | | TS | LOC FIELD | COMMON | ANAL SUBF | C |
| 1894 | | TX | LXFORMS | - | Z,SO | INITIALIZE TRANSFORM ADDRESS. |
| 1896 | | NA | FIELD COD | BIT 1 | NUM LEFTO | BRANCH IF FIELD IS NOT SYMBOLIC. |
| 1898 | | SM | LOC STATE | BIT 8 | LOC STATE | INDICATE SYMBOLIC FIELD. |
| 1900 | | TS | COMMON | COMMON +1 | ANAL SYMR | C |
| 1903 | | LA | ONES | COMMON +2 | REJECT -1 | SAVE SYMBOL FOR SY DEF XIT, AND ANALYZE. REJECT LEFTOVER STATUS IF SYM TAB FULL. |
| 1905 | | SWE, D12 | COMMON +2 | 16 | LOC VALUE | USE OLD SYMBOL HEALTH... |
| 1907 | | WA | Z,SO | LOC VALUE | Z,SO | ...TO GET ADDRESS OF TRANSFORM. |
| 19082 | | LA | 3 D8 | COMMON +2 | S LFT HLTH | |
| 1909 | | LA | COMMON +2 | ZERO | S LFT HLTH | |
| 1910 | | TS, BIT 10 | ONES | LOC STATE | REJECT +1 | C |
| 19112 | | SM | LOC STATE | BIT 14 | LOC STATE | INDICATE PREDEFINITION FAILURE. |
| 19114 | | TS | D8 | COMMON +2 | NUM LEFTO -1 | INDICATE ILL-DEFINED LOCATION VALUE. FAILED ATTEMPT TO PREDEFINE LEFTOVER. |
| 1912 | S LFT HLTH | SWS, D8 | N,SO | D,2 | COMMON +2 | STORE TRANSFORMED SYMBOL HEALTH. |
| 1914 | | LA | N,SO | BIT 1 | LEFTOVER | BRANCH IF NOT PREDEF BY IS OR =. |
| 1916 | | HA | LOC STATE | BIT 12 | LOC STATE | REMOVE LEFTOVER STATUS. |
| 1918 | | EX | COMMON +2 | CAC3 | LOC VALUE | USE PREDEFINED VALUE (ALWAYS OK SIZE). |
| 1919 | | TS | Z,X4 | Z,X6 | OK L SIZE | |
| 1923 | LEFTOVER | LA | N,SO | BIT 2 | REJECT | BRANCH IF DEFINED BY OTHER THAN IS OR =. |
| 19242 | | SWE, CAC23 | M FLEFLO P | 16 | COMMON +2 | FETCH MACHINE'S OWN FIXED LEFTO PARAM. |
| 19244 | | SM | SPEC SIGN | M FLEFLO P | Z,SC | VISIT MACHINE'S OWN ROUTINE FOR DITTO. |
| 1925 | GOT FLEFP | SM, SPECMA3 | COMMON +2 | HEALTH | COMMON +2 | INDICATE WHETHER SINGLE OR DOUBLE PREC. |
| 1929 | | TS | Z,X4 | Z,X6 | SY DEF XIT | STORE SYMBOL TABLE ENTRY, AND EXIT. |
| 1930 | NUM LEFTO | NA, BIT 6 | FIELD COD | ONES | REJECT | BRANCH IF NOT UNSIGNED NUMERIC. |
| 1932 | | HA | LOC STATE | BIT 12 | LOC STATE | REMOVE LEFTOVER STATUS. |
| 1934 | | TX | LOC CTR | - | SAVE LOC | |
| 1935 | | TS | Z,SC | Z,X6 | NUM LOC +1 | USE REGULAR LOC PROCEDURE. |
| 1937 | | TS | SAVE LOC | LOC CTR | N,X4 | RESTORE LC SETTING AND EXIT. |
| 19382 | | SM | LOC STATE | BIT 17 | LOC STATE | SHOW THAT LOC SYMBOL IS NOT IN SYM TAB. |
| 1939 | REJECT | WD | LOC STATE | BIT 13 | LOC STATE | INDICATE LEFTOVER REJECTION. |
| 1941 | | SS | ZERO | ONE | HEALTH | CLEAR POSSIBLE DOUBLE PRECISION BIT. |
| 1943 | | TS | Z,X4 | Z,X6 | BLANK LOC | TREAT AS REGULAR INSTRUCTION OR CONST. |

P1945 SUBROUTINE TO BREAK AN ADDRESS FIELD DOWN INTO SUBFIELDS. PUT RETURN ADDRESS INTO X4 ON ENTERING.

R1947 RESULTS ARE DELIVERED IN FIELD COD AND FIELD COD+1, AND IN ADRWD AND ADRWD+1, AS FOLLOWS....

| | | |
|-------|----------------------------------|---------------------------|
| R1949 | FIELD COD ALL ZERO | BLANK ADDRESS FIELD |
| R1950 | FIELD COD ALL ONES | ILLEGAL FORMAT |
| R1951 | FIELD COD+1 ALL ZERO | NO MODIFIER |
| R1952 | FIELD COD+1 INDICATES SIGNED NUM | MODIFIER GIVEN IN ADRWD+1 |
| R1953 | FIELD COD INDICATES SYMBOLIC | ADDRESS SYMBOL IN ADRWD |
| R1954 | FIELD COD INDICATES S OR US NUM | VALUE GIVEN IN ADRWD. |

R1955 USES ANALSUBF, S3, X3, AND X5.

| | | | | | | |
|------|-----------|-----------|-----------|-----------|--------------|--|
| 1956 | ADR FIELD | NA | ADDRESS 1 | BLANKS | TEST WD2 | |
| 1957 | | NA | ADDRESS 2 | BLANKS | MOV ADRES | |
| 1958 | | TS | ZERO | FIELD COD | N,X4 | INDICATE BLANK ADDRESS FIELD AND EXIT. |
| 1960 | TEST WD2 | NA | ADDRESS 2 | BLANKS | MOV ADRES | BRANCH IF BOTH WORDS NON-BLANK. |
| 1962 | | TX | ADDRESS 1 | - | AFIELD +1 | |
| 1963 | | TS | BLANKS | AFIELD | MOV ADRES +1 | SHORT CUT WHEN WORD 2 IS BLANK. |
| 1965 | MOV ADRES | TN | ADDRESS 1 | 2 | AFIELD | |
| 1966 | | SWE, ONES | C,+3 | 16 | Z,X3 | INITIAL PROCEDURE FOR NON-NUM ADDRESS. |
| 1968 | | TX | ZERO | - | FIELD COD +1 | INITIALLY ASSUME NO MODIFIER. |
| 1970 | | TS | C,+1 | Z,X5 | LD A2 S3 | |
| 1971 | | CAC | | NO MODIF | FOUND RNR | SET UP TO LOOK FOR SIGNS INITIALLY. |
| 1973 | LD A2 S3 | TX | EIGHT | - | Z,S3 | MAXIMUM NUMBER OF NBCS IN A SUBFIELD. |
| 1975 | | TS | BLANKS | AFIELD +2 | FIND NBCS | |

R1976 MINOR SUBROUTINES TO SHIFT TWO OR THREE WORDS RIGHT BY ONE CHARACTER.

| | | | | | | |
|------|---------|------------|-----------|-------|-----------|---|
| 1977 | 3SRT 1C | SWS, ONES | AFIELD +2 | A,1 | AFIELD +2 | C |
| 1978 | | SWS, CHAR1 | AFIELD +1 | A,1 | AFIELD +2 | C |
| 1979 | 2SRT 1C | SWS, ONES | AFIELD +1 | A,1 | AFIELD +1 | C |
| 1980 | | SWS, ONES | AFIELD | A,1 | AFIELD | C |
| 1981 | | SS | AFIELD | CHAR1 | AFIELD +1 | C |
| 1982 | | SS | BLANKS | CHAR1 | AFIELD | |

P1983

| | | | | | | | |
|----------------------|-----------|-----------------------------|----------------------------------|-------------------|---------------------------------|---|---|
| 1984 | FIND NBCS | NA, CHAR8 | AFIELD +1 | BLANKS | 5,0 | | BRANCH WHEN 2 WORDS ARE RIGHT-JUSTIFIED. |
| 1986 1988 | | TS SPEC | C,+1 | Z,SC | 2SRT 1C FIND NBCS | C | SHIFT AFIELD AND AFIELD+1 RIGHT 1 CHAR. |
| 1989 1991 1992 | FOUND RNB | TS NA, B3T6 LA, CHAR1 | Z,S3,1 AFIELD +2 AFIELD +2 | - ZERO ZERO | 3SRT 1C NOT SIGN NOT SIGN | C | PROCEDURE WHEN SEEKING SIGN. |
| 1993 | | NA, CHAR8 | AFIELD +1 | BLANKS | NO MODIF | | BRANCH IF SIGN NOT PRECEDED BY A BLANK. |
| 1995 1997 | | TS NA, B2B6 | AFIELD +2 FIELD COD | COMMON BIT2 | ANAL SUBF +2 NO MODIF | C | ANALYZE POSSIBLE MODIFIER. BRANCH IF TWASNT A SIGNED NUMERIC SUBF. |
| 1999 2000 | | NA NA | AFIELD +1 AFIELD | BLANKS BLANKS | ALSO MAIN ALSO MAIN | | BRANCH IF COMPOUND ADDRESS. |
| 2002 | | TS | COMMON +1 | ADR WD | N,X4 | | EXIT FOR SIGNED NUMERIC FIELD. |
| 2004 | FOUND MNB | TS | Z,S3,1 | - | 3SRT 1C | C | PROCEDURE WHEN NOT SEEKING SIGN. |
| 2006 2007 | NOT SIGN | NA NA | AFIELD +1 AFIELD | BLANKS BLANKS | 8 NBC 0 8 NBC 0 | | BRANCH IF MORE NBCS TO EXAMINE. |
| 2009 2011 | | TS NA, BIT2 | AFIELD +2 FIELD COD | COMMON ONES | ANAL SUBF +2 3,0 | C | ANALYZE POSSIBLE MAIN ADDRESS. BRANCH IF NOT NUMERIC. |
| 2013 | | TS | COMMON +1 | ADR WD | N,X4 | | EXIT WHEN MAIN ADDRESS IS S OR JS NUM. |
| 2015 2017 | NO MODIF | TN TS | ADDRESS 1 BLANKS | 2 AFIELD +2 | AFIELD SEEK HEAD +1 | | SET UP PUTATIVE SYMBOLIC SUBFIELD. |
| 2018 2020 | | TN TS | ALSO MAIN -2 BLANKS | 2 AFIELD +2 | AFIELD SEEK HEAD +1 | | RECOVER NON-MODIFIER PART OF ADR FIELD. |
| 2021 | SEEK HEAD | NA, CHAR1 | AFIELD +2 | BLANKS | C,+3 | | BRANCH WHEN POSSIBLE HEAD FOUND. |
| 2023 2025 | | TS SPEC | C,+1 | Z,SC | 3SRT 1C SEEK HEAD | C | TRIPLE SHIFT RIGHT TO FIND HEAD. |

P2026

| | | | | | | |
|------|-----------|------------|-----------|-----------|--------------|--|
| 2027 | | NA, CHAR8 | AFIELD +1 | BLANKS | NO HEAD | CHAR. PRECEDED BY NON-BLANK ISNT HEAD. |
| 2029 | | NA | AFIELD | BLANKS | SRT SYM | MOVE SYMBOL RIGHT TO INSERT HEAD. |
| 2031 | | NA | AFIELD +1 | BLANKS | C,+2 | |
| 2032 | | TS | AFIELD +2 | ADR WD | N,X4 | EXIT WHEN MAIN ADDRESS IS 1-CHAR. SYM. |
| 2034 | | NA, CHAR1 | AFIELD +1 | BLANKS | PLACE HED | MOVE SYMBOL LEFT TO INSERT HEAD. |
| 2036 | | SWS, ONES | AFIELD +1 | A,1,L | AFIELD +1 | |
| 2037 | | TS | - | - | C,-2 | |
| 2038 | SRT SYM | TS | - | - | 2SRT 1C | |
| 2039 | | NA, CHAR8 | AFIELD +1 | BLANKS | BAD ADRES | C ERROR IF NO ROOM FOR HEAD. |
| 2041 | | NA | AFIELD | BLANKS | C,-2 | SHIFT UNTIL NORMALIZED IN AFIELD +1. |
| 2043 | PLACE HED | SWS, CHAR8 | AFIELD +2 | A,1,L | AFIELD +1 | INSERT HEAD CHARACTER. |
| 2045 | | TS | AFIELD +1 | ADR WD | N,X4 | EXIT WHEN MAIN ADDRESS IS SYMBOLIC. |
| 2047 | NO HEAD | SWS, ONES | AFIELD +1 | A,1,L | AFIELD +1 | BACKTRACK AFTER NO-HEAD FINDING. |
| 2049 | | NA, CHAR8 | AFIELD +1 | BLANKS | BAD ADRES | ERROR IF SYMBOL IS TOO LONG. |
| 2051 | | NA | AFIELD | BLANKS | BAD ADRES | ERROR IF SYMBOL IS TOO LONG. |
| 2053 | | SWS, CHAR8 | AFIELD +2 | A,1,L | AFIELD +1 | FINISH BACKTRACKING. |
| 2055 | | NA, CHAR1 | AFIELD +1 | BLANKS | PLACE HED +1 | BRANCH WHEN SYMBOL IS NORMALIZED. |
| 2057 | | SWS, ONES | AFIELD +1 | A,1,L | AFIELD +1 | |
| 2058 | | TS | - | - | C,-2 | |
| 2059 | 8 NBC Q | NA | Z,S3 | ZERO | FIND NBCS | SEEK ANOTHER NON-BLANK CHARACTER. |
| 2061 | BAD ADRES | TS | ONES | FIELD COD | N,X4 | ERROR EXIT. |
| 2063 | | RESERVE | 2 | | | |
| 2064 | ALSO MAIN | TX | FIELD COD | - | FIELD COD +1 | INDICATE PRESENCE OF MODIFIER. |
| 2066 | | TN | AFIELD | 2 | ALSO MAIN -2 | SAVE ORIGINAL FORM OF REST OF FIELD. |
| 2068 | | SM | Z,X3,2 | Z,X5,9 | - | SET UP TO OMIT SIGN SEARCH. |
| 2070 | | TS | COMMON +1 | ADR WD +1 | LD A2 S3 | DELIVER VALUE OF MODIFIER. |

P2072 SUBROUTINE TO ANALYZE A SUBFIELD OF EIGHT CHARACTERS. ENTER WITH THE SUBFIELD IN COMMON. C(COMMON)
 R2074 IS NORMALIZED ON RETURN. IF THE SUBFIELD IS NUMERIC, THE RESULTING BINARY INTEGER IS DELIVERED IN COMMON+1 WITH
 R2076 THE SPECIFIED SIGN IF ANY OR A PLUS SIGN IF NO SIGN IS GIVEN. C(FIELDCOD) GIVES THE RESULTS OF ANALYSIS....

| | | | |
|-------|-------|---------------------------------|---|
| R2078 | BIT 1 | ZERO -- NON-SYMBOLIC SUBFIELD | ONE -- SYMBOLIC SUBFIELD |
| R2080 | BIT 2 | ZERO -- NON-NUMERIC SUBFIELD | ONE -- NUMERIC SUBFIELD |
| R2082 | BIT 5 | ZERO -- MINUS SIGNED SUBFIELD | ONE -- UNSIGNED OR PLUS SIGNED SUBFIELD |
| R2084 | BIT 6 | ZERO -- SIGNED NUMERIC SUBFIELD | ONE -- UNSIGNED NUMERIC SUBFIELD |

R2086 BIT 9 OF HEALTH IS SET TO 1 IF A DECIMAL SUBFIELD IS WRITTEN WITHOUT A D

| | | | | | | | |
|-------|---|-----------|-----------|-----------|--------------|---|---|
| 2087 | ANAL SUBF | NA | COMMON | BLANKS | C,+2 | C | |
| 2088 | | TX | ZERO | - | FIELD COD | | INDICATE BLANK SUBFIELD AND EXIT. |
| 2090 | | TS | UNSIG NUM | FIELD COD | NORMALED -1 | C | TEMPORARILY ASSUME UNSIGNED NUMERIC. |
| 2092 | | NA, CHAR1 | COMMON | BLANKS | NORMALED | C | |
| 2093 | | SWS, ONES | COMMON | A,1,L | COMMON | C | NORMALIZE. |
| 2095 | | TS | COMMON | COMMON +1 | C,-2 | C | |
| 2096 | NORMALED | LA, CHAR1 | COMMON +1 | ZERO | SET DIG | C | BR IF 1ST CHAR OF SUBFIELD IS ZERO. |
| 2098 | | TX | ONES | - | DIG FILE | C | INDICATE NO DIGITS YET. |
| 2100 | | NA, B3T6 | COMMON +1 | ZERO | NO SIGN | C | BR IF 1ST CHAR OF SUBFIELD ISNT A SIGN. |
| 2102 | | SWS, B5T6 | COMMON +1 | 3 | FIELD COD | C | INDICATE SIGN AND WHICH SIGN. |
| 2104 | | NA, C2T8 | COMMON +1 | BLANKS | BLANK FIL +2 | C | |
| 2105 | SYMBOLIC | TX | BIT 1 | - | FIELD COD | | INDICATE SYMBOLIC AND EXIT. |
| R2107 | NO SIGN IS THE BEGINNING OF THE LOOP TO EXAMINE EACH CHARACTER. | | | | | | |
| 2108 | NO SIGN | LA, CHAR1 | COMMON +1 | ALF 9 C1 | DIGITS | C | BRANCH IF CHARACTER IS A NUMERAL. |
| 2110 | | NA, CHAR1 | COMMON +1 | D C1 | SYMBOLIC | C | BRANCH IF NEITHER NUMERAL NOR D. |
| 2112 | | NA, C2T8 | COMMON +1 | BLANKS | SYMBOLIC | C | BRANCH IF D WITH MORE TO COME. |
| 2114 | | LA | ONES | DIG FILE | SYMBOLIC | C | BRANCH IF D WITH NO PRECEDING NUMERALS. |
| 2116 | DECIMAL) | TS | C,+1 | CONV LOOP | CONV LOOP -1 | C | SET UP CONVERSION, DECIMAL TO BINARY. |
| 2118 | | BT | COMMON +1 | 10 | COMMON +1 | C | |

P2119

| | | | | | | | |
|------|-----------|--------------|------------|-----------|--------------------------|---|---|
| 2120 | DIGITS | SM, BIT3 | FIELD COD | COMMON +1 | FIELD COD | C | TELLTALE BIT FOR 85 AND 95. |
| 2122 | | NA | DIG FILE | ONES | FILE DIG | C | BRANCH IF 2ND OR SUBSEQUENT DIGIT. |
| 2124 | SET DIG | TX | L DIG FILE | - | Z,SO | C | PROCEDURE FOR FIRST DIGIT. |
| 2126 | | TX | ZERO | - | DIG FILE | C | FAKE A ZERO PRECEDING FIRST DIGIT. |
| 2128 | | TX | L DIG FILE | - | Z,S1 | C | |
| 2129 | FILE DIG | NA, CHAR1 | COMMON +1 | ZERO | NZ DIGIT | C | |
| 2130 | | LA | DIG FILE | ZERO | NZ DIGIT +1 | C | SUPPRESS INSIGNIFICANT ZEROS. |
| 2132 | NZ DIGIT | SWE, D12 | COMMON +1 | A,7 | N,SO,1 | C | FILE SIGNIFICANT DIGIT. |
| 2134 | | NA, C2T8 | COMMON +1 | BLANKS | BLANK FI ⁻ +2 | C | CONTINUE IF MORE TO COME. |
| 2136 | | NA, BIT3 | FIELD COD | ONES | OCTAL) | C | BRANCH IF NO D AND NO 85 OR 95. |
| 2138 | | TS, BIT9 | ONES | HEALTH | DECIMAL) | C | SET COMPLAINT WHEN 85 OR 95 AND NO D. |
| 2140 | BLANK FIL | SWS, ONES | COMMON +1 | A,1,L | COMMON +1 | C | |
| 2141 | | NA, CHAR1 | COMMON +1 | BLANKS | NO SIGN | C | |
| 2142 | | TS, CHAR1 | BLANKS | COMMON +1 | BLANK FI ⁻ | C | INSERT BLANK FOR USED DIGIT, NORMALIZE. |
| 2144 | OCTAL) | TS | C,+1 | CONV LOOP | CONV LOOP -1 | C | SET UP CONVERSION, OCTAL TO BINARY. |
| 2146 | | SWE, OCTMASK | COMMON +1 | 3,L | COMMON +1 | C | |
| 2147 | | TS | ZERO | COMMON +1 | CONV LOOP +2 | C | |
| 2148 | CONV LOOP | TS | - | - | DISASTER | C | (SHOULD ALWAYS GET REPLACED) |
| 2150 | | WA | COMMON +1 | N,S1,1 | COMMON +1 | C | |
| 2151 | | NA | Z,SO | Z,S1 | CONV LOOP | C | LOOP UNTIL ALL SIGNIFICANT DIGITS USED. |
| 2153 | | SWS, BIT1 | FIELD COD | 4,L | COMMON +1 | C | INSERT CORRECT SIGN AND EXIT. |

P2155 SUBROUTINE IN PASS 1 TO ANALYZE THE HISTORY OF A SYMBOL. ENTER WITH THE NORMALIZED SYMBOL IN COMMON.
 R2156 PREVAILING HEAD IS APPENDED TO SYMBOL IN COMMON IF THERE IS ROOM. THE PRESENT HEALTH AND DEFINITION (IF ANY)
 R2157 ARE DELIVERED IN COMMON+2 IN BITS 17-48, BUT ALL ONES IS DELIVERED IN COMMON+2 IF THE SYMBOL IS NEW AND THERE
 R2158 IS NO ROOM IN THE TABLE. Z,X2 IS SET TO THE ADDRESS OF THE SECOND WORD OF THE TABLE ENTRY, OR TO COPY BUFF -1
 R2159 IF THE TABLE IS FULL. Z,X3 IS SET TO THE ADDRESS OF A WORD WHOSE RIGHT CAC FIELD POINTS TO THE SYMBOL, EXCEPT
 R2160 IF THE TABLE IS FULL. NEW SYMBOLS ARE INSERTED IN THE TABLE WITH ALPHABETICAL ORDERING BY A COMBINATION OF
 R2161 ASSOCIATIVE REFERENCING ON THE FRONT 7 BITS AND THREADING FROM SYMBOL TO SYMBOL. SEARCHING IS AIDED BY DIVIDING
 R2162 THE SET OF SYMBOLS UP INTO STRINGS WHOSE MAXIMUM SIZE IS 11 SYMBOLS, THE DIVIDERS BEING UP TO 1024 PAIRS OF SPEC
 R2163 FIELDS. THE FIRST AND SECOND SPECS IN EACH PAIR POINT TO THE END AND BEGINNING OF ITS STRING.

| | | | | | | | |
|--------|--|------------|------------|-----------|--------------|---|--|
| 2164 | ANAL SYMB | TX | L SYM THR | - | Z,X5 | C | ADDRESS OF LIST OF 126 SPECPAIR THREADS. |
| 2165 | | TX | ZERO | - | COMMON +2 | C | IN CASE SYM IS IN 1ST STRING OR IN NONE. |
| 2166 | | TX | ZERO | - | COMMON +3 | C | IN CASE THIS WILL BE A NON-EQUALS DEF. |
| 2167 | | NA, CHAR8 | COMMON | BLANKS | C,+2 | C | |
| 21675 | | TX, CHAR8 | HEAD | - | COMMON | C | APPEND HEAD IF THERE IS ROOM. |
| 21685 | | SWS,B19T25 | COMMON | 18 | SYM SHIFT | C | CHOOSE THREAD BY 7 FRONT BITS OF SYMBOL. |
| 21695 | SYM SHIFT | SWE, CAC3 | 5,0 | 0 | Z,X3 | C | THREAD FOR 1 OF 126 OF 1024 SPEC PAIRS. |
| 21705 | | LA | ONES | COMMON | FULLNESS | C | "cccccccc" IS SOCIALLY UNFIT FOR TABLE. |
| 21715 | SEEK STRG | S, ETS | 3,0 | ZX +2 | C,+1 | | POINT TO LAST SYMBOL IN STRING. |
| 21725 | | LA | COMMON | N,X2 | IN STRING | C | BRANCH IF SYMBOL MUST BE IN THIS STRING. |
| 21735 | | HA | N,X2,1 | COMMON | COMMON +2 | C | COMPARE ARG WITH LAST SYM IN WRONG STRG. |
| 21745 | | TS | N,X2 | Z,X3 | SEEK STRG | C | POINT TO SPEC PAIR FOR NEXT STRING. |
| 21755 | IN STRING | TS | Z,X3,1 | Z,SH | SEEK SYMB +3 | C | SAVE ADDRESS OF SPEC PAIR. |
| 21775 | SEEK SYMB | LA | COMMON | N,X2 | FIND OR NO | C | |
| 2178 | | S, ETS | 2,1 | ZX +3 | C,+1 | | ARGUMENT IS GREATER. TRY NEXT SYMBOL. |
| 2179 | | LA | COMMON | N,X3,1 | C,+2 | C | |
| 21795 | | S, ETS | 3,0 | ZX +2 | SEEK SYMB | | ARGUMENT IS GREATER. TRY NEXT SYMBOL. |
| 21805 | | EBA | Z,X2 | ONE | Z,X3 | C | POINT TO SECOND WORD OF PRECEDING SYMB. |
| 21815 | | S, ETS | 3,0 | ZX +2 | C,+1 | | POINT TO EQUAL OR GREATER SYMBOL. |
| 21825 | FIND OR NO | LA | COMMON +2 | B8T48 | THR SHIFT +1 | C | BRANCH IF THREAD TO SPEC PAIR IS RIGHT. |
| R21835 | IF THE HIGH 7 BITS OF THE NEW SYMBOL DIFFER FROM THOSE OF THE LAST SYMBOL IN THE LAST STRING, THE THREAD PICKED | | | | | | |
| R21845 | OUT BY THESE BITS MUST BE CHANGED SO AS TO POINT TO THIS STRING, BECAUSE WE SHOULDN'T HAVE SEEN THE LAST STRING. | | | | | | |
| 21855 | NEW THRED | HA,B25T27 | SYM SHIFT | B25T26 | CAC SHIFT | C | FORM 48S-COMPLEMENT OF SHIFT COUNT. |
| 21865 | | SWS, CHAR8 | SYM SHIFT | 24 | THR SHIFT | C | MOVE INDEX AUGMENTER. |
| 21875 | | TX,B25T27 | CAC SHIFT | - | THR SHIFT | C | COPY COMPLEMENTED SHIFT COUNT. |
| 21885 | CAC SHIFT | SWE, ONES | CAC3 | 0 | CACN | C | MAKE MASK FOR NEW THREAD. |
| 21895 | THR SHIFT | SWS,CACN | Z,SH | 0 | 5,0 | C | MAKE NEW THREAD. |
| 21905 | | NA | N,X2,1 | COMMON | NEW SYMB -1 | C | BRANCH IF SYMBOL IS NOT IN TABLE. |
| 21912 | | TX | 2,1 | - | COMMON +3 | C | IN CASE THIS SYMBOL IS A DEFINER FOR =. |
| 21915 | | LA | 2,1 | CAC12 | FOUND SYM | C | BRANCH IF SYMBOL, NOT MULT. DEF. FLAG. |
| 21925 | | S, ETS | 2,1 | ZX +2 | THR SHIFT +1 | | POINT TO CURRENT MEMBER OF MULT DEF SET. |
| 21935 | | LA | END SY TAB | SYM PLACE | FULLNESS | C | BRANCH IF SYMBOL TABLE IS NOT FULL. |

P2197 CREATE 3-WORD SYMBOL TABLE ENTRY. WD 2 = CAC HEALTH DEFINITION THREAD - . WD 3 = 0 (ANALYZER IN PASS 2).

| | | | | | | | |
|-------|--|------------|------------|----------|------------|---|--|
| 21982 | NEW SYMB | NA | SYM PLACE | SPEC MAG | C,+2 | C | |
| 21983 | | WA | SYM PLACE | THREE | SYM PLACE | C | SKIP OVER 32K STOPPER. |
| 21985 | | EX | N,X3 | CAC3 | CACN | C | SAVE ADDRESS OF NEXT SYM OR SPEC PAIR. |
| 21995 | | SS | SYM PLACE | CAC3 | N,X3 | C | THREAD TO THIS FROM LAST SYM OR SPEC PR. |
| 22005 | | EBA | SYM PLACE | BIT 25 | Z,X2 | C | |
| 2201 | | TX | COMMON | - | N,X2,1 | C | PUT NEW SYMBOL IN SYMBOL TABLE. |
| 2202 | | TX | CACN | - | N,X2 | C | THREAD TO NEXT SYMBOL OR SPEC PAIR. |
| 2203 | | TX | ZERO | - | Z,1 | C | INITIALIZE ANALYZER WORD. |
| 2204 | SYM OR NOT | WA | SYM PLACE | THREE | SYM PLACE | C | LEFT SIX BITS MUST BE 60. |
| 2207 | | EX | N,SH | CAC3 | CACN | C | POINT TO LAST SYMBOL IN STRING. |
| 2208 | | WA | Z,SH | ONE | Z,AU1 | C | POINT TO POINTER TO HEAD OF STRING. |
| 2209 | | WA | NINE | TWO | Z,AU2 | C | |
| 2211 | MEASURE | EX | N,AU1 | CAC3 | ETS | C | POINT TO A SYMBOL IN THE STRING. |
| 2212 | | NA | ETS | CACN | C,+2 | C | BRANCH IF NOT LOOKING AT LAST IN STRING. |
| 2214 | CLR COMM 2 | TX | ZERO | - | COMMON +2 | S | RETURN AFTER NEW SYMBOL BUT NO NEW STR. |
| 2216 | | EBA | ETS | ONE | Z,AU1 | C | |
| 2217 | | NA | Z,AU2 | SIX | C,+2 | C | |
| 2218 | | SM | ETS | BIT 25 | COMMON +2 | C | SAVE ADDRESS OF SIXTH SYMBOL IN STRING. |
| 22195 | | NA | Z,AU2,1 | ONE | MEASURE | C | BRANCH UNLESS STRING JUST GREW TO 12. |
| 22205 | SPLIT STR | WA | 5,13 | BIT 15 | 5,13 | C | |
| 22207 | | LA, CHAR1 | EOR | 5,13 | MEASURE +2 | C | IF NO AVAIL. SPEC PAIRS, KEEP SAME STR. |
| 2221 | | SWE, CAC3 | 5,13 | 32 | Z,AU2 | C | INCREMENT & GET ADDR OF NEXT SPEC PAIR. |
| 2222 | | SS | CACN | CAC3 | N,AU2 | C | POINTER TO LAST SYMBOL IN NEW STRING. |
| 2223 | | SS | COMMON +2 | CAC3 | N,SH | C | POINTER TO NEW LAST SYM IN OLD STRING. |
| 2224 | | EBA | COMMON +2 | ONE | Z,AU1 | C | POINT TO SECOND WORD OF SAME. |
| 2225 | | WA | Z,AU2 | ONE | Z,SH | C | |
| 22255 | | SS | N,AU1 | CAC3 | N,SH | C | NEW SPEC PR POINTS TO START OF NEW STR. |
| 22265 | | SS | Z,AU2 | CAC3 | N,AU1 | C | OLD STRING POINTS TO NEW SPEC PAIR. |
| 22275 | FOUND SYM | SWE, CAC23 | N,X2 | 16 | COMMON +2 | S | DELIVER HEALTH AND EQUIVALENT OF SYMBOL. |
| R2229 | EXIT WITH BAD NEWS WHEN THE NUMBER OF SYMBOLS PLUS SUBROUTINES EXCEEDS 8191. ALSO FOR A SYMBOL OF 48 ONES. | | | | | | |
| 2230 | FULLNESS | DS | SYM TAB XS | ONE | SYM TAB XS | C | COUNT HOW MANY TOO MANY. |
| 2232 | | WD | L COP BUFS | ONE | Z,X2 | C | PREVENT POSSIBLE TROUBLE WITH 2,N REFS. |
| 2234 | | TX | ONES | - | COMMON +2 | S | SET FULLNESS SIGNAL AND EXIT. |

P2236 SUBROUTINE IN PASS 1 TO DETERMINE AND (OPTIONALLY) RESET THE AVAILABILITY OF A LOCATION. PUT LOCATIONS IN BITS 33-48 OF COMMON ON ENTERING. IF LOCATION IS AVAILABLE, ONE OF BITS 1-32 OF COMMON WILL BE A ONE ON RETURN. ENTER AT AVAIL1 FOR A NON-DESTRUCTIVE TEST, OR AT AVAIL2 TO LEAVE LOCATION RESERVED.

| | | | | | | | |
|------|---------|-------------|---------|------------|------------|---|--------------------------------------|
| 2242 | AVAIL 1 | TX | RST AV2 | - | RST AV2 -1 | C | SET UP NON-DESTRUCTIVE TEST. |
| 2244 | AVAIL 2 | SWS, B26T30 | COMMON | 18,L | C,+1 | C | USE LOW-ORDER 5 BITS AS SHIFT COUNT. |
| 2246 | | SWE, ONES | BIT 1 | 0 | AVAIL MSK | C | FORM VARIABLE (1 OF 32) MASK. |
| 2248 | | SWE, B38T48 | COMMON | 5 | Z,SH | C | USE REMAINING BITS TO GET RELATIVE |
| 2250 | | WA | Z,SH | L AV TABLE | Z,SH | C | ADDRESS OF WORD WITHIN TABLE. |
| 2252 | | SS | N,SH | AVAIL MSK | COMMON | C | STORE AVAILABILITY SIGNAL. |
| 2254 | | SS | ZERO | AVAIL MSK | N,SH | C | RESERVE LOCATION. |
| 2256 | RST AV2 | TX | C,+1 | - | C,-1 | | RESTORE AVAIL1 TO AVAIL2. |
| 2258 | | SS | ZERO | AVAIL MSK | N,SH | | |

R225802 PASS 1 PROCESSING OF A COUNT CARD CARD. THE ADDRESS FIELD MAY CONTAIN ONLY A SYMBOL, WHICH IS INTERPRETED AS THE NAME OF A ROUTINE WHOSE WORDS ARE TO BE COUNTED. A BLANK ADDRESS FIELD "TURNS OFF" COUNTING.

| | | | | | | | |
|--------|-----------|---------------|--------------|------------|-----------|---|--|
| 22581 | | TS, BIT8 | ONES | HEALTH | C,+3 | | MILDLY CUSS NON-BLANK LOC FIELD. |
| 225814 | COUNT | TX, CD TYPE | (COUNT) | - | HEALTH | | ASTERISK ON CODE ASKS SPECIAL PROCESS. |
| 225818 | | NA | LOC FIELD | BLANKS | C,-2 | | |
| 22582 | | TS, D12 | ONE | HEALTH | BLOCK +1 | C | DECODE ADDRESS FIELD. |
| 225824 | | LA | ONES | FIELD COD | ILL COUNT | | BRANCH IF ADDRESS FIELD IS MEANINGLESS. |
| 225828 | | EBA | SPEC SIGN | BIT 25 | Z,X2 | | POINT TO ORIGIN OF LIST. |
| 225832 | | LA | FIELD COD | ZERO | COUNT PTR | | BRANCH IF ADDRESS FIELD IS BLANK. |
| 225836 | NB COUNT | NA | FIELD COD | BIT 1 | ILL COUNT | | BRANCH IF ADDRESS FIELD HAS NO SYMBOL. |
| 22584 | | LA | FIELD COD +1 | ZERO | C,+2 | | FALL THRU TO ERROR IF THERE IS A MODIF. |
| 225844 | ILL COUNT | TS, BIT 9 | ONES | HEALTH | XMIT RTRN | | "ADDRESS FIELD IS MEANINGLESS". |
| 225846 | | NA, BIT11 | HEALTH | ONES | C,+2 | | |
| 225847 | | SWS, SPEC MAG | M COUNSP | 32 | Z,CSC | C | DO SPECIAL PROCESSING FOR "COUNT*" CODE. |
| 225849 | | EBA | SPEC SIGN | BIT 25 | Z,X3 | | |
| 22585 | | TS | ADR WD | COMMON | C,+3 | | MOVE NAME OF ROUTINE. |
| 225854 | | LA | COMMON | N,X2 | C,+3 | | BRANCH WHEN PLACE IN ALPHA LIST FOUND. |
| 225858 | | EBA | Z,X2 | ONE | Z,X3 | | KEEP X3 ONE PLACE BEHIND. |
| 225862 | | S, ETS | 3,0 | ZX +2 | C,-2 | | STEP THRU ALPHA-THREADED ROUTINE LIST. |
| 225866 | | NA | COMMON | N,X2,1 | NEW RTINE | | |
| 225868 | COJNT PTR | EBA | HEALTH | Z,X2 | HEALTH | | LET CARD POINT TO WORD 3 OF TABLE ENTRY. |
| 225872 | | TS, B25T27 | ZERO | HEALTH | XMIT RTRN | | |
| 225874 | NEW RTINE | NA | SYM PLACE | END SY TAB | C,+2 | | |
| 225876 | | TS, BIT 10 | ONES | HEALTH | XMIT RTRN | | CUSS NO ROOM IN SYMTAB FOR RTINE NAME. |
| 22588 | NEW JNSYM | TS, CHAR1 | BIT 2 | SYM OR NOT | NEW SYMB | C | (ALSO USED BY SUBRO). |
| 225884 | | TS, CHAR1 | END ERR M +1 | SYM OR NOT | COUNT PTR | | RESTORE SYMBOL SUBROUTINE. |

P2800 LOAD EPILOGUE INTO PARTICULAR PASS AREA AND FINISH PASS 1.

2802 END PASS 1 S, PHI LOAD P1 EPILOG 1 BASE ADDR EPILOGUE WILL LOAD PASSES 1.5 AND 2.

2804 FILL MODLOC 64

R28041 THIS PART OF INITIALIZATION IS PERFORMED AFTER THE LOADING OF PARTICULAR PASS 1.

280414 SETLOC RL CD HLTH FINAL INITIALIZATIONS HIDE IN BUFFER.

| | | | | | | | |
|--------|-----------|--------------|------------|-----------|------------|---|---|
| 280418 | POST SPEC | SM | M TYP TAB | SPEC SIGN | Z,X1 | | |
| 28042 | | IT | N,X1 | 1,27 | N,X2 | | MOVE MEMORY TYPE TABLE. |
| 280424 | | WD | Z,AU2 | TWO | END TYP TA | | |
| 280426 | | TS | RL TYP TAB | Z,X2 | C,-2 | C | STANDARD MEMORY TYPE CONFIG FOR BYPT. |
| 28043 | | SS | MOD SHIFT | COUNT FLD | SHIFT NCP | | SHIFT FOR NUMERIC OP CODE. |
| 280434 | | TX | P1 MASKS | - | Z,MXR | | |
| 280436 | | SWS,COUNTFLD | MOD SHIFT | 6 | BLOK SHIF | | LOG (BASE 2) OF BLOCK LENGTH. |
| 280439 | | TX | L END OF | - | Z,X0 | | |
| 28044 | | SWE,CAC3 | M SUBR LOC | 16 | LOC CTR | | LOCATION COUNTER HAS GOOD INITIAL VALUE |
| 280444 | | NA,BIT9 | SWITCH | ZERO | GET REAL | | FOR SUBROUTINE ASSEMBLY, BUT IN PROGRAM |
| 280448 | | TS | ONES | LOC CTR | GET REAL | | ASSEMBLY IT IS MADE HIDEOUS. |

R280452 ITEMS TO BE FILLED IN BY THE PARTICULAR PART OF PASS 1.

280454 SIZ PASS 1 EQUALS FILL - PROG NAME + 64

| | | | | | | |
|--------|------------|--------|-----------|--|--|---------------------------|
| 280456 | M OP THRS | EQUALS | FILL +64 | | | |
| 280458 | MAX NJM OP | EQUALS | FILL +65 | | | |
| 28046 | MAX LOC | EQUALS | FILL +66 | | | |
| 280462 | MAX ISEQL | EQUALS | MAX LOC | | | |
| 280464 | ADR LIMIT | EQUALS | FILL +67 | | | ONE GREATER THAN MAX LOC. |
| 280468 | BLOK ONES | EQUALS | FILL +68 | | | ONE LESS THAN BLOCK SIZE. |
| 280472 | MOD SHIFT | EQUALS | FILL +69 | | | |
| 280474 | M TYP TAB | EQUALS | FILL +70 | | | |
| 280476 | M SUBR LOC | EQUALS | M TYP TAB | | | |
| 280477 | M COJNSP | EQUALS | M TYP TAB | | | |
| 280478 | M SPECIAL | EQUALS | FILL +71 | | | |
| 28048 | M LEFTO P | EQUALS | FILL +73 | | | |
| 280482 | M LEFTO P | EQUALS | FILL +74 | | | |

P2805 INITIALIZING SEQUENCE FOR PASS 1, OVERLAID BY THE PARTICULAR PART. SETS UP SYMBOL TABLE THREADS AND
 R2807 BUFFER-SHARING, MOVES "END OF" INFO AND COVER SHEET CONTENTS INTO PLACE, STARTS THE PARAPROGRAMS, LOADS THE PAR-
 R2809 TICULAR PART OF PASS 1, AND PARTICULARIZES THE MEMORY TYPE TABLE AND OTHER CONSTANTS.

| | | | | | | |
|-------|--------------|------------|--------------|---------------------|-------------|--|
| 2811 | SETLOC,7C | SIZ PASS 1 | B1 | | | |
| 2816 | INISH P1 | TX | INPUT XIT | - | Z,R5 | LOAD INPUT BUFFER LIST ADDRESS. |
| 2818 | | TN | OLD LINE +6 | 8 | END OF 1 +1 | MOVE "END OF" INFORMATION TO ITS IMAGE. |
| 2820 | | TN | PAGE HEAD +1 | 13 | OLD LINE +1 | COVER IT UP WITH PAGE HEAD INFORMATION. |
| 28214 | SWS, B8B17 | | SWITCH | 9,L | SWITCH | MOVE FREEZE INDICATOR TO BIT 8, B17 = 0. |
| 28216 | | SS | PASS 2 | C1T3 | P1 SIDE GP | |
| 28217 | | SS | PASS 2 | C1T3 | P1 EPILOG | SELECT VERSION OF YUL SYSTEM. |
| 28218 | S, PHI LOAD) | | P1 SIDE GP | 1 | C,+1 | LOAD PASS 1 PARAPROGRAMS. |
| 28219 | | TX | P1 MASKS | - | Z,MXR | |
| 2822 | SWE, CAC3 | | SOURCE | 32 | Z,X6 | |
| 2823 | | MT | N,SC,1 | 2 | N,X6,3 | START GROUPS B AND C (RD1 AND WNT). |
| 2835 | SPEC*B7 | | | | 1056 | |
| 2836 | SPEC*B7 | | | | 1057 | |
| 2837 | EBA | | SPEC SIGN | BIT 25 | Z,AU1 | POINT TO ORIGIN OF ROUTINE LIST, WHICH |
| 2838 | TX | | INIT UNCO | - | N,AU1,1 | MAINTAINS THE COUNT OF "UNCOUNTED" WDS. |
| 2839 | TX | | ZERO | - | N,AU1 | |
| 2841 | TS | | L COMP NAM | Z,X6 | MON WAKE | C GET ADDRESS OF COMPUTER NAME. |
| 2844 | SWS,THREA)10 | 6,1 | | 36 | Z,X6 | ADDRESS OF PREFIX FOR PARTIC. PASS NAME. |
| 2846 | TX | | CHAR1 | - | ALF MASK | MOVE LEADING NON-BLANK CHARACTERS OF |
| 2848 | SS | | N,X6 | ALF MASK | PARP NAME | REFERENCED COMPUTER NAME TO FORM |
| 2850 | SWE, C1T4 | | ALF MASK | A,1 | ALF MASK | COMPLETE NAME OF PARTICULAR PASS 1. |
| 2852 | NA, ALFMASK | 6,0 | | BLANKS | C,-2 | |
| 2853 | TX | | L TYP TAB | - | Z,X2 | ADDRESS OF WORKING MEMORY TYPE TABLE. |
| 2855 | S, PHI LOAD) | | PARP NAME | 1 | M SPECIAL | LOAD PARTICULAR PART OF PASS 1. |
| 2857 | INPUT XIT | OCT | | -133770 | | |
| 2858 | C1T3 | OCT | | 777777 | | |
| 28581 | INIT JNCO | OCT | | 0001 0000 0003 4007 | | |
| 2859 | P1 SIDE GP | ALF | | YULSIDE1 | | |

SEQBRK END YUL PASS 1 GENERAL