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

                          1401-UT-026 TAPE-TO-PRINTER PROGRAM                    3026              PAGE    1

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

 101  1 010         JOB   1401-UT-026 TAPE-TO-PRINTER PROGRAM
 102  1 020         CTL   6611               VERS 3 - 12/1/61
 103  1 030         ORG   333                                                  0333
 104  1 040  * TAPE TO PRINTER 1401 UTILITY - MAIN LINE
 105  1 050  FLSTST B     NXTPGE             BR IF NO FILESEL                 4  0333  B 425               4    425
 106  1 060         A     KTWO,FLSELA                                         7  0337  A W77 S91           4   1677   1291
 107  1 070         MCW   FLSELA,FILESL+6    SET ADDRESS                      7  0344  M S91 371           4   1291    371
 108  1 080         MCW   FLSELA,FILESL+14   FOR NEXT                         7  0351  M S91 379           4   1291    379
 109  1 090         MCW   FLSELA,FILESL+18   FILE SELECTED                    7  0358  M S91 383           4   1291    383
 110  1 100  FILESL BCE   FINAL,0-0,                                          8  0365  B 772 000           5    772    000
 111  1 110         S     ONE,0-0                                             7  0373  S W76 000           5   1676    000
 112  1 120         C     0-0,NOFLSP         COMP FOR NXTFILE                 7  0380  C 000 S80           5    000   1280
 113  1 130         BE    NXTPGE             NXTPAGE IF FOUND                 5  0387  B 425 S             5    425
 114  1 140         BH    FSQERR             FILE NOS OUT SEQ                 5  0392  B 783 U             5    783
 115  1 150  SEARCH RTW   3,3995                                              8  0397  L %U3 I95 R         6    003   3995
 116  1 160         BEF   *&5                TEST EOF                         5  0405  B 414 K             6    414
 117  1 170         B     SEARCH             NOT YET                          4  0410  B 397               6    397
 118  1 180         A     ONE,NOFLSP         STEP NO OF FILE                  7  0414  A W76 S80           6   1676   1280
 119  1 190         B     FILESL+15          RETRY COMPARE                    4  0421  B 380               6    380
 120  1 200  NXTPGE B     *+3                FIRST TIME BR                    4  0425  B 431               6    431
 121  1 210         CC    1                  SKIP TO NEW PAGE                 2  0429  F 1                 6
 122  1 220         MCW   KENN,NXTPGE        CHANGE BR TO NO-OP               7  0431  M W93 425           7   1693    425
 123  1 230         CS    332                                                 4  0438  / 332               7    332
 124  1 240         CS                                                        1  0442  /                   7
 125  1 250  PAGEOP NOP   HDPRNT             PAGE NO BYPASS                   4  0443  N 469               7    469
 126  1 260         MCS   PAGENO,299         PRINT                            7  0447  Z T00 299           7   1300    299
 127  1 270         MCW   PAGE,295           PAGE NO                          7  0454  M S96 295           7   1296    295
 128  1 280         W                                                         1  0461  2                   7
 129  1 290         A     ONE,PAGENO         STEP PAGE NO                     7  0462  A W76 T00           8   1676   1300
 130  1 300  HDPRNT LCA   ADDLN1,CARRCT+5                                     7  0469  L V73 539           8   1573    539
 131  1 310         LCA   KNOLNS,LNSCTR      SET NO OF LINES                  7  0476  L T02 T04           8   1302   1304
 132  1 320  PRINTH LCA   CARRCT+5,HEADLN+3  SET UP LINE ADDR                 7  0483  L 539 522           8    539    522
 133  1 330         A     ONE,HEADLN+3                                        7  0490  A W76 522           8   1676    522
 134  1 340         S     ONE,LNSCTR                                          7  0497  S W76 T04           9   1676   1304
 135  1 350         BWZ   TPREAD,LNSCTR,K    BR IF ALL LINES                  8  0504  V 559 T04 K         9    559   1304
 136  1 360         CW    HEADLN+1,CARRCT+3                                   7  0512  ) 520 537           9    520    537
 137  1 370  HEADLN MCW   0-0,CARRCT+1       HEAD LINE FRM CT                 7  0519  M 000 535           9    000    535
 138  1 380         BCE   CARRCT+2,CARRCT+1,                                  8  0526  B 536 535           9    536    535
 139  1 390  CARRCT CC    0                                                   2  0534  F 0                 9
 140  1 400         MCW   0-0,332            MOVE HEAD LINE                   7  0536  M 000 332          10    000    332
 141  1 410         W                                                         1  0543  2                  10
 142  1 420         SW    CARRCT+3                                            4  0544  , 537              10    537
 143  1 430         A     K133,CARRCT+5                                       7  0548  A W91 539          10   1691    539
 144  1 440         B     PRINTH             GET NEXT HEAD LN                 4  0555  B 483              10    483
 145  1 450  TPREAD CS    332                                                 4  0559  / 332              10    332
 146  1 460         CS                                                        1  0563  /                  10
 147  1 470         CCB   *+1,L              TRIPLE SPACE                     5  0564  F 569 L            11    569
 148  1 480  RECRD  LCA   3999,3997                                           7  0569  L I99 I97          11   3999   3997
```

SEQ	PG	LIN	LABEL	OP	OPERANDS		SFX	CT	LOCN	INSTRUCTION TYPE	CARD	A-ADDR	B-ADDR
149	1	490		RTW	3,RIAREA	READ TAPE BLOCK		8	0576	L %U3 N01 R	11	003	2501
150	1	500		LCA	RMBLNK			4	0584	L X06	11	1706	
151	1	510		BER	REDUND	CHECK REDUNDANCY		5	0588	B /46 L	11	1146	
152	1	520	TSTTM	BEF	NXTFLE	TEST EOF		5	0593	B 614 K	11	614	
153	1	530		MCW	BLANK,BYPASS			7	0598	M W92 W61	12	1692	1661
154	1	540		BSS	RECRD,C	SENSE SW C-BYP		5	0605	B 569 C	12	569	
155	1	550		B	START1	TO OBJECT PGRM		4	0610	B X11	12	1711	
156	1	560	NXTFLE	A	ONE,NOFLSP	ADD 1 TO FILES		7	0614	A W76 S80	12	1676	1280
157	1	570		CC	1			2	0621	F 1	12		
158	1	580		CS	332			4	0623	/ 332	12	332	
159	1	590		CS				1	0627	/	12		
160	1	600		MCW	RECLEG,299	PRINT NUMBER OF		7	0628	M S76 299	13	1276	299
161	1	610		MCS	KNORCS,291	RECORDS IN FILE		7	0635	Z S69 291	13	1269	291
162	1	620		W				1	0642	2	13		
163	1	630		MCW	332,SEQHLD	BLANK SEQUENCE FIELD		7	0643	M 332 W38	13	332	1638
164	1	640		MCW	332,KNORCS	BLANK NO RECS		7	0650	M 332 S69	13	332	1269
165	1	650		ZA	K001,PAGENO	RESET PAGE NO		7	0657	? X04 T00	13	1704	1300
166	1	660		C	NOFLSP,KNOFLS	COMP FILES PROC		7	0664	C S80 S78	14	1280	1278
167	1	670		BE	FINAL	OUT IF EQUAL		5	0671	B 772 S	14	772	
168	1	680	FILOPT	B	HALTOP	END OF FILE HALT		4	0676	B 760	14	760	
169	1	690		BSS	HALTOP,B	CONT CD OR SS B		5	0680	B 760 B	14	760	
170	1	700	TAPELD	LCA	3999,RIAREA+80			7	0685	L I99 N81	14	3999	2581
171	1	710		RTW	3,RIAREA	READ TO CHECK		8	0692	L %U3 N01 R	14	003	2501
172	1	720		LCA	FILE4	SECOND EOF MARK		4	0700	L S88	15	1288	
173	1	730		BEF	FINAL			5	0704	B 772 K	15	772	
174	1	740		LCA	80,180			7	0709	L 080 180	15	080	180
175	1	750		BCE	CLTRWM,RIAREA+80,			8	0716	B 764 N81	15	764	2581
176	1	760	COMTLR	C	ONE,ONE			7	0724	C W76 W76	15	1676	1676
177	1	770		LCA	RIAREA+80,181			7	0731	L N81 181	15	2581	181
178	1	780		C		COMP FOR TRAILER		1	0738	C	15		
179	1	790		BE	FINAL			5	0739	B 772 S	16	772	
180	1	800		BSP	3			5	0744	U %U3 B	16	003	
181	1	810	TOFILT	LCA	3999,3997			7	0749	L I99 I97	16	3999	3997
182	1	820		B	FLSTST			4	0756	B 333	16	333	
183	1	830	HALTOP	H	TAPELD			4	0760	. 685	16	685	
184	1	840	CLTRWM	CW	RIAREA+80			4	0764	) N81	16	2581	
185	1	850		B	COMTLR			4	0768	B 724	16	724	
186	1	860	FINAL	RWD	3	REWIND TAPE		5	0772	U %U3 R	17	003	
187	1	870		CC	1	RESTORE FORM		2	0777	F 1	17		
188	1	880		H	*-3	HALT-END OF JOB		4	0779	. 779	17	779	
189	1	890	FSQERR	H	FLSTST	FILE NOS OUT SEQ		4	0783	. 333	17	333	
190	1	900	SUBRTN	MCW	BLANK,EXITCT	FROM OBJECT PRGM		7	0787	M W92 W62	17	1692	1662
191	1	910		B	SEQNCE	BYP IF NO EXCPNS		4	0794	B 879	17	879	
192	1	920	TESTEX	LCA	TAPADD,TESTC1+3	SET UP ADDRESSES		7	0798	L W04 836	17	1604	836
193	1	930		LCA	TAPADD,TESTC2+3	OF EXCEPTION		7	0805	L W04 859	18	1604	859
194	1	940		A	C1ADDR,TESTC1+3	CHARACTER		7	0812	A W45 836	18	1645	836
195	1	950		A	C2ADDR,TESTC2+3	LOCATIONS		7	0819	A W48 859	18	1648	859
196	1	960		CW	TESTC1+1,TESTC2+1			7	0826	) 834 857	18	834	857
197	1	970	TESTC1	MCW	0-0,TSTCH1			7	0833	M 000 W51	18	000	1651
198	1	980		C	TSTCH1,CHAR1	COMP FIRST CHAR		7	0840	C W51 W49	19	1651	1649
199	1	990		BU	TESTC2	BRANCH ON PROPER		5	0847	B 856 /	19	856	

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

200  2 000         B     EXCFND            CONDITION                    4  0852  B 875               19    875
201  2 010  TESTC2 MCW   0-0,TSTCH2                                     7  0856  M 000 W52           19    000   1652
202  2 020         C     TSTCH2,CHAR2      COMP SECOND CHAR             7  0863  C W52 W50           19   1652   1650
203  2 030         BU    SEQNCE            BR ON PROPER CND             5  0870  B 879 /             19    879
204  2 040  EXCFND B     EXCPTN            BR-PROCESS EXCPN             4  0875  B X61               19   1761
205  2 050  SEQNCE B     OUTSEQ-4          BYP IF NO SEQCHK             4  0879  B 927               20    927
206  2 060         LCA   SEQADD,CHKSEQ+3   SET UP SEQUENCE              7  0883  L W41 911           20   1641    911
207  2 070         A     TAPADD,CHKSEQ+3   CHECK ADDRESS                7  0890  A W04 911           20   1604    911
208  2 080         MCW   CHKSEQ+3,CHKSEQ+10                             7  0897  M 911 918           20    911    918
209  2 090         CW    CHKSEQ+1                                       4  0904  ) 909               20    909
210  2 100  CHKSEQ C     0-0,0-0           CHECK SEQUENCE               7  0908  C 000 000           20    000    000
211  2 110         MCW   0-0,0-0                                        7  0915  M 000 000           21    000    000
212  2 120         BH    OUTSEQ            BR-OUT OF SEQNCE             5  0922  B 931 U             21    931
213  2 130         B     SETUP2            TO PROCESS RECRD             4  0927  B X36               21   1736
214  2 140  OUTSEQ H     *-7               RECRD OUT OF SEQ             4  0931  . 927               21    927
215  2 150  SKPSUB B     LINKGE            BYP-NOT FIRST CR             4  0935  B |58               21   1058
216  2 160         LCA   TAPADD,SKCNTL+3   SET UP ADDRESS               7  0939  L W04 967           21   1604    967
217  2 170         A     ONE,SKCNTL+3      OF FIRST CHAR                7  0946  A W76 967           21   1676    967
218  2 180         MCW   SKCNTL+3,SKCNTL+13                             7  0953  M 967 977           22    967    977
219  2 190         CW    SKCNTL+1                                       4  0960  ) 965               22    965
220  2 200  SKCNTL MCW   0-0,FCCHAR        PICK UP CHAR                 7  0964  M 000 W06           22    000   1606
221  2 210         MCW   BLANK,0-0         BLANK CHAR                   7  0971  M W92 000           22   1692    000
222  2 220         C     FCCHAR,AMPRSD     CHECK FOR SPACE              7  0978  C W06 X01           22   1606   1701
223  2 230         BU    SKIP              SUPPRESS                     5  0985  B |18 /             22   1018
224  2 240  SUPPRS MCW   ONE,EXITCT        SPACE SUPPRESS               7  0990  M W76 W62           23   1676   1662
225  2 250         B     NOPNCH            OPTION TO BYPASS             4  0997  B Z10               23   1910
226  2 260         CS    332                                            4  1001  / 332               23    332
227  2 270         CS                                                   1  1005  /                   23
228  2 280         MCW   ASTRSK,203        OPTION TO PRINT              7  1006  M W96 203           23   1696    203
229  2 290         W                       ASTERISKS                    1  1013  2                   23
230  2 300         CS    203                                            4  1014  / 203               23    203
231  2 310  SKIP   BCE   LINKGE,FCCHAR,    SINGLE SPACE                 8  1018  B |58 W06           24   1058   1606
232  2 320         BCE   FORM,FCCHAR,0     DOUBLE SPACE                 8  1026  B |62 W06 0         24   1062   1606
233  2 330         BCE   FORM+5,FCCHAR,-   TRIPLE SPACE                 8  1034  B |67 W06 -         24   1067   1606
234  2 340         BWZ   FORM+10,FCCHAR,2  SKIP TO CHANNEL              8  1042  V |72 W06 2         24   1072   1606
235  2 350         BWZ   FORM+10,FCCHAR,K  1-9                          8  1050  V |72 W06 K         25   1072   1606
236  2 360  LINKGE B     PNTSTP            LINK TO PRINT                4  1058  B Z21               25   1921
237  2 370  FORM   CCB   LINKGE,J                                       5  1062  F |58 J             25   1058
238  2 380         CCB   LINKGE,K                                       5  1067  F |58 K             25   1058
239  2 390         MCW   ADLINK,TPREAD+8                                7  1072  M W68 567           25   1668    567
240  2 400         MN    FCCHAR,*+2                                     7  1079  D W06 |87           25   1606   1087
241  2 410         CC    0                                              2  1086  F 0                 25
242  2 420         BCE   PAGEOP-5,*-8,1    PAGE EJECT-HDNGS             8  1088  B 438 |87 1         26    438   1087
243  2 430         B     LINKGE                                         4  1096  B |58               26   1058
244  2 440  TESTOF MCW   OVFAD3,TPREAD+8                                7  1100  M W65 567           26   1665    567
245  2 450         BCE   RECRD,BYPASS,                                  8  1107  B 569 W61           26    569   1661
246  2 460         BCV   NXTPGE            OVERFLOW-EJECT               5  1115  B 425 @             26    425
247  2 470         MCW   FCBLKC,*+2                                     7  1120  M W08 /28           26   1608   1128
248  2 480         CC    0                 BLOCK FORM CONTL             2  1127  F 0                 27
249  2 490         BCE   PAGEOP-5,*-8,1                                 8  1129  B 438 /28 1         27    438   1128
250  2 500         BCV   NXTPGE            OVERFLOW-EJECT               5  1137  B 425 @             27    425
```

SEQ	PG	LIN	LABEL	OP	OPERANDS		SFX	CT	LOCN	INSTRUCTION TYPE	CARD	A-ADDR	B-ADDR
251	2	510		B	RECRD	GET NEXT BLOCK		4	1142	B 569	27	569	
252	2	520	REDUND	MCW	TSTSSF+5,OPTNB-4	REDUNDANCY		7	1146	M S13 S43	27	1213	1243
253	2	530		MCW	TRYCTR-2,TRYCTR	SET CTR FOR TRYS		7	1153	M S59 S61	27	1259	1261
254	2	540	RETRY	S	ONE,TRYCTR			7	1160	S W76 S61	28	1676	1261
255	2	550		BWZ	TSTSSF,TRYCTR,K	OUT IF TEN TRYS		8	1167	V S08 S61 K	28	1208	1261
256	2	560		BSP	3			5	1175	U %U3 B	28	003	
257	2	570		LCA	3999,3997			7	1180	L I99 I97	28	3999	3997
258	2	580		RTW	3,RIAREA	BACKSPACE-READ		8	1187	L %U3 N01 R	28	003	2501
259	2	590		LCA	RMBLNK			4	1195	L X06	28	1706	
260	2	600		BER	RETRY	CHECK REDUNDANCY		5	1199	B /60 L	29	1160	
261	2	610		B	TSTTM	RECORD GOOD		4	1204	B 593	29	593	
262	2	620	TSTSSF	BSS	TSTTM,F	SS F -CONTINUE		5	1208	B 593 F	29	593	
263	2	630		H		HALT-USER SET SW		1	1213	.	29		
264	2	640		BSS	RETRY-7,G			5	1214	B /53 G	29	1153	
265	2	650	BKSPRD	BSP	3			5	1219	U %U3 B	29	003	
266	2	660		LCA	3999,3997			7	1224	L I99 I97	29	3999	3997
267	2	670		RTW	3,RIAREA	BACKSPACE-READ		8	1231	L %U3 N01 R	30	003	2501
268	2	680		LCA	RMBLNK			4	1239	L X06	30	1706	
269	2	690		H	TSTTM	HALT-USER FIX		4	1243	. 593	30	593	
270	2	700	OPTNB	MCW	KBEE,OPTNB-4	CANNOT FIX-READ		7	1247	M W97 S43	30	1697	1243
271	2	710		B	BKSPRD	AND PROCESS		4	1254	B S19	30	1219	
272	2	720		DCW	09			2	1259		30		
273	2	730	TRYCTR	DCW	09			2	1261		30		
274	2	740	KNORCS	DCW	#8			8	1269		31		
275	2	750	RECLEG	DCW	@RECORDS@			7	1276		31		
276	2	760	KNOFLS	DCW	99			2	1278		31		
277	2	770	NOFLSP	DCW	@0?@ 0+			2	1280		31		
278	2	780	FILE1	DCW	#2			2	1282		31		
279	2	790	FILE2	DCW	#2			2	1284		31		
280	2	800	FILE3	DCW	#2			2	1286		31		
281	2	810	FILE4	DCW	#2			2	1288		32		
282	2	820	FLSELA	DSA	FILE1-2			3	1291	S80	32	1280	
283	2	830	PAGE	DCW	@PAGE @			5	1296		32		
284	2	840	PAGENO	DCW	@ 1@			4	1300		32		
285	2	850	KNOLNS	DCW	#2			2	1302		32		
286	2	860	LNSCTR	DCW	#2			2	1304		32		
287	2	870	LINE1	DCW	#1			1	1305		32		
288	2	880	LINE1A	DS	79				1384				
289	2	890	LINE1B	DS	52				1436				
290	2	900	LNE1FC	DCW	#1			1	1437		33		
291	2	910	LINE2	DCW	#1			1	1438		33		
292	2	920	LINE2A	DS	79				1517				
293	2	930	LINE2B	DS	52				1569				
294	2	940	LNE2FC	DCW	#1			1	1570		34		
295	2	950	ADDLN1	DSA	LINE1B			3	1573	U36	34	1436	
296	2	960	KRECLG	DCW	0000			4	1577		34		
297	2	970	PARAM1	DCW	#4			4	1581		34		
298	2	980	KLINLG	DCW	#4			4	1585		34		
299	2	990	PARAM2	DCW	#4			4	1589		34		
300	3	000	RCLCNV	DCW	#3			3	1592		34		
301	3	010	KBLKNG	DCW	000			3	1595		35		

```
SEQ PG LIN  LABEL  OP    OPERANDS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR B-ADDR
302  3 020  BLKCTR DCW   #3                                        3  1598                      35
303  3 030  TRUEBL DCW   000                                       3  1601                      35
304  3 040  TAPADD DCW   #3                                        3  1604                      35
305  3 050  SKPTST DCW   #1                                        1  1605                      35
306  3 060  FCCHAR DCW   @/@                                       1  1606                      35
307  3 070  FCINST DCW   @N@                                       1  1607                      35
308  3 080  FCBLKC DCW   0                                         1  1608                      36
309  3 090  SEQHLD DCW   #30                                      30  1638                      36
310  3 100  SEQADD DCW   #3                                        3  1641                      36
311  3 110  EXCOPT DCW   #1                                        1  1642                      36
312  3 120  C1ADDR DCW   000                                       3  1645                      36
313  3 130  C2ADDR DCW   000                                       3  1648                      37
314  3 140  CHAR1  DCW   #1                                        1  1649                      37
315  3 150  CHAR2  DCW   #1                                        1  1650                      37
316  3 160  TSTCH1 DCW   #1                                        1  1651                      37
317  3 170  TSTCH2 DCW   #1                                        1  1652                      37
318  3 180  PNHLGT DCW   #4                                        4  1656                      37
319  3 190  TPELGT DCW   #4                                        4  1660                      37
320  3 200  BYPASS DCW   #1                                        1  1661                      38
321  3 210  EXITCT DCW   #1                                        1  1662                      38
322  3 220  OVFAD3 DSA   RECRD                                     3  1665  569                 38    569
323  3 230  ADLINK DSA   LINKGE                                    3  1668  |58                 38   1058
324  3 240  KRRR   DSA   RIAREA-1                                 3  1671  N00                 38   2500
325  3 250  KZEROP DCW   +0000              WAS DCW  000+         4  1675                      38
326  3 260  ONE    DCW   1                                        1  1676                      38
327  3 270  KTWO   DCW   2                                        1  1677                      39
328  3 280  KFOUR  DCW   4                                        1  1678                      39
329  3 290  K80    DCW   0080                                     4  1682                      39
330  3 300  K100   DCW   100                                      3  1685                      39
331  3 310  K200   DCW   200                                      3  1688                      39
332  3 320  K133   DCW   133                                      3  1691                      39
333  3 330  BLANK  DCW   #1                                       1  1692                      39
334  3 340  KENN   NOP                   WAS DCW  @N@            1  1693  N                   40
335  3 350  ASTRSK DCW   @***@                                    3  1696                      40
336  3 360  KBEE   B                     WAS DCW  @B@            1  1697  B                   40
337  3 370  K11    DCW   011                                      3  1700                      40
338  3 380  AMPRSD DCW   @+@                                      1  1701                      40
339  3 390  K001   DCW   001                                      3  1704                      40
340  3 400  RMBLNK DCW   @| @                                     2  1706                      40
341  3 410  KTHREE DCW   3                                        1  1707                      41
342  3 420  KG83   DSA   3783              WAS DCW  @G83@         3  1710  G83                 41   3783
343  3 430  RIAREA EQU   2501              WAS DS   2501             2501
344  3 440         ORG   81                                                  0081
345  3 450  EXCDSA DSA   SEQNCE                                   3  0083  879                 42    879
346  3 460  KDEE   MN                    WAS DCW  @D@            1  0084  D                   42
347  3 470  KYYY   MZ                    WAS DCW  @Y@            1  0085  Y                   42
348  3 480  KMAXLG DCW   1496                                     4  0089                      42
349  3 490  KMINLG DCW   1279                                     4  0093                      42
350  3 500  KG79   DSA   3779              WAS DCW  @G79@         3  0096  G79                 42   3779
351  3 510  TEMP   DCW   #3                                       3  0099                      42
352  3 520  K16    DCW   16                                       2  0101                      43
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                          SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR B-ADDR
353  3 530  KEMM    MCW                  WAS DCW  @M@          1  0102  M                  43
354  3 540  KZEE    MCS                  WAS DCW  @Z@          1  0103  Z                  43
355  3 550          ORG   3990                                      3990
356  3 560  TABLE   DCW   @2SKB@                                 4  3993                  44
357  3 570          ORG   3997                                      3997
358  3 580  GRPMRK  DCW   @}@                                    1  3997        GMARK     45
359  3 590          ORG   104                                       0104
360  3 600  K03     DCW   03                                     2  0105                  46
361  3 610  K10     DCW   10                                     2  0107                  46
362  3 620  HLDADD  DSA   SEQHLD-30                             3  0110  W08             46   1608
363  3 630  SLASH   DCW   @/@                                   1  0111                  46
364  3 640  ESS     DCW   @S@                                   1  0112                  46
365  3 650  TEE     DCW   @T@                                   1  0113                  46
366  3 660  ADDED1  DCW   #3                                    3  0116                  46
367  3 670          DCW   #3                                    3  0119                  47
368  3 680          DCW   #3                                    3  0122                  47
369  3 690          DCW   #3                                    3  0125                  47
370  3 700          DCW   #3                                    3  0128                  47
371  3 710          DCW   #3                                    3  0131                  47
372  3 720          DCW   #3                                    3  0134                  47
373  3 730          DCW   #3                                    3  0137                  47
374  3 740          DCW   #3                                    3  0140                  48
375  3 750          DCW   #3                                    3  0143                  48
376  3 760          DCW   #3                                    3  0146                  48
377  3 770          DCW   #3                                    3  0149                  48
378  3 780          DCW   #3                                    3  0152                  48
379  3 790          DCW   #3                                    3  0155                  48
380  3 800          DCW   #3                                    3  0158                  48
381  3 810  ADDED0  DCW   #3                                    3  0161                  49
382  3 820  EDTWDA  DS    80                                       0241
383  3 830  EDTWDB  DS    80                                       0321
384  3 840  ADDSTR  DSA   3828                 WAS DCW  @H28@     3  0324  H28             50   3828
385  3 850  EDTTST  DSA   EDTWDB                                  3  0327  321             50    321
386  3 860          ORG   2500                                      2500
387  3 870  ANAL1   CS    80                                     4  2500  / 080           51    080
388  3 880          SW    1                                      4  2504  , 001           51    001
389  3 890          SW    3472,3605                              7  2508  , D72 F05       51   3472   3605
390  3 900          SW    3738,3739                              7  2515  , G38 G39       51   3738   3739
391  3 910          SW    3899                                   4  2522  , H99           51   3899
392  3 920          R                                            1  2526  1               51
393  3 930          SS    1                                      2  2527  K 1             51
394  3 940          BCE   ERROR1,4,            CHECK FOR RECORD 8  2529  B ?62 004       52   3062    004
395  3 950          BCE   ERROR1,10,           LENGTH + LINE LG 8  2537  B ?62 010       52   3062    010
396  3 960          LCA   80,3179              STORE CC 1       7  2545  L 080 A79       52    080   3179
397  3 970          MCW   80,TEMP                               7  2552  M 080 099       52    080    099
398  3 980          BCE   STORFH,3154,         BR IF NOT FLDSEL 8  2559  B O18 A54       52   2618   3154
399  3 990          MCW   ONE,DECKSL+7         SET FIELD SELPGM 7  2567  M W76 ?34       53   1676   3034
400  4 000          C     3154,K03                               7  2574  C A54 105       53   3154    105
401  4 010          BH    STORFH                                 5  2581  B O18 U         53   2618
402  4 020          R                                            1  2586  1               53
403  4 030          SS    1                                      2  2587  K 1             53
```

```
SEQ PG LIN  LABEL   OP   OPERANDS                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR B-ADDR
404  4 040          LCA  77,3253          STORE CC 2        7  2589  L 077 B53           53   077   3253
405  4 050          C    3154,K10                           7  2596  C A54 107           53  3154    107
406  4 060          BH   STORFH                             5  2603  B O18 U             54  2618
407  4 070          R                                       1  2608  1                   54
408  4 080          SS   1                                  2  2609  K 1                 54
409  4 090          LCA  77,3330          STORE CC 3        7  2611  L 077 C30           54   077   3330
410  4 100  STORFH  MN   3145,LNSCTR                        7  2618  D A45 T04           54  3145   1304
411  4 110          C    3145,KTHREE      CHK NO OF LINES   7  2625  C A45 X07           54  3145   1707
412  4 120          BL   ERROR2           OF FIX HEADING    5  2632  B ?63 T             54  3063
413  4 130  NXTFHD  S    ONE,LNSCTR                         7  2637  S W76 T04           55  1676   1304
414  4 140          BWZ  STORVH,LNSCTR,K                   8  2644  V P26 T04 K         55  2726   1304
415  4 150          R                                       1  2652  1                   55
416  4 160          SS   1                                  2  2653  K 1                 55
417  4 170  FIXCD1  LCA  80,3419          FIX HEAD CARD 1   7  2655  L 080 D19           55   080   3419
418  4 180          R                                       1  2662  1                   55
419  4 190          SS   1                                  2  2663  K 1                 55
420  4 200  FIXCD2  MCW  52,3471          FIX HEAD CARD 2   7  2665  M 052 D71           56   052   3471
421  4 210          MCW  80,3472                           7  2672  M 080 D72           56   080   3472
422  4 220          SW   FIXCD1+4,FIXCD2+4                 7  2679  , O59 O69           56  2659   2669
423  4 230          SW   FIXCD2+11                         4  2686  , O76               56  2676
424  4 240          A    K133,FIXCD1+6                     7  2690  A W91 O61           56  1691   2661
425  4 250          A    K133,FIXCD2+6                     7  2697  A W91 O71           56  1691   2671
426  4 260          A    K133,FIXCD2+13                    7  2704  A W91 O78           57  1691   2678
427  4 270          CW   FIXCD1+4,FIXCD2+4                 7  2711  ) O59 O69           57  2659   2669
428  4 280          CW   FIXCD2+11                         4  2718  ) O76               57  2676
429  4 290          B    NXTFHD           GET NEXT FIX HDG  4  2722  B O37               57  2637
430  4 300  STORVH  MN   3147,KNOLNS                       7  2726  D A47 T02           57  3147   1302
431  4 310          ZA   KNOLNS,LNSCTR    CHK NO OF LINES   7  2733  ? T02 T04           57  1302   1304
432  4 320          C    3147,KTWO        OF VAR HEADING    7  2740  C A47 W77           58  3147   1677
433  4 330          BL   ERROR3                              5  2747  B ?64 T             58  3064
434  4 340  NXTVHD  S    ONE,LNSCTR                         7  2752  S W76 T04           58  1676   1304
435  4 350          BWZ  STORHL,LNSCTR,K  BR IF ALL LINES   8  2759  V Q27 T04 K         58  2827   1304
436  4 360          R                                       1  2767  1                   58
437  4 370          SS   1                                  2  2768  K 1                 58
438  4 380  VARCD1  LCA  80,LINE1A        VAR HEAD CARD 1   7  2770  L 080 T84           58   080   1384
439  4 390          R                                       1  2777  1                   59
440  4 400          SS   1                                  2  2778  K 1                 59
441  4 410  VARCD2  MCW  52,LINE1B        VAR HEAD CARD 2   7  2780  M 052 U36           59   052   1436
442  4 420          BCE  *+8,80,/                          8  2787  B Q02 080 /         59  2802    080
443  4 430          MCW  80,LNE1FC                         7  2795  M 080 U37           59   080   1437
444  4 440          MCW  ADDL2A,VARCD1+6                   7  2802  M ?70 P76           59  3070   2776
445  4 450          MCW  ADDL2B,VARCD2+6                   7  2809  M ?73 P86           59  3073   2786
446  4 460          MCW  ADDL2F,VARCD2+21                  7  2816  M ?76 Q01           60  3076   2801
447  4 470          B    NXTVHD           GET NEXT VAR HAG  4  2823  B P52               60  2752
448  4 480  STORHL  BCE  *+5,3151,4                       8  2827  B Q39 A51 4         60  2839   3151
449  4 490          B    STORTL           NO HDR LABEL CDS  4  2835  B Q79               60  2879
450  4 500          R                                       1  2839  1                   60
451  4 510          SS   1                                  2  2840  K 1                 60
452  4 520          LCA  80,3818          HEADER LABEL 1    7  2842  L 080 H18           60   080   3818
453  4 530          SW   3148                               4  2849  , A48               61  3148
454  4 540          C    K80,3150                          7  2853  C W82 A50           61  1682   3150
```

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

455  4 550          BH    *+5                                       5  2860  B Q69 U             61   2869
456  4 560          B     STORTL                                    4  2865  B Q79               61   2879
457  4 570          R                                               1  2869  1                   61
458  4 580          SS    1                                         2  2870  K 1                 61
459  4 590          MCW   80,3898            HEADER LABEL 2         7  2872  M 080 H98           61    080   3898
460  4 600  STORTL  BCE   EDITST,TEMP-1,                            8  2879  B Q97 098           62   2897    098
461  4 610          R                                               1  2887  1                   62
462  4 620          SS    1                                         2  2888  K 1                 62
463  4 630          LCA   80,3978            TRAILER LABEL          7  2890  L 080 I78           62    080   3978
464  4 640  EDITST  BCE   SELPGM,TEMP-2,                           8  2897  B ?04 097           62   3004    097
465  4 650          SW    2,4                                       7  2905  , 002 004           62    002    004
466  4 660  NXTEDT  R                                               1  2912  1                   62
467  4 670          BCE   *+12,1,)            BR IF EDIT WORD        8  2913  B R32 001 )         63   2932    001
468  4 680          CW    2,4                 NO MORE EDIT           7  2921  ) 002 004           63    002    004
469  4 690          B     SELPGM+1            WORD CARDS             4  2928  B ?05               63   3005
470  4 700          SS    1                                         2  2932  K 1                 63
471  4 710          MCW   K03,STEDIT+3                             7  2934  M 105 R66           63    105   2966
472  4 720          A     3,STEDIT+3                                7  2941  A 003 R66           63    003   2966
473  4 730          SW    STEDIT+4                                  4  2948  , R67               63   2967
474  4 740          A     3,STEDIT+6                                7  2952  A 003 R69           64    003   2969
475  4 750          CW    STEDIT+4                                  4  2959  ) R67               64   2967
476  4 760  STEDIT  LCA   0-0,ADDED0          STORE EDIT WORD        7  2963  L 000 161           64    000    161
477  4 770          A     3,ADDED1            STORE ED WD ADDR       7  2970  A 003 116           64    003    116
478  4 780          A     KTHREE,STEDIT+13                          7  2977  A X07 R76           64   1707   2976
479  4 790          C     STEDIT+6,EDTTST     TEST OVER 160          7  2984  C R69 327           64   2969    327
480  4 800          BL    ERREDT              COLUMNS                5  2991  B ?00 T             65   3000
481  4 810          B     NXTEDT              GET NEXT EDIT CD       4  2996  B R12               65   2912
482  4 820  ERREDT  H     *-3                 OVER 160 COLUMNS       4  3000  . ?00               65   3000
483  4 830  SELPGM  R                                               1  3004  1                   65
484  4 840          SW    24,56               RESTORE BOOTSTRAP      7  3005  , 024 056           65    024    056
485  4 850          SW    63,67               WORD MARKS             7  3012  , 063 067           65    063    067
486  4 860          BCE   VARRCD,3103,V                            8  3019  B ?39 A03 V         65   3039   3103
487  4 870  DECKSL  BCE   56,76,2             BR IF PROPER PGM       8  3027  B 056 076 2         66    056    076
488  4 880          R     DECKSL              SEARCH IF NOT          4  3035  1 ?27               66   3027
489  4 890  VARRCD  MCW   KTHREE,DECKSL+7                           7  3039  M X07 ?34           66   1707   3034
490  4 900          B     DECKSL                                    4  3046  B ?27               66   3027
491  4 910  RUNOUT  BCE   56,76,              TO LOAD PROGRAM        8  3050  B 056 076           66    056    076
492  4 920          R     RUNOUT                                    4  3058  1 ?50               66   3050
493  4 930  ERROR1  H                         NO REC OR LM LGT       1  3062  .                   66
494  4 940  ERROR2  H                         OVER 3 FIX HEAD        1  3063  .                   67
495  4 950  ERROR3  H     *-3                 OVER 2 VAR HEAD        4  3064  . ?64               67   3064
496  4 960  ADDL2A  DSA   LINE2A                                    3  3070  V17                 67   1517
497  4 970  ADDL2B  DSA   LINE2B                                    3  3073  V69                 67   1569
498  4 980  ADDL2F  DSA   LNE2FC                                    3  3076  V70                 67   1570
499  4 990          EX    ANAL1                                          B N00                 68   2500
```

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

500                 JOB   TAPE TO PRINTER 1401 UTILITY - FIELD SELECTOR
501  5 000          ORG   1711                                            1711
502  5 020  START1  MCW   KBLKNG,BLKCTR      SET BLOCK CTR             7  1711  M V95 V98          71   1595   1598
503  5 030          MCW   KRRR,TAPEMD        START TAPE ADDRS          7  1718  M W71 K88          71   1671   2288
504  5 040  FLSREC  MCW   ONE,COMPRL+7       SET LINE NO EQ 1          7  1725  M W76 Z71          71   1676   1971
505  5 050          MCW   KG83,EDITAD        SET EDIT WORD AD          7  1732  M X10 M85          71   1710   2485
506  5 060          MCW   TAPEMD,TAPADD                                7  1739  M K88 W04          71   2288   1604
507  5 070          B     SUBRTN             BR TO EXC + SEQ           4  1746  B 787              71    787
508  5 080  SETUP1  MCW   KFLDCT,FLDCTR      SET NO OF FIELDS          7  1750  M K90 K92          72   2290   2292
509  5 090          LCA   ADDFLD,PTSTUP+14                            7  1757  L M82 Z35          72   2482   1935
510  5 100          B     SKPSUB             BR TO FORM CTL            4  1764  B 935              72    935
511  5 110  EXCPFS  BCE   PNHNOT,EXCOPT,1    EXCOPT 1-BYPASS           8  1768  B Z10 W42 1        72   1910   1642
512  5 120          MCW   K80,PNHLGT                                   7  1776  M W82 W56          72   1682   1656
513  5 130          MCW   KRECLG,TPELGT                               7  1783  M V77 W60          73   1577   1660
514  5 140          LCA   TAPEMD,TAPEPN+3    SET UP ADDRESSES          7  1790  L K88 Y55          73   2288   1855
515  5 150  NXTCD   LCA   K100,TAPEPN+6      FOR MOVE INSTR            7  1797  L W85 Y58          73   1685   1858
516  5 160          C     TPELGT,PNHLGT                                7  1804  C W60 W56          73   1660   1656
517  5 170          BL    ADDLGT             SET CARD LENGTH           5  1811  B Y23 T            73   1823
518  5 180          MCW   TPELGT,PNHLGT      EQ REC IF LESS            7  1816  M W60 W56          74   1660   1656
519  5 190  ADDLGT  A     PNHLGT,TAPEPN+3    MODIFY MOVE               7  1823  A W56 Y55          74   1656   1855
520  5 200          A     PNHLGT,TAPEPN+6    ADDRESSES                 7  1830  A W56 Y58          74   1656   1858
521  5 210          CS    180                                          4  1837  / 180              74    180
522  5 220          SW    101                                          4  1841  , 101              74    101
523  5 230          CW    TAPEPN+1,TAPEPN+4                            7  1845  ) Y53 Y56          74   1853   1856
524  5 240  TAPEPN  MCW   0-0,0-0            MOVE REC TO CARD          7  1852  M 000 000          75    000    000
525  5 250          SW    TAPEPN+1                                     4  1859  , Y53              75   1853
526  5 260          P                        PUNCH OR NOP              1  1863  4                  75
527  5 270          S     PNHLGT,TPELGT                                7  1864  S W56 W60          75   1656   1660
528  5 280          C     TPELGT,KZEROP      TEST FOR ZERO             7  1871  C W60 W75          75   1660   1675
529  5 290          BU    NXTCD              ANOTHER IF NOT            5  1878  B X97 /            75   1797
530  5 300          MCW   KFOUR,TAPEPN+11                             7  1883  M W78 Y63          75   1678   1863
531  5 310          BCE   TSTBLK,EXITCT,1    SPACE SUPPR RECD          8  1890  B J18 W62 1        76   2118   1662
532  5 320          BCE   SEQNCE,EXCOPT,3    OPT-PUNCH + PRNT          8  1898  B 879 W42 3        76    879   1642
533  5 330          B     TSTBLK                                       4  1906  B J18              76   2118
534  5 340  PNHNOT  MCW   KENN,TAPEPN+11     BYPASS OR SUPPRS          7  1910  M W93 Y63          76   1693   1863
535  5 350          B     EXCPFS+8                                     4  1917  B X76              76   1776
536  5 360  PTSTUP  A     K11,PTSTUP+14      MODIFY FIELD              7  1921  A X00 Z35          76   1700   1935
537  5 370          CW    PTSTUP+12          PARAM PICKUP              4  1928  ) Z33              77   1933
538  5 380          LCA   0-0,FLDANL         PICKUP FLD PARAM          7  1932  L 000 M79          77    000   2479
539  5 390          MCW   ONE,BYPASS                                   7  1939  M W76 W61          77   1676   1661
540  5 400          SW    PTSTUP+12,FLDANL-3                           7  1946  , Z33 M76          77   1933   2476
541  5 410          SW    FLDANL-4,FLDANL-7                            7  1953  , M75 M72          77   2475   2472
542  5 420          SW    FLDANL                                       4  1960  , M79              77   2479
543  5 430  COMPRL  BCE   OVFRT1+5,FLDANL-4,0  FIELD SAME LINE        8  1964  B Z90 M75 0        78   1990   2475
544  5 440          W                        PRINT IF NOT              1  1972  2                  78
545  5 450          MCW   OVFAD1,TPREAD+8                             7  1973  M K82 567          78   2282    567
546  5 460          BCV   NXTPGE             EJECT IF OVERFLO          5  1980  B 425 @            78    425
547  5 470  OVFRT1  CS    332                                          4  1985  / 332              78    332
548  5 480          CS                                               1  1989  /                  78
549  5 490          BCE   SETZRO,FLDANL-5,Z  TEST ZERO EMIT           8  1990  B J80 M74 Z        78   2180   2474
550  5 500          A     TAPEMD,FLDANL-5    MODIFY ADDRESSES          7  1998  A K88 M74          79   2288   2474
```

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

551  5 510          A     TAPEMD,FLDANL-8    TO MOVE FIELD TO       7  2005  A K88 M71          79   2288   2471
552  5 520          MCW   FLDANL,MOVETP+4    PRINT AREA             7  2012  M M79 !44          79   2479   2044
553  5 530          MCW   FLDANL-1,MOVETP+10                       7  2019  M M78 !50          79   2478   2050
554  5 540          MCW   FLDANL-5,MOVETP+7                        7  2026  M M74 !47          79   2474   2047
555  5 550          MCW   FLDANL-8,MOVETP+3                        7  2033  M M71 !43          80   2471   2043
556  5 560  MOVETP  SW    0-0                                     4  2040  , 000              80    000
557  5 570          MCW   0-0,0-0            MCW,MCS OR NOP        7  2044  M 000 000          80    000    000
558  5 580          BCE   EDITRN,FLDANL,N                         8  2051  B K20 M79 N        80   2220   2479
559  5 590  TFLDCT  MCW   FLDANL-8,*+4                           7  2059  M M71 !69          80   2471   2069
560  5 600          CW    0-0                                     4  2066  ) 000              80    000
561  5 610          S     ONE,FLDCTR         SUBT 1-NO FIELDS     7  2070  S W76 K92          81   1676   2292
562  5 620          MCW   FLDANL-4,COMPRL+7  RESET LINE NO        7  2077  M M75 Z71          81   2475   1971
563  5 630          BWZ   PTSTUP,FLDCTR,B    NEXT FIELD-PLUS      8  2084  V Z21 K92 B        81   1921   2292
564  5 640          BCE   PRINTR,SKPTST,1                         8  2092  B J17 W05 1        81   2117   1605
565  5 650  NORMAL  MCW   FCCHAR,PRINTR-1    SET FORM CONTROL     7  2100  M W06 J16          81   1606   2116
566  5 660          BCE   PRINTR,PRINTR-1,/                       8  2107  B J17 J16 /        82   2117   2116
567  5 670          CC    0                                       2  2115  F 0                82
568  5 680  PRINTR  W                                            1  2117  2                  82
569  5 690  TSTBLK  CS    332                                     4  2118  / 332              82    332
570  5 700          CS                                            1  2122  /                  82
571  5 710          MCW   OVFAD6,TPREAD+8                         7  2123  M K85 567          82   2285    567
572  5 720          S     ONE,BLKCTR                              7  2130  S W76 V98          82   1676   1598
573  5 730          A     RCLCNV,TAPEMD      BUMP TAPE ADDRS      7  2137  A V92 K88          83   1592   2288
574  5 740          BWZ   BLOCK,BLKCTR,K     BR IF END OF BLK     8  2144  V J69 V98 K        83   2169   1598
575  5 750          BCE   PAGEOP,PRINTR-1,A                       8  2152  B 443 J16 A        83    443   2116
576  5 760          BCV   NXTPGE             EJECT IF OVERFLO     5  2160  B 425 @            83    425
577  5 770          B     FLSREC             GET NEXT RECORD      4  2165  B X25              83   1725
578  5 780  BLOCK   A     TRUEBL,KNORCS      BUMP NO OF RCRDS     7  2169  A W01 S69          83   1601   1269
579  5 790          B     TESTOF             TO BLK FROM CTL      4  2176  B /00              84   1100
580  5 800  SETZRO  MCW   FLDANL-8,*+4                           7  2180  M M71 J90          84   2471   2190
581  5 810          SW    0-0                                     4  2187  , 000              84    000
582  5 820          MCW   FLDANL-1,ZEROST+6  SET ADDRESS FOR      7  2191  M M78 K11          84   2478   2211
583  5 830          MCW   FLDANL-1,ZEROST+10  FIELD OF ZEROS     7  2198  M M78 K15          84   2478   2215
584  5 840  ZEROST  MCW   KZEROP-3,0-0       GENERATE FIELD       7  2205  M W72 000          84   1672    000
585  5 850          MCW   0-0                OF ZEROS             4  2212  M 000              85    000
586  5 860          B     TFLDCT             TO BUMP NO FLDS      4  2216  B !59              85   2059
587  5 870  EDITRN  MCW   FLDANL-1,LDEDIT+6  SET UP ADDRESSES     7  2220  M M78 K61          85   2478   2261
588  5 880          MCW   FLDANL-1,LDEDIT+13  OF FIELD FROM      7  2227  M M78 K68          85   2478   2268
589  5 890          MCW   FLDANL-5,LDEDIT+10  TAPE RECORD        7  2234  M M74 K65          85   2474   2265
590  5 900          MCW   EDITAD,*+4          SET UP ADDRESS       7  2241  M M85 K51          85   2485   2251
591  5 910          MCW   0-0,LDEDIT+3       OF EDIT WORD         7  2248  M 000 K58          86    000   2258
592  5 920  LDEDIT  LCA   0-0,0-0            LOAD EDIT WORD       7  2255  L 000 000          86    000    000
593  5 930          MCE   0-0,0-0            EDIT FIELD           7  2262  E 000 000          86    000    000
594  5 940          A     KTHREE,EDITAD      BUMP EDIT ADDRS      7  2269  A X07 M85          86   1707   2485
595  5 950          B     TFLDCT             TO BUMP NO FLDS      4  2276  B !59              86   2059
596  5 960  OVFAD1  DSA   OVFRT1                                  3  2282  Z85                86   1985
597  5 970  OVFAD6  DSA   FLSREC                                  3  2285  X25                86   1725
598  5 980  TAPEMD  DCW   #3                                      3  2288                     87
599  5 990  KFLDCT  DCW   00                                      2  2290                     87
600  6 000  FLDCTR  DCW   #2                                      2  2292                     87
601  6 010  FIELD1  DCW   #11                                    11  2303                     87
```

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION TYPE	CARD	A-ADDR	B-ADDR
602	6	020		DCW	#11		11	2314		87		
603	6	030		DCW	#11		11	2325		88		
604	6	040		DCW	#11		11	2336		88		
605	6	050		DCW	#11		11	2347		88		
606	6	060		DCW	#11		11	2358		89		
607	6	070		DCW	#11		11	2369		89		
608	6	080		DCW	#11		11	2380		89		
609	6	090		DCW	#11		11	2391		90		
610	6	100		DCW	#11		11	2402		90		
611	6	110		DCW	#11		11	2413		90		
612	6	120		DCW	#11		11	2424		91		
613	6	130		DCW	#11		11	2435		91		
614	6	140		DCW	#11		11	2446		91		
615	6	150		DCW	#11		11	2457		92		
616	6	160	FIELD0	DCW	#11		11	2468		92		
617	6	170	FLDANL	DCW	#11		11	2479		92		
618	6	180	ADDFLD	DSA	FIELD1-11		3	2482	K92	92	2292	
619	6	190	EDITAD	DCW	#3		3	2485		92		
620	6	200		EX	RUNOUT				B ?50	94	3050	

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

621                 JOB   TAPE TO PRINT 1401 UTILITY - FIXED LENGTH
622  6 210          ORG   1711                                          1711
623  6 230  START2  MCW   KBLKNG,BLKCTR      SET BLOCK CTR           7  1711  M V95 V98          97   1595   1598
624  6 240          LCA   KRRR,MVLTOP+3       SET TAPE ADDRS          7  1718  L W71 Z61          97   1671   1961
625  6 250  FIXREC  MCW   MVLTOP+3,TAPADD                            7  1725  M Z61 W04          97   1961   1604
626  6 260          B     SUBRTN              BR TO EXC + SEQ         4  1732  B 787              97    787
627  6 270  SETUP2  MCW   KRECLG,PARAM1       SET UP RECORD           7  1736  M V77 V81          97   1577   1581
628  6 280          MCW   KLINLG,PARAM2       LENGTH,LINE LGTH        7  1743  M V85 V89          97   1585   1589
629  6 290          LCA   K200,MVLTOP+6                              7  1750  L W88 Z64          98   1688   1964
630  6 300          B     SKPSUB              BR TO FROM CTL          4  1757  B 935              98    935
631  6 310  EXCPTN  BCE   NOPNCH,EXCOPT,1     EXTOPT 1-BYPASS         8  1761  B Z10 W42 1        98   1910   1642
632  6 320          MCW   K80,PNHLGT                                 7  1769  M W82 W56          98   1682   1656
633  6 330          MCW   KRECLG,TPELGT                             7  1776  M V77 W60          98   1577   1660
634  6 340          LCA   MVLTOP+3,TPTOPN+3   SET UP ADDRESSES        7  1783  L Z61 Y48          99   1961   1848
635  6 350  NXTRCD  LCA   K100,TPTOPN+6       FOR MOVE INSTR          7  1790  L W85 Y51          99   1685   1851
636  6 360          C     TPELGT,PNHLGT                              7  1797  C W60 W56          99   1660   1656
637  6 370          BL    ADDPNL              SET CARD LENGTH         5  1804  B Y16 T            99   1816
638  6 380          MCW   TPELGT,PNHLGT       EQ REC IF LESS          7  1809  M W60 W56          99   1660   1656
639  6 390  ADDPNL  A     PNHLGT,TPTOPN+3     MODIFY MOVE             7  1816  A W56 Y48         100   1656   1848
640  6 400          A     PNHLGT,TPTOPN+6     ADDRESSES               7  1823  A W56 Y51         100   1656   1851
641  6 410          CS    180                                        4  1830  / 180             100    180
642  6 420          SW    101                                        4  1834  , 101             100    101
643  6 430          CW    TPTOPN+1,TPTOPN+4                          7  1838  ) Y46 Y49         100   1846   1849
644  6 440  TPTOPN  MCW   0-0,0-0             MOVE REC TO CARD        7  1845  M 000 000         100    000    000
645  6 450          SW    TPTOPN+1                                   4  1852  , Y46             101   1846
646  6 460          P                         PUNCH OR NOP            1  1856  4                 101
647  6 470          S     PNHLGT,TPELGT                              7  1857  S W56 W60         101   1656   1660
648  6 480          C     TPELGT,KZEROP       TEST FOR ZERO           7  1864  C W60 W75         101   1660   1675
649  6 490          BU    NXTRCD              ANOTHER IF NOT          5  1871  B X90 /           101   1790
650  6 500          MCW   KFOUR,TPTOPN+11                           7  1876  M W78 Y56         101   1678   1856
651  6 510          BCE   *+9,EXITCT,1        SPACE SUPPR RECD        8  1883  B Y99 W62 1       101   1899   1662
652  6 520          BCE   SEQNCE,EXCOPT,3     OPT-PUNCH + PRNT        8  1891  B 879 W42 3       102    879   1642
653  6 530          MCW   TPTOPN+3,MVLTOP+3   BYPASS PRINTING         7  1899  M Y48 Z61         102   1848   1961
654  6 540          B     BLKTST                                     4  1906  B J09             102   2109
655  6 550  NOPNCH  MCW   KENN,TPTOPN+11      BYPASS OR SUPPRS        7  1910  M W93 Y56         102   1693   1856
656  6 560          B     EXCPTN+8                                   4  1917  B X69             102   1769
657  6 570  PNTSTP  A     PARAM2,MVLTOP+3     MODIFY MOVE TO          7  1921  A V89 Z61         102   1589   1961
658  6 580          A     PARAM2,MVLTOP+6     PRINT INSTR             7  1928  A V89 Z64         103   1589   1964
659  6 590          MCW   ONE,BYPASS                                 7  1935  M W76 W61         103   1676   1661
660  6 600          CS    332                                        4  1942  / 332             103    332
661  6 610          CS                                               1  1946  /                 103
662  6 620          SW    201                                        4  1947  , 201             103    201
663  6 630          CW    MVLTOP+1,MVLTOP+4                          7  1951  ) Z59 Z62         103   1959   1962
664  6 640  MVLTOP  MCW   0-0,0-0             MOVE TO PRINT           7  1958  M 000 000         103    000    000
665  6 650          SW    MVLTOP+1,MVLTOP+4                          7  1965  , Z59 Z62         104   1959   1962
666  6 660          C     PARAM1,PARAM2                              7  1972  C V81 V89         104   1581   1589
667  6 670          BL    PRNTLN              BR IF NOT END           5  1979  B !47 T           104   2047
668  6 680          BH    ERROR               BR IF LL GRTR RL        5  1984  B J54 U           104   2154
669  6 690          MCW   MVLTOP+6,*+7                               7  1989  M Z64 !02         104   1964   2002
670  6 700          BCE   *+5,0-0,|           TEST LO FOR RM          8  1996  B !08 000 |       104   2008    000
671  6 710          B     FORMAT                                     4  2004  B !22             105   2022
```

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

672  6 720         MCW   MVLTOP+6,*+7       ELIMINATE LOW          7  2008  M Z64 !21          105   1964   2021
673  6 730         MCW   BLANK,0-0          ORDER RECORD MRK       7  2015  M W92 000          105   1692    000
674  6 740  FORMAT BCE   PRNTLN,SKPTST,1                           8  2022  B !47 W05 1        105   2047   1605
675  6 750  NORMFC MCW   FCCHAR,PRNTLN-1    SET FORM CONTROL       7  2030  M W06 !46          105   1606   2046
676  6 760         BCE   PRNTLN,PRNTLN-1,/                        8  2037  B !47 !46 /        106   2047   2046
677  6 770         CC    0                                       2  2045  F 0                106
678  6 780  PRNTLN W                        PRINT LINE            1  2047  2                  106
679  6 790         MCW   OVFAD4,TPREAD+8                         7  2048  M J60 567          106   2160    567
680  6 800         BCV   NXTPGE             EJECT IF OVERFLO      5  2055  B 425 @            106    425
681  6 810  OVFRT4 S     PARAM2,PARAM1                           7  2060  S V89 V81          106   1589   1581
682  6 820         C     PARAM1,KZEROP      TEST END OF REC       7  2067  C V81 W75          106   1581   1675
683  6 830         BE    BLKTST             OUT IF TRUE           5  2074  B J09 S            107   2109
684  6 840         C     PARAM1,PARAM2      TEST REC LGTH         7  2079  C V81 V89          107   1581   1589
685  6 850         BL    *+8                LESS THAN LINE        5  2086  B !98 T            107   2098
686  6 860         MCW   PARAM1,PARAM2      LET LL EQ RL          7  2091  M V81 V89          107   1581   1589
687  6 870         LCA   K200,MVLTOP+6                           7  2098  L W88 Z64          107   1688   1964
688  6 880         B     PNTSTP             GET NEXT LINE         4  2105  B Z21              107   1921
689  6 890  BLKTST S     ONE,BLKCTR                              7  2109  S W76 V98          108   1676   1598
690  6 900         BWZ   NEWPGE,BLKCTR,B    TEST END OF BLOCK     8  2116  V J35 V98 B        108   2135   1598
691  6 910         A     TRUEBL,KNORCS      BUMP NO OF RCRDS      7  2124  A W01 S69          108   1601   1269
692  6 920         B     TESTOF             TO BLK FORM CTL       4  2131  B /00              108   1100
693  6 930  NEWPGE MCW   ADFIXR,TPREAD+8                         7  2135  M J63 567          108   2163    567
694  6 940         BCE   PAGEOP-5,PRNTLN-1,A  TEST NEW PAGE      8  2142  B 438 !46 A        109    438   2046
695  6 950         B     FIXREC             NEXT RCRD IF NOT      4  2150  B X25              109   1725
696  6 960  ERROR  H     *-3                ERROR-R GR N          4  2154  . J54              109   2154
697  6 970  OVFAD4 DSA   OVFRT4                                  3  2160  !60                109   2060
698  6 980  ADFIXR DSA   FIXREC                                  3  2163  X25                109   1725
699  6 990         EX    RUNOUT                                        B ?50                110   3050
```

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

700            JOB   TAPE TO PRINTER 1401 UTILITY - VARIABLE LENGTH
701  7 000     ORG   1711                                                 1711
702  7 020  START3 LCA   KRRR,MVRTOP+3      SET TAPE ADDRS           7  1711  L W71 J21          113   1671   2121
703  7 030  VARREC MCW   MVRTOP+3,TAPADD                            7  1718  M J21 W04          113   2121   1604
704  7 040     LCA   TAPADD,COMPND+6                                 7  1725  L W04 X49          113   1604   1749
705  7 050     A     ONE,COMPND+6                                    7  1732  A W76 X49          113   1676   1749
706  7 060     CW    COMPND+4                                        4  1739  ) X47              113   1747
707  7 070  COMPND C     RMBLNK-1,0-0       Q. END OF BLOCK          7  1743  C X05 000          113   1705    000
708  7 080     BE    BLKFMC              OUT IF YES                  5  1750  B L23 S            114   2323
709  7 090     B     SUBRTN              BR TO EXC + SEQ             4  1755  B 787              114    787
710  7 100  SETUP3 LCA   K200,MVRTOP+6      SET PRINT ADDRS          7  1759  L W88 J24          114   1688   2124
711  7 110     B     SKPSUB              BR TO FORM CTL              4  1766  B 935              114    935
712  7 120  EXCPVR BCE   NOTPNH,EXCOPT,1    EXCOPT 1-BYPASS          8  1770  B Z96 W42 1        114   1996   1642
713  7 130     LCA   MVRTOP+3,TAPPNH+3  SET REC ADDR                7  1778  L J21 Y65          114   2121   1865
714  7 140     MCW   BLANK,TSTPGM                                    7  1785  M W92 L44          115   1692   2344
715  7 150  NEWCRD CS    180                                         4  1792  / 180              115    180
716  7 160     SW    101                                             4  1796  , 101              115    101
717  7 170     LCA   K100,TAPPNH+006    SET CARD ADDR               7  1800  L W85 Y68          115   1685   1868
718  7 180  GETCHR A     ONE,TAPPNH+3       BUM RECORD AND           7  1807  A W76 Y65          115   1676   1865
719  7 190     A     ONE,TAPPNH+6       CARD ADRESSES               7  1814  A W76 Y68          115   1676   1868
720  7 200     MCW   TAPPNH+3,*+7                                    7  1821  M Y65 Y34          116   1865   1834
721  7 210     BCE   RMFND,0-0,|        TEST FOR RECMRK             8  1828  B Y85 000 |        116   1885    000
722  7 220     C     NEWCRD+3,TAPPNH+6  TEST END OF CARD            7  1836  C X95 Y68          116   1795   1868
723  7 230     BL    GETCHR              NEXT CHAR IF NOT            5  1843  B Y07 T            116   1807
724  7 240     MCW   BLANK,SWITCH                                    7  1848  M W92 L43          116   1692   2343
725  7 250  LOADPH CW    TAPPNH+1,TAPPNH+4                           7  1855  ) Y63 Y66          117   1863   1866
726  7 260  TAPPNH MCW   0-0,0-0             MOVE ONE CARD           7  1862  M 000 000          117    000    000
727  7 270     SW    TAPPNH+1                                        4  1869  , Y63              117   1863
728  7 280     BCE   PNCHCD,SWITCH,1                                 8  1873  B Z36 L43 1        117   1936   2343
729  7 290     P     NEWCRD              PUNCH + RETURN              4  1881  4 X92              117   1792
730  7 300  RMFND  MCW   TAPPNH+3,TSTEOF+6  SET GM TEST ADDR         7  1885  M Y65 Z05          117   1865   1905
731  7 310     MCW   ONE,SWITCH                                      7  1892  M W76 L43          118   1676   2343
732  7 320  TSTEOF BW    GRMFND,0-0         TEST FOR END BLK         8  1899  V Z11 000 1        118   1911    000
733  7 330     B     LOADPH              RETURN IF NOT               4  1907  B Y55              118   1855
734  7 340  GRMFND MCW   ONE,TSTPGM                                   7  1911  M W76 L44          118   1676   2344
735  7 350     A     KI99,TAPPNH+3      SUBT 1 FROM                 7  1918  A L42 Y65          118   2342   1865
736  7 360     A     KI99,TAPPNH+6      MOVE ADDRESSES              7  1925  A L42 Y68          119   2342   1868
737  7 370     B     LOADPH              RETURN TO PUNCH             4  1932  B Y55              119   1855
738  7 380  PNCHCD P                         PUNCH LAST CARD         1  1936  4                  119
739  7 390     MCW   KFOUR,PNCHCD       RESET NOP INSTRS            7  1937  M W78 Z36          119   1678   1936
740  7 400     MCW   KFOUR,RMFND-4      TO PUNCH INSTRS             7  1944  M W78 Y81          119   1678   1881
741  7 410     BCE   *+9,EXITCT,1       SPACE SUPPR RECD            8  1951  B Z67 W62 1        119   1967   1662
742  7 420     BCE   SEQNCE,EXCOPT,3    OPT-PUNCH + PRNT            8  1959  B 879 W42 3        120    879   1642
743  7 430     A     ONE,KNORCS          BUMP NO OF RECS             7  1967  A W76 S69          120   1676   1269
744  7 440     MCW   TSTEOF+6,MVRTOP+3  BYPASS PRINTING             7  1974  M Z05 J21          120   1905   2121
745  7 450     BCE   BLKFMC,TSTPGM,1    TO BLK FORM CTL             8  1981  B L23 L44 1        120   2323   2344
746  7 460     CS    VARREC,203          OR NEXT RECORD              7  1989  / X18 203          120   1718    203
747  7 470  NOTPNH MCW   KENN,PNCHCD       BYPASS OR SPACE          7  1996  M W93 Z36          121   1693   1936
748  7 480     MCW   KBEE,RMFND-4        SUPPRESS                    7  2003  M W97 Y81          121   1697   1881
749  7 490     B     EXCPVR+8                                        4  2010  B X78              121   1778
750  7 500  SETPNT MCW   ONE,BYPASS                                  7  2014  M W76 W61          121   1676   1661
```

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

751  7 510          CS    332                                       4  2021  / 332              121    332
752  7 520          CS                                              1  2025  /                  121
753  7 530          SW    201                                       4  2026  , 201              121    201
754  7 540  NXTCTR A     ONE,MVRTOP+3       BUMP REC ADDRESS       7  2030  A W76 J21          122   1676   2121
755  7 550          MCW   MVRTOP+3,*+7                             7  2037  M J21 !50          122   2121   2050
756  7 560          BCE   RECMRK,0-0,|       TEST FOR REC MRK     8  2044  B J90 000 |        122   2190    000
757  7 570          A     ONE,MVRTOP+6       BUMP PRNT ADDRS        7  2052  A W76 J24          122   1676   2124
758  7 580          C     KLINLG,MVRTOP+6    TEST FULL LINE         7  2059  C V85 J24          122   1585   2124
759  7 590          BL    NXTCTR             NEXT CHAR IF NOT       5  2066  B !30 T            123   2030
760  7 600          MCW   BLANK,SWITCH                              7  2071  M W92 L43          123   1692   2343
761  7 610          LCA   MVRTOP+3,LKAHED+6  SET UP TEST            7  2078  L J21 J09          123   2121   2109
762  7 620          A     ONE,LKAHED+6       FOR RECORD MARK        7  2085  A W76 J09          123   1676   2109
763  7 630          MCW   LKAHED+6,EOFTST+6  IN NEXT POSITION       7  2092  M J09 K17          123   2109   2217
764  7 640          CW    LKAHED+4                                  4  2099  ) J07              123   2107
765  7 650  LKAHED  BCE   PICKSW,0-0,|       BRANCH IF RM NXT      8  2103  B K04 000 |        124   2204    000
766  7 660  MOVERC  CW    MVRTOP+1,MVRTOP+4                         7  2111  ) J19 J22          124   2119   2122
767  7 670  MVRTOP  MCW   0-0,0-0            MOVE ONE LINE          7  2118  M 000 000          124    000    000
768  7 680          SW    MVRTOP+1                                  4  2125  , J19              124   2119
769  7 690          BCE   LINEPT,SWITCH,1    OUT IF END RECORD      8  2129  B K34 L43 1        124   2234   2343
770  7 700  LNEOPT B     SETLNE             NOP-ONE LN / RCD       4  2137  B J62              124   2162
771  7 710          MCW   KENN,MVRTOP        NOP MOVE AND           7  2141  M W93 J18          125   1693   2118
772  7 720          MCW   KENN,SETLNE+7      PRINT INSTRS           7  2148  M W93 J69          125   1693   2169
773  7 730          MCW   KBEE,ONELNE                               7  2155  M W97 J77          125   1697   2177
774  7 740  SETLNE  LCA   K200,MVRTOP+6                            7  2162  L W88 J24          125   1688   2124
775  7 750          W                                               1  2169  2                  125
776  7 760          MCW   OVFAD5,TPREAD+8                           7  2170  M L36 567          125   2336    567
777  7 770  ONELNE  NOP   NXTCTR                                   4  2177  N !30              126   2030
778  7 780          BCV   NXTPGE             EJECT IF OVERFLO       5  2181  B 425 @            126    425
779  7 790          B     SETPNT             NEXT LINE              4  2186  B !14              126   2014
780  7 800  RECMRK  MCW   MVRTOP+3,EOFTST+6  SET GM TEST ADDR       7  2190  M J21 K17          126   2121   2217
781  7 810          A     KI99,MVRTOP+3                             7  2197  A L42 J21          126   2342   2121
782  7 820  PICKSW  MCW   ONE,SWITCH                                7  2204  M W76 L43          126   1676   2343
783  7 830  EOFTST  BW    GMFND,0-0          TEST FOR END BLK       8  2211  V K23 000 1        127   2223    000
784  7 840          B     MOVERC             RETURN IF NOT          4  2219  B J11              127   2111
785  7 850  GMFND   MCW   KBEE,NOPBRN        SET BLOCK SWITCH       7  2223  M W97 L02          127   1697   2302
786  7 860          B     MOVERC                                    4  2230  B J11              127   2111
787  7 870  LINEPT  A     ONE,MVRTOP+3                              7  2234  A W76 J21          127   1676   2121
788  7 880          BCE   RECPNT,SKPTST,1                          8  2241  B K66 W05 1        127   2266   1605
789  7 890  NORM    MCW   FCCHAR,RECPNT-1     SET FORM CONTROL       7  2249  M W06 K65          128   1606   2265
790  7 900          BCE   RECPNT,RECPNT-1,/                         8  2256  B K66 K65 /        128   2266   2265
791  7 910          CC    0                                         2  2264  F 0                128
792  7 920  RECPNT  A     ONE,KNORCS         BUMP NO OF RECDS       7  2266  A W76 S69          128   1676   1269
793  7 930          W                        PRINT LAST LINE        1  2273  2                  128
794  7 940          MCW   OVFAD7,TPREAD+8                           7  2274  M L39 567          128   2339    567
795  7 950          MCW   *-6,MVRTOP          RESET MOVE AND         7  2281  M K81 J18          128   2281   2118
796  7 960          MCW   KTWO,SETLNE+7      PRINT INSTRS           7  2288  M W77 J69          129   1677   2169
797  7 970          MCW   KENN,ONELNE                               7  2295  M W93 J77          129   1693   2177
798  7 980  NOPBRN  NOP   BLKFMC             BR IF END OF BLK       4  2302  N L23              129   2323
799  7 990          BCE   PAGEOP-5,RECPNT-1,A  TEST NEW PAGE        8  2306  B 438 K65 A        129    438   2265
800  8 000          BCV   NXTPGE             EJECT IF OVERFLO       5  2314  B 425 @            129    425
801  8 010          B     VARREC             GET NEXT RECORD        4  2319  B X18              129   1718
```

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

802  8 020  BLKFMC MCW   KENN,NOPBRN       RESET BLOCK SWTH          7  2323  M W93 L02         130   1693   2302
803  8 030         B     TESTOF            TO BLK FROM CTL           4  2330  B /00             130   1100
804  8 040  OVFAD5 DSA   SETPNT                                       3  2336  !14               130   2014
805  8 050  OVFAD7 DSA   VARREC                                       3  2339  X18               130   1718
806  8 060  KI99   DSA   3999              WAS DCW  @I99@            3  2342  I99               130   3999
807  8 070  SWITCH DCW   #1                                          1  2343                    130
808  8 080  TSTPGM DCW   #1                                          1  2344                    130
809  8 090         EX    RUNOUT                                                B ?50             131   3050
```

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

810            JOB
811  8 100     ORG   2500                                                 2500
812  8 110  ANAL1A BCE   VARLNE,3154,       BR IF NOT FLDSEL          8  2500  B N83 A54          134   2583   3154
813  8 120         MCW   EXITS1,OUTSEQ-1    MODIFY LINKAGE            7  2508  M Q01 930          134   2801    930
814  8 130         MCW   EXITS1+3,SUPPRS+10  ADDRESSES IN             7  2515  M Q04 |00          134   2804   1000
815  8 140         MCW   EXITS1+6,EXCFND+3  MAIN LINE ROUT           7  2522  M Q07 878          134   2807    878
816  8 150         MCW   EXITS1+9,LINKGE+3                           7  2529  M Q10 |61          134   2810   1061
817  8 160         BCE   FLSSET,TEMP-2,     BR IF NO EDITING          8  2536  B O45 097          135   2645    097
818  8 170         MCW   KG79,RECRD+6       ALTER MAXIMUM             7  2544  M 096 575          135    096    575
819  8 180         MCW   KG79,TOFILT+6      BLOCK LENGTH              7  2551  M 096 755          135    096    755
820  8 190         MCW   KG79,RETRY+26                                7  2558  M 096 /86          135    096   1186
821  8 200         MCW   KG79,BKSPRD+11                               7  2565  M 096 S30          135    096   1230
822  8 210         MCW   KMINLG,KMAXLG                               7  2572  M 093 089          136    093    089
823  8 220         B     FLSSET                                       4  2579  B O45              136   2645
824  8 230  VARLNE BCE   *+5,31-3,V                                  8  2583  B N95 028 V        136   2595    028
825  8 240         B     FLSSET                                       4  2591  B O45              136   2645
826  8 250         MCW   EXITS1+12,OUTSEQ-1  MODIFY LINKAGE          7  2595  M Q13 930          136   2813    930
827  8 260         MCW   EXITS1+15,SUPPRS+10  ADDRESSES IN           7  2602  M Q16 |00          136   2816   1000
828  8 270         MCW   EXITS1+18,EXCFND+3  MAIN LINE ROUT         7  2609  M Q19 878          137   2819    878
829  8 280         MCW   EXITS1+21,LINKGE+3  FOR VAR LGTH           7  2616  M Q22 |61          137   2822   1061
830  8 290         BCE   *+8,3152,          TEST VAR LGTH             8  2623  B O38 A52          137   2638   3152
831  8 300         MCW   KENN,LNEOPT        ONE LINE OPTION           7  2631  M W93 J37          137   1693   2137
832  8 310         A     K200,KLINLG                                  7  2638  A W88 V85          137   1688   1585
833  8 320  FLSSET BCE   *+8,3111,                                    8  2645  B O60 A11          138   2660   3111
834  8 330         MCW   3111,KNOFLS        SET NO OF FILES           7  2653  M A11 S78          138   3111   1278
835  8 340         MZ    KZEROP,KNOFLS                                7  2660  Y W75 S78          138   1675   1278
836  8 350         BCE   STLINL,3115,                                  8  2667  B O91 A15          138   2691   3115
837  8 360         MCW   KENN,FLSTST                                  7  2675  M W93 333          138   1693    333
838  8 370         MCW   3119,FILE3         STORE SELECTED            7  2682  M A19 S86          139   3119   1286
839  8 380         MCW                      FILE NUMBERS              1  2689  M                  139
840  8 390         MCW                                                1  2690  M                  139
841  8 400  STLINL SW    3107                                         4  2691  , A07              139   3107
842  8 410         A     3109,KLINLG        SET LINE LENGTH           7  2695  A A09 V85          139   3109   1585
843  8 420  TSTHLT BCE   *+8,3113,1                                   8  2702  B P17 A13 1        139   2717   3113
844  8 430         MCW   KENN,FILOPT        SET HALT OPTION           7  2710  M W93 676          139   1693    676
845  8 440         BCE   PGNOOP,3146,                                 8  2717  B P32 A46          140   2732   3146
846  8 450         MCW   KENN,NXTPGE        SET FIX HEAD OPT          7  2725  M W93 425          140   1693    425
847  8 460  PGNOOP BCE   PGNOOP+15,3120,                              8  2732  B P47 A20          140   2747   3120
848  8 470         MCW   KBEE,PAGEOP        SET PAGE NO OPT           7  2740  M W97 443          140   1697    443
849  8 480         BCE   TRIPLE-4,3124,                               8  2747  B P69 A24          140   2769   3124
850  8 490         MCW   NXTPGE+4,FCINST    SET BLOCK FORM            7  2755  M 429 W07          141    429   1607
851  8 500         MCW   3124,FCBLKC        CONTROL                   7  2762  M A24 W08          141   3124   1608
852  8 510         CW    FCBLKC                                       4  2769  ) W08              141   1608
853  8 520  TRIPLE BCE   LDANL2,TEMP,                                 8  2773  B P95 099          141   2795    099
854  8 530         MCW   BLANK,RECRD-1      ELIMINATE AUTO-           7  2781  M W92 568          141   1692    568
855  8 540         MCW   KBEE,TPREAD+5      MATIC TROPLE SPC          7  2788  M W97 564          142   1697    564
856  8 550  LDANL2 R     56                 BR TO BOOTSTRAP           4  2795  1 056              142    056
857  8 560  EXITS1 DSA   SETUP1                                       3  2801  X50                142   1750
858  8 570         DSA   PNHNOT                                       3  2804  Z10                142   1910
859  8 580         DSA   EXCPFS                                       3  2807  X68                142   1768
860  8 590         DSA   PTSTUP                                       3  2810  Z21                142   1921
```

```
SEQ PG LIN  LABEL   OP    OPERANDS                        SFX CT  LOCN  INSTRUCTION TYPE  CARD A-ADDR B-ADDR
861  8 600          DSA   SETUP3                            3  2813  X59               142   1759
862  8 610          DSA   NOTPNH                           3  2816  Z96               143   1996
863  8 620          DSA   EXCPVR                           3  2819  X70               143   1770
864  8 630          DSA   SETPNT                           3  2822  !14               143   2014
865  8 640          EX    ANAL1A                                 B N00             144   2500
866  8 650          ORG   2500                                    2500
867  8 660  ANAL2   BCE   LDANL3,3103,V      BYP VAR LNGTH     8  2500  B R64 A03 V       147   2964   3103
868  8 670          A     3103,KRECLG        SET RECRD LENGTH  7  2508  A A03 V77         147   3103   1577
869  8 680          MN    KRECLG-3,*+4                         7  2515  D V74 N25         147   1574   2525
870  8 690          MZ    3990,3101                            7  2522  Y I90 A01         147   3990   3101
871  8 700          MCW   3103,RCLCNV        SET CONV REC LGT  7  2529  M A03 V92         147   3103   1592
872  8 710          A     3106,TRUEBL        SET BLOCKING      7  2536  A A06 W01         148   3106   1601
873  8 720          MCW   TRUEBL,BLKCTR                       7  2543  M W01 V98         148   1601   1598
874  8 730          S     ONE,BLKCTR                           7  2550  S W76 V98         148   1676   1598
875  8 740          MCW   BLKCTR,KBLKNG                        7  2557  M V98 V95         148   1598   1595
876  8 750  TESTRL  A     KRECLG,PARAM1                        7  2564  A V77 V81         148   1577   1581
877  8 760          S     ONE,BLKCTR                           7  2571  S W76 V98         149   1676   1598
878  8 770          BWZ   TESTRL,BLKCTR,B                     8  2578  V N64 V98 B       149   2564   1598
879  8 780          C     PARAM1,KMAXLG      ERROR IF BLOCK    7  2586  C V81 089         149   1581    089
880  8 790          BL    ERROR4             LGTH EXCEEDS MAX  5  2593  B R68 T           149   2968
881  8 800          BCE   LDANL3,3154,                         8  2598  B R64 A54         149   2964   3154
882  8 810  FLDSEL  A     3154,KFLDCT        SET NO FIELDS     7  2606  A A54 K90         150   3154   2290
883  8 820          C     KFLDCT,K16                           7  2613  C K90 101         150   2290    101
884  8 830          BL    ERROR5             ERROR IF OVER 16  5  2620  B R72 T           150   2972
885  8 840          S     ONE,KFLDCT                           7  2625  S W76 K90         150   1676   2290
886  8 850          LCA   ADDFLD,STORE+6                      7  2632  L M82 Q90         150   2482   2890
887  8 860          A     K11,STORE+6                          7  2639  A X00 Q90         151   1700   2890
888  8 870          LCA   FLDANL,ANAL2+11                     7  2646  L M79 N11         151   2479   2511
889  8 880          MCW   KFLDCT,FLDCTR                       7  2653  M K90 K92         151   2290   2292
890  8 890          LCA   ONE,ANAL2+12                       7  2660  L W76 N12         151   1676   2512
891  8 900          CW    PICKUP+1,STORE+4                     7  2667  ) O75 Q88         151   2675   2888
892  8 910  PICKUP  MCW   3165,ANAL2+11      PICKUP FIELD PRM  7  2674  M A65 N11         152   3165   2511
893  8 920          SW    ANAL2+5,ANAL2+8                      7  2681  , N05 N08         152   2505   2508
894  8 930          MCW   KEMM,FLDANL                         7  2688  M 102 M79         152    102   2479
895  8 940          BWZ   COMLNE,ANAL2+11,2  BR IF MOVE INSTR  8  2695  V P44 N11 2       152   2744   2511
896  8 950          BWZ   ZERSUP,ANAL2+11,B  BR-MV + ZERO SUP  8  2703  V P30 N11 B       152   2730   2511
897  8 960          BWZ   ERROR5,ANAL2+11,S  BR-INCORRECT      8  2711  V R72 N11 S       153   2972   2511
898  8 970          MCW   KENN,FLDANL        SET NOP FOR EDIT  7  2719  M W93 M79         153   1693   2479
899  8 980          B     ZERSUP+7                             4  2726  B P37             153   2737
900  8 990  ZERSUP  MCW   KZEE,FLDANL        SET Z FOR MCS     7  2730  M 103 M79         153    103   2479
901  9 000          MZ    BLANK,ANAL2+11                       7  2737  Y W92 N11         153   1692   2511
902  9 010  COMLNE  C     ANAL2+11,ANAL2+12  CHECK LINE ORDER  7  2744  C N11 N12         154   2511   2512
903  9 020          BH    ERROR5                               5  2751  B R72 U           154   2972
904  9 030          BE    ADDCHR             BR IF SAME LINE   5  2756  B P80 S           154   2780
905  9 040  TSTLIN  C     KLINLG,TAPEMD      TEST LINE MAX     7  2761  C V85 K88         154   1585   2288
906  9 050          BH    ERROR5                               5  2768  B R72 U           154   2972
907  9 060          MCW   C1ADDR,TAPEMD                       7  2773  M W45 K88         154   1645   2288
908  9 070  ADDCHR  A     ANAL2+7,TAPEMD     ADD TO LINE CTR   7  2780  A N07 K88         155   2507   2288
909  9 080          MN    ANAL2+11,FLDANL-4  SET LINE NUMBER  7  2787  D N11 M75         155   2511   2475
910  9 090          MN    ANAL2+11,ANAL2+12                    7  2794  D N11 N12         155   2511   2512
911  9 100          S     ONE,ANAL2+7                          7  2801  S W76 N07         155   1676   2507
```

SEQ	PG	LIN	LABEL	OP	OPERANDS		SFX	CT	LOCN	INSTRUCTION TYPE	CARD	A-ADDR	B-ADDR
912	9	110		A	ANAL2+7,ANAL2+10			7	2808	A N07 N10	155	2507	2510
913	9	120		A	K200,ANAL2+10			7	2815	A W88 N10	156	1688	2510
914	9	130		MCW	ANAL2+10,FLDANL-1	SET LO PRINT LOC		7	2822	M N10 M78	156	2510	2478
915	9	140		SW	ANAL2+2			4	2829	, N02	156	2502	
916	9	150		BCE	ZEROS,ANAL2+4,Z	TEST-EMIT ZEROS		8	2833	B R39 N04 Z	156	2939	2504
917	9	160		BCE	*+15,ANAL2+1,			8	2841	B Q63 N01	156	2863	2501
918	9	170		MN	ANAL2+1,*+4			7	2849	D N01 Q59	157	2501	2859
919	9	180		MZ	3990,ANAL2+2			7	2856	Y I90 N02	157	3990	2502
920	9	190		MCW	ANAL2+4,FLDANL-8	SET HO TAPE LOC		7	2863	M N04 M71	157	2504	2471
921	9	200		A	ANAL2+7,ANAL2+4			7	2870	A N07 N04	157	2507	2504
922	9	210		MCW	ANAL2+4,FLDANL-5	SET LO TAPE LOC		7	2877	M N04 M74	157	2504	2474
923	9	220	STORE	MCW	FLDANL,0-0	STORE FIELD PARS		7	2884	M M79 000	158	2479	000
924	9	230		S	ONE,FLDCTR			7	2891	S W76 K92	158	1676	2292
925	9	240		BWZ	LDANL3,FLDCTR,K	OUT-NO MORE FLDS		8	2898	V R64 K92 K	158	2964	2292
926	9	250		SW	PICKUP+1,STORE+4			7	2906	, O75 Q88	158	2675	2888
927	9	260		CS	ANAL2+11			4	2913	/ N11	158	2511	
928	9	270		SW	ANAL2+1			4	2917	, N01	158	2501	
929	9	280		A	K11,PICKUP+3	BUMP PICKUP +		7	2921	A X00 O77	159	1700	2677
930	9	290		A	K11,STORE+6	STORE ADDRESSES		7	2928	A X00 Q90	159	1700	2890
931	9	300		B	PICKUP-7	GET NEXT FIELD		4	2935	B O67	159	2667	
932	9	310	ZEROS	S	ANAL2+7,ANAL2+10			7	2939	S N07 N10	159	2507	2510
933	9	320		MZ	BLANK,ANAL2+10			7	2946	Y W92 N10	159	1692	2510
934	9	330		MCW	ANAL2+10,FLDANL-8	SET HO PRINT LOC		7	2953	M N10 M71	159	2510	2471
935	9	340		B	STORE-7	TO STORE		4	2960	B Q77	160	2877	
936	9	350	LDANL3	R	56	BR TO BOOTSTRAP		4	2964	1 056	160	056	
937	9	360	ERROR4	H	FLDSEL-8	BLK EXCEEDS MAX		4	2968	. N98	160	2598	
938	9	370	ERROR5	H	*-3	FIELD SELN		4	2972	. R72	160	2972	
939	9	380		DCW	#1			1	2976		160		
940	9	390		EX	ANAL2					B N00	161	2500	
941	9	400		ORG	2500					2500			
942	9	410	ANAL3	BCE	SEQSET,3103,V	BR FOR FIELD SEL		8	2500	B N77 A03 V	164	2577	3103
943	9	420		BCE	RLVSLL,3154,	OR VAR LGTH		8	2508	B N20 A54	164	2520	3154
944	9	430		B	SEQSET			4	2516	B N77	164	2577	
945	9	440	RLVSLL	C	KRECLG,KLINLG	COMP REC LGTH VS		7	2520	C V77 V85	164	1577	1585
946	9	450		BH	*+5	LINE LENGTH		5	2527	B N36 U	164	2536	
947	9	460		B	SEQSET	OUT IF EQ OR GR		4	2532	B N77	164	2577	
948	9	470		MCW	KZEROP,KBLKNG	SET BLKNG TO 001		7	2536	M W75 V95	165	1675	1595
949	9	480		MCW	PARAM1,KRECLG	SET RL TO BLK LG		7	2543	M V81 V77	165	1581	1577
950	9	490		CS	3144	ELIM SEQ,EXC+ FC		4	2550	/ A44	165	3144	
951	9	500		C	KRECLG,KLINLG	COMP BL VS LL		7	2554	C V77 V85	165	1577	1585
952	9	510		BH	*+5			5	2561	B N70 U	165	2570	
953	9	520		B	SEQSET			4	2566	B N77	165	2577	
954	9	530		MCW	KRECLG,KLINLG	SET LL EQ BL		7	2570	M V77 V85	166	1577	1585
955	9	540	SEQSET	BCE	SETFC,3144,			8	2577	B O55 A44	166	2655	3144
956	9	550		MCW	KENN,SEQNCE	SET SEQ BYP SWTH		7	2585	M W93 879	166	1693	879
957	9	560		SW	3139,3143			7	2592	, A39 A43	166	3139	3143
958	9	570		A	3144,HLDADD	SET HOLD ADDRESS		7	2599	A A44 110	166	3144	110
959	9	580		S	ONE,3144			7	2606	S W76 A44	167	1676	3144
960	9	590		A	3144,3142			7	2613	A A44 A42	167	3144	3142
961	9	600		MN	3139,*+4			7	2620	D A39 O30	167	3139	2630
962	9	610		MZ	3990,3140			7	2627	Y I90 A40	167	3990	3140

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

 963  9 620          MCW   3142,SEQADD         SET SEQ ADDRESS      7  2634  M A42 W41          167   3142   1641
 964  9 630          MCW   HLDADD,CHKSEQ+6     MODIFY SEQUENCE      7  2641  M 110 914          168    110    914
 965  9 640          MCW   HLDADD,CHKSEQ+13    CHECK INSTRS         7  2648  M 110 921          168    110    921
 966  9 650  SETFC   BCE   RECFC,3121,                              8  2655  B O92 A21          168   2692   3121
 967  9 660          MCW   KENN,SKPSUB         SET FIRST CHAR       7  2663  M W93 935          168   1693    935
 968  9 670          MCW   ONE,SKPTST          FORM CTL PARAMS      7  2670  M W76 W05          168   1676   1605
 969  9 680          BCE   SETEXP,3122,1                           8  2677  B P07 A22 1        169   2707   3122
 970  9 690          MCW   KENN,SUPPRS+7       SET SUPPR OPTN       7  2685  M W93 997          169   1693    997
 971  9 700  RECFC   BCE   SETEXP,3123,                           8  2692  B P07 A23          169   2707   3123
 972  9 710          MCW   3123,FCCHAR         SET FORM CTL         7  2700  M A23 W06          169   3123   1606
 973  9 720  SETEXP  BCE   LDANL4,3125,        OUT IF NO EXCPTN     8  2707  B ?33 A25          169   3033   3125
 974  9 730          MCW   KENN,SUBRTN+7       SET BYP SWITCH       7  2715  M W93 794          170   1693    794
 975  9 740          MN    3125,EXCOPT         STORE + CHECK        7  2722  D A25 W42          170   3125   1642
 976  9 750          C     EXCOPT,KTHREE       EXCEPTION OPTION     7  2729  C W42 X07          170   1642   1707
 977  9 760          BL    ERROR6                                   5  2736  B ?37 T            170   3037
 978  9 770          MCW   3127,CHAR1         STORE FIRST CHAR     7  2741  M A27 W49          170   3127   1649
 979  9 780          BCE   C1STR,3129,                             8  2748  B P70 A29          171   2770   3129
 980  9 790          MN    3129,*+4                                 7  2756  D A29 P66          171   3129   2766
 981  9 800          MZ    3990,3130                                7  2763  Y I90 A30          171   3990   3130
 982  9 810  C1STR   A     3132,C1ADDR         STORE FIRST ADDR     7  2770  A A32 W45          171   3132   1645
 983  9 820          BCE   C2BLNK,3134,                           8  2777  B R89 A34          171   2989   3134
 984  9 830  STRC2   MCW   3133,CHAR2         STORE SECOND CHAR    7  2785  M A33 W50          172   3133   1650
 985  9 840          BCE   C2STR,3135,                           8  2792  B Q14 A35          172   2814   3135
 986  9 850          MN    3135,*+4                                 7  2800  D A35 Q10          172   3135   2810
 987  9 860          MZ    3990,3136                                7  2807  Y I90 A36          172   3990   3136
 988  9 870  C2STR   A     3138,C2ADDR         STORE SECOND ADDR    7  2814  A A38 W48          172   3138   1648
 989  9 880          BWZ   SETY1,3128,B        TEST FIRST CHAR,     8  2821  V ?11 A28 B        173   3011   3128
 990  9 890          BWZ   TSTDP1,3128,2       ZONE OR DIGIT        8  2829  V Q52 A28 2        173   2852   3128
 991  9 900          BWZ   ERROR6,3128,S       INCORRECT PUNCH      8  2837  V ?37 A28 S        173   3037   3128
 992  9 910          MCW   KDEE,TESTC1         SET DIGIT OP CD      7  2845  M 084 833          173    084    833
 993  9 920  TSTDP1  MZ    BLANK,3128                               7  2852  Y W92 A28          173   1692   3128
 994  9 930          BCE   ANDOR,3128,1        TEST PRESENCE OR     8  2859  B Q86 A28 1        174   2886   3128
 995  9 940          BCE   *+5,3128,2          ABSENCE OF CHAR      8  2867  B Q79 A28 2        174   2879   3128
 996  9 950          B     ERROR6                                   4  2875  B ?37              174   3037
 997  9 960          MCW   ESS,TESTC1+18       SET D MODR S         7  2879  M 112 851          174    112    851
 998  9 970  ANDOR   BCE   DISPN2,3126,2       TEST CONNECTIVE      8  2886  B R20 A26 2        174   2920   3126
 999  9 980          BCE   *+5,3126,1          AND/OR               8  2894  B R06 A26 1        175   2906   3126
1000  9 990          B     ERROR6                                   4  2902  B ?37              175   3037
1001 10 000          MCW   KENN,TESTC1+19      CHANGE OP CODE +     7  2906  M W93 852          175   1693    852
1002 10 010          MCW   EXCDSA,TESTC1+17    OPERAND FOR AND      7  2913  M 083 850          175    083    850
1003 10 020  DISPN2  BWZ   SETY2,3134,B        TEST SECOND CHAR,    8  2920  V ?22 A34 B        175   3022   3134
1004 10 030          BWZ   TSTDP2,3134,2       ZONE OR DIGIT        8  2928  V R51 A34 2        176   2951   3134
1005 10 040          BWZ   ERROR6,3134,S       INCORRECT PUNCH      8  2936  V ?37 A34 S        176   3037   3134
1006 10 050          MCW   KDEE,TESTC2         SECOND DIGIT OP CD   7  2944  M 084 856          176    084    856
1007 10 060  TSTDP2  MZ    BLANK,3134                               7  2951  Y W92 A34          176   1692   3134
1008 10 070          BCE   LDANL4,3134,1       TEST PRESENCE OR     8  2958  B ?33 A34 1        176   3033   3134
1009 10 080          BCE   *+5,3134,2          ABSENCE OF CHAR      8  2966  B R78 A34 2        177   2978   3134
1010 10 090          B     ERROR6                                   4  2974  B ?37              177   3037
1011 10 100          MCW   ESS,TESTC2+18       SET D MODR S         7  2978  M 112 874          177    112    874
1012 10 110          B     LDANL4              BRANCH OUT           4  2985  B ?33              177   3033
1013 10 120  C2BLNK  SW    3133                SET SECND CHAR       4  2989  , A33              177   3133
```

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

1014 10 130         MCW   3132,3138          SAME AS FIRST      7  2993  M A32 A38          177   3132   3138
1015 10 140         MN    ONE,3126           SET CONNECT AND    7  3000  D W76 A26          178   1676   3126
1016 10 150         B     STRC2                                 4  3007  B P85              178   2785
1017 10 160  SETY1  MCW   KYYY,TESTC1        SET ZONE OP CODE   7  3011  M 085 833          178    085    833
1018 10 170         B     TSTDP1                                4  3018  B Q52              178   2852
1019 10 180  SETY2  MCW   KYYY,TESTC2        SET ZONE OP CODE   7  3022  M 085 856          178    085    856
1020 10 190         B     TSTDP2                                4  3029  B R51              178   2951
1021 10 200  LDANL4 R     56                 BR TO BOOTSTRAP    4  3033  1 056              178    056
1022 10 210  ERROR6 H                        EXCEPTION ERROR    1  3037  .                  179
1023 10 220         MCW   KBEE,SUBRTN+7                        7  3038  M W97 794          179   1697    794
1024 10 230         MN    BLANK,EXCOPT                          7  3045  D W92 W42          179   1692   1642
1025 10 240         B     LDANL4                                4  3052  B ?33              179   3033
1026 10 250         DCW   #1                                    1  3056                     179
1027 10 260         EX    ANAL3                                        B N00              180   2500
1028 10 270         ORG   2500                                          2500
1029 10 280  ANAL4  BCE   STRPRG,3112,D      TO PROD SYS TAPE   8  2500  B R51 A12 D        183   2951   3112
1030 10 290         SW    3145,3997                             7  2508  , A45 I97          183   3145   3997
1031 10 300         A     3145,TAPADD                           7  2515  A A45 W04          183   3145   1604
1032 10 310         MCW   3151,ANAL4+3                        7  2522  M A51 N03          183   3151   2503
1033 10 320         LCA   3978,80            SET UP TRAILER     7  2529  L I78 080          183   3978    080
1034 10 330         LCA   3898,3169                            7  2536  L H98 A69          184   3898   3169
1035 10 340  EDITNG BCE   HEADER,ADDED1,     OUT IF NO EDIT     8  2543  B O53 116          184   2653    116
1036 10 350         SW    LODEDT+1,LODEDT+4                     7  2551  , N87 N90          184   2587   2590
1037 10 360  MODIFY A     ADDED1,LODEDT+3    MODIFY MOVE EDIT   7  2558  A 116 N89          184    116   2589
1038 10 370         A     ADDED1,LODEDT+6    WORDS INSTR        7  2565  A 116 N92          184    116   2592
1039 10 380         LCA   LODEDT+6,3783      STORE EDWD ADDRS   7  2572  L N92 G83          185   2592   3783
1040 10 390         CW    LODEDT+1,LODEDT+4                     7  2579  ) N87 N90          185   2587   2590
1041 10 400  LODEDT LCA   ADDED0,3828        STORE EDIT WORD    7  2586  L 161 H28          185    161   3828
1042 10 410         SW    EDITNG+4,MODIFY+1                     7  2593  , N47 N59          185   2547   2559
1043 10 420         SW    MODIFY+8,MODIFY+18                    7  2600  , N66 N76          185   2566   2576
1044 10 430         A     KTHREE,EDITNG+6    BUMP STORE ADDRS   7  2607  A X07 N49          186   1707   2549
1045 10 440         A     KTHREE,MODIFY+3                       7  2614  A X07 N61          186   1707   2561
1046 10 450         A     KTHREE,MODIFY+10                      7  2621  A X07 N68          186   1707   2568
1047 10 460         A     KTHREE,MODIFY+20                      7  2628  A X07 N78          186   1707   2578
1048 10 470         CW    EDITNG+4,MODIFY+1                     7  2635  ) N47 N59          186   2547   2559
1049 10 480         CW    MODIFY+8,MODIFY+18                    7  2642  ) N66 N76          187   2566   2576
1050 10 490         B     EDITNG             NEXT EDIT WORD     4  2649  B N43              187   2543
1051 10 500  HEADER BCE   FIXHDG,ANAL4+3,    BR IF NO HEADER    8  2653  B Q36 N03          187   2836   2503
1052 10 510         LCA   GRPMRK,3338                          7  2661  L I97 C38          187   3997   3338
1053 10 520         RTW   3,3178             READ HEADER LABL   8  2668  L %U3 A78 R        187    003   3178
1054 10 530         LCA   FILE4                                 4  2676  L S88              187   1288
1055 10 540         LCA   FILE4,3339                          7  2680  L S88 C39          188   1288   3339
1056 10 550         BCE   FIXHDG,ANAL4+3,3   BYPASS HEADER     8  2687  B Q36 N03 3        188   2836   2503
1057 10 560         BCE   PNTLAB,ANAL4+3,1   TO PRINT HEADER    8  2695  B P23 N03 1        188   2723   2503
1058 10 570         BCE   PNHLAB,ANAL4+3,2   TO PUNCH HEADER    8  2703  B P65 N03 2        188   2765   2503
1059 10 580         BCE   COMLAB,ANAL4+3,4   TO COMPR HEADER    8  2711  B P95 N03 4        188   2795   2503
1060 10 590         B     ERROR7             INCORRECT DISP     4  2719  B Q35              189   2835
1061 10 600  PNTLAB CS    332                                   4  2723  / 332              189    332
1062 10 610         CS                                          1  2727  /                  189
1063 10 620         CC    1                                     2  2728  F 1                189
1064 10 630         SW    201                                   4  2730  , 201              189    201
```

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

1065 10 640          SW                                        1  2734  ,                 189
1066 10 650          MCW   3257,280                            7  2735  M B57 280         189   3257    280
1067 10 660          MCW                                       1  2742  M                 190
1068 10 670          W                       PRINT FIRST 80    1  2743  2                 190
1069 10 680          CS    299                                 4  2744  / 299             190    299
1070 10 690          SW    201                                 4  2748  , 201             190    201
1071 10 700          SW                                        1  2752  ,                 190
1072 10 710          MCW   3337,280                            7  2753  M C37 280         190   3337    280
1073 10 720          MCW                                       1  2760  M                 190
1074 10 730          W     FIXHDG            PRINT SECND 80    4  2761  2 Q36             191   2836
1075 10 740  PNHLAB CS    180                                 4  2765  / 180             191    180
1076 10 750          SW    101                                 4  2769  , 101             191    101
1077 10 760          SW                                        1  2773  ,                 191
1078 10 770          MCW   3257,180                            7  2774  M B57 180         191   3257    180
1079 10 780          MCW                                       1  2781  M                 191
1080 10 790          P                       PUNCH FIRST 80    1  2782  4                 191
1081 10 800          MCW   3337,180                            7  2783  M C37 180         192   3337    180
1082 10 810          MCW                                       1  2790  M                 192
1083 10 820          P     FIXHDG            PUNCH SECND 80    4  2791  4 Q36             192   2836
1084 10 830  COMLAB SW    COMPRE+1,COMPRE+4                   7  2795  , Q24 Q27         192   2824   2827
1085 10 840          A     ANAL4+2,COMPRE+6  SET ADDRESSES     7  2802  A N02 Q29         192   2502   2829
1086 10 850          A     ANAL4+2,COMPRE+3  FOR COMPARE       7  2809  A N02 Q26         192   2502   2826
1087 10 860          CW    COMPRE+1,COMPRE+4                   7  2816  ) Q24 Q27         193   2824   2827
1088 10 870  COMPRE C     3177,3009                           7  2823  C A77 ?09         193   3177   3009
1089 10 880          BE    FIXHDG            BR IF EQUAL       5  2830  B Q36 S           193   2836
1090 10 890  ERROR7 H                       UNEQUAL COMP      1  2835  .                 193
1091 10 900  FIXHDG CC    1                 EJECT PAGE        2  2836  F 1               193
1092 10 910          S     ONE,TAPADD                          7  2838  S W76 W04         193   1676   1604
1093 10 920          CS    332                                 4  2845  / 332             193    332
1094 10 930          CS                                        1  2849  /                 194
1095 10 940          BWZ   SETTPE,TAPADD,K  OUT IF NO MORE     8  2850  V R22 W04 K       194   2922   1604
1096 10 950  MCWFIX MCW   3471,332                            7  2858  M D71 332         194   3471    332
1097 10 960          MCW   3472,FIXFC+1                        7  2865  M D72 Q89         194   3472   2889
1098 10 970          BCE   FIXFC+2,FIXFC+1,                    8  2872  B Q90 Q89         194   2890   2889
1099 10 980          BCE   FIXFC+2,FIXFC+1,/                   8  2880  B Q90 Q89 /       194   2890   2889
1100 10 990  FIXFC  CC    0                 FIX HEAD FORM CT  2  2888  F 0               195
1101 11 000          SW    MCWFIX+1,MCWFIX+8                   7  2890  , Q59 Q66         195   2859   2866
1102 11 010          A     K133,MCWFIX+3                       7  2897  A W91 Q61         195   1691   2861
1103 11 020          A     K133,MCWFIX+10                      7  2904  A W91 Q68         195   1691   2868
1104 11 030          CW    MCWFIX+1,MCWFIX+8                   7  2911  ) Q59 Q66         195   2859   2866
1105 11 040          W     FIXHDG+2          PRINT + RETURN    4  2918  2 Q38             195   2838
1106 11 050  SETTPE LCA   3997,3999                           7  2922  L I97 I99         196   3997   3999
1107 11 060          RT    3,3996                              8  2929  M %U3 I96 R       196    003   3996
1108 11 070          BEF   *+6               TEST EOF          5  2937  B R47 K           196   2947
1109 11 080          BSP   3                 BACKSPACE IF NOT  5  2942  U %U3 B           196    003
1110 11 090          B     FLSTST            TO OBJECT PROGRM  4  2947  B 333             196    333
1111 11 100  STRPRG CS    80                                  4  2951  / 080             196    080
1112 11 110          LCA   RETURN+7,13       SET RETURN BRNCH  7  2955  L R94 013         197   2994    013
1113 11 120          LCA                                       1  2962  L                 197
1114 11 130          LCA                                       1  2963  L                 197
1115 11 140          WTW   1,1                                 8  2964  L %U1 001 W       197    001    001
```

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

1116 11 150         WTM   1                                         5  2972  U %U1 M            197    001
1117 11 160         WTM   1                                         5  2977  U %U1 M            197    001
1118 11 170         RWD   1                                         5  2982  U %U1 R            197    001
1119 11 180  RETURN H     ANAL4+8           HALT-CONTINUE           4  2987  . N08              198   2508
1120 11 190         H     *-3                                       4  2991  . R91              198   2991
1121 11 200         DCW   #1                                        1  2995                     198
1122 11 210         END   ANAL4                                           /  N00 080                  2500
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ADDCHR	2780: 0	ADDED0	0161: 0	ADDED1	0116: 0	ADDFLD	2482: 0	ADDL2A	3070: 0	ADDL2B	3073: 0
ADDL2F	3076: 0	ADDLGT	1823: 0	ADDLN1	1573: 0	ADDPNL	1816: 0	ADDSTR	0324: 0	ADFIXR	2163: 0
ADLINK	1668: 0	AMPRSD	1701: 0	ANAL1	2500: 0	ANAL1A	2500: 0	ANAL2	2500: 0	ANAL3	2500: 0
ANAL4	2500: 0	ANDOR	2886: 0	ASTRSK	1696: 0	BKSPRD	1219: 0	BLANK	1692: 0	BLKCTR	1598: 0
BLKFMC	2323: 0	BLKTST	2109: 0	BLOCK	2169: 0	BYPASS	1661: 0	C1ADDR	1645: 0	C1STR	2770: 0
C2ADDR	1648: 0	C2BLNK	2989: 0	C2STR	2814: 0	CARRCT	0534: 0	CHAR1	1649: 0	CHAR2	1650: 0
CHKSEQ	0908: 0	CLTRWM	0764: 0	COMLAB	2795: 0	COMLNE	2744: 0	COMPND	1743: 0	COMPRE	2823: 0
COMPRL	1964: 0	COMTLR	0724: 0	DECKSL	3027: 0	DISPN2	2920: 0	EDITAD	2485: 0	EDITNG	2543: 0
EDITRN	2220: 0	EDITST	2897: 0	EDTTST	0327: 0	EDTWDA	0241: 0	EDTWDB	0321: 0	EOFTST	2211: 0
ERREDT	3000: 0	ERROR	2154: 0	ERROR1	3062: 0	ERROR2	3063: 0	ERROR3	3064: 0	ERROR4	2968: 0
ERROR5	2972: 0	ERROR6	3037: 0	ERROR7	2835: 0	ESS	0112: 0	EXCDSA	0083: 0	EXCFND	0875: 0
EXCOPT	1642: 0	EXCPFS	1768: 0	EXCPTN	1761: 0	EXCPVR	1770: 0	EXITCT	1662: 0	EXITS1	2801: 0
FCBLKC	1608: 0	FCCHAR	1606: 0	FCINST	1607: 0	FIELD0	2468: 0	FIELD1	2303: 0	FILE1	1282: 0
FILE2	1284: 0	FILE3	1286: 0	FILE4	1288: 0	FILESL	0365: 0	FILOPT	0676: 0	FINAL	0772: 0
FIXCD1	2655: 0	FIXCD2	2665: 0	FIXFC	2888: 0	FIXHDG	2836: 0	FIXREC	1725: 0	FLDANL	2479: 0
FLDCTR	2292: 0	FLDSEL	2606: 0	FLSELA	1291: 0	FLSREC	1725: 0	FLSSET	2645: 0	FLSTST	0333: 0
FORM	1062: 0	FORMAT	2022: 0	FSQERR	0783: 0	GETCHR	1807: 0	GMFND	2223: 0	GRMFND	1911: 0
GRPMRK	3997: 0	HALTOP	0760: 0	HDPRNT	0469: 0	HEADER	2653: 0	HEADLN	0519: 0	HLDADD	0110: 0
K001	1704: 0	K03	0105: 0	K10	0107: 0	K100	1685: 0	K11	1700: 0	K133	1691: 0
K16	0101: 0	K200	1688: 0	K80	1682: 0	KBEE	1697: 0	KBLKNG	1595: 0	KDEE	0084: 0
KEMM	0102: 0	KENN	1693: 0	KFLDCT	2290: 0	KFOUR	1678: 0	KG79	0096: 0	KG83	1710: 0
KI99	2342: 0	KLINLG	1585: 0	KMAXLG	0089: 0	KMINLG	0093: 0	KNOFLS	1278: 0	KNOLNS	1302: 0
KNORCS	1269: 0	KRECLG	1577: 0	KRRR	1671: 0	KTHREE	1707: 0	KTWO	1677: 0	KYYY	0085: 0
KZEE	0103: 0	KZEROP	1675: 0	LDANL2	2795: 0	LDANL3	2964: 0	LDANL4	3033: 0	LDEDIT	2255: 0
LINE1	1305: 0	LINE1A	1384: 0	LINE1B	1436: 0	LINE2	1438: 0	LINE2A	1517: 0	LINE2B	1569: 0
LINEPT	2234: 0	LINKGE	1058: 0	LKAHED	2103: 0	LNE1FC	1437: 0	LNE2FC	1570: 0	LNEOPT	2137: 0
LNSCTR	1304: 0	LOADPH	1855: 0	LODEDT	2586: 0	MCWFIX	2858: 0	MODIFY	2558: 0	MOVERC	2111: 0
MOVETP	2040: 0	MVLTOP	1958: 0	MVRTOP	2118: 0	NEWCRD	1792: 0	NEWPGE	2135: 0	NOFLSP	1280: 0
NOPBRN	2302: 0	NOPNCH	1910: 0	NORM	2249: 0	NORMAL	2100: 0	NORMFC	2030: 0	NOTPNH	1996: 0
NXTCD	1797: 0	NXTCTR	2030: 0	NXTEDT	2912: 0	NXTFHD	2637: 0	NXTFLE	0614: 0	NXTPGE	0425: 0
NXTRCD	1790: 0	NXTVHD	2752: 0	ONE	1676: 0	ONELNE	2177: 0	OPTNB	1247: 0	OUTSEQ	0931: 0
OVFAD1	2282: 0	OVFAD3	1665: 0	OVFAD4	2160: 0	OVFAD5	2336: 0	OVFAD6	2285: 0	OVFAD7	2339: 0
OVFRT1	1985: 0	OVFRT4	2060: 0	PAGE	1296: 0	PAGENO	1300: 0	PAGEOP	0443: 0	PARAM1	1581: 0
PARAM2	1589: 0	PGNOOP	2732: 0	PICKSW	2204: 0	PICKUP	2674: 0	PNCHCD	1936: 0	PNHLAB	2765: 0
PNHLGT	1656: 0	PNHNOT	1910: 0	PNTLAB	2723: 0	PNTSTP	1921: 0	PRINTH	0483: 0	PRINTR	2117: 0
PRNTLN	2047: 0	PTSTUP	1921: 0	RCLCNV	1592: 0	RECFC	2692: 0	RECLEG	1276: 0	RECMRK	2190: 0
RECPNT	2266: 0	RECRD	0569: 0	REDUND	1146: 0	RETRY	1160: 0	RETURN	2987: 0	RIAREA	2501: 0
RLVSLL	2520: 0	RMBLNK	1706: 0	RMFND	1885: 0	RUNOUT	3050: 0	SEARCH	0397: 0	SELPGM	3004: 0
SEQADD	1641: 0	SEQHLD	1638: 0	SEQNCE	0879: 0	SEQSET	2577: 0	SETEXP	2707: 0	SETFC	2655: 0
SETLNE	2162: 0	SETPNT	2014: 0	SETTPE	2922: 0	SETUP1	1750: 0	SETUP2	1736: 0	SETUP3	1759: 0
SETY1	3011: 0	SETY2	3022: 0	SETZRO	2180: 0	SKCNTL	0964: 0	SKIP	1018: 0	SKPSUB	0935: 0
SKPTST	1605: 0	SLASH	0111: 0	START1	1711: 0	START2	1711: 0	START3	1711: 0	STEDIT	2963: 0
STLINL	2691: 0	STORE	2884: 0	STORFH	2618: 0	STORHL	2827: 0	STORTL	2879: 0	STORVH	2726: 0
STRC2	2785: 0	STRPRG	2951: 0	SUBRTN	0787: 0	SUPPRS	0990: 0	SWITCH	2343: 0	TABLE	3993: 0
TAPADD	1604: 0	TAPELD	0685: 0	TAPEMD	2288: 0	TAPEPN	1852: 0	TAPPNH	1862: 0	TEE	0113: 0
TEMP	0099: 0	TESTC1	0833: 0	TESTC2	0856: 0	TESTEX	0798: 0	TESTOF	1100: 0	TESTRL	2564: 0
TFLDCT	2059: 0	TOFILT	0749: 0	TPELGT	1660: 0	TPREAD	0559: 0	TPTOPN	1845: 0	TRIPLE	2773: 0
TRUEBL	1601: 0	TRYCTR	1261: 0	TSTBLK	2118: 0	TSTCH1	1651: 0	TSTCH2	1652: 0	TSTDP1	2852: 0
TSTDP2	2951: 0	TSTEOF	1899: 0	TSTHLT	2702: 0	TSTLIN	2761: 0	TSTPGM	2344: 0	TSTSSF	1208: 0
TSTTM	0593: 0	VARCD1	2770: 0	VARCD2	2780: 0	VARLNE	2583: 0	VARRCD	3039: 0	VARREC	1718: 0
ZEROS	2939: 0	ZEROST	2205: 0	ZERSUP	2730: 0						

UNREFERENCED SYMBOLS

ADDSTR EDTWDA FIELD0 FILE2 LINE1 LINE2 NORM NORMAL NORMFC SLASH START2 START3 TABLE TEE TESTEX TSTHLT TSTLIN