

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
146			)6J003	EQU	110 PHASE ID			0110		GEN			
147			)6K003	EQU	700 LOAD NEXT PHASE			0700		GEN			
148			)6L003	EQU	704 TAPE READ INSTRUCTION			0704		GEN			
149			)6M003	EQU	728 TAPE ERROR HANDLER			0728		GEN			
			*							GEN			
150				ORG	201				0201				
151			PHAS23	EQU	*&1			0201		GEN			
152				LCA	)9J003,)6J003	7		0201	L 253 110	GEN	4	253	110
153				BCE	)6K003,)6K003,1	8		0208	B 700 700 1	GEN	4	700	700
154				BCE	)6K003,)6L003&4,0	8		0216	B 700 708 0	GEN	4	700	708
155				RTW	1,LOADAD	8		0224	L %U1 838 R	GEN	4	%U1	838
156				BER	)6M003	5		0232	B 728 L	GEN	4	728	
157				CS	BEGN23,)9R003	7		0237	/ 980 257	GEN	5	980	257
158			)9J003	DCW	@TAMROF ONE@	10		0253		GEN	5		
159				DC	#1	1		0254		GEN	5		
160				DC	@23@	2		0256		GEN	5		
161			)9R003	DCW	@}@	1		0257		GEN	5		
162				XFR	PHAS23				B 201		5	201	
163			*										
164				ORG	BEGIN3				0838				
165			*										
166			*		THE TOOBIG AND MSG ROUTINES ARE NOT REFERENCED HERE. WHY ARE								
167			*		NOT SIMPLY IN PHASE 24?								
168			*										
169				LOADAD	EQU *&1			0838					
170	*	838		TOOBIG	CS 332	4		0838	/ 332		6	332	
171		842			CS	1		0842	/		6		
172		843			CC 1	2		0843	F 1		6		
173		845			MCW ERROR2,270	7		0845	M 963 270		6	963	270
174		852			W	1		0852	2		6		
175		853			CC 1	2		0853	F 1		6		
176		855			BCE HALT,CDOVLY,1	8		0855	B 868 700 1		6	868	700
177		863			RWD 1	5		0863	U %U1 R		6	%U1	
178		868		HALT	H HALT	4		0868	. 868		6	868	
179			*										
180	*	872		SEMIC	DCW @;@	1		0872			6		
181	*	875		SX3	DCW #3 USED TO SAVE X3 EXACTLY ONCE	3		0875			6		
182	*	879		SEQCOD	DCW #4	4		0879			7		
183			*										
184			*		FILL IN ERROR MESSAGE BOILERPLATE								
185			*										
186	*	880		MSG	SBR MSGX&3	4		0880	H 927		7	927	
187		884			BCV *&5	5		0884	B 893 @		7	893	
188		889			B *&3	4		0889	B 895		7	895	
189		893			CC 1	2		0893	F 1		7		
190		895			CS 332	4		0895	/ 332		7	332	
191		899			CS	1		0899	/		7		
192		900			SW GLOBER	4		0900	, 184		7	184	
193		904			MN SEQCOD,250	7		0904	D 879 250		7	879	250
194		911			MN	1		0911	D		7		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
195		912		MN		1		0912	D		7		
196		913		MCW	STMT	4		0913	M 974		8	974	
197		917		MCW	ERR,205	7		0917	M 979 205		8	979	205
198		924	MSGX	B	0	4		0924	B 000		8	000	
199		963	ERROR2	DCW	@MESSAGE 2 - OBJECT PROGRAM TOO LARGE@	36		0963			9		
200		974	STMT	DCW	@STATEMENT @	11		0974			10		
201		979	ERR	DCW	@ERROR@	5		0979			10		
202			*										
203	*	980	BEGN23	CS	1&X2	4		0980	/ 0!1		10	001+2	
204		984		SBR	X1	4		0984	H 089		10	089	
205		988		SW	GMWM	4		0988	, U70		10	1470	
206		992	CLRL	CS	0&X1	4		0992	/ 0|0		10	000+1	
207		996		SBR	X1	4		0996	H 089		10	089	
208	1	000		C	X1,KBOT	7		1000	C 089 U11		11	089	1411
209	1	007		BU	CLRL	5		1007	B 992 /		11	992	
210	1	012		LCA	GMWM,2601	7		1012	L U70 O01		11	1470	2601
211	1	019		SBR	X1,2602	7		1019	H 089 O02		11	089	2602
212	1	026		SBR	X2,2&X2	7		1026	H 094 0!2		11	094	002+2
213	1	033		MCW	DOT,96 NO FORMAT STATEMENT SEEN	7		1033	M U12 096		12	1412	096
214	1	040		SW	FLAG	4		1040	, U13		12	1413	
215	1	044	LOOP	MCW	83,X3 TOP OF STATEMENTS IN TOP CORE	7		1044	M 083 099		12	083	099
216	1	051		SBR	X3,1&X3	7		1051	H 099 0?1		12	099	001+3
217	1	058		C	X3,X2 MOVED TOP STATEMENT UP?	7		1058	C 099 094		12	099	094
218	1	065		BE	DONE YES	5		1065	B S16 S		12	1216	
219	1	070		CW	FLAG2 MOVING BODY	4		1070	) U14		13	1414	
220	1	074		MN	0&X2	4		1074	D 0!0		13	000+2	
221	1	078		SAR	X3	4		1078	Q 099		13	099	
222	1	082		MCW	SEMIC	4		1082	M 872		13	872	
223	1	086	MOVEDN	MN	0&X1	4		1086	D 0|0		13	000+1	
224	1	090		SAR	X1	4		1090	Q 089		13	089	
225	1	094	MORE	MCM	0&X2	4		1094	P 0!0		13	000+2	
226	1	098		SAR	SX2&6	4		1098	Q /20		13	1120	
227	1	102		MCM	0&X2,1&X1	7		1102	P 0!0 0|1		13	000+2	001+1
228	1	109		MN		1		1109	D		14		
229	1	110		SBR	X1	4		1110	H 089		14	089	
230	1	114	SX2	SBR	X2,0	7		1114	H 094 000		14	094	000
231	1	121		BCE	MORE,0&X1,|	8		1121	B |94 0|0 |		14	1094	000+1
232	1	129		MN	0&X2	4		1129	D 0!0		14	000+2	
233	1	133		CW		1		1133	)		14		
234	1	134		SW	0&X1	4		1134	, 0|0		14	000+1	
235	1	138		SBR	X1,1&X1	7		1138	H 089 0|1		14	089	001+1
236	1	145		BW	PREFIX,FLAG2 PROCESSING PREFIX?	8		1145	V /61 U14 1		15	1161	1414
237	1	153		SW	FLAG2 MOVING PREFIX	4		1153	, U14		15	1414	
238	1	157		B	MOVEDN	4		1157	B |86		15	1086	
239	1	161	PREFIX	MN	0&X1	4		1161	D 0|0		15	000+1	
240	1	165		MN		1		1165	D		15		
241	1	166		SAR	X3	4		1166	Q 099		15	099	
242	1	170		SBR	SETZON&6	4		1170	H T72		15	1372	
243	1	174		MCW	0&X3,SEQCOD	7		1174	M 0?0 879		15	000+3	879
244	1	181		SAR	X3	4		1181	Q 099		16	099	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
245	1	185		BCE	FORMAT,SEQCOD-3,F	8	1185	B	S90 876 F		16	1290	876
246	1	193		MCW	SEQCOD-3,*&8	7	1193	M	876 S07		16	876	1207
247	1	200		BCE	FMTIO,STMTS,X	8	1200	B	S66 U19 X		16	1266	1419
248	1	208			CHAIN 4					MACRO			
249				BCE		1	1208	B		GEN	16		
250				BCE		1	1209	B		GEN	16		
251				BCE		1	1210	B		GEN	16		
252				BCE		1	1211	B		GEN	16		
253	1	212		B	LOOP	4	1212	B	|44		16	1044	
254				*									
255				*	GOT TO BOTTOM OF STATEMENTS								
256				*									
257	1	216	DONE	MN	0&X1	4	1216	D	0|0		16	000+1	
258	1	220		MN		1	1220	D			17		
259	1	221		SAR	X1 TOP OF STATEMENTS	4	1221	Q	089		17	089	
260	1	225		MCW	SX1,X2 TOP OF TOP FORMATTED I/O STATEMENT	7	1225	M	U24 094		17	1424	094
261	1	232		MCW	83,X3 ONE BELOW NUMBER TABLE	7	1232	M	083 099		17	083	099
262	1	239		MCW	KB1,0&X3 CLEAR STATEMENTS	7	1239	M	U20 0?0		17	1420	000+3
263	1	246		MCW	0&X3 RECENTLY MOVED DOWN	4	1246	M	0?0		17	000+3	
264	1	250		MCW	SEMIC,0&X3 BELOW NUMBER TABLE	7	1250	M	872 0?0		17	872	000+3
265	1	257		BSS	SNAPSH,C	5	1257	B	333 C		18	333	
266	1	287		B	LOADNX	4	1262	B	700		18	700	
267				*									
268				*	FOUND FORMATTED I/O STATEMENT								
269				*									
270	1	291	FMTIO	MZ	ABZONE,3&X3 BOTTOM OF SEQUENCE NUMBER	7	1266	Y	U21 0?3		18	1421	003+3
271	1	298		CW	FLAG	4	1273	)	U13		18	1413	
272	1	302		MN	0&X1	4	1277	D	0|0		18	000+1	
273	1	306		MN		1	1281	D			18		
274	1	307		SAR	SX1 TOP OF SEQUENCE NUMBER	4	1282	Q	U24		18	1424	
275	1	311		B	LOOP	4	1286	B	|44		18	1044	
276				*									
277				*	FOUND A FORMAT STATEMENT								
278				*									
279	1	315	FORMAT	MCW	KB1,96 SAW A FORMAT STATEMENT	7	1290	M	U20 096		19	1420	096
280	1	322		BW	UNREF,FLAG NO FORMATTED I/O SEEN	8	1297	V	T36 U13 1		19	1336	1413
281	1	330		BCE	UNREF,0&X3,} CAN'T BE REFERENCED WITH NO LABEL	8	1305	B	T36 0?0 } GMARK		19	1336	000+3
282	1	338		MCW	0&X3,FMTLAB	7	1313	M	0?0 U27		19	000+3	1427
283	1	345		MCW	SX1,X3 SEQ NO OF TOP FORMATTED I/O STATEMENT	7	1320	M	U24 099		19	1424	099
284	1	352	CHKREF	BWZ	CHKLAB,0&X3,B	8	1327	V	T77 0?0 B		20	1377	000+3
285	1	360		BWZ		1	1335	V			20		
286	1	361	UNREF	CS	332	4	1336	/	332		20	332	
287	1	365		CS		1	1340	/			20		
288	1	366		MN	SEQCOD,245	7	1341	D	879 245		20	879	245
289	1	373		MN		1	1348	D			20		
290	1	374		MN		1	1349	D			20		
291	1	375		MCW	ERR14 UNREFERENCED	4	1350	M	U69		20	1469	
292	1	379		W		1	1354	2			20		
293	1	380		BCV	*&5	5	1355	B	T64 @		20	1364	
294	1	385		B	*&3	4	1360	B	T66		20	1366	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
295	1	389		CC	1	2		1364	F 1		20		
296	1	391	SETZON	MZ	ABZONE,0-0	7		1366	Y U21 000		21	1421	000
297	1	398		B	LOOP	4		1373	B |44		21	1044	
298			*										
299			*		CHECK WHETHER FORMAT LABEL APPEARS IN FORMATTED I/O								
300			*		STATEMENT. THE FORMATTED I/O STATEMENTS ARE ALL BELOW								
301			*		(PROCESSED BEFORE IN THIS PHASE) THE FORMAT STATEMENTS.								
302			*										
303	1	402	CHKLAB	C	0&X3 SKIP	4		1377	C 0?0		21	000+3	
304	1	406		SAR	X3 PREFIX	4		1381	Q 099		21	099	
305	1	410		C	0&X3,FMTLAB LABEL IN STMT SAME AS THE FORMAT?	7		1385	C 0?0 U27		21	000+3	1427
306	1	417		BE	LOOP YES, GO DO NEXT STATEMENT	5		1392	B |44 S		21	1044	
307	1	422		C	0&X3 SKIP	4		1397	C 0?0		21	000+3	
308	1	426		SAR	X3 BODY	4		1401	Q 099		21	099	
309	1	430		B	CHKREF	4		1405	B T27		22	1327	
310			*										
311	1	436	KBOT	DSA	BOT BOTTOM OF CORE CLEARING	3		1411	U99		22	1499	
312	1	437		DCW	@.@	1		1412			22		
313	1	438	FLAG	DCW	#1 INITIALLY SET, CLEARED WHEN FORMATTED I/O SEEN	1		1413			22		
314	1	439	FLAG2	DCW	#1 SET FOR PREFIX, CLEARED FOR BODY	1		1414			22		
315	1	444	STMTS	DCW	@56ULP@ FORMATTED I/O STATEMENTS CODES	5		1419			22		
316	1	445	KB1	DCW	#1	1		1420			22		
317	1	454	ABZONE	DCW	@A@	1		1421			22		
318	1	457	SX1	DCW	#3 TOP OF SEQUENCE NUMBER OF TOP FORMATTED I/O	3		1424			22		
319	1	460	FMTLAB	DCW	#3 LABEL FROM FORMAT STATEMENT	3		1427			22		
320	1	502	ERR14	DCW	@ERROR 14 - UNREFERENCED FORMAT, STATEMENT @	42		1469			24		
321	1	503	GMWM	DCW	@}@	1		1470			24		
322				ORG	*&X00				1500				
323			BOT	EQU	*			1499					
324				XFR	BEGN23				B 980		25	980	
325			CLRME	CLRA	BEGN23, TOP3								
			*	CLRA	CLRBOT, CLRTOP [, ORG, GMWMAD]								
			*										
			*	CLEAR CORE	AFTER A PHASE USING THE CLRTOP ADDRESS								
			*										
326				ORG	201				0201				
			*										
			*	CLEAR DOWN	TO CLRBOT & X00 THE EASY WAY								
			*										
327			CLRME	EQU	*&1			0201					
328			)0J004	CS	TOP3 CLEAR FROM CLRTOP	4		0201	/ 000		26	2600	
329				SBR	)0J004&3	4		0205	H 204		26	204	
330				SBR	)0L004&6	4		0209	H 250		26	250	
331				C	)0J004&3,)0M004 DOWN TO CLRBOT & X00?	7		0213	C 204 261		26	204	261
332				BU	)0J004	5		0220	B 201 /		26	201	
			*										
			*	NOW CLEAR	DOWN TO CLRBOT THE HARD WAY								
			*										
333			)0K004	C	)0L004&6,)0N004	7		0225	C 250 264		26	250	264
334				BU	)0L004	5		0232	B 244 /		26	244	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
335				CS	LOADNX,)0Q004				LOAD THE NEXT BLOCK AT 1				
336			)0L004	LCA	)0P004, 0-0	7		0237	/ 700 271	GEN	27	700	271
337				SBR	)0L004&6	7		0244	L 265 000	GEN	27	265	000
338				B	)0K004	4		0251	H 250	GEN	27	250	
339			)0M004	DSA	)0R004	4		0255	B 225	GEN	27	225	
340			)0N004	DSA	BEGN23	3		0261	999	GEN	27	999	
341			)0P004	DCW	#1	3		0264	980	GEN	27	980	
342				DC	@CLRA @ IDENTIFY IN A DECK, TAPE, OR DUMP	1		0265		GEN	27		
343			)0Q004	DCW	@}@	5		0270		GEN	27		
344				ORG	BEGN23&X00	1		0271		GEN	27		
345			)0R004	EQU	*				1000				
346				XFR	CLRME			0999		GEN			
									B 201		28	201	

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J004	0201: 0	)0K004	0225: 0	)0L004	0244: 0	)0M004	0261: 0	)0N004	0264: 0	)0P004	0265: 0
)0Q004	0271: 0	)0R004	0999: 0	)6J003	0110: 0	)6K003	0700: 0	)6L003	0704: 0	)6M003	0728: 0
)9J003	0253: 0	)9R003	0257: 0	ABZONE	1421: 0	BEGIN3	0838: 0	BEGN23	0980: 0	BOT	1499: 0
CDOVLY	0700: 0	CHKLAB	1377: 0	CHKREF	1327: 0	CLRL	0992: 0	CLRME	0201: 0	DONE	1216: 0
DOT	1412: 0	ERR	0979: 0	ERR14	1469: 0	ERROR2	0963: 0	FLAG	1413: 0	FLAG2	1414: 0
FMTIO	1266: 0	FMTLAB	1427: 0	FORMAT	1290: 0	GLOBER	0184: 0	GMWM	1470: 0	HALT	0868: 0
KB1	1420: 0	KBOT	1411: 0	LOADAD	0838: 0	LOADNX	0700: 0	LOOP	1044: 0	MORE	1094: 0
MOVEDN	1086: 0	MSG	0880: 0	MSGX	0924: 0	PHAS23	0201: 0	PHASLD	0381: 0	PREFIX	1161: 0
SEMIC	0872: 0	SEQCOD	0879: 0	SETZON	1366: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	STMT	0974: 0
STMTS	1419: 0	SX1	1424: 0	SX2	1114: 0	SX3	0875: 0	TOOBIG	0838: 0	TOP3	2600: 0
TPERR	0728: 0	TPREAD	0704: 0	UNREF	1336: 0	X1	0089: 0	X2	0094: 0	X3	0099: 0

UNREFERENCED SYMBOLS

MSG PHASLD SNAPEX SX3 TOOBIG TPERR TPREAD