

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
101			JOB		FORTRAN COMPILER -- SORT ONE PHASE -- PHASE 04								
102			CTL		6611								
103			*										
104			*		EXTERNALLY REFERENCED SYMBOLS ARE MARKED WITH ASTERISK IN COLUMN 1.								
105			*										
106			*		SORT ONE PHASE: DETERMINE WHETHER THERE IS SUFFICIENT ROOM								
107			*		TO EXPAND EVERY STATEMENT BY THREE CHARACTERS.								
108			*		81-83 IS ONE BELOW THE GROUP MARK BELOW THE LAST (BOTTOM								
109			*		ADDRESS) IN CORE.								
110			*										
111			X1	EQU	89			0089					
112			X2	EQU	94			0094					
113			X3	EQU	99			0099					
114			*										
115			*		STUFF IN THE RESIDENT AREA								
116			*										
117				EXT00	SNAPSH, LOADNX, CDOVLY					MACRO			
118			SNAPSH	EQU	333			0333		GEN			
119			PHASLD	EQU	381			0381		GEN			
120			SNAPEX	EQU	564			0564		GEN			
121			LOADNX	EQU	700			0700		GEN			
122			CDOVLY	EQU	700			0700		GEN			
123			TPREAD	EQU	704			0704		GEN			
124			TPERR	EQU	728			0728		GEN			
125			*										
126				EXT03	START, TOP OF PHASE 3					MACRO			
127			BEGIN3	EQU	838			0838		GEN			
128			TOP3	EQU	2600			2600		GEN			
129			*										
130			110	DCW	@SORTER ONE@	10	0110					1	
131			089	DCW	000	3	0089					2	
132			091	DC	00	2	0091					2	
133			094	DCW	000	3	0094					2	
134			096	DC	00	2	0096					2	
135			099	DCW	000	3	0099					2	
136			100	DC	0	1	0100					2	
137			*										
138			PHAS4	LDPH	SORTER ONE,LOADAD,BEGIN4,,,4					MACRO			
			*	PHAZ	LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]					GEN			
			*	XFR	PHASZ PROHIBITED IN A MACRO					GEN			
			*							GEN			
			*	LOAD	A BLOCK					GEN			
			*							GEN			
139			)6J003	EQU	110			0110		GEN			
140			)6K003	EQU	700			0700		GEN			
141			)6L003	EQU	704			0704		GEN			
142			)6M003	EQU	728			0728		GEN			
			*							GEN			
143				ORG	201				0201				
144			PHAS4	BSS	)8J003,G	5	0201	B 257 G		GEN	3	257	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
145				NOP	TO PATCH IN TRAPS FOR DEBUGGING	1		0206	N	GEN	3		
146			)0J003	EQU	*&1			0207		GEN			
147				LCA	)9J003,)6J003	7		0207	L 282 110	GEN	3	282	110
148				BCE	)1J003,)6K003,1 Q: LOADING FROM CARDS?	8		0214	B 250 700 1	GEN	3	250	700
149				BCE	)1J003,)6L003&4,0 Q: LOADING FROM AUTOCODER TAPE?	8		0222	B 250 708 0	GEN	3	250	708
150				RTW	1,LOADAD READ THE BLOCK	8		0230	L %U1 838 R	GEN	3	%U1	838
151				BER	)6M003 Q: TAPE ERROR?	5		0238	B 728 L	GEN	4	728	
152				CS	BEGIN4,)9R003 ENTER THE BLOCK	7		0243	/ |10 285	GEN	4	1010	285
153			)1J003	CS	)6K003,)9R003 LOAD CARDS OR AUTOCODER TAPE	7		0250	/ 700 285	GEN	4	700	285
154			)8J003	SW	)9R003	4		0257	, 285	GEN	4	285	
155				MU	%T0,)8K003,W	8		0261	M %T0 273 W	GEN	4	%T0	273
156				H	)0J003	4		0269	. 207	GEN	4	207	
157			)8K003	EQU	*&1			0273		GEN			
158			)9J003	DCW	@SORTER ONE@ PHASE ID	10		0282		GEN	5		
159				DCW	#1	1		0283		GEN	5		
160				DC	@4@ PHASE NUMBER	1		0284		GEN	5		
161			)9R003	DCW	@}@	1		0285		GEN	5		
162				XFR	PHAS4				B 201		5	201	
163				*									
164				*	TABLE OF ADDRESSES OF THE FIRST STATEMENT OF EACH TYPE,								
165				*	INDEXED BY 30*(ZONE OF STATEMENT TYPE) + 3*(NUMERIC PART OF								
166				*	STATEMENT CODE). FILLED IN NEXT PHASE, Q.V.								
167				*									
168				ORG	BEGIN3				0838				
169			LOADAD	EQU	*&1 LOAD ADDRESS			0838					
170	*	840	TYPTAB	DCW	#3 BLANK	3		0840			6		
171		843		DCW	#3 1 READ TAPE	3		0843			6		
172		846		DCW	#3 2	3		0846			6		
173		849		DCW	#3 3 WRITE TAPE	3		0849			6		
174		852		DCW	#3 4	3		0852			6		
175		855		DCW	#3 5 READ INPUT TAPE	3		0855			6		
176		858		DCW	#3 6 WRITE OUTPUT TAPE	3		0858			6		
177		861		DCW	#3 7	3		0861			7		
178		864		DCW	#3 8	3		0864			7		
179		867		DCW	#3 9	3		0867			7		
180		870		DCW	#3 0	3		0870			7		
181		873		DCW	#3 / END	3		0873			7		
182		876		DCW	#3 S STOP	3		0876			7		
183		879		DCW	#3 T COMPUTED GOTO	3		0879			7		
184		882		DCW	#3 U PUNCH	3		0882			8		
185		885		DCW	#3 V	3		0885			8		
186		888		DCW	#3 W IF (SENSE SWITCH ...)	3		0888			8		
187		891		DCW	#3 X	3		0891			8		
188		894		DCW	#3 Y	3		0894			8		
189		897		DCW	#3 Z REWIND	3		0897			8		
190		900		DCW	#3 !	3		0900			8		
191		903		DCW	#3 J SENSE LIGHT	3		0903			9		
192		906		DCW	#3 K IF (SENSE LIGHT ...)	3		0906			9		
193		909		DCW	#3 L READ	3		0909			9		
194		912		DCW	#3 M	3		0912			9		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
245					* CONVERT TO ADDRESS								
246					*								
247	1	091		BAV	LOOP CLEAR OVERFLOW	5		1091	B |96 Z		15	1096	
248	1	096	LOOP	A	KP96, SEQ5-3	7		1096	A T33 T17		15	1333	1317
249	1	103		BAV	LOOP	5		1103	B |96 Z		15	1096	
250	1	108		MN	SEQ5-3, *&4	7		1108	D T17 /18		15	1317	1118
251	1	115		MZ	ZONES-0, SEQ5-2	7		1115	Y |09 T18		16	1009	1318
252					*								
253	1	122		MCW	83, X1	7		1122	M 083 089		16	083	089
254	1	129		MCW	X1, NOP&3	7		1129	M 089 /53		16	089	1153
255	1	136		MCW	SEQ5, X2	7		1136	M T20 094		16	1320	094
256	1	143		MZ	KM1, NOP&2 SET TAG FOR X2	7		1143	Y T34 /52		16	1334	1152
257	1	150	NOP	NOP	0 X1 + X2	4		1150	N 000		16	000	
258	1	154		SAR	X2	4		1154	Q 094		17	094	
259	1	158		S	W2A	4		1158	S T36		17	1336	
260	1	162		S	W2B	4		1162	S T38		17	1338	
261	1	166		MZ	X2, W2A-1	7		1166	Y 094 T35		17	094	1335
262	1	173		MZ	X2-2, W2B-1	7		1173	Y 092 T37		17	092	1337
263	1	180	LOOP2	BWZ	LOOP2X, W2B-1, 2	8		1180	V /99 T37 2		17	1199	1337
264	1	188		A	K10V, W2B	7		1188	A T40 T38		18	1340	1338
265	1	195		B	LOOP2	4		1195	B /80		18	1180	
266	1	199	LOOP2X	BWZ	LOOP3X, W2A-1, 2	8		1199	V S18 T35 2		18	1218	1335
267	1	207		A	K04V, W2A	7		1207	A T42 T36		18	1342	1336
268	1	214		B	LOOP2X	4		1214	B /99		18	1199	
269	1	218	LOOP3X	A	W2B-1, W2A	7		1218	A T37 T36		18	1337	1336
270	1	225		MCW	X2, SEQ5	7		1225	M 094 T20		19	094	1320
271	1	232		MCW	W2A	4		1232	M T36		19	1336	
272	1	236		ZA	SEQ5	4		1236	? T20		19	1320	
273	1	240		MZ	*-4, SEQ5 CLEAR ZONE IN TENS DIGIT	7		1240	Y S42 T20		19	1242	1320
274	1	247		C	SEQ5, K2900	7		1247	C T20 T47		19	1320	1347
275	1	254		BL	OK	5		1254	B S93 T		19	1293	
276					*								
277					* INSUFFICIENT ROOM TO EXPAND EVERY STATEMENT BY THREE CHARACTERS								
278					*								
279	1	259		CS	332	4		1259	/ 332		19	332	
280	1	263		CS		1		1263	/		20		
281	1	264		CC	1	2		1264	F 1		20		
282	1	266		MCW	MSG2, 270	7		1266	M T83 270		20	1383	270
283	1	273		W		1		1273	2		20		
284	1	274		CC	1	2		1274	F 1		20		
285	1	276		BCE	HALT, CDOVLY, 1	8		1276	B S89 700 1		20	1289	700
286	1	284		RWD	1	5		1284	U %U1 R		20	%U1	
287	1	289	HALT	H	HALT	4		1289	. S89		21	1289	
288					*								
289					* SOURCE CODE WILL FIT AFTER EXPANDING EVERY STATEMENT BY								
290					* THREE CHARACTERS								
291					*								
292	1	293	OK	MCW	X2, 83 REPLACE ADDRESS OF BOTTOM OF CODE	7		1293	M 094 083		21	094	083
293	1	300		MCM	0&X1	4		1300	P 0|0		21	000+1	
294	1	304		SAR	X1 ADDRESS BELOW LAST STATEMENT	4		1304	Q 089		21	089	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
295	1	345		B	LOADNX LOAD NEXT OVERLAY	4		1308	B 700		21	700	
296			*										
297			*		CONSTANTS AND WORK AREAS								
298			*										
299	1	349		DCW	0	1		1312			21		
300	1	352	SEQ	DCW	#3 SEQUENCE NUMBER OF LAST STATEMENT	3		1315			21		
301	1	357	SEQ5	DCW	#5 STMT NUMBER TIMES 3	5		1320			22		
302	1	358	KP2	DCW	&2	1		1321			22		
303	1	363	WORK5	DCW	#5	5		1326			22		
304	1	368	K16K	DCW	16000	5		1331			22		
305	1	370	KP96	DCW	&96	2		1333			22		
306	1	371	KM1	DCW	-1	1		1334			22		
307	1	373	W2A	DCW	#2	2		1336			22		
308	1	375	W2B	DCW	#2	2		1338			23		
309	1	377	K10V	DCW	@A0@ TEN, OVERFLOWED	2		1340			23		
310	1	379	K04V	DCW	@?4@ 04, OVERFLOWED	2		1342			23		
311	1	384	K2900	DCW	02900	5		1347			23		
312	1	420	MSG2	DCW	@MESSAGE 2 - OBJECT PROGRAM TOO LARGE@	36		1383			24		
313	1	427	GMWM	DCW	@}@	1		1384		GMARK	24		
314			XFR		BEGIN4				B |10		24	1010	
315			CLRME	CLRA	BEGN4X, GMWM, C					MACRO			
			*	CLRA	CLRBOT, CLRTOP [, SS, HERE, GWMAD]					GEN			
			*							GEN			
			*		CLEAR CORE AFTER A PHASE USING THE CLRTOP ADDRESS					GEN			
			*							GEN			
316			ORG		201				0201				
			*							GEN			
			*		CLEAR DOWN TO CLRBOT & X00 THE EASY WAY					GEN			
			*							GEN			
317			CLRME	EQU	*&1			0201		GEN			
318				BSS	SNAPSH, C	5		0201	B 333 C	GEN	25	333	
319			)0J004	CS	GMWM CLEAR FROM CLRTOP	4		0206	/ T84	GEN	25	1384	
320				SBR	)0J004&3	4		0210	H 209	GEN	25	209	
321				SBR	)0L004&6	4		0214	H 255	GEN	25	255	
322				C	)0J004&3,)0M004 DOWN TO CLRBOT & X00?	7		0218	C 209 266	GEN	25	209	266
323				BU	)0J004	5		0225	B 206 /	GEN	25	206	
			*							GEN			
			*		NOW CLEAR DOWN TO CLRBOT THE HARD WAY					GEN			
			*							GEN			
324			)0K004	C	)0L004&6,)0N004	7		0230	C 255 269	GEN	25	255	269
325				BU	)0L004	5		0237	B 249 /	GEN	26	249	
326				CS	LOADNX,)0Q004 LOAD THE NEXT BLOCK AT 1	7		0242	/ 700 276	GEN	26	700	276
327			)0L004	LCA	)0P004, 0-0 CLEAR WITH BLANK AND WORD MARK	7		0249	L 270 000	GEN	26	270	000
328				SBR	)0L004&6	4		0256	H 255	GEN	26	255	
329				B	)0K004	4		0260	B 230	GEN	26	230	
330			)0M004	DSA	)0R004 CLRBOT & X00 - 1	3		0266	|99	GEN	26	1099	
331			)0N004	DSA	BEGN4X CLRBOT	3		0269	|22	GEN	26	1022	
332			)0P004	DCW	#1	1		0270		GEN	27		
333				DC	@CLRA @ IDENTIFY IN A DECK, TAPE, OR DUMP	5		0275		GEN	27		
334			)0Q004	DCW	@}@	1		0276		GEN	27		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
335				ORG	BEGN4X&X00				1100				
336			)OR004	EQU	* CLRBOT & X00 - 1			1099		GEN			
337				XFR	CLRME				B 201		27	201	

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J003	0207: 0	)0J004	0206: 0	)0K004	0230: 0	)0L004	0249: 0	)0M004	0266: 0	)0N004	0269: 0
)0P004	0270: 0	)0Q004	0276: 0	)0R004	1099: 0	)1J003	0250: 0	)6J003	0110: 0	)6K003	0700: 0
)6L003	0704: 0	)6M003	0728: 0	)8J003	0257: 0	)8K003	0273: 0	)9J003	0282: 0	)9R003	0285: 0
BEGIN3	0838: 0	BEGIN4	1010: 0	BEGN4X	1022: 0	CDOVLY	0700: 0	CLRME	0201: 0	GMWM	1384: 0
HALT	1289: 0	K04V	1342: 0	K10V	1340: 0	K16K	1331: 0	K2900	1347: 0	KM1	1334: 0
KP2	1321: 0	KP96	1333: 0	LOADAD	0838: 0	LOADNX	0700: 0	LOOP	1096: 0	LOOP2	1180: 0
LOOP2X	1199: 0	LOOP3X	1218: 0	MSG2	1383: 0	NOP	1150: 0	OK	1293: 0	PHAS4	0201: 0
PHASLD	0381: 0	SEQ	1315: 0	SEQ5	1320: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	TOP3	2600: 0
TPERR	0728: 0	TPREAD	0704: 0	TYPTAB	0840: 0	W2A	1336: 0	W2B	1338: 0	WORK5	1326: 0
X1	0089: 0	X2	0094: 0	X3	0099: 0	ZONES	1009: 0				

UNREFERENCED SYMBOLS

PHASLD SNAPEX TPERR TPREAD TYPTAB