

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
101			JOB		FORTRAN COMPILER -- DO PHASE -- PHASE 46								
102			CTL		6611								
103			*										
104			*		STRINGS OF UNCONDITIONAL BRANCH INSTRUCTIONS AND PARAMETERS								
105			*		ARE GENERATED IN-LINE. AN UNCONDITIONAL BRANCH IS GENERATED								
106			*		TO FOLLOW THE LAST STATEMENT WITHIN THE RANGE OF THE DO								
107			*										
108			X1	EQU	89			0089					
109			X2	EQU	94			0094					
110			X3	EQU	99			0099					
111			*										
112			*		STUFF IN THE RESIDENT AREA								
113			*										
114			NEGAR2	EQU	142 LOOKS LIKE NEGARY -- SEE PHASE 20			0142					
115			DOCNT	EQU	151 COUNT OF DO STATEMENTS			0151					
116			GLOBER	EQU	184 GLOBAL ERROR FLAG -- WM MEANS ERROR			0184					
117			*										
118				EXT00	SNAPSH, LOADNX, CDOVLY							MACRO	
119			SNAPSH	EQU	333			0333				GEN	
120			PHASLD	EQU	381			0381				GEN	
121			SNAPEX	EQU	564			0564				GEN	
122			LOADNX	EQU	700 CARD OVERLAY UNLESS NOP			0700				GEN	
123			CDOVLY	EQU	700 1 IF LOADING FROM CARDS, N IF FROM TAPE			0700				GEN	
124			TPREAD	EQU	704 LOAD OVERLAY FROM TAPE			0704				GEN	
125			TPERR	EQU	728			0728				GEN	
126			*										
127			TABEL	EQU	2499 IN RESORT THREE PHASE 3 ???			2499					
128			*										
129				EXT03	START, TOP OF PHASE 3							MACRO	
130			BEGIN3	EQU	838			0838				GEN	
131			TOP3	EQU	2600			2600				GEN	
132			*										
133			PHAS46	LDPH	DOMSK,LOADAD,BEGN46,,,46							MACRO	
			*	PHAZ	LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]							GEN	
			*	XFR	PHASZ PROHIBITED IN A MACRO							GEN	
			*									GEN	
			*	LOAD	A BLOCK							GEN	
			*									GEN	
134			)6J003	EQU	110 PHASE ID			0110				GEN	
135			)6K003	EQU	700 LOAD NEXT PHASE			0700				GEN	
136			)6L003	EQU	704 TAPE READ INSTRUCTION			0704				GEN	
137			)6M003	EQU	728 TAPE ERROR HANDLER			0728				GEN	
			*									GEN	
138				ORG	201				0201				
139			PHAS46	EQU	*&1			0201				GEN	
140				LCA	)9J003,)6J003		7	0201	L 248 110	GEN	1	248	110
141				BCE	)6K003,)6K003,1		8	0208	B 700 700 1	GEN	1	700	700
142				BCE	)6K003,)6L003&4,0		8	0216	B 700 708 0	GEN	1	700	708
143				RTW	1,LOADAD		8	0224	L %U1 838 R	GEN	1	%U1	838
144				BER	)6M003		5	0232	B 728 L	GEN	1	728	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
145				CS	BEGN46,)9R003	7		0237	/ 838 252	GEN	2	838	252
146			)9J003	DCW	@DOMSK@	5		0248		GEN	2		
147				DC	#1	1		0249		GEN	2		
148				DC	@46@	2		0251		GEN	2		
149			)9R003	DCW	@}@	1		0252		GEN	2		
150				XFR	PHAS46				B 201		3	201	
151				*									
152				*	DO PHASE ALGORITHM								
153				*									
154				*	OUTER								
155				*									
156				*	NO SAME DIFF								
157				*	I B XT B XT B XT								
158				*	N								
159				*	N GM T BK T IN T BK								
160				*	E EZ B BK B IN B BK								
161				*	R HD - BK - IN - BK								
162				*									
163				ORG	BEGIN3				0838				
164			LOADAD	EQU	*&1			0838					
165	838		BEGN46	SW	GM,GM3	7		0838	, V77 W05		4	1577	1605
166	845			SW	GM4,GM2	7		0845	, W10 W01		4	1610	1601
167	852			MCW	X3,SX3	7		0852	M 099 W16		4	099	1616
168	859		LOOP	BW	DONE,0&X1	8		0859	V V33 0|0 1		4	1533	000+1
169	867			MCW	KLESS,2&X1	7		0867	M W17 0|2		4	1617	002+1
170	874			SBR	TSTLES&6,2&X1	7		0874	H S65 0|2		5	1265	002+1
171	881			C	0&X1	4		0881	C 0|0		5	000+1	
172	885			SAR	X1	4		0885	Q 089		5	089	
173	889			C	2&X1,KD DO STATEMENT?	7		0889	C 0|2 W18		5	002+1	1618
174	896			BU	ALMOST NO	5		0896	B V26 /		5	1526	
175	901			CW	111,112	7		0901	) 111 112		5	111	112
176	908			CW	113,114	7		0908	) 113 114		6	113	114
177	915			MCW	5&X1,X2 ADDRESS OF SEQUENCE NUMBER	7		0915	M 0|5 094		6	005+1	094
178	922			MCW	0&X2,SEQNO	7		0922	M 0|0 W21		6	000+2	1621
179	929			MCW	0&X1,X2	7		0929	M 0|0 094		6	000+1	094
180	936			SAR	X1	4		0936	Q 089		6	089	
181	940			MCW	0&X2,SEQEND	7		0940	M 0|0 W24		6	000+2	1624
182	947			ZA	SEQNO,SEQDIF	7		0947	? W21 W27		7	1621	1627
183	954			S	SEQEND,SEQDIF	7		0954	S W24 W27		7	1624	1627
184	961			MCW	NOP,SWICH1	7		0961	M W28 S12		7	1628	1212
185	968			BWZ	MSG38,SEQDIF,B	8		0968	V T97 W27 B		7	1397	1627
186	976			MCW	X1,X2	7		0976	M 089 094		7	089	094
187	983			MCW	KB3,F5	7		0983	M W31 W00		8	1631	1600
188	990			MCW	KT,LONGOP	7		0990	M W32 W06		8	1632	1606
189	997			MCW	BRANCH,SWICH2	7		0997	M W33 S16		8	1633	1216
190	1 004		NESTED	C	0&X2 DOWN TO BODY OF STMT BELOW DO	4		1004	C 0|0		8	000+2	
191	1 008			C		1		1008	C		8		
192	1 009			SAR	X2	4		1009	Q 094		8	094	
193	1 013			C	2&X2,KD IS IT A DO STATEMENT?	7		1013	C 0|2 W18		8	002+2	1618
194	1 020			BU	NOTDO	5		1020	B |90 /		9	1090	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
195	1	025		MCW	0&X2,X3	7		1025	M 0|0 099		9	000+2	099
196	1	032		C	0&X3,SEQNO PROPERLY NESTED?	7		1032	C 0?0 W21		9	000+3	1621
197	1	039		BH	NESTED YES	5		1039	B |04 U		9	1004	
198	1	044		C	0&X3,SEQEND	7		1044	C 0?0 W24		9	000+3	1624
199	1	051		BH	MSG39 ILLEGAL DO NESTING	5		1051	B U42 U		9	1442	
200	1	056		BCE	*&8,1&X2,H CO-ENDING?	8		1056	B |71 0|1 H		10	1071	001+2
201	1	064		MCW	KE,1&X2 NOT CO-ENDING	7		1064	M W34 0|1		10	1634	001+2
202	1	071		BL	NOTDO	5		1071	B |90 T		10	1090	
203	1	076		MCW	KH,1&X2 CO-ENDING AFTER ALL	7		1076	M W35 0|1		10	1635	001+2
204	1	083		MCW	5&X2,F5	7		1083	M 0|5 W00		10	005+2	1600
205	1	090	NOTDO	BCE	COEND,4&X1,H	8		1090	B /20 0|4 H		11	1120	004+1
206	1	098		MCW	NOP,SWICH2	7		1098	M W28 S16		11	1628	1216
207	1	105		BCE	*&8,4&X1,}	8		1105	B /20 0|4 } GMARK		11	1120	004+1
208	1	113		MCW	BRANCH, LONGOP	7		1113	M W33 W06		11	1633	1606
209	1	120	COEND	MCW	SEQEND, LONG	7		1120	M W24 W13		11	1624	1613
210	1	127		SW	6&X1	4		1127	, 0|6		12	006+1	
211	1	131		MCW	8&X1, SHORT	7		1131	M 0|8 W04		12	008+1	1604
212	1	138		MCW	8&X1,F6	7		1138	M 0|8 W09		12	008+1	1609
213				*									
214				*	TEST SYNTAX AND GENERATE CODE								
215				*									
216	1	145	GEN	B	SUB	4		1145	B T01		12	1301	
217	1	149		DCW	@,@	1		1149			12		
218	1	152		DSA	F4	3		1152	V97		12	1597	
219	1	153		B	SUB	4		1153	B T01		12	1301	
220	1	157		DCW	@#@	1		1157			13		
221	1	160		DSA	F1	3		1160	V88		13	1588	
222	1	161		B	SUB	4		1161	B T01		13	1301	
223	1	165		DCW	@,@	1		1165			13		
224	1	168		DSA	F2	3		1168	V91		13	1591	
225	1	169		BW	NRBOT,0&X1	8		1169	V T86 0|0 1		13	1386	000+1
226	1	177		B	SUB	4		1177	B T01		13	1301	
227	1	181		DCW	@,@	1		1181			14		
228	1	184		DSA	F3	3		1184	V94		14	1594	
229	1	185		BW	BOTTOM,0&X1	8		1185	V /97 0|0 1		14	1197	000+1
230	1	193		B	MSG40 SYNTAX ERROR	4		1193	B U80		14	1480	
231				*									
232	1	197	BOTTOM	MCW	SX3,X3	7		1197	M W16 099		14	1616	099
233	1	204		MN	0&X1	4		1204	D 0|0		14	000+1	
234	1	208		SAR	X1	4		1208	Q 089		14	089	
235	1	212	SWICH1	NOP	TSTLES	4		1212	N S59		15	1259	
236	1	216	SWICH2	NOP	SKIP	4		1216	N S40		15	1240	
237	1	220		A	KP1,DOCNT	7		1220	A W36 151		15	1636	151
238	1	227		LCA	LONG,0&X3	7		1227	L W13 0?0		15	1613	000+3
239	1	234		LCA		1		1234	L		15		
240	1	235		LCA		1		1235	L		15		
241	1	236		SBR	X3	4		1236	H 099		15	099	
242	1	240	SKIP	LCA	SHORT,0&X3	7		1240	L W04 0?0		16	1604	000+3
243	1	247		CHAIN	8					MACRO			
244				LCA		1		1247	L	GEN	16		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
295					* ILLEGAL RANGE OF DO								
296					*								
297	1	397	MSG38	CS	332	4		1397	/ 332		22	332	
298	1	401		CS		1		1401	/		22		
299	1	402		SW	GLOBER	4		1402	, 184		22	184	
300	1	406		MN	SEQNO,245	7		1406	D W21 245		22	1621	245
301	1	413		MN		1		1413	D		23		
302	1	414		MN		1		1414	D		23		
303	1	415		MCW	ERR38	4		1415	M X25		23	1725	
304	1	419		W		1		1419	2		23		
305	1	420		BCV	*&5	5		1420	B U29 @		23	1429	
306	1	425		B	*&3	4		1425	B U31		23	1431	
307	1	429		CC	1	2		1429	F 1		23		
308	1	431	SET1	MCW	BRANCH,SWICH1	7		1431	M W33 S12		24	1633	1212
309	1	438		B	GEN	4		1438	B /45		24	1145	
310					*								
311					* ILLEGAL NESTING								
312					*								
313	1	442	MSG39	CS	332	4		1442	/ 332		24	332	
314	1	446		CS		1		1446	/		24		
315	1	447		SW	GLOBER	4		1447	, 184		24	184	
316	1	451		MN	SEQNO,241	7		1451	D W21 241		24	1621	241
317	1	458		MN		1		1458	D		24		
318	1	459		MN		1		1459	D		25		
319	1	460		MCW	ERR39	4		1460	M X63		25	1763	
320	1	464		W		1		1464	2		25		
321	1	465		BCV	*&5	5		1465	B U74 @		25	1474	
322	1	470		B	*&3	4		1470	B U76		25	1476	
323	1	474		CC	1	2		1474	F 1		25		
324	1	476		B	SET1	4		1476	B U31		25	1431	
325					*								
326					* SYNTAX ERROR								
327					*								
328	1	480	MSG40	CS	332	4		1480	/ 332		26	332	
329	1	484		CS		1		1484	/		26		
330	1	485		SW	GLOBER	4		1485	, 184		26	184	
331	1	489		MN	SEQNO,235	7		1489	D W21 235		26	1621	235
332	1	496		MN		1		1496	D		26		
333	1	497		MN		1		1497	D		26		
334	1	498		MCW	ERR40	4		1498	M X95		26	1795	
335	1	502		W		1		1502	2		27		
336	1	503		BCV	*&5	5		1503	B V12 @		27	1512	
337	1	508		B	*&3	4		1508	B V14		27	1514	
338	1	512		CC	1	2		1512	F 1		27		
339	1	514		C	1&X1	4		1514	C 0|1		27	001+1	
340	1	518		SAR	X1	4		1518	Q 089		27	089	
341	1	522		B	TSTLES	4		1522	B S59		27	1259	
342					*								
343	1	526	ALMOST	SBR	X1,5&X1	7		1526	H 089 0|5		28	089	005+1
344	1	533	DONE	MCW	SX3,X3	7		1533	M W16 099		28	1616	099

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
345	1	540		MN	0&X3	4		1540	D 0?0		28	000+3	
346	1	544		SAR	X2	4		1544	Q 094		28	094	
347	1	548	CSLOOP	CS	0&X2	4		1548	/ 0!0		28	000+2	
348	1	552		SBR	X2	4		1552	H 094		28	094	
349	1	556		C	0&X2,DOEND	7		1556	C 0!0 X99		28	000+2	1799
350	1	563		BU	CSLOOP	5		1563	B V48 /		29	1548	
351	1	568		BSS	SNAPSH,E	5		1568	B 333 E		29	333	
352	1	594		B	LOADNX	4		1573	B 700		29	700	
353	1	598	GM	DC	@}@	1		1577		GMARK	29		
354				*									
355				*	GENERATED CODE TEMPLATE								
356				*									
357	1	602		DCW	@T924@	4		1581			29		
358	1	606		DCW	@T921@	4		1585			29		
359	1	609	F1	DCW	#3	3		1588			29		
360	1	612	F2	DCW	#3	3		1591			29		
361	1	615	F3	DCW	#3	3		1594			30		
362	1	618	F4	DCW	#3	3		1597			30		
363	1	621	F5	DCW	#3	3		1600			30		
364	1	622	GM2	DC	@}@	1		1601		GMARK	30		
365	1	625	SHORT	DC	#3	3		1604			30		
366	1	626	GM3	DC	@}@	1		1605		GMARK	30		
367	1	627	LONGOP	DCW	@T@	1		1606			30		
368	1	630	F6	DC	#3	3		1609			30		
369	1	631	GM4	DC	@}@	1		1610		GMARK	30		
370	1	634	LONG	DC	#3	3		1613			30		
371				*									
372				*	DATA								
373				*									
374	1	637	SX3	DCW	#3	3		1616			30		
375	1	638	KLESS	DCW	@<@	1		1617			30		
376	1	639	KD	DCW	@D@	1		1618			30		
377	1	642	SEQNO	DCW	#3 SEQUENCE NUMBER OF DO	3		1621			31		
378	1	645	SEQEND	DCW	#3 SEQUENCE NUMBER OF FINAL STATEMENT OF DO	3		1624			31		
379	1	648	SEQDIF	DCW	#3 SEQNO - SEQEND -- BETTER BE NEGATIVE	3		1627			31		
380	1	649	NOP	NOF		1		1628	N		31		
381	1	652	KB3	DCW	#3	3		1631			31		
382	1	653	KT	DCW	@T@	1		1632			31		
383	1	654	BRANCH	B		1		1633	B		31		
384	1	655	KE	DCW	@E@	1		1634			32		
385	1	656	KH	DCW	@H@	1		1635			32		
386	1	657	KP1	DCW	&1	1		1636			32		
387	1	693	ERROR2	DCW	@MESSAGE 2 - OBJECT PROGRAM TOO LARGE@	36		1672			32		
388	1	694	W1	DCW	#1	1		1673			33		
389	1	704	DIGITS	DCW	@0123456789@	10		1683			33		
390	1	746	ERR38	DCW	@ERROR 38 - ILLEGAL RANGE OF DO, STATEMENT @	42		1725			35		
391	1	784	ERR39	DCW	@ERROR 39 - ILLEGAL NESTING, STATEMENT @	38		1763			36		
392	1	816	ERR40	DCW	@ERROR 40 - DO SYNTAX, STATEMENT @	32		1795			37		
393				ORG	*&X00								
394			DOEND	EQU	*			1799	1800				

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
395	1	825		DCW	@}@		1	1800		GMARK	38		
396				XFR	BEGN46				B 838		39	838	
397			CLRME	CLRA	LOADAD, TABEL					MACRO			
			*	CLRA	CLRBOT, CLRTOP [, ORG, GMWMAD]					GEN			
			*							GEN			
			*	CLEAR CORE	AFTER A PHASE USING THE CLRTOP ADDRESS					GEN			
			*							GEN			
398				ORG	201				0201				
			*							GEN			
			*	CLEAR DOWN	TO CLRBOT & X00 THE EASY WAY					GEN			
			*							GEN			
399			CLRME	EQU	*&1			0201		GEN			
400			)0J004	CS	TABEL CLEAR FROM CLRTOP	4		0201	/ M99	GEN	40	2499	
401				SBR	)0J004&3	4		0205	H 204	GEN	40	204	
402				SBR	)0L004&6	4		0209	H 250	GEN	40	250	
403				C	)0J004&3,)0M004 DOWN TO CLRBOT & X00?	7		0213	C 204 261	GEN	40	204	261
404				BU	)0J004	5		0220	B 201 /	GEN	40	201	
			*							GEN			
			*	NOW CLEAR DOWN	TO CLRBOT THE HARD WAY					GEN			
			*							GEN			
405			)0K004	C	)0L004&6,)0N004	7		0225	C 250 264	GEN	40	250	264
406				BU	)0L004	5		0232	B 244 /	GEN	40	244	
407				CS	LOADNX,)0Q004 LOAD THE NEXT BLOCK AT 1	7		0237	/ 700 271	GEN	41	700	271
408			)0L004	LCA	)0P004, 0-0 CLEAR WITH BLANK AND WORD MARK	7		0244	L 265 000	GEN	41	265	000
409				SBR	)0L004&6	4		0251	H 250	GEN	41	250	
410				B	)0K004	4		0255	B 225	GEN	41	225	
411			)0M004	DSA	)0R004 CLRBOT & X00 - 1	3		0261	899	GEN	41	899	
412			)0N004	DSA	LOADAD CLRBOT	3		0264	838	GEN	41	838	
413			)0P004	DCW	#1	1		0265		GEN	41		
414				DC	@CLRA @ IDENTIFY IN A DECK, TAPE, OR DUMP	5		0270		GEN	41		
415			)0Q004	DCW	@}@	1		0271		GEN	42		
416				ORG	LOADAD&X00				0900				
417			)0R004	EQU	* CLRBOT & X00 - 1			0899		GEN			
418				XFR	CLRME				B 201		43	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	0899: 0	)6J003	0110: 0	)6K003	0700: 0	)6L003	0704: 0	)6M003	0728: 0
)9J003	0248: 0	)9R003	0252: 0	ALMOST	1526: 0	BEGIN3	0838: 0	BEGN46	0838: 0	BOTTOM	1197: 0
BRANCH	1633: 0	CDOVLY	0700: 0	CLRME	0201: 0	COEND	1120: 0	CSLOOP	1548: 0	DIGITS	1683: 0
DOCNT	0151: 0	DOEND	1799: 0	DONE	1533: 0	ERR38	1725: 0	ERR39	1763: 0	ERR40	1795: 0
ERROR2	1672: 0	F1	1588: 0	F2	1591: 0	F3	1594: 0	F4	1597: 0	F5	1600: 0
F6	1609: 0	GEN	1145: 0	GLOBER	0184: 0	GM	1577: 0	GM2	1601: 0	GM3	1605: 0
GM4	1610: 0	GOTDIG	1339: 0	HALT	1297: 0	KB3	1631: 0	KD	1618: 0	KE	1634: 0
KH	1635: 0	KLESS	1617: 0	KP1	1636: 0	KT	1632: 0	LOADAD	0838: 0	LOADNX	0700: 0
LONG	1613: 0	LONGOP	1606: 0	LOOP	0859: 0	MSG38	1397: 0	MSG39	1442: 0	MSG40	1480: 0
NEGAR2	0142: 0	NESTED	1004: 0	NOP	1628: 0	NOTDO	1090: 0	NRBOT	1386: 0	PHAS46	0201: 0
PHASLD	0381: 0	SEQDIF	1627: 0	SEQEND	1624: 0	SEQNO	1621: 0	SET1	1431: 0	SHORT	1604: 0
SKIP	1240: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	SUB	1301: 0	SWICH1	1212: 0	SWICH2	1216: 0
SX3	1616: 0	TABEL	2499: 0	TOP3	2600: 0	TPERR	0728: 0	TPREAD	0704: 0	TSTLES	1259: 0
W1	1673: 0	X1	0089: 0	X2	0094: 0	X3	0099: 0				

UNREFERENCED SYMBOLS

PHASLD SNAPEX TOP3 TPERR TPREAD