



SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
146			)6J004	EQU	110 PHASE ID			0110		GEN			
147			)6K004	EQU	700 LOAD NEXT PHASE			0700		GEN			
148			)6L004	EQU	704 TAPE READ INSTRUCTION			0704		GEN			
149			)6M004	EQU	728 TAPE ERROR HANDLER			0728		GEN			
			*							GEN			
150				ORG	201				0201				
151			PHAS6	EQU	*&1			0201		GEN			
152				LCA	)9J004,)6J004	7		0201	L 253 110	GEN	2	253	110
153				BCE	)6K004,)6K004,1 Q: LOADING FROM CARDS?	8		0208	B 700 700 1	GEN	2	700	700
154				BCE	)6K004,)6L004&4,0 Q: LOADING FROM AUTOCODER TAPE?	8		0216	B 700 708 0	GEN	2	700	708
155				RTW	1,LOADAD READ THE BLOCK	8		0224	L %U1  11 R	GEN	2	%U1	1011
156				BER	)6M004 Q: TAPE ERROR?	5		0232	B 728 L	GEN	2	728	
157				CS	BEGIN6,)9R004 ENTER THE BLOCK	7		0237	/  11 256	GEN	3	1011	256
158			)9J004	DCW	@SORTER TRI@ PHASE ID	10		0253		GEN	3		
159				DC	#1	1		0254		GEN	3		
160				DC	@6@ PHASE NUMBER	1		0255		GEN	3		
161			)9R004	DCW	@}@	1		0256		GEN	3		
162				XFR	PHAS6				B 201		3	201	
163			*										
164				ORG	BEGIN5-11 ELEVEN BEFORE MOKOTOFF V3M0.LST LINE				1011				
165			*		1018 BECAUSE WE SET THE GMWM AT 2900 INSTEAD								
166			*		OF LOADING IT, TO AVOID SPLITTING THE BLOCK								
167			LOADAD	EQU	*&1 LOAD ADDRESS			1011					
168	1	022	BEGIN6	MCW	83,X3 ADDRESS AT END OF LAST STATEMENT	7		1011	M 083 099		4	083	099
169	1	029		SW	GM	4		1018	, X74		4	1774	
170				LCA	GM,END5 SEE MOKOTOFF V3M0.LST LINE 1216	7		1022	L X74 R00		4	1774	2900
171				CS	GMWM	4		1029	/ J00		4	2100	
172	1	033		SBR	X1,END5-1 BOTTOM OF FREE STORAGE	7		1033	H 089 Q99		4	089	2899
173	1	040		SW	END5	4		1040	, R00		4	2900	
174	1	044		MN	0&X3 COMPUTE ADDRESS BELOW LAST STATEMENT,	4		1044	D 0?0		4	000+3	
175	1	048		LCA	GM PUT A GMWM THERE	4		1048	L X74		5	1774	
176	1	052		SBR	SAVE&6 AND STORE ADDRESS BELOW GMWM	4		1052	H /10		5	1110	
177	1	056		SBR	W3,TABI XS GET LAST TYPTAB INDEX	7		1056	H X78 X67		5	1778	1767
178	1	063	LOOP	MCW	W3,X3 GET NEXT HEAD	7		1063	M X78 099		5	1778	099
179	1	070		MCW	0&X3,X3 OF CHAIN TO X3	7		1070	M 0?0 099		5	000+3	099
180	1	077		SAR	W3	4		1077	Q X78		5	1778	
181	1	081		BCE	DONE,X3,X END OF THE TABLE?	8		1081	B W47 099 X		6	1647	099
182	1	089		MCW	TYPTAB&X3,X3 HEAD OF LIST OF STATEMENTS OF TYPE	7		1089	M 8D0 099		6	840+3	099
183	1	096		BCE	LOOP,X3, NO STATEMENTS OF THE TYPE	8		1096	B  63 099		6	1063	099
184			*										
185			*	MOVE	ALL STATEMENTS OF THE TYPE DOWN TO LOW CORE								
186			*										
187	1	104	SAVE	MCW	0&X3,0-0 MOVE STATEMENT TO SAVE AREA	7		1104	M 0?0 000		6	000+3	000
188	1	111		SAR	X2	4		1111	Q 094		6	094	
189	1	115		BCE	*&5,1&X2,} DID WE MOVE THE GM?	8		1115	B /27 0!1 } GMARK		7	1127	001+2
190	1	123		B	NOROOM NO, MAYBE WE'RE OUT OF SPACE	4		1123	B S95		7	1295	
191	1	127		SBR	X2,2&X2 GET BACK ABOVE GMWM, TO BOTTOM OF STMT	7		1127	H 094 0!2		7	094	002+2
192	1	134	MORE	MCM	0&X2 COMPUTE ADDRESS ABOVE TOP OF STATEMENT	4		1134	P 0!0		7	000+2	
193	1	138		SBR	SX2&6 AND SAVE IT	4		1138	H /67		7	1167	
194	1	142		MCM	0&X2,1&X1 MOVE STATEMENT TO BOTTOM OF FREE AREA,	7		1142	P 0!0 0 1		7	000+2	001+1

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
195	1	149		SBR	X1			4	1149	H 089	7	089	
196	1	153		MN	0&X1			4	1153	D 0 0	8	000+1	
197	1	157		SBR	X1			4	1157	H 089	8	089	
198	1	161	SX2	SBR	X2,0-0			7	1161	H 094 000	8	094	000
199	1	168		BCE	MORE,0&X1,			8	1168	B /34 0 0	8	1134	000+1
200	1	176		SBR	X1,1&X1			7	1176	H 089 0 1	8	089	001+1
201	1	183		CW	BIGFLG			4	1183	) X75	8	1775	
202	1	187		MN	0&X1			4	1187	D 0 0	8	000+1	
203	1	191		MN				1	1191	D	9		
204	1	192		MN				1	1192	D	9		
205	1	193		MN				1	1193	D	9		
206	1	194		SAR	X1			4	1194	Q 089	9	089	
207	1	198		LCA	GM,0&X1			7	1198	L X74 0 0	9	1774	000+1
208	1	205		SBR	83			4	1205	H 083	9	083	
209	1	209		SBR	X1			4	1209	H 089	9	089	
210	1	213	MORE2	MCM	1&X1			4	1213	P 0 1	10	001+1	
211	1	217		MN				1	1217	D	10		
212	1	218		SAR	X1			4	1218	Q 089	10	089	
213	1	222		BCE	MORE2,0&X1,			8	1222	B S13 0 0	10	1213	000+1
214	1	230		MN	0&X3			4	1230	D 0?0	10	000+3	
215	1	234		MN				1	1234	D	10		
216	1	235		MN				1	1235	D	10		
217	1	236		MN				1	1236	D	11		
218	1	237		MN				1	1237	D	11		
219	1	238		MN				1	1238	D	11		
220	1	239		SAR	X3			4	1239	Q 099	11	099	
221	1	243		MN	0&X1			4	1243	D 0 0	11	000+1	
222	1	247		LCA	3&X3			4	1247	L 0?3	11	003+3	
223	1	251		MCW	POUND,0&X3			7	1251	M X79 0?0	11	1779	000+3
224	1	258	MORE3	MCM	2&X3			4	1258	P 0?2	12	002+3	
225	1	262		MN				1	1262	D	12		
226	1	263		MN				1	1263	D	12		
227	1	264		SAR	X3			4	1264	Q 099	12	099	
228	1	268		BCE	MORE3,1&X3,			8	1268	B S58 0?1	12	1258	001+3
229	1	276		BCE	LOOP,0&X3,			8	1276	B  63 0?0	12	1063	000+3
230	1	284		MCW	0&X3,X3			7	1284	M 0?0 099	12	000+3	099
231	1	291		B	SAVE			4	1291	B /04	13	1104	
232			*										
233			*		NO ROOM TO MOVE STATEMENT BELOW BOTTOM STATEMENT								
234			*										
235	1	295	NOROOM	BW	TOOBIG,BIGFLG			8	1295	V W56 X75 1	13	1656	1775
236	1	303		SW	BIGFLG			4	1303	, X75	13	1775	
237	1	307		MCW	TOPCOR,X2			7	1307	M 688 094	13	688	094
238	1	314		MN	0&X2			4	1314	D 0!0	13	000+2	
239	1	318		SAR	X2			4	1318	Q 094	13	094	
240	1	322		MCW	X2,X3			7	1322	M 094 099	13	094	099
241	1	329	MOVEUP	LCA	0&X2,0&X3			7	1329	L 0!0 0?0	14	000+2	000+3
242	1	336		SAR	X2			4	1336	Q 094	14	094	
243	1	340		MCW	0&X3,PREFIX			7	1340	M 0?0 X88	14	000+3	1788
244	1	347		BCE	MOVED,PREFIX-6,#			8	1347	B T66 X82 #	14	1366	1782

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245	1	355		LCA	0&X3,0&X3	NO, DECREMENT X3 SO AS NOT TO	7	1355	L 0?0 0?0		14	000+3	000+3
246	1	362		SAR	X3	CLOBBER RECENTLY MOVED STATEMENT	4	1362	Q 099		14	099	
247	1	366	MOVED	C	SAVE&6,X2	DONE?	7	1366	C /10 094		15	1110	094
248	1	373		BU	MOVEUP	NO, MOVE ANOTHER ONE	5	1373	B T29 /		15	1329	
249	1	378		MCW	X3,SAVE&6	BELOW LAST MOVED STATEMENT	7	1378	M 099 /10		15	099	1110
250	1	385		MCW	X3,X2		7	1385	M 099 094		15	099	094
251	1	392		MZ	X3,X3999	COMPUTE X3 & X00 - 1	7	1392	Y 099 X73		15	099	1773
252	1	399		MZ			1	1399	Y		15		
253	1	400		MCW			1	1400	M		15		
254	1	401		MZ	X1,X1999	COMPUTE X1 & X00 - 1	7	1401	Y 089 X70		16	089	1770
255	1	408		MZ			1	1408	Y		16		
256	1	409		MCW			1	1409	M		16		
257	1	410		C	X1999,X3999		7	1410	C X70 X73		16	1770	1773
258	1	417		BE	NOCLR		5	1417	B U42 S		16	1442	
259	1	422	CLR	CS	0&X3	CLEAR FROM X3 DOWN TO X1 & X00	4	1422	/ 0?0		16	000+3	
260	1	426		SBR	X3		4	1426	H 099		16	099	
261	1	430		C	X3,X1999		7	1430	C 099 X70		17	099	1770
262	1	437		BU	CLR		5	1437	B U22 /		17	1422	
263	1	442	NOCLR	ZA	TABLEN,TABCNT	TABLE LENGTH TO TABLE COUNTER	7	1442	? X90 !03		17	1790	2003
264	1	449		S	X3&1		4	1449	S 100		17	100	
265				*									
266				*	FILL TYPE TABLE WITH BLANKS								
267				*									
268	1	453	CLRTAB	MCW	KB3,TYPTAB&X3	MARK END OF CHAIN	7	1453	M X93 8D0		17	1793	840+3
269	1	460		S	KP1,TABCNT		7	1460	S X94 !03		17	1794	2003
270	1	467		BM	CLRFIN,TABCNT	DONE CLEARING TABLE?	8	1467	V U86 !03 K		18	1486	2003
271	1	475		A	KP3,X3		7	1475	A X95 099		18	1795	099
272	1	482		B	CLRTAB		4	1482	B U53		18	1453	
273				*									
274				*	RELINK MOVED STATEMENTS INTO TYPE TABLE								
275				*									
276	1	486	CLRFIN	MCM	1&X2	GET X1 TO TOP OF STATEMENT	4	1486	P 0!1		18	001+2	
277	1	490		MN			1	1490	D		18		
278	1	491		SAR	X2		4	1491	Q 094		18	094	
279	1	495		BCE	CLRFIN,0&X2,	MORE TO DO IF RM INSTEAD OF GMWM	8	1495	B U86 0!0		18	1486	000+2
280	1	503		SBR	X2,1&X2	X2 IS NOW BOTTOM OF NEXT STATEMENT	7	1503	H 094 0!1		19	094	001+2
281	1	510		S	X3&1		4	1510	S 100		19	100	
282	1	514		C	0&X2		4	1514	C 0!0		19	000+2	
283	1	518		SAR	*&4		4	1518	Q V25		19	1525	
284	1	522		MCW	0-0,PREFIX	SAVE PREFIX	7	1522	M 000 X88		19	000	1788
285	1	529		MN	PREFIX-6,X3	3 TIMES	7	1529	D X82 099		19	1782	099
286	1	536		MCW	X3,TABCNT	NUMERIC PART OF	7	1536	M 099 !03		20	099	2003
287	1	543		A	X3	STATEMENT CODE	4	1543	A 099		20	099	
288	1	547		A	TABCNT,X3	TO X3	7	1547	A !03 099		20	2003	099
289	1	554		BWZ	ZONFIN,PREFIX-6,2	ADD 30 TIMES	8	1554	V V99 X82 2		20	1599	1782
290	1	562		A	KP30,X3	ZONE PART	7	1562	A X97 099		20	1797	099
291	1	569		BWZ	ZONFIN,PREFIX-6,S	OF STATEMENT	8	1569	V V99 X82 S		21	1599	1782
292	1	577		A	KP30,X3	CODE	7	1577	A X97 099		21	1797	099
293	1	584		BM	ZONFIN,PREFIX-6	TO X3	8	1584	V V99 X82 K		21	1599	1782
294	1	592		A	KP30,X3		7	1592	A X97 099		21	1797	099

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
295	1	599	ZONFIN	MN	0&X2 MINUS 2	4		1599	D 0!0		21	000+2	
296	1	603		MN		1		1603	D		21		
297	1	604		MCW	TYPTAB&X3 LINK TO NEXT STATEMENT SAME TYPE	4		1604	M 8D0		21	840+3	
298	1	608		C	0&X2 DOWN TO NEXT WORD MARK	4		1608	C 0!0		22	000+2	
299	1	612		SAR	TYPTAB&X3 LINK TYPE TABLE TO STATEMENT TYPE	4		1612	Q 8D0		22	840+3	
300	1	616		C	X2, TOPCOR DONE?	7		1616	C 094 688		22	094	688
301	1	623		BU	CLRFIN	5		1623	B U86 /		22	1486	
302	1	628		MCW	W3, X3 RECOVER X3	7		1628	M X78 099		22	1778	099
303	1	635		NOP	3&X3	4		1635	N 0?3		22	003+3	
304	1	639		SAR	W3 PLUS 3	4		1639	Q X78		22	1778	
305	1	643		B	LOOP BACK TO SORTING	4		1643	B  63		23	1063	
306				*									
307				*	LOAD NEXT OVERLAY								
308				*									
309	1	647	DONE	BSS	SNAPSH, C	5		1647	B 333 C		23	333	
310	1	684		B	LOADNX LOAD IT	4		1652	B 700		23	700	
311				*									
312				*	PROGRAM IS TOO BIG								
313				*									
314	1	688	TOOBIG	CS	332	4		1656	/ 332		23	332	
315	1	692		CS		1		1660	/		23		
316	1	693		CC	1	2		1661	F 1		23		
317	1	695		MCW	MSG2, 270	7		1663	M Y33 270		23	1833	270
318	1	702		W		1		1670	2		24		
319	1	703		CC	1	2		1671	F 1		24		
320	1	705		BCE	HALT, CDOVLY, 1	8		1673	B W86 700 1		24	1686	700
321	1	713		RWD	1	5		1681	U %U1 R		24	%U1	
322	1	718	HALT	H	HALT	4		1686	. W86		24	1686	
323				*									
324				*	DATA								
325				*									
326				*	FIRST IS TABLE OF TABLE INDEXES IN THE REVERSE ORDER								
327				*	WE WANT STATEMENTS SORTED INTO LOW CORE								
328				*									
329	1	724		DCW	@XXX@ END-OF-TABLE SENTINEL	3		1692			24		
330	1	727		DSA	117 I DIMENSION	3		1695	117		24	117	
331	1	730		DSA	84 Q	3		1698	084		25	084	
332	1	733		DSA	108 F FORMAT	3		1701	108		25	108	
333	1	736		DSA	9 3 WRITE TAPE	3		1704	009		25	009	
334	1	739		DSA	3 1 READ	3		1707	003		25	003	
335	1	742		DSA	18 6 WRITE OUTPUT TAPE	3		1710	018		25	018	
336	1	745		DSA	81 M	3		1713	081		25	081	
337	1	748		DSA	42 U PUNCH	3		1716	042		25	042	
338	1	751		DSA	15 5 READ INPUT TAPE	3		1719	015		26	015	
339	1	754		DSA	69 L	3		1722	069		26	069	
340	1	757		DSA	87 R ARITHMETIC	3		1725	087		26	087	
341	1	760		DSA	105 E IF	3		1728	105		26	105	
342	1	763		DSA	27 9	3		1731	027		26	027	
343	1	766		DSA	96 B BACKSPACE	3		1734	096		26	096	
344	1	769		DSA	57 Z REWIND	3		1737	057		26	057	

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345	1	772		DSA	75 N ENDFILE	3		1740	075		27	075	
346	1	775		DSA	39 T COMPUTED GOTO	3		1743	039		27	039	
347	1	778		DSA	111 G GOTO	3		1746	111		27	111	
348	1	781		DSA	36 S STOP	3		1749	036		27	036	
349	1	784		DSA	93 A PAUSE	3		1752	093		27	093	
350	1	787		DSA	63 J SENSE LIGHT	3		1755	063		27	063	
351	1	790		DSA	66 K IF SENSE LIGHT	3		1758	066		27	066	
352	1	793		DSA	48 W IF SENSE SWITCH	3		1761	048		28	048	
353	1	796		DSA	99 C CONTINUE	3		1764	099		28	099	
354	1	799	TABIXS	DSA	102 D DO	3		1767	102		28	102	
355			*		LAST OF TABLE INDEXES								
356	1	802	X1999	DSA	999 X1 & X00 - 1	3		1770	999		28	999	
357	1	805	X3999	DCW	999 X3 & X00 - 1	3		1773			28		
358	1	806	GM	DC	@)@	1		1774		GMARK	28		
359	1	807	BIGFLG	DC	0 WORD MARK SET IF TOO BIG	1		1775			28		
360	1	810	W3	DCW	#3	3		1778			28		
361	1	811	POUND	DCW	@#@	1		1779			28		
362	1	820	PREFIX	DCW	#9 STATEMENT PREFIX	9		1788			29		
363	1	822	TABLEN	DCW	&39 TYPE TABLE LENGTH	2		1790			29		
364	1	825	KB3	DCW	#3 THREE BLANKS -- END OF CHAIN SENTINEL	3		1793			29		
365	1	826	KP1	DCW	&1	1		1794			29		
366	1	827	KP3	DCW	&3	1		1795			29		
367	1	829	KP30	DCW	&30	2		1797			29		
368	1	875	MSG2	DCW	@MESSAGE 2 - OBJECT PROGRAM TOO LARGE@	36		1833			30		
369			ORG		EOTWO&1 SAME AS MOKOTOFF V3M0.LST LINE 1214				2001				
370	2	003	TABCNT	DCW	#3	3		2003			31		
371			ORG		*&X00				2100				
372	2	900	GMWM	DCW	@)@	1		2100		GMARK	32		
373			XFR		BEGIN6				B  11		32	1011	
374			CLRME	CLRA	TYPTAB-2, TABCNT					MACRO			
			*	CLRA	CLRBOT, CLRTOP [, ORG, GMWMAD]					GEN			
			*							GEN			
			*	CLEAR CORE	AFTER A PHASE USING THE CLRTOP ADDRESS					GEN			
			*							GEN			
375			ORG		201				0201				
			*							GEN			
			*	CLEAR DOWN	TO CLRBOT & X00 THE EASY WAY					GEN			
			*							GEN			
376			CLRME	EQU	*&1			0201		GEN			
377			)0J005	CS	TABCNT CLEAR FROM CLRTOP	4		0201	/ !03	GEN	33	2003	
378			SBR		)0J005&3	4		0205	H 204	GEN	33	204	
379			SBR		)0L005&6	4		0209	H 250	GEN	33	250	
380			C		)0J005&3, )0M005 DOWN TO CLRBOT & X00?	7		0213	C 204 261	GEN	33	204	261
381			BU		)0J005	5		0220	B 201 /	GEN	33	201	
			*							GEN			
			*	NOW CLEAR	DOWN TO CLRBOT THE HARD WAY					GEN			
			*							GEN			
382			)0K005	C	)0L005&6, )0N005	7		0225	C 250 264	GEN	33	250	264
383			BU		)0L005	5		0232	B 244 /	GEN	33	244	
384			CS		LOADNX, )0Q005 LOAD THE NEXT BLOCK AT 1	7		0237	/ 700 271	GEN	34	700	271

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
385			)0L005	LCA	)0P005,0-0			7	0244	L 265 000	GEN	34	265 000
386				SBR	)0L005&6			4	0251	H 250	GEN	34	250
387				B	)0K005			4	0255	B 225	GEN	34	225
388			)0M005	DSA	)0R005			3	0261	899	GEN	34	899
389			)0N005	DSA	TYPTAB-2			3	0264	838	GEN	34	838
390			)0P005	DCW	#1			1	0265		GEN	34	
391				DC	@CLRA @			5	0270	IDENTIFY IN A DECK, TAPE, OR DUMP	GEN	34	
392			)0Q005	DCW	@}@			1	0271		GEN	35	
393				ORG	TYPTAB-2&X00					0900			
394			)0R005	EQU	*				0899		GEN		
395				XFR	CLRME					B 201		35	201

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
)0J005	0201: 0	)0K005	0225: 0	)0L005	0244: 0	)0M005	0261: 0	)0N005	0264: 0	)0P005	0265: 0
)0Q005	0271: 0	)0R005	0899: 0	)6J004	0110: 0	)6K004	0700: 0	)6L004	0704: 0	)6M004	0728: 0
)9J004	0253: 0	)9R004	0256: 0	BEGIN5	1022: 0	BEGIN6	1011: 0	BEGN4X	1022: 0	BIGFLG	1775: 0
CDOVLY	0700: 0	CLR	1422: 0	CLRFIN	1486: 0	CLRME	0201: 0	CLRTAB	1453: 0	DONE	1647: 0
END5	2900: 0	EOTWO	2000: 0	GM	1774: 0	GMWM	2100: 0	HALT	1686: 0	KB3	1793: 0
KP1	1794: 0	KP3	1795: 0	KP30	1797: 0	LOADAD	1011: 0	LOADNX	0700: 0	LOOP	1063: 0
MORE	1134: 0	MORE2	1213: 0	MORE3	1258: 0	MOVED	1366: 0	MOVEUP	1329: 0	MSG2	1833: 0
NOCLR	1442: 0	NOROOM	1295: 0	PHAS6	0201: 0	PHASLD	0381: 0	POUND	1779: 0	PREFIX	1788: 0
SAVE	1104: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	SX2	1161: 0	TABCNT	2003: 0	TABIXS	1767: 0
TABLEN	1790: 0	TOOBIG	1656: 0	TOPCOR	0688: 0	TPERR	0728: 0	TPREAD	0704: 0	TYPTAB	0840: 0
W3	1778: 0	X1	0089: 0	X1999	1770: 0	X2	0094: 0	X3	0099: 0	X3999	1773: 0
ZONFIN	1599: 0										

## UNREFERENCED SYMBOLS

BEGN4X PHASLD SNAPEX TPERR TPREAD