

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
151			*		OF THE CORRESPONDING VARIABLE IN THE ARRAY TABLE.								
152			*										
153			*		EACH ELEMENT OF THE ARRAY TABLE HAS ONE OR TWO VARIABLE-WIDTH								
154			*		DIMENSION FIELDS (FIRST DIMENSION HIGHER IN CORE), WITH THE								
155			*		DIGITS OF THE DIMENSIONS NOT REVERSED, A FIVE DIGIT OFFSET								
156			*		FROM THE BASE OF THE EQUIVALENCE CLASS, A THREE-CHARACTER LINK								
157			*		TO THE BASE MEMBER OF THE EQUIVALENCE CLASS, A THREE-CHARACTER								
158			*		LINK TO THE NEXT ELEMENT, A THREE-CHARACTER LINK TO THE								
159			*		PREVIOUS ELEMENT, THE NAME (VARIABLE WIDTH), AND A GROUP MARK								
160			*		WITH A WORD MARK. THE GMWM OF THE TOPMOST ELEMENT IS AT								
161			*		TOPCOR-3, AND TOPCOR-2 .. TOPCOR ARE BLANK.								
162			*										
163			*		THE NEXT AND PREV POINTERS ARE REDIRECTED SO THAT ELEMENTS OF								
164			*		AN EQUIVALENCE CLASS ARE CONSECUTIVE, AND ASCENDING ORDER BY								
165			*		OFFSET.								
166			*										
167			*		BELOW THE ARRAY TABLE, BUILD A TABLE OF CLASSES, EACH ELEMENT								
168			*		HAVING A FIVE-DIGIT OFFSET AND A LINK TO THE FIRST ELEMENT OF								
169			*		THE CLASS IN THE ARRAY TABLE.								
170			*										
171			*		AT EXIT, X3 IS ONE BELOW THE GM AT THE BOTTOM OF THE ARRAY								
172			*		TABLE, AND X1 IS THE TOP (PREFIX) OF THE FIRST STATEMENT								
173			*		AFTER (BELOW) THE LAST EQUIVALENCE.								
174			*										
175			*		COME HERE FROM FIND ROUTINE IN PREVIOUS PHASE WHEN IT FINDS								
176			*		THE VARIABLE IN THE ARRAY TABLE.								
177			*										
178			PHAS11	LDPH	EQUIV TWO,FOUND,NXSTMT,,11					MACRO			
			*	PHAZ	LDPH [PHASID],LOADAD,ENTAD[,SKIPFG,SKIP],[NUMBER][,HALT]					GEN			
			*		XFR PHASZ PROHIBITED IN A MACRO					GEN			
			*							GEN			
			*	LOAD	A BLOCK					GEN			
			*							GEN			
179			)6J004	EQU	110 PHASE ID			0110		GEN			
180			)6K004	EQU	700 LOAD NEXT PHASE			0700		GEN			
181			)6L004	EQU	704 TAPE READ INSTRUCTION			0704		GEN			
182			)6M004	EQU	728 TAPE ERROR HANDLER			0728		GEN			
			*							GEN			
183				ORG	201				0201				
184			PHAS11	EQU	*&1			0201		GEN			
185				LCA	)9J004,)6J004		7	0201	L 252 110	GEN	2	252	110
186				BCE	)6K004,)6K004,1 Q: LOADING FROM CARDS?		8	0208	B 700 700 1	GEN	2	700	700
187				BCE	)6K004,)6L004&4,0 Q: LOADING FROM AUTOCODER TAPE?		8	0216	B 700 708 0	GEN	2	700	708
188				RTW	1,FOUND READ THE BLOCK		8	0224	L %U1 /81 R	GEN	2	%U1	1181
189				BER	)6M004 Q: TAPE ERROR?		5	0232	B 728 L	GEN	2	728	
190				CS	NXSTMT,)9R004 ENTER THE BLOCK		7	0237	/ /15 256	GEN	3	1115	256
191			)9J004	DCW	@EQUIV TWO@ PHASE ID		9	0252		GEN	3		
192				DC	#1		1	0253		GEN	3		
193				DC	@11@ PHASE NUMBER		2	0255		GEN	3		
194			)9R004	DCW	@}@		1	0256		GEN	3		

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
195				XFR	PHAS11				B 201		3	201	
196			*										
197				ORG	CHKTYP MOKOTOFF V3M0.LST LINE 1973, PHASE 10				1181				
198	1	181	FOUND	LCA	KZ5,OFF2	7		1181	L Z60 865		4	1960	865
199	1	188		NOP	0&X2	4		1188	N 0!0		4	000+2	
200	1	192		MCW	SKIP NAME	1		1192	M		4		
201	1	193		MCW	SKIP "NEXT" POINTER	1		1193	M		4		
202	1	194		MCW	SKIP "PREV" POINTER	1		1194	M		4		
203	1	195		MCW	SKIP "CLASS" POINTER	1		1195	M		4		
204	1	196		SAR	X2 NOW POINTS AT 5-DIGIT OFFSET	4		1196	Q 094		4	094	
205	1	200		BAV	*&1 TURN OFF ARITHMETIC OVERFLOW FLAG	5		1200	B S05 Z		5	1205	
206	1	205		S	W3	4		1205	S Z63		5	1963	
207	1	209	MORE	BCE	NEW,1&X2, OFFSET EMPTY?	8		1209	B S47 0!1		5	1247	001+2
208	1	217		A	0&X2,OFF2	7		1217	A 0!0 865		5	000+2	865
209	1	224		MCW	3&X2,X2 NEXT ELEMENT IN EQUIVALENCE CLASS	7		1224	M 0!3 094		5	003+2	094
210	1	231		A	KP1,W3 COUNT ELEMENTS IN CLASS	7		1231	A Z64 Z63		5	1964	1963
211	1	238		BAV	FIXIT ERROR IF OVERFLOW -- CIRCULAR LIST?	5		1238	B Z20 Z		6	1920	
212	1	243		B	MORE	4		1243	B S09		6	1209	
213	1	247	NEW	MCW	X2,CLASS2	7		1247	M 094 868		6	094	868
214	1	254		BCE	SUBS,0&X1,% VARIABLE IN EQUIVALENCE SUBSCRIPTED?	8		1254	B V92 0!0 %		6	1592	000+1
215	1	262		A	K1,OFF2 BUMP OFFSET	7		1262	A Z65 865		6	1965	865
216	1	269	TOTOP	MCW	NEXT3,X3 TOP OF CLASS TABLE	7		1269	M 876 099		6	876	099
217	1	276		LCA	OFF1,OFF3	7		1276	L 857 873		7	857	873
218	1	283		S	OFF2,OFF3	7		1283	S 865 873		7	865	873
219	1	290		BM	NEG,OFF3 OFF2 .LT. OFF1?	8		1290	V W53 873 K		7	1653	873
220	1	298		LCA	CLASS2,0&X3	7		1298	L 868 0?0		7	868	000+3
221	1	305		SBR	NEXT3	4		1305	H 876		7	876	
222	1	309	GETNXT	BCE	NXTVAR,0&X1,,	8		1309	B /65 0!0 ,		8	1165	000+1
223	1	317		BCE	EQVFIN,0&X1,) EQUIVALENCE GROUP DONE	8		1317	B T29 0!0)		8	1329	000+1
224	1	325		B	SYNTAX	4		1325	B 883		8	883	
225	1	329	EQVFIN	MN	0&X1 SKIP RIGHT PAREN	4		1329	D 0!0		8	000+1	
226	1	333		MN	SKIP COMMA IF STATEMENT NOT ENDED	1		1333	D		8		
227	1	334		SAR	SAVX1 LEFT PAREN IF STATEMENT NOT ENDED	4		1334	Q Z68		8	1968	
228	1	338		MCW	NEXT3,X3	7		1338	M 876 099		8	876	099
229	1	345		LCA	DOLLAR,0&X3 MARK BOTTOM OF CLASS TABLE	7		1345	L Z69 0?0		9	1969	000+3
230			*										
231			*		SEARCH THE CLASS TABLE FOR THE LINK TO THE CLASS IN CLASS1								
232			*										
233	1	352		MCW	NEXT,X3 TOP OF CLASS TABLE	7		1352	M 852 099		9	852	099
234	1	359	TSTBOT	BCE	ATBOT,0&X3,\$ AT BOTTOM OF CLASS TABLE?	8		1359	B W83 0?0 \$		9	1683	000+3
235	1	367		MCW	0&X3,WNEXT	7		1367	M 0?0 Z72		9	000+3	1972
236	1	374		C	CLASS1,WNEXT	7		1374	C 860 Z72		9	860	1972
237	1	381		BE	TESTRI IT'S EITHER REDUNDANT OR ILLEGAL	5		1381	B X97 S		10	1797	
238	1	386	BACKRI	MCW	0&X3,X2	7		1386	M 0?0 094		10	000+3	094
239	1	393		SAR	NEXT3	4		1393	Q 876		10	876	
240	1	397		BCE	EMPTY,0&X2,	8		1397	B U09 0!0		10	1409	000+2
241	1	405		B	FULL ENTRY HAS AN OFFSET	4		1405	B Z41		10	1941	
242	1	409	EMPTY	MCW	9&X2,X1 PREV TO X1	7		1409	M 0!9 089		10	009+2	089
243	1	416	EMPTYL	MCW	6&X2,X3 NEXT FROM X3 IS X3	7		1416	M 0!6 099		11	006+2	099
244	1	423		BCE	ENDTAB,X3, AT END OF ARRAY TABLE?	8		1423	B U47 099		11	1447	099

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295	1	653	NEG	BCE	FIRST,OFF1, STILL EMPTY?	8		1653	B W72 857		17	1672	857
296	1	661		LCA	CLASS1,0&X3	7		1661	L 860 0?0		17	860	000+3
297	1	668		SBR	NEXT3	4		1668	H 876		17	876	
298	1	672	FIRST	MCW	CLASS2,CLASS1 CURRENT ONE HAS LEAST OFFSET	7		1672	M 868 860		18	868	860
299	1	679		B	GETNXT	4		1679	B T09		18	1309	
300				*									
301				*	AT BOTTOM OF CLASS TABLE								
302				*									
303	1	683	ATBOT	MCW	SAVX1,X1	7		1683	M Z68 089		18	1968	089
304	1	690		LCA	E0FF,OFF1 EMPTY OFFSET TO OFF1	7		1690	L Z78 857		18	1978	857
305	1	697		MCW	NEXT,NEXT3	7		1697	M 852 876		18	852	876
306	1	704		BCE	GOTLP,1&X1,,	8		1704	B /58 0|1 ,		19	1158	001+1
307	1	712		BCE	NXSTMT,1&X1,}	8		1712	B /15 0|1 } GMARK		19	1115	001+1
308	1	720		B	SYNTAX	4		1720	B 883		19	883	
309				*									
310	1	724	NOPREV	MCW	X3,86	7		1724	M 099 086		19	099	086
311	1	731		B	ENDTB3	4		1731	B U77		19	1477	
312				*									
313				*	CODE NOT OVERLAID IN PREVIOUS PHASE COMES HERE WHEN EQUIVALENCE								
314				*	STATEMENTS HAVE ALL BEEN PROCESSED								
315				*									
316	*1	735	DONE2	MCW	NEXT,X3	7		1735	M 852 099		19	852	099
317	1	742		MCW	GM,1&X3 MARK BOTTOM OF ARRAY TABLE	7		1742	M 839 0?1		20	839	001+3
318	1	749		MCM	5&X1	4		1749	P 0|5		20	005+1	
319	1	753		MN		1		1753	D		20		
320	1	754		MN		1		1754	D		20		
321	1	755		SAR	X1 TOP OF STATEMENT AFTER LAST EQUIVALENCE	4		1755	Q 089		20	089	
322	1	759		BSS	SNAPSH,C	5		1759	B 333 C		20	333	
323	1	796		B	LOADNX	4		1764	B 700		20	700	
324				DCW	#1	1		1768			21		
325				*									
326				*	CODE NOT OVERLAID IN PREVIOUS PHASE COMES HERE FOR VARIABLES								
327				*	IN THE EQUIVALENCE STATEMENT THAT ARE NOT IN THE TABLE								
328				*									
329	*1	800	NOTIN2	BCE	GOTRP,0&X1,)	8		1769	B X85 0|0)		21	1785	000+1
330	1	808		SBR	X1	4		1777	H 089		21	089	
331	1	812		B	NOTIN2	4		1781	B X69		21	1769	
332	1	816	GOTRP	MN	0&X1	4		1785	D 0|0		21	000+1	
333	1	820		SAR	X1	4		1789	Q 089		21	089	
334	1	824		B	NXTVAR	4		1793	B /65		21	1165	
335				*									
336				*	TEST FOR REDUNDANT OR ILLEGAL EQUIVALENCE								
337				*									
338	1	828	TESTRI	MCW	0&X3,X2	7		1797	M 0?0 094		22	000+3	094
339	1	835		SAR	X2	4		1804	Q 094		22	094	
340	1	839		C	0&X2,OFF1	7		1808	C 0!0 857		22	000+2	857
341	1	846		BE	RED2	5		1815	B Y28 S		22	1828	
342	1	851		B	ILLEGL	4		1820	B Y36		22	1836	
343	1	855		B	BACKRI	4		1824	B T86		22	1386	
344	1	859	RED2	B	REDUND	4		1828	B Y78		22	1878	

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD	A-ADDR	B-ADDR
395					* DATA								
396					*								
397	1	991	KZ5	DCW	@00000@	5		1960			28		
398	1	994	W3	DCW	#3	3		1963			28		
399	1	995	KP1	DCW	&1	1		1964			28		
400	1	996	K1	DCW	1	1		1965			28		
401	1	999	SAVX1	DCW	#3	3		1968			28		
402	2	000	DOLLAR	DCW	@\$@	1		1969			29		
403	2	003	WNEXT	DCW	#3	3		1972			29		
404	2	004	CHTEST	DCW	#1	1		1973			29		
405	2	009	EOFF	DCW	#5	5		1978			29		
406	2	059	ERROR7	DCW	@ERROR 7 - ILLEGAL EQUIVALENCE, STATEMENT @	41		2019			31		
407	2	102	ERROR8	DCW	@ERROR 8 - REDUNDANT EQUIVALENCE, STATEMENT @	43		2062			33		
408	2	138	FIXMSG	DCW	@CORRECT ERRORS INDICATED AND RESTART@	36		2098			34		
409	2	143	WOFF	DCW	#5 OFFSET WORK AREA	5		2103			35		
410	2	144	FLAG	DCW	#1	1		2104			35		
411	2	145	GMWM	DCW	@}@	1		2105		GMARK	35		
412				XFR	NXSTMT				B /15		35	1115	
413			CLRME	CLRA	BEGIN3,GMWM					MACRO			
			*	CLRA	CLRBOT,CLRTOP[,ORG,GMWMAD]					GEN			
			*							GEN			
			*	CLEAR CORE	AFTER A PHASE USING THE CLRTOP ADDRESS					GEN			
			*							GEN			
414			ORG		201				0201				
			*							GEN			
			*	CLEAR DOWN	TO CLRBOT & X00 THE EASY WAY					GEN			
			*							GEN			
415			CLRME	EQU	*&1			0201		GEN			
416			)0J005	CS	GMWM CLEAR FROM CLRTOP	4		0201	/ J05	GEN	36	2105	
417				SBR	)0J005&3	4		0205	H 204	GEN	36	204	
418				SBR	)0L005&6	4		0209	H 250	GEN	36	250	
419				C	)0J005&3,)0M005 DOWN TO CLRBOT & X00?	7		0213	C 204 261	GEN	36	204	261
420				BU	)0J005	5		0220	B 201 /	GEN	36	201	
			*							GEN			
			*	NOW CLEAR	DOWN TO CLRBOT THE HARD WAY					GEN			
			*							GEN			
421			)0K005	C	)0L005&6,)0N005	7		0225	C 250 264	GEN	36	250	264
422				BU	)0L005	5		0232	B 244 /	GEN	36	244	
423				CS	LOADNX,)0Q005 LOAD THE NEXT BLOCK AT 1	7		0237	/ 700 271	GEN	37	700	271
424			)0L005	LCA	)0P005,0-0 CLEAR WITH BLANK AND WORD MARK	7		0244	L 265 000	GEN	37	265	000
425				SBR	)0L005&6	4		0251	H 250	GEN	37	250	
426				B	)0K005	4		0255	B 225	GEN	37	225	
427			)0M005	DSA	)0R005 CLRBOT & X00 - 1	3		0261	899	GEN	37	899	
428			)0N005	DSA	BEGIN3 CLRBOT	3		0264	838	GEN	37	838	
429			)0P005	DCW	#1	1		0265		GEN	37		
430				DC	@CLRA @ IDENTIFY IN A DECK, TAPE, OR DUMP	5		0270		GEN	37		
431			)0Q005	DCW	@}@	1		0271		GEN	38		
432				ORG	BEGIN3&X00				0900				
433			)0R005	EQU	* CLRBOT & X00 - 1			0899		GEN			
434				XFR	CLRME				B 201		38	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	0252: 0	)9R004	0256: 0	ATBOT	1683: 0	BACKRI	1386: 0	BEGIN3	0838: 0	CDOVLY	0700: 0
CHKTYP	1181: 0	CHTEST	1973: 0	CLASS1	0860: 0	CLASS2	0868: 0	CLRME	0201: 0	DOLLAR	1969: 0
DONE2	1735: 0	EMPTY	1409: 0	EMPTYL	1416: 0	ENDTAB	1447: 0	ENDTB2	1462: 0	ENDTB3	1477: 0
E0FF	1978: 0	EQVFIN	1329: 0	ERROR7	2019: 0	ERROR8	2062: 0	FIRST	1672: 0	FIXIT	1920: 0
FIXMSG	2098: 0	FLAG	2104: 0	FOUND	1181: 0	FULL	1941: 0	GETNXT	1309: 0	GLOBER	0184: 0
GM	0839: 0	GMWM	2105: 0	GOTLP	1158: 0	GOTRP	1785: 0	HALT	1937: 0	ILLEGL	1836: 0
K1	1965: 0	KP1	1964: 0	KZ5	1960: 0	LOADNX	0700: 0	MORE	1209: 0	NEG	1653: 0
NEW	1247: 0	NEXT	0852: 0	NEXT3	0876: 0	NOPREV	1724: 0	NOTIN2	1769: 0	NOVFL1	1874: 0
NOVFL2	1916: 0	NXSTMT	1115: 0	NXTVAR	1165: 0	OFF1	0857: 0	OFF2	0865: 0	OFF3	0873: 0
OVFL1	1872: 0	OVFL2	1914: 0	PHAS11	0201: 0	PHASLD	0381: 0	PREFIX	0849: 0	RED1	1584: 0
RED2	1828: 0	REDUND	1878: 0	SAVX1	1968: 0	SNAPEX	0564: 0	SNAPSH	0333: 0	SUBS	1592: 0
SUBSL	1608: 0	SUBSX	1642: 0	SYNTAX	0883: 0	TESTRI	1797: 0	TOP3	2600: 0	TOTOP	1269: 0
TPERR	0728: 0	TPREAD	0704: 0	TSTBOT	1359: 0	W3	1963: 0	WNEXT	1972: 0	WOFF	2103: 0
X1	0089: 0	X2	0094: 0	X3	0099: 0						

UNREFERENCED SYMBOLS

CDOVLY DONE2 PHASLD SNAPEX TOP3 TPERR TPREAD