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CLEAR STORAGE 1 ,008015,022026,030037,044,049,053053N000000N00001026 1
CLEAR STORAGE 2 L068116,105106,110117B101/I9I#071029C029056B026/B001/0991,001/001117I0? 2
BOOTSTRAP ,008015,022029,036040,047054,061068,072/061039 ,0010011040 3
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FORTRAN COMPILER -- DO PHASE -- PHASE 46 PAGE 1

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
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			PHASID	EQU	110 PHASE ID, FOR SNAPSHOT DUMPS			0110			
115			NEGAR2	EQU	142 LOOKS LIKE NEGARY -- SEE PHASE 20			0142			
116			DOCNT	EQU	151 COUNT OF DO STATEMENTS			0151			
117			GLOBER	EQU	184 GLOBAL ERROR FLAG -- WM MEANS ERROR			0184			
118			SNAPSH	EQU	333 CORE DUMP SNAPSHOT			0333			
119			LOADNX	EQU	700 LOAD NEXT OVERLAY			0700			
120			CLEARL	EQU	707 CS AT START OF OVERLAY LOADER			0707			
121			CDOVLY	EQU	769 1 IF RUNNING FROM CARDS, N IF FROM TAPE			0769			
122			LOADXX	EQU	793 EXIT FROM OVERLAY LOADER			0793			
123				*							
124				ORG	838				0838		
125			LOADDD	EQU	*&1 LOAD ADDRESS			0838			
126	838		BEGINN	SW	GM,GM3	7	0838	,	V98 W26		4
127	845			SW	GM4,GM2	7	0845	,	W31 W22		4
128	852			MCW	X3,SX3	7	0852	M	099 W37		4
129	859	LOOP		BW	DONE,0&X1	8	0859	V	V33 0 0 1		4
130	867			MCW	KLESS,2&X1 MARK TOP OF CODE -- BOTTOM OF FREE	7	0867	M	W38 0 2		4
131	874			SBR	TSTLES&6,2&X1	7	0874	H	S65 0 2		5
132	881			C	0&X1	4	0881	C	0 0		5
133	885			SAR	X1	4	0885	Q	089		5
134	889			C	2&X1,KD DO STATEMENT?	7	0889	C	0 2 W39		5
135	896			BU	ALMOST NO	5	0896	B	V26 /		5
136	901			CW	111,112	7	0901)	111 112		5
137	908			CW	113,114	7	0908)	113 114		6
138	915			MCW	5&X1,X2 ADDRESS OF SEQUENCE NUMBER	7	0915	M	0 5 094		6
139	922			MCW	0&X2,SEQNO	7	0922	M	0 0 W42		6
140	929			MCW	0&X1,X2	7	0929	M	0 0 094		6
141	936			SAR	X1	4	0936	Q	089		6
142	940			MCW	0&X2,SEQEND	7	0940	M	0 0 W45		6
143	947			ZA	SEQNO,SEQDIF	7	0947	?	W42 W48		7
144	954			S	SEQEND,SEQDIF	7	0954	S	W45 W48		7
145	961			MCW	NOP,SWICH1	7	0961	M	W49 S12		7
146	968			BWZ	MSG38,SEQDIF,B ILLEGAL RANGE IF POSITIVE	8	0968	V	T97 W48 B		7
147	976			MCW	X1,X2	7	0976	M	089 094		7

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
148		983		MCW	KB3,F5	7		0983	M W52 W21		8
149		990		MCW	KT, LONGOP	7		0990	M W53 W27		8
150		997		MCW	BRANCH, SWICH2	7		0997	M W54 S16		8
151	1	004	NESTED	C	0&X2 DOWN TO BODY OF STMT BELOW DO	4		1004	C 0!0		8
152	1	008		C		1		1008	C		8
153	1	009		SAR	X2	4		1009	Q 094		8
154	1	013		C	2&X2, KD IS IT A DO STATEMENT?	7		1013	C 0!2 W39		8
155	1	020		BU	NOTDO	5		1020	B !90 /		9
156	1	025		MCW	0&X2, X3	7		1025	M 0!0 099		9
157	1	032		C	0&X3, SEQNO PROPERLY NESTED?	7		1032	C 0?0 W42		9
158	1	039		BH	NESTED YES	5		1039	B !04 U		9
159	1	044		C	0&X3, SEQEND	7		1044	C 0?0 W45		9
160	1	051		BH	MSG39 ILLEGAL DO NESTING	5		1051	B U42 U		9
161	1	056		BCE	*&8, 1&X2, H CO-ENDING?	8		1056	B !71 0!1 H		10
162	1	064		MCW	KE, 1&X2 NOT CO-ENDING	7		1064	M W55 0!1		10
163	1	071		BL	NOTDO	5		1071	B !90 T		10
164	1	076		MCW	KH, 1&X2 CO-ENDING AFTER ALL	7		1076	M W56 0!1		10
165	1	083		MCW	5&X2, F5	7		1083	M 0!5 W21		10
166	1	090	NOTDO	BCE	COEND, 4&X1, H	8		1090	B /20 0!4 H		11
167	1	098		MCW	NOP, SWICH2	7		1098	M W49 S16		11
168	1	105		BCE	*&8, 4&X1, }	8		1105	B /20 0!4 } GMARK		11
169	1	113		MCW	BRANCH, LONGOP	7		1113	M W54 W27		11
170	1	120	COEND	MCW	SEQEND, LONG	7		1120	M W45 W34		11
171	1	127		SW	6&X1	4		1127	, 0!6		12
172	1	131		MCW	8&X1, SHORT	7		1131	M 0!8 W25		12
173	1	138		MCW	8&X1, F6	7		1138	M 0!8 W30		12
174				*							
175				*	TEST SYNTAX AND GENERATE CODE						
176				*							
177	1	145	GEN	B	SUB	4		1145	B T01		12
178	1	149		DCW	@, @	1		1149			12
179	1	152		DSA	F4	3		1152	W18		12
180	1	153		B	SUB	4		1153	B T01		12
181	1	157		DCW	@# @	1		1157			13
182	1	160		DSA	F1	3		1160	W09		13
183	1	161		B	SUB	4		1161	B T01		13
184	1	165		DCW	@, @	1		1165			13
185	1	168		DSA	F2	3		1168	W12		13
186	1	169		BW	NRBOT, 0&X1	8		1169	V T86 0!0 1		13
187	1	177		B	SUB	4		1177	B T01		13
188	1	181		DCW	@, @	1		1181			14
189	1	184		DSA	F3	3		1184	W15		14
190	1	185		BW	BOTTOM, 0&X1	8		1185	V /97 0!0 1		14
191	1	193		B	MSG40 SYNTAX ERROR	4		1193	B U80		14
192				*							
193	1	197	BOTTOM	MCW	SX3, X3	7		1197	M W37 099		14
194	1	204		MN	0&X1	4		1204	D 0!0		14
195	1	208		SAR	X1	4		1208	Q 089		14
196	1	212	SWICH1	NOP	TSTLES	4		1212	N S59		15
197	1	216	SWICH2	NOP	SKIP	4		1216	N S40		15

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
198	1	220		A	KP1,DOCNT	7		1220	A W57 151		15
199	1	227		LCA	LONG,0&X3	7		1227	L W34 0?0		15
200	1	234		LCA		1		1234	L		15
201	1	235		LCA		1		1235	L		15
202	1	236		SBR	X3	4		1236	H 099		15
203	1	240	SKIP	LCA	SHORT,0&X3	7		1240	L W25 0?0		16
204	1	247		CHAIN	8					MACRO	
205				LCA		1		1247	L	GEN	16
206				LCA		1		1248	L	GEN	16
207				LCA		1		1249	L	GEN	16
208				LCA		1		1250	L	GEN	16
209				LCA		1		1251	L	GEN	16
210				LCA		1		1252	L	GEN	16
211				LCA		1		1253	L	GEN	17
212				LCA		1		1254	L	GEN	17
213	1	255		SBR	SX3	4		1255	H W37		17
214	1	259	TSTLES	BCE	LOOP,0,<	8		1259	B 859 000 <		17
215	1	267		CS	332	4		1267	/ 332		17
216	1	271		CS		1		1271	/		17
217	1	272		CC	1	2		1272	F 1		17
218	1	274		MCW	ERROR2,270	7		1274	M W93 270		18
219	1	281		W		1		1281	2		18
220	1	282		CC	1	2		1282	F 1		18
221	1	284		BCE	HALT,CDOVLY,1	8		1284	B S97 769 1		18
222	1	292		RWD	1	5		1292	U %U1 R		18
223	1	297	HALT	H	HALT	4		1297	. S97		18
224			*								
225			*		* CHECK THE NEXT CHARACTER AGAINST THE ONE AT 0&X1, THEN						
226			*		* CHECK THAT THE NEXT THREE HAVE NUMERIC PARTS IN 0..9,						
227			*		* THAT IS, THEY CONSTITUTE AN ADDRESS.						
228			*								
229	1	301	SUB	SBR	X2	4		1301	H 094		18
230	1	305		C	0&X1,0&X2	7		1305	C 0 0 0!0		19
231	1	312		SAR	X1	4		1312	Q 089		19
232	1	316		BU	MSG40 SYNTAX ERROR IF NOT THE EXPECTED CHAR	5		1316	B U80 /		19
233	1	321		MCW	3&X2,*&7	7		1321	M 0!3 T34		19
234	1	328		MCW	0&X1,0	7		1328	M 0 0 000		19
235	1	335		S	W1	4		1335	S W94		19
236	1	339	GOTDIG	A	KP1,W1	7		1339	A W57 W94		20
237	1	346		BCE	4&X2,W1,D EXIT IF THREE TIMES THROUGH LOOP	8		1346	B 0!4 W94 D		20
238	1	354		MN	0&X1,*&12	7		1354	D 0 0 T72		20
239	1	361		SAR	X1	4		1361	Q 089		20
240	1	365		BCE	GOTDIG,DIGITS,0	8		1365	B T39 X04 0		20
241	1	373		CHAIN	9					MACRO	
242				BCE		1		1373	B	GEN	20
243				BCE		1		1374	B	GEN	20
244				BCE		1		1375	B	GEN	21
245				BCE		1		1376	B	GEN	21
246				BCE		1		1377	B	GEN	21
247				BCE		1		1378	B	GEN	21

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
248				BCE		1		1379	B	GEN	21
249				BCE		1		1380	B	GEN	21
250				BCE		1		1381	B	GEN	21
251	1	382		B	MSG40 SPECIAL CHARACTER MEANS SYNTAX ERROR	4		1382	B U80		22
252				*							
253	1	386	NRBOT	MCW	NEGAR2,F3	7		1386	M 142 W15		22
254	1	393		B	BOTTOM	4		1393	B /97		22
255				*							
256				*	ILLEGAL RANGE OF DO						
257				*							
258	1	397	MSG38	CS	332	4		1397	/ 332		22
259	1	401		CS		1		1401	/		22
260	1	402		SW	GLOBER	4		1402	, 184		22
261	1	406		MN	SEQNO,245	7		1406	D W42 245		22
262	1	413		MN		1		1413	D		23
263	1	414		MN		1		1414	D		23
264	1	415		MCW	ERR38	4		1415	M X46		23
265	1	419		W		1		1419	2		23
266	1	420		BCV	*&5	5		1420	B U29 @		23
267	1	425		B	*&3	4		1425	B U31		23
268	1	429		CC	1	2		1429	F 1		23
269	1	431	SET1	MCW	BRANCH,SWICH1	7		1431	M W54 S12		24
270	1	438		B	GEN	4		1438	B /45		24
271				*							
272				*	ILLEGAL NESTING						
273				*							
274	1	442	MSG39	CS	332	4		1442	/ 332		24
275	1	446		CS		1		1446	/		24
276	1	447		SW	GLOBER	4		1447	, 184		24
277	1	451		MN	SEQNO,241	7		1451	D W42 241		24
278	1	458		MN		1		1458	D		24
279	1	459		MN		1		1459	D		25
280	1	460		MCW	ERR39	4		1460	M X84		25
281	1	464		W		1		1464	2		25
282	1	465		BCV	*&5	5		1465	B U74 @		25
283	1	470		B	*&3	4		1470	B U76		25
284	1	474		CC	1	2		1474	F 1		25
285	1	476		B	SET1	4		1476	B U31		25
286				*							
287				*	SYNTAX ERROR						
288				*							
289	1	480	MSG40	CS	332	4		1480	/ 332		26
290	1	484		CS		1		1484	/		26
291	1	485		SW	GLOBER	4		1485	, 184		26
292	1	489		MN	SEQNO,235	7		1489	D W42 235		26
293	1	496		MN		1		1496	D		26
294	1	497		MN		1		1497	D		26
295	1	498		MCW	ERR40	4		1498	M Y16		26
296	1	502		W		1		1502	2		27
297	1	503		BCV	*&5	5		1503	B V12 @		27

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
298	1	508		B	*&3	4		1508	B V14		27
299	1	512		CC	1	2		1512	F 1		27
300	1	514		C	1&X1	4		1514	C 0 1		27
301	1	518		SAR	X1	4		1518	Q 089		27
302	1	522		B	TSTLES	4		1522	B S59		27
303			*								
304	1	526	ALMOST	SBR	X1,5&X1	7		1526	H 089 0 5		28
305	1	533	DONE	MCW	SX3,X3	7		1533	M W37 099		28
306	1	540		MN	0&X3	4		1540	D 0?0		28
307	1	544		SAR	X2	4		1544	Q 094		28
308	1	548	CSLOOP	CS	0&X2	4		1548	/ 0!0		28
309	1	552		SBR	X2	4		1552	H 094		28
310	1	556		C	0&X2,1899 SHOULD THIS BE @1899@???	7		1556	C 0!0 Y99		28
311	1	563		BU	CSLOOP	5		1563	B V48 /		29
312	1	568		BSS	SNAPSH,E	5		1568	B 333 E		29
313	1	573		SBR	LOADXX&3,1175	7		1573	H 796 /75		29
314	1	580		SBR	CLEARL&3,2499	7		1580	H 710 M99		29
315	1	587		LCA	RESORT,PHASID	7		1587	L Y24 110		29
316	1	594		B	LOADNX	4		1594	B 700		29
317	1	598	GM	DC	@}@	1		1598		GMARK	29
318			*								
319			* GENERATED CODE TEMPLATE								
320			*								
321	1	602		DCW	@T924@	4		1602			30
322	1	606		DCW	@T921@	4		1606			30
323	1	609	F1	DCW	#3	3		1609			30
324	1	612	F2	DCW	#3	3		1612			30
325	1	615	F3	DCW	#3	3		1615			30
326	1	618	F4	DCW	#3	3		1618			30
327	1	621	F5	DCW	#3	3		1621			30
328	1	622	GM2	DC	@}@	1		1622		GMARK	30
329	1	625	SHORT	DC	#3	3		1625			30
330	1	626	GM3	DC	@}@	1		1626		GMARK	30
331	1	627	LONGOP	DCW	@T@	1		1627			31
332	1	630	F6	DC	#3	3		1630			31
333	1	631	GM4	DC	@}@	1		1631		GMARK	31
334	1	634	LONG	DC	#3	3		1634			31
335			*								
336			* DATA								
337			*								
338	1	637	SX3	DCW	#3	3		1637			31
339	1	638	KLESS	DCW	@<@	1		1638			31
340	1	639	KD	DCW	@D@	1		1639			31
341	1	642	SEQNO	DCW	#3 SEQUENCE NUMBER OF DO	3		1642			31
342	1	645	SEQEND	DCW	#3 SEQUENCE NUMBER OF FINAL STATEMENT OF DO	3		1645			31
343	1	648	SEQDIF	DCW	#3 SEQNO - SEQEND -- BETTER BE NEGATIVE	3		1648			31
344	1	649	NOP	NOP		1		1649	N		32
345	1	652	KB3	DCW	#3	3		1652			32
346	1	653	KT	DCW	@T@	1		1653			32
347	1	654	BRANCH	B		1		1654	B		32

SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
348	1	655	KE	DCW	@E@	1		1655			32
349	1	656	KH	DCW	@H@	1		1656			32
350	1	657	KP1	DCW	&1	1		1657			32
351	1	693	ERROR2	DCW	@MESSAGE 2 - OBJECT PROGRAM TOO LARGE@	36		1693			33
352	1	694	W1	DCW	#1	1		1694			33
353	1	704	DIGITS	DCW	@0123456789@	10		1704			34
354	1	746	ERR38	DCW	@ERROR 38 - ILLEGAL RANGE OF DO, STATEMENT @	42		1746			36
355	1	784	ERR39	DCW	@ERROR 39 - ILLEGAL NESTING, STATEMENT @	38		1784			37
356	1	816	ERR40	DCW	@ERROR 40 - DO SYNTAX, STATEMENT @	32		1816			38
357	1	824	RESORT	DCW	@RESORT 1@	8		1824			39
358	1	825		DCW	@}@	1		1825		GMARK	39
359				ORG	201				0201		
360		203	DSA	LOADDD	LOAD ADDRESS FOR CARD-TO-TAPE PROGRAM	3		0203	838		40
361			EX	BEGINN					B 838		41
362			END						/ 000 080		

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ALMOST	1526	BEGINN	838	BOTTOM	1197	BRANCH	1654	CDOVLY	769	CLEARL	707	COEND	1120
CSLOOP	1548	DIGITS	1704	DOCNT	151	DONE	1533	ERR38	1746	ERR39	1784	ERR40	1816
ERROR2	1693	F1	1609	F2	1612	F3	1615	F4	1618	F5	1621	F6	1630
GEN	1145	GLOBER	184	GM	1598	GM2	1622	GM3	1626	GM4	1631	GOTDIG	1339
HALT	1297	KB3	1652	KD	1639	KE	1655	KH	1656	KLESS	1638	KP1	1657
KT	1653	LOADDD	838	LOADNX	700	LOADXX	793	LONG	1634	LONGOP	1627	LOOP	859
MSG38	1397	MSG39	1442	MSG40	1480	NEGAR2	142	NESTED	1004	NOP	1649	NOTDO	1090
NRBOT	1386	PHASID	110	RESORT	1824	SEQDIF	1648	SEQEND	1645	SEQNO	1642	SET1	1431
SHORT	1625	SKIP	1240	SNAPSH	333	SUB	1301	SWICH1	1212	SWICH2	1216	SX3	1637
TSTLES	1259	W1	1694	X1	89	X2	94	X3	99				