

OPTIONS NODECK,LIST,XREF,NOREL,OBJ(P)

THE LIST OF OPTIONS USED DURING THIS ASSEMBLY IS-- NODECK,LIST,XREF,NOREL,OBJ

0000	1	#UDELV	START	0
	2		PRINT	ON,NODATA
	3	*	@SYS	EXP-N
	214+		PRINT	ON
	215	*	@FXD	EXP-N
	620+		PRINT	ON
	621	*	@DIR	EXP-N
	741+		PRINT	ON
	742	*	@VOL	EXP-N
	780+		PRINT	ON
	781	*	@SPF	EXP-N
	1244+		PRINT	ON
	1245	*	@HLT	EXP-N
	1300+		PRINT	ON
	1301	*	@VTC	EXP-N
	1330+		PRINT	ON
	1331	*	@CY0	EXP-N
	1404+		PRINT	ON
	1405	*	@WKA	EXP-N
	1475+		PRINT	ON
	1476	*	@ERM	EXP-N
	2098+		PRINT	ON

UDELVT - DELETE VTOC

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	3
					2100	*	HDR #UDELV,1				
					2101	*****					
					2102	*	PROGRAM HEADER FOR DISK LOAD				*
					2103	*****					
					2104	*#\$UDEL EQU	X'1B24'				DISK ADDR OF #UDELV
					2105	*#\$UDE EQU	X'0C00'				CORE LOAD ADDRESS OF #UDELV
					2106	*#\$@UDE EQU	014				SECTOR CNT OF #UDELV
0C00					2107		ORG #UDE				CORE LOAD ADDRESS
				0C00	2108	\$\$\$\$\$ EQU	*				FIRST LOCATION IN PROGRAM
0C00	7BE4C4C5D3E5			0C05	2109		DC CL6'#UDELV'				PROGRAM NAME
0C06	57			0C06	2110		DC IL1'087'				PROGRAM NUMBER OF #UDELV
				0C07	2111	#UDEL EQU	*				ENTRY POINT TO PROGRAM
					2112	*** END OF EXPANSION ***					

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 4
		2114		*****	
		2115	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		2116	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		2117	*		*
		2118		*****	
		2119	*	STATUS	*
		2120	*	VERSION 1 MODIFICATION 0	*
		2121	*		*
		2122	*	FUNCTION	*
		2123	*	* UDELVT ANALYZES THE SECONDARY KEYWORD FOR THE VTOC UTILITY	*
		2124	*	COMMAND.	*
		2125	*	* IF THE SECONDARY KEYWORD IS DISPLAY, UDELVT LOADS UDISVT VIA	*
		2126	*	\$RLOAD TO PROCESS THE VTOC-DISPLAY COMMAND.	*
		2127	*	* IF THE SECONDARY KEYWORD IS DELETE, UDELVT PROCESSES THE	*
		2128	*	DELETION OF ENTRIES AND INFORMATION CONCERNING THE SPECIFIED	*
		2129	*	FILE FROM THE VOLUME LABEL AND THE VTOC INDEX. UDELVT ALSO	*
		2130	*	SETS CERTAIN INDICATORS IN THE NUCLEUS.	*
		2131	*	* THE VTOC-DELETE COMMAND MAY BE USED FOR DELETING ONE OR ALL	*
		2132	*	OF THE FOLLOWING FILES:	*
		2133	*	* HELPTEXT	*
		2134	*	* PTF	*
		2135	*	* WORKAREA	*
		2136	*	* LIBRARY	*
		2137	*	* SYSTEM	*
		2138	*		*
		2139	*	ENTRY POINTS	*
		2140	*	THE FIRST INSTRUCTION OF THE ROUTINE IS THE ONLY ENTRY POINT.	*
		2141	*		*
		2142	*	INPUT	*
		2143	*	THE INPUT TO THIS MODULE IS A POINTER TO THE INPUT LINE BUFFER	*
		2144	*	BEGINNING WITH THE CHARACTER FOLLOWING VTOC. THE CONDITION OF	*
		2145	*	THE REGISTERS IS IRRELEVANT AT ENTRY TIME.	*
		2146	*		*
		2147	*	OUTPUT	*
		2148	*	THE OUTPUT OF THIS ROUTINE IS THE FUNCTION REQUESTED.	*
		2149	*		*
		2150	*	EXTERNAL REFERENCES	*
		2151	*	\$VOLID - ADDRESS OF TABLE CONTAINING CURRENT DISK LABELS	*
		2152	*	\$PASWD - ADDRESS OF CURRENT PASSWORD	*
		2153	*	\$XRSV - ADDRESS OF SAVE AREA FOR INPUT LINE POINTER	*
		2154	*	\$CAERR - SAVE AREA FOR ERROR CODE	*
		2155	*	\$NWRKR - NO WORKAREA ON REMOVABLE INDICATOR	*
		2156	*	\$NWRKF - NO WORKAREA ON FIXED DISK INDICATOR	*
		2157	*	\$FILIB - ADDRESS OF LIBRARY FOR LOGON COMMAND	*
		2158	*	\$USRDR - RELATIVE ADDRESS OF LIBRARY	*
		2159	*	\$INDR3 - GENERAL SYSTEM STATUS INDICATOR	*
		2160	*	\$WAITF - DPL FOR WAIT FUNCTION	*
		2161	*	\$BSADR - DISK ADDRESS ON IPL'ED DISK	*
		2162	*	\$#THEL - INDICATION OF HELPTEXT	*
		2163	*	\$#TPFL - INDICATION OF PTF	*
		2164	*	\$#TWR1 - INDICATION OF WORKAREA ON REMOVABLE	*
		2165	*	\$#TWF1 - INDICATION OF WORKAREA ON FIXED	*
		2166	*	\$#TLIF - INDICATION OF LIBRARY	*
		2167	*	@#TSYM - INDICATION OF SYSTEM	*
		2168	*	@HIPLE - HALT CODE FOR ERROR EXIT	*
		2169	*	\$RLOAD - ENTRY TO LOAD UDISVT FROM UDELVT	*

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 5
		2170	*	\$CIMSK - ENTRY TO DISABLE INTERRUPTS	*
		2171	*	\$DISKN - ENTRY TO PHYSICAL DISK IOCS	*
		2172	*	SCARPL - ENTRY TO NORMAL EXIT	*
		2173	*	\$CAERK - ENTRY TO ERROR EXIT	*
		2174	*	SCANIT - ENTRY TO SCAN VALID DELIMITERS	*
		2175	*	SDISKS - ENTRY TO COMPLETE DISK SPECIFICATION CHECKER	*
		2176	*	UTVTOC - ENTRY TO PROCESS VOLUME LABEL AND VTOC INDEX	*
		2177	*	FOR DELETION OF A FILE	*
		2178	*	TVSDSK - SAVE AREA FOR PHYSICAL DISK ADDRESS FOR DELETION	*
		2179	*	SCAMMA - ADDRESS OF INDICATOR TO SCANIT TO SCAN A COMMA	*
		2180	*	TKSBFI - ADDRESS OF INDICATOR TO SPECIFY FILE FOR DELETIOP	*
		2181	*	SDITBL - OUTPUT TABLE OF DISK INFO FROM SDISKS	*
		2182	*	SUTOBA - ENTRY TO SET SYSTEM MODE	*
		2183	*		*
		2184	*	*EXITS,NORMAL	*
		2185	*	NORMAL EXIT IS TO \$CARPL TO LOAD AND EXECUTE GUFUDI	*
		2186	*		*
		2187	*	*EXITS,ERROR	*
		2188	*	ERROR EXIT IS TO SCAERK TO LOAD AND EXECUTE ERRPGM	*
		2189	*		*
		2190	*	*TABLES/WORKAREAS	*
		2191	*	* UDENDR - ADDRESS OF INDICATOR TO DELETE ALL FILES	*
		2192	*	* UDECMP - PTF LOG ENTRY TYPE TO BE DELETED	*
		2193	*	* UDEBUF - 1 SECTOR BUFFER FOR GETTING, MODIFYING AND WRITING	*
		2194	*	THE PTF LOG TO DISK	*
		2195	*		*
		2196	*	*ATTRIBUTES	*
		2197	*	THIS ROUTINE IS NOT REUSABLE	*
		2198	*		*
		2199	*	*CHARACTER CODE DEPENDENCY	*
		2200	*	THE OPERATION OF THIS MODULE DEPENDS UPON AN INTERNAL	*
		2201	*	REPRESENTATION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT	*
		2202	*	TO THE ONE USED AT ASSEMBLY TIME. THE CODING HAS BEEN ARRANGED	*
		2203	*	SO THAT REDEFINITION OF CHARACTER CONSTANTS, BY REASSEMBLY, WILL	*
		2204	*	RESULT IN A CORRECT MODULE FOR THE NEW DEFINITIONS.	*
		2205	*		*
		2206	*	*NOTES	*
		2207	*	ERROR PROCEDURES	*
		2208	*	* A SYNTAX ERROR CAUSES THE UP-ARROW AND AN ERROR MESSAGE	*
		2209	*	TO BE PRINTED BY POINTING THE INDEX REGISTER TO THE	*
		2210	*	PARAMETER OR DELIMITER IN ERROR AND SETTING AN ERROR CODE	*
		2211	*	AT \$CAERR, RESPECTIVELY, BEFORE TAKING THE ERROR EXIT.	*
		2212	*	* A NON-SYNTAX ERROR CAUSES AN ERROR MESSAGE TO BE PRINTED BY	*
		2213	*	SETTING AN ERROR CODE AT \$CAERR BEFORE TAKING THE ERROR	*
		2214	*	EXIT	*
		2215	*	* DELETING THE SYSTEM ON THE DISK IPL'ED FROM CAUSES AN ERROR	*
		2216	*	MESSAGE TO BE PRINTED AND CAUSES THE SYSTEM TO COME TO A	*
		2217	*	HARD HALT.	*
		2218	*		*
		2219	*	REGISTER USAGE	*
		2220	*	* THE BASE REGISTER IS USED FOR RELATIVE ADDRESSING BUT IS	*
		2221	*	NEITHER SAVED NOR RESTORED.	*
		2222	*	* THE INDEX REGISTER IS USED FOR SCANNING THE INPUT LINE	*
		2223	*	BUFFER.	*
		2224	*	* THE ADDRESS RECALL REGISTER IS SAVED IN THE EXIT BRANCH	*
		2225	*	INSTRUCTION OF AN INTERNAL SUBROUTINE WHICH PROCESSES THE	*

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 6
		2226	*	PTF LOG AND ONE WHICH DOES SYNTAX CHECKING ON THE INPUT	*
		2227	*	LINE.	*
		2228	*		*
		2229	*	SAVED/RESTORED AREAS	*
		2230	*	N/A	*
		2231	*		*
		2232	*	MODIFICATION CONSIDERATIONS	*
		2233	*	N/A	*
		2234	*		*
		2235	*	REQUIRED MODULES	*
		2236	*	* SCANIT - SCAN VALID DELIMITERS (BLANKS AND COMMA)	*
		2237	*	* SDISKS - COMPLETE DISK SPECIFICATION CHECKER	*
		2238	*	* SALPHA - ALPHAMERIC CHARACTER CHECKER	*
		2239	*	* SUTOBA - SWITCH SYSTEM MODE	*
		2240	*	* UTKUSE - TRACK USAGE MASK UTILITY PROGRAM	*
		2241	*	* TKSAVE - VOLUME LABEL COMMON SAVE AREAS AND EQUATES	*
		2242	*	* TVSAVE - VTOC COMMON AREAS	*
		2243	*	* UTVTOC - VTOC UTILITY PROGRAM	*
		2244	*	* @SYSEQ - GENERAL SYSTEM EQUATES	*
		2245	*	* @FXDEQ - NUCLEUS ADDRESSES AND INDICATORS	*
		2246	*	* @DIREQ - FILE LIBRARY EQUATES	*
		2247	*	* @VOLEQ - VOLUME LABEL EQUATES	*
		2248	*	* @HLTEQ - HALT INDICATOR EQUATES	*
		2249	*	* @VTCEQ - VTOC EQUATES	*
		2250	*	* @CY0EQ - CYLINDER ZERO EQUATES	*
		2251	*	* @WKAEQ - SYSTEM WORKAREA EQUATES	*
		2252	*	* @ERNEQ - ERROR MESSAGE EQUATES	*
		2253	*		*
		2254	*	OTHER	*
		2255	*	WHEN THE SYSTEM IS DELETED FROM ANY DISK, THE IPL SECTOR ON	*
		2256	*	THAT DISK IS MODIFIED SUCH THAT AN ATTEMPT TO IPL FROM THAT	*
		2257	*	DISK WILL CAUSE THE SYSTEM TO COME TO A HARD HALT.	*
		2258	*	*****	*

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	7
					2260	*					
					2261	*					
					2262	*	EQUATES FOR UDELVT				
					0060	2263	UDED SH EQU	X'60'			DASH--REQUIRED DELIMITER
					0000	2264	UDE000 EQU	X'00'			END OF PTF LOG INDR
					0003	2265	UDETHR EQU	3			EQUATES FOR LENGTH FIELDS OF
					0006	2266	UDESIX EQU	6			* THE CHARACTER CONSTANT
					0007	2267	UDESEV EQU	7			* PARAMETERS
					0008	2268	UDEEIT EQU	8			
					0004	2269	UDEFOR EQU	4			
					0006	2270	UDELN1 EQU	6			LENGTH OF SECONDARY KEYWORD
					0007	2271	UDELN2 EQU	7			LENGTH OF SECONDARY KEYWORD
					0002	2272	UDETWO EQU	2			LENGTH AND DISPLACEMENT
					0008	2273	UDEPSL EQU	8			LENGTH OF PASSWORD
					0005	2274	UDEPFR EQU	#@PTFL-1			DISP TO RIGHT OF PTF LOG ENTRY
					00FF	2275	UDELNZ EQU	@SCTSZ-1			INITIAL LNG FOR ZEROING PTF LOG
					0008	2276	UDEVID EQU	@VOLID+@DADDR			LENGTH OF VOLID TABLE ENTRY
					0426	2277	UDEPSR EQU	\$PASWD-7			LEFT BYTE OF PASSWORD
					03FC	2278	UDEVOL EQU	\$VOLID+6			RIGHT BYTE OF VOLID ENTRY
					0000	2279	UDEZER EQU	X'00'			FOR ZEROING 1-BYTE FIELD
					0000	2280	UDEION EQU	X'00'			INDR IN SFILIB FOR NOT LOGGED ON
					0000	2281	UDECY0 EQU	0			CYLINDER 0 EQUATE
					2282	*					
					2283	*					
					2284	*	VOLUME LABEL EQUATES				
					0047	2285	UDESYS EQU	X'47'			DISP TO SCP AVAILABLE INDICATOR
					0080	2286	UDENAV EQU	X'80'			MASK ON -> SCP AVAILABLE ON DISK
					00FE	2287	UDEIPL EQU	X'FE'			DISP TO PRIMARY IPL INDICATOR
					0001	2288	UDEBIS EQU	X'01'			CODE FOR PRIMARY IPL = BIS
					0002	2289	UDESCP EQU	X'02'			CODE FOR PRIMARY IPL = SCP
					2290	*					
					2291	*					
					2292	*	MASKS				
					0001	2293	UDEM K2 EQU	X'01'			MASK FOR FIXED DISK SPECIFIED
					0002	2294	UDEM K3 EQU	X'02'			MASK FOR DRIVE 2 SPECIFIED
					0080	2295	UDEM KA EQU	X'80'			MASK TO DELETE ALL FILES
					00FC	2296	UDEL MK EQU	X'FC'			MASK OUT ALL BUT DISK-DRIVE SPEC
					00FC	2297	UDEM K4 EQU	X'FC'			SET OFF ALL BUT DISK-DRIVE BITS

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 8
					2299	*	INITIALIZATION	
					2300	*		
					2301	*	DETERMINE FUNCTION	
					2302	*		
				0E54	2303		USING UDE740,@BR	SET VALUE FOR BASE
0C07	C2	01	0E54		2304		LA UDE740,@BR	POINT BASE REGISTER TO ORIGIN
0C0B	35	02	03C7		2305		L \$XRSV,@XR	POINT XR TO INPUT LINE AFTER CMD
0C0F	3C	19	03CD		2306		MVI \$CAERR,@E142	ERROR--'INVALID DELIMITER'
0C13	BD	60	00		2307		CLI 0(,@XR),UDEDH	CHECK FOR A DASH FOLLOWING VTOC
0C16	D0	01	3E		2308		BNE UDE895(,@BR)	IF NOT--TAKE ERROR EXIT
0C19	3C	87	1082		2309		MVI SCAMMA,SCACOF	SET INDR TO SCAN BLANKS ONLY
0C1D	E2	02	01		2310		LA 1(,@XR),@XR	INCREMENT @XR PAST DASH
0C20	34	02	0C6F		2311		ST UDE100+@OP1,@XR	SAVE POINTER TO LEFT OF KYWD
0C24	6D	05	A2 05		2312		CLC UDEDLT(UDELN1,@BR),UDELN1-1(,@XR)	SECONDARY KYWD DELETE ?
0C28	F2	81	17		2313		JE UDE075	YES--CONTINUE SYNTAX CHECKING
0C2B	6D	06	9C 06		2314		CLC UDEDSP(UDELN2,@BR),UDELN2-1(,@XR)	SECONDARY KYWD DISPLAY?
0C2F	F2	01	3E		2315		JNE UDE125	NO--GO SET ERROR CODE
0C32	E2	02	07		2316		LA UDELN2(,@XR),@XR	INCR TO CHAR FOLLOWING 'DISPLAY'
0C35	C0	87	1065		2317		B SCANIT	GO TO SCAN BLANKS
0C39	F2	04	2A		2318		JNH UDE080	TAKE ERROR EXIT IF NON-BLANK
					2319	*UDE050	RLOAD UDEDIS	BRING IN #UDISV
0C3C	C0	87	051E		2320	UDE050	B \$RLOAD	LOAD AND EXECUTE PGM
0C40	1053			0C41	2321		DC AL2(UDEDIS)	DPL ADDRESS
					2322	***	END OF EXPANSION **	
					2324	UDE075	LA UDELN1(,@XR),@XR	INCR TO CHAR FOLLOWING 'DELETE'
0C42	E2	02	06		2325		CLI 0(,@XR),UDEDH	IS THIS CHARACTER A DASH?
0C45	BD	60	00		2326		JNE UDE078	NO--ALL FILES NOT SPECIFIED
0C48	F2	01	14		2327		LA 1(,@XR),@XR	YES--INCREMENT TO NEXT CHARACTER
0C4B	E2	02	01		2328		CLC UDEFOR-1(UDEFOR,@XR),UDEALL(,@BR)	IS THIS KYWD 'ALL' ?
0C4E	9D	03	03 A6		2329		JNE UDE125	NO--GO TO SET ERROR CODE
0C52	F2	01	1B		2330		SBN UDEENDR(,@BR),UDEMKA	YES--SET INDR FOR 'ALL'
0C55	7A	80	DC		2331		MVI UDE360+@Q,@NOP	NOP BRANCH TO DELETE 1 FILE
0C58	3C	80	0D37		2332		LA UDETHR(,@XR),@XR	INCREMENT UR TO FIRST PARAMETER
0C5C	E2	02	03		2333	UDE078	B SCANIT	GO TO SCAN BLANKS
0C5F	C0	87	1065		2334		JH UDE150	NO ERROR-CHECK FIRST PARAMETER
0C63	F2	84	11		2335	UDE080	CLI 0(,@XR),@EOS	TEST FOR EOS
0C66	BD	1E	00		2336		BE UDE860(,@BR)	ERROR--'MISSING PARAMETER'
0C69	D0	81	33		2337	UDE100	LA *-*,@XR	RESTORE POINTER TO KEYWORD
0C6C	C2	02	0000		2338	UDE125	MVI \$CAERR,@E143	ERROR--'INVALID SECONDARY KYWD'
0C70	3C	1A	03CD		2339		B UDE895(,@BR)	ERROR--'INVALID SECONDARY
0C74	D0	87	3E		2340	UDE150	MVI SDINID,SDIVOF	SET INDR FOR SDISKS
0C77	3C	80	114E		2341		B SDISKS	GO TO CHECK COMPLETE DISK SPEC
0C7B	C0	87	10A6		2342		BL UDE895(,@BR)	ERROR FROM SDISKS--ERROR E
0C7F	D0	82	3E		2343		MVC TVSDSK(@DADDR),UDEDAD(,@BR)	CALCULATE THE PHYSICAL DISK
0C82	1C	01	1442 CD		2344		ALC TVSDSK(@DADDR),SDITBL+@DADDR	* ADDRESS
0C87	0E	01	1442 1190		2345		ALC UDEPLP+@DSAD(@DADDR),SDITBL+@DADDR	ADJUST PTF DPL ADDRESS
0C8D	0E	01	1049 1190		2346		ALC UDEWRT+@DSAD(@DADDR),SDITBL+@DADDR	ADJUST PTF DPL ADDRESS
0C93	0E	01	104F 1190		2347		TBN UDEENDR(,@BR),UDEMKA	TEST FOR 'ALL' SPECIFIED
0C99	78	80	DC		2348		JT UDE330	YES-CHECK FOR END OF INPUT LINE
0C9C	F2	10	86		2349	*		
					2350	*	FIND FILE TO DELETE	
					2351	*		
0C9F	BD	1E	00		2352	UDE200	CLI 0(,@XR),@EOS	IS THE FILE SPEC MISSING
0CA2	D0	81	33		2353		BE UDE860(,@BR)	YES--GO TO SET ERROR CODE
0CA5	9D	07	07 AE		2354	UDE220	CLC UDEEIT-1(,@XR),UDEHLP(UDEEIT,@BR)	'HELPTXT' SPEC ?

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	0CA9	F2	01	0B	2355	JNE	UDE230				
	0CAC	3C	08	0D09	2356	MVI	UDE320+@D1,UDEEIT				
	0CB0	C0	87	0CFF	2357	B	UDE300				
	0CB4	F2	87	83	2358	J	UDE400				
	0CB7	9D	02	02 B1	2360	UDE230 CLC	UDETHR-1(,@XR),UDEPTF(UDETHR,@BR) 'PTF' SPEC ?				
	0CBB	F2	01	0B	2361	JNE	UDE240				
	0CBE	3C	03	0D09	2362	MVI	UDE320+@D1,UDETHR				
	0CC2	C0	87	0CFF	2363	B	UDE300				
	0CC6	F2	87	94	2364	J	UDE450				
	0CC9	9D	06	06 B8	2366	UDE240 CLC	UDESEV-1(,@XR),UDELIB(UDESEV,@BR) 'LIBRARY' SPEC ?				
	0CCD	F2	01	0B	2367	JNE	UDE250				
	0CD0	3C	07	0D09	2368	MVI	UDE320+@D1,UDESEV				
	0CD4	C0	87	0CFF	2369	B	UDE300				
	0CD8	F2	87	CF	2370	J	UDE600				
	0CDB	9D	07	07 C0	2372	UDE250 CLC	UDEEIT-1(,@XR),UDEWKA(UDEEIT,@BR) 'WORKAREA' SPEC ?				
	0CDF	F2	01	0B	2373	JNE	UDE260				
	0CE2	3C	08	0D09	2374	MVI	UDE320+@D1,UDEEIT				
	0CE6	C0	87	0CFF	2375	B	UDE300				
	0CEA	F2	87	7E	2376	J	UDE500				
	0CED	9D	05	05 C6	2378	UDE260 CLC	UDESIX-1(,@XR),UDESTM(UDESIX,@BR) 'SYSTEM' SPEC ?				
	0CF1	D0	01	3A	2379	BNE	UDE865(,@BR)				
	0CF4	3C	06	0D09	2380	MVI	UDE320+@D1,UDESIX				
	0CF8	C0	87	0CFF	2381	B	UDE300				
	0CFC	F2	87	E8	2382	J	UDE700				

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 10
				2384	*			
				2385	*		SYNTAX CHECK INPUT LINE FOLLOWING	
				2386	*		LAST VALID PARAMETER	
				2387	*			
	0CFF	34	08	0D39	2388	UDE300	ST UDE360+@OP1,@ARR	SAVE RETURN ADDRESS
	0D03	34	02	0F2F	2389		ST UDEXRS,@XR	SAVE POINTER TO LAST PARAMETER
	0D07	E2	02	00	2390	UDE320	LA *-*(,@XR),@XR	INCREMENT @XR BY LGN OF PARAM
	0D0A	3C	01	1082	2391		MVI SCAMMA,SCACOM	SCAN TO THE END OF THE INPUT
	0D0E	C0	87	1065	2392		B SCANIT	* LINE OR NEXT NON-BLANK
	0D12	D0	82	3E	2393		BL UDE895(,@BR)	ERROR EXIT
	0D15	F2	84	0D	2394		JH UDE330	CHECK FOR @EOS
	0D18	BD	1E	00	2395		CLI 0(,@XR),@EOS	TEST FOR @EOS
	0D1B	F2	81	11	2396		JE UDE340	GO TO DELETE FILE
	0D1E	35	02	0F2F	2397		L UDEXRS,@XR	RESTORE INDEX REGISTER
	0D22	D0	87	3A	2398		B UDE865(,@BR)	ERROR--'INV PARAMETER'
	0D25	3C	12	03CD	2399	UDE330	MVI \$CAERR,@E133	ERROR--'TOO MANY PARAMETERS'
	0D29	BD	1E	00	2400		CLI 0(,@XR),@EOS	@EOS FIRST NON-BLANK?
	0D2C	D0	01	3E	2401		BNE UDE895(,@BR)	ERROR--'TOO MANY PARAMETERS'
	0D2F	3C	32	03CD	2402	UDE340	MVI \$CAERR,@E229	ERROR--'FILE NOT FOUND'
	0D33	E2	02	FF	2403	UDE350	LA @SCTS-1(,@XR),@XR	INCR @XR PAST INPUT LINE BUFFER
	0D36	C0	87	0000	2404	UDE360	B *-*	RETURN TO DELETE SPECIFIED FILE

UDELVT - DELETE VTOC

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE 11
					2406	*	DELETE SPECIFIED FILE			
					2407	*	HELP-TEXT SPECIFIED			
					2408	*				
	0D3A	3C	04	142E	2409	UDE400	MVI TKSBF1,\$#THEL			SET INDR FOR UTVTOC--HELPTXT
	0D3E	5C	02	E1 D0	2410		MVC UDECMP(UDETHR,@BR),UDEHLD(,@BR)			SPECIFY ENTRY TO DELETE
	0D42	C0	87	1564	2411		B UTVTOC			DELETE THIS FILE
	0D46	C0	82	0D57	2412		BL UDE420			
	0D4A	C0	87	0E96	2413		B UDE900			GO TO PROCESS PTF LOG
	0D4E	78	80	DC	2414		TBN UDENDR(,@BR),UDEMKA			MUST ALL FILES BE DELETED?
	0D51	D0	90	2B	2415		BF UDE830(,@BR)			NO, TAKE NORMAL EXIT
	0D54	F2	87	06	2416		J UDE450			DELETE NEXT FILE
	0D57	78	80	DC	2417	UDE420	TBN UDENDR(,@BR),UDEMKA			MUST ALL FILES BE DELETED ?
	0D5A	D0	90	3E	2418		BF UDE895(,@BR)			NO, TAKE ERROR EXIT
					2419	*				
					2420	*	PTF SPECIFIED			
					2421	*				
	0D5D	3C	08	142E	2422	UDE450	MVI TKSBF1,\$#TPFL			SET INDR FOR UTVTOC--PTF
	0D61	78	80	DC	2423		TBN UDENDR(,@BR),UDEMKA			MUST ALL FILES BE DELETED
	0D64	D0	90	24	2424		BF UDE800(,@BR)			GO TO UTVTOC FOR THIS FILE ONLY
	0D67	C0	87	1564	2425		B UTVTOC			DELETE THIS FILE AND CONTINUE--
					2426	*				
					2427	*	WORK AREA SPECIFIED			
					2428	*				
	0D6B	3C	40	142E	2429	UDE500	MVI TKSBF1,\$#TWR1			SET INDR FOR REMOVABLE DISK
	0D6F	C0	87	1564	2430		B UTVTOC			GO TO DELETE THIS FILE
	0D73	F2	02	0B	2431		JNL UDE530			IF FOUND PROCESS NUCLEUS
	0D76	3C	20	142E	2432		MVI TKSBF1,\$#TWF1			SET INDR FOR FIXED DISK
	0D7A	C0	87	1564	2433		B UTVTOC			GO TO DELETE THIS FILE
	0D7E	F2	82	23	2434		JL UDE540			IF_NOT FOUND GO TO CHECK FOR ERR
	0D81	38	02	1190	2435	UDE530	TBN SDITBL+@DADDR,UDEMK3			DRIVE 2 SPECIFIED ?
	0D85	F2	10	12	2436		JT UDE537			YES--
	0D88	38	01	1190	2437		TBN SDITBL+@DADDR,UDEMK2			NO--CHECK FOR REMOVABLE OR FIX
	0D8C	F2	10	07	2438		JT UDE535			JUMP FOR FIXED
	0D8F	3A	40	03D6	2439		SBN \$INDR3,\$NWRKR			NO WORKAREA INDR FOR REMOVABLE
	0D93	F2	87	04	2440		J UDE537			
	0D96	3A	80	03D6	2442	UDE535	SBN \$INDR3,\$NWRKF			NO WORKAREA INDR FOR FIXED
				0D9A	2443	UDE537	EQU *			
	0D9A	78	80	DC	2444		TBN UDENDR(,@BR),UDEMKA			MUST ALL FILES BE DELETED?
	0D9D	C0	90	0E7F	2445		BF UDE830			TAKE NORMAL EXIT
	0DA1	F2	87	06	2446		J UDE600			GO TO DELETE NEXT FILE
	0DA4	78	80	DC	2448	UDE540	TBN UDENDR(,@BR),UDEMKA			MUST ALL FILES BE DELETED?
	0DA7	F2	90	E8	2449		JF UDE895			GO TO UTVTOC FOR THIS FILE ONLY
					2450	*				
					2451	*	LIBRARY SPECIFIED			
					2452	*				
	0DAA	3D	00	03D9	2453	UDE600	CLI \$FILIB-1,UDEION			USER LOGGED ON
	0DAE	F2	81	1E	2454		JE UDE640			NO--GO TO DELETE FILE
	0DB1	4C	00	D9 03DA	2455		MVC UDELBS(1,@BR),\$FILIB			SAVE FILE LIBRARY DADDR
	0DB6	7B	FC	D9	2456		SBF UDELBS(,@BR),UDELMK			SAVE ONLY DISK-DRIVE SPEC
	0DB9	4D	00	D9 1190	2457		CLC UDELBS(1,@BR),SDITBL+@DADDR			WIPE OUT LOGGED-ON STATUS ?
	0DBE	F2	01	0E	2458		JNE UDE640			NO--
	0DC1	3C	00	0426	2459		MVI UDEPSR,UDEZER			RESET TO INDICATE NO PASSWORD
	0DC5	3C	00	03D9	2460		MVI \$FILIB-1,UDEZER			ZERO LEFT BYTE OF LIBRARY ADDR
	0DC9	0F	01	03DC 03DC	2461		SLC \$USRDR(@DADDR),\$USRDR			ZERO RELATIVE ADDRESS

UDELVT - DELETE VTOC

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 12
0DCF	0E 01	0DD8	118E		2462	UDE640	ALC UDE650+@OP1(@CADDR),SDITBL	ADJUST INST ADDR BY DISK SPEC
0DD5	3C 00	03FC			2463	UDE650	MVI UDEVOL+*-* ,UDEZER	ZERO LIBRARY ADDRESS
0DD9	3C 10	142E			2464	UDE660	MVI TKSBF1,\$#TLIF	SET INDR FOR UTVTOC--LIBRARY
0DDD	78 80	DC			2465		TBN UDENDR(,@BR),UDEMKA	MUST ALL FILES BE DELETED?
0DE0	F2 90	95			2466		JF UDE800	GO TO UTVTOC FOR THIS FILE ONLY
0DE3	C0 87	1564			2467		B UTVTOC	DELETE THIS FILE AND CONTINUE
					2468	*		
					2469	*	SYSTEM SPECIFIED	
					2470	*		
0DE7	3C 80	142E			2471	UDE700	MVI TKSBF1,\$#TSYM	SET INDR FOR UTVTOC--SYSTEM
0DEB	5C 02	E1 D3			2472		MVC UDECMP(UDETHR,@BR),UDEBSS(,@BR)	SPECIFY ENTRY TO DELETE
0DEF	C0 87	1564			2473		B UTVTOC	DELETE SYSTEM ENTRY
0DF3	C0 82	0E6F			2474		BL UDE790	CHECK TO SEE WHICH EXIT TO TAKE
0DF7	3C 80	0476			2475		MVI \$CIMSK,@NOP	DISABLE INTERRUPTS
0DFB	C0 87	0E96			2476		B UDE900	GO TO PROCESS PTF LOG
0DFF	0E 00	1043	1190		2477		ALC UDEDPL+@DSAD,SDITBL+@DADDR	SET UP DPL DADDR FOR DISK SPEC
0E05	0E 00	105B	1190		2478		ALC UDERVERL+@DSAD,SDITBL+@DADDR	ADD DISK SPEC TO DPL DADDR
					2479	*	DISK UDERVERL,WAIT	GET VOL LABEL FROM SPEC DISK
0E0B	C0 87	0025			2480		B \$DISKN	PERFORM PHYSICAL DISK OP
0E0F	1059			0E10	2481		DC AL2(UDERVERL)	DPL ADDRESS
0E11	C0 87	0025			2482		B \$DISKN	WAIT AND CHECK DISK ERRORS
0E15	057F			0E16	2483		DC AL2(\$WAITF)	WAIT DPL ADDRESS
					2484	***	END OF EXPANSION ***	
0E17	38 80	0F7D			2486		TBN UDEBFS+UDESYS,UDENAV	IS SCP AVAILABLE ON SPEC DISK ?
0E1B	F2 90	2A			2487		JF UDE720	NO--GO WRITE HALT TO IPL SECTOR
0E1E	0E 00	1061	1190		2488		ALC UDEWVL+@DSAD,SDITBL+@DADDR	ADD DISK SPEC TO DPL DADDR
					2489	*	DISK UDEWVL,WAIT	GET IPL SECTOR
0E24	C0 87	0025			2490		B \$DISKN	PERFORM PHYSICAL DISK OP
0E28	105F			0E29	2491		DC AL2(UDEWVL)	DPL ADDRESS
0E2A	C0 87	0025			2492		B \$DISKN	WAIT AND CHECK DISK ERRORS
0E2E	057F			0E2F	2493		DC AL2(\$WAITF)	WAIT DPL ADDRESS
					2494	***	END OF EXPANSION ***	
0E30	3C 02	1034			2496		MVI UDEBFS+UDEIPL,UDESCP	SET SCP FOR IPL
0E34	3C 02	105F			2497		MVI UDEWVL,@DPUT	SET FOR WRITE OPERATION
					2498	*	DISK UDEWVL,WAIT	WRITE MODIFIED VOL LABEL TO DIS
0E38	C0 87	0025			2499		B \$DISKN	PERFORM PHYSICAL DISK OP
0E3C	105F			0E3D	2500		DC AL2(UDEWVL)	DPL ADDRESS
0E3E	C0 87	0025			2501		B \$DISKN	WAIT AND CHECK DISK ERRORS
0E42	057F			0E43	2502		DC AL2(\$WAITF)	WAIT DPL ADDRESS
					2503	***	END OF EXPANSION ***	
0E44	C0 87	0E54			2505		B UDE740	CHECK FOR DISK IPL'ED FROM
					2506	*UDE720	DISK UDEDPL,WAIT	WRITE TO IPL SECTOR
0E48	C0 87	0025			2507	UDE720	B \$DISKN	PERFORM PHYSICAL DISK OP
0E4C	1041			0E4D	2508		DC AL2(UDEDPL)	DPL ADDRESS
0E4E	C0 87	0025			2509		B \$DISKN	WAIT AND CHECK DISK ERRORS
0E52	057F			0E53	2510		DC AL2(\$WAITF)	WAIT DPL ADDRESS
					2511	***	END OF EXPANSION ***	
0E54	4C 01	DE 0587			2513	UDE740	MVC UDEBSA(@DADDR,@BR),\$BSADR	FIND DISK IPL'ED FROM
0E59	7B FC	DE			2514		SBF UDEBSA(,@BR),UDEMKA	DISREGARD ALL BUT DK-DRIVE SPEC
0E5C	4D 00	DE 1190			2515		CLC UDEBSA(1,@BR),SDITBL+@CADDR	DELETION ON DISK IPLED FROM ?
0E61	F2 01	1B			2516		JNE UDE830	IF NOT TAKE NORMAL EXIT
0E64	3A 04	03D6			2517	UDE780	SBN \$INDR3,\$ERHRD	SET INDR TO CAUSE HARD HALT

UDELVT - DELETE VTOC

ERR LOC		OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE 13
0E68	3C	9E 03CD		2518	MVI	\$CAERR,@E558			SET ERROR CODE--SPF DELETED
0E6C	F2	87 23		2519	J	UDE895			GO TO ERROR PROGRAM
0E6F	78	80 DC		2521	UDE790 TBN	UDENDR(,@BR),UDEMKA			MUST ALL FILES BE DELETED ?
0E72	F2	10 0A		2522	JT	UDE830			YES--TAKE NORMAL EXIT
0E75	F2	87 1A		2523	J	UDE895			NO--TAKE ERROR EXIT
0E78	C0	87 1564		2525	UDE800 B	UTVTOC			GO TO DELETE ONE FILE
0E7C	F2	82 13		2526	JL	UDE895			TAKE ERROR EXIT
0E7F	C0	87 1262		2527	UDE830 B	SUTOBA			GO TO CHECK SYSTEM MODE
0E83	C0	87 04A1		2528	B	\$CARPL			NORMAL EXIT
			04A1	2529	SUTERR EQU	\$CARPL			IGNORE WARNING FROM SUTOBA
				2530	*				
				2531	*	ERROR EXITS			
				2532	*				
0E87	3C	10 03CD		2533	UDE860 MVI	\$CAERR,@E130			ERROR--'REQUIRED PARAM MISSING'
0E8B	F2	87 04		2534	J	UDE895			ERROR EXIT
0E8E	3C	11 03CD		2536	UDE865 MVI	\$CAERR,@E131			ERROR--'INV PARAMETER'
0E92	C0	87 0469		2537	UDE895 B	\$CAERK			GO TO ERROR PROGRAM

UDELVT - DELETE VTOC

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 14
					2539	*		
					2540	*	PROCESS PTF LOG	
					2541	*		
0E96	34	08	0EE9		2542	UDE900 ST	UDE980+@OP1,@ARR	SAVE THE RETURN ADDRESS
0E9A	1C	01	0EC4 D5		2543	MVC	UDE957+@OP1,UDEAD6(@CADDR,@BR)	INITIALIZE POINTER TO LOG
0E9F	7C	FF	81		2544	MVI	UDE970+@Q(,@BR),UDELNZ	INITIALIZE LNG FOR ZEROING LOG
					2545	*UDE930 DISK	UDEPLP, WAIT	GET PTF LOG FROM DISK
0EA2	C0	87	0025		2546	UDE930 B	\$DISKN	PERFORM PHYSICAL DISK OP
0EA6	1047			0EA7	2547	DC	AL2(UDEPLP)	DPL ADDRESS
0EA8	C0	87	0025		2548	B	\$DISKN	WAIT AND CHECK DISK ERRORS
0EAC	057F			0EAD	2549	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
					2550	***	END OF EXPANSION ***	
0EAE	C2	02	0F36		2552	LA	UDEBFS,@XR	POINT @XR TO LEFT BYTE OF BUFFER
0EB2	8D	02	02 0F35		2553	UDE950 CLC	UDETWO(UDETHR,@XR),UDECMP	IS THIS AN ENTRY TYPE TO DELETE
0EB7	F2	81	14		2554	JE	UDE960	SKIP TO THE NEXT ENTRY
0EBA	BD	00	00		2555	UDE955 CLI	0(,@XR),UDE000	END OF LOG ?
0EBD	C0	81	0ED4		2556	BE	UDE970	ZERO REST OF LOG AND WRITE TO DK
0EC1	2C	05	0000 05		2557	UDE957 MVC	*-*(#@PTFL),UDEPFR(,@XR)	SAVE THIS ENTRY
0EC6	5E	01	70 D7		2558	ALC	UDE957+@OP1(@CADDR,@BR),UDED6(,@BR)	ADJUST NEW LOG PT
0ECA	5F	00	81 D7		2559	SLC	UDE970+@Q(1,@BR),UDED6(,@BR)	ADJUST LNG FOR ZEROING LOG
0ECE	E2	02	06		2560	UDE960 LA	#@PTFL(,@XR),@XR	INCR TO NEXT ENTRY IN OLD LOG
0ED1	D0	87	5E		2561	B	UDE950(,@BR)	GO TO CHECK TO DELETE OR SAVE
0ED4	0F	00	1035 1035		2562	UDE970 SLC	UDEBUF(@VQ),UDEBUF	ZERO UNUSED PORTION OF PTF LOG
					2563	*	DISK UDEWRT, WAIT	WRITE MODIFIED LOG TO DISK
0EDA	C0	87	0025		2564	B	\$DISKN	PERFORM PHYSICAL DISK OP
0EDE	104D			0EDF	2565	DC	AL2(UDEWRT)	DPL ADDRESS
0EE0	C0	87	0025		2566	B	\$DISKN	WAIT AND CHECK DISK ERRORS
0EE4	057F			0EE5	2567	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
					2568	***	END OF EXPANSION ***	
0EE6	C0	87	0000		2570	UDE980 B	*-*	RETURN TO CALLING LOCATION

UDELVT - DELETE VTOC

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 15
			2572	*			
			2573	*			
			2574	*		CONSTANTS	
0EEA	C4C9E2D7D3C1E8	0EF0	2575	UDEDSP	DC	CL(UDELN2)'DISPLAY'	CHAR CONSTANT--SECONDARY KYWD
0EF1	C4C5D3C5E3C5	0EF6	2576	UDEDLT	DC	CL(UDELN1)'DELETE'	CHARACTER CONSTANT-SECONDARY
0EF7	C1D3D340	0EFA	2577	UDEALL	DC	CL(UDEFOR)'ALL'	SECONDARY KYWD-REPLACE FILE SPEC
0EFB	C8C5D3D7E3C5E7E3	0F02	2578	UDEHLP	DC	CL(UDEEIT)'HELPTXT'	CHARACTER CONSTANTS WHICH
0F03	D7E3C6	0F05	2579	UDEPTF	DC	CL(UDETHR)'PTF'	* REPRESENT ALL THE VALID
0F06	D3C9C2D9C1D9E8	0F0C	2580	UDELIB	DC	CL(UDESEV)'LIBRARY'	* PARAMETERS FOR SPECIFYING ONE
0F0D	E6D6D9D2C1D9C5C1	0F14	2581	UDEWKA	DC	CL(UDEEIT)'WORKAREA'	* OR MORE FILES TO BE DELETED
0F15	E2E8E2E3C5D4	0F1A	2582	UDESTM	DC	CL(UDESIX)'SYSTEM'	
0F1B	0008	0F1C	2583	UDEVLL	DC	XL(UDETHR)'0008'	LENGTH OF ENTRY IN VOLID TABLE
0F1D	0001	0F1E	2584	UDECX1	DC	XL(UDETHR)'0001'	CONSTANT FOR INCREMENTING
0F1F	40	0F1F	2585	UDEBLK	DC	CL1' '	BYTE FOR MOVING BLANKS TO FIELD
0F20	0024	0F21	2586	UDEDAD	DC	XL(@DADDR)'0024'	BASE FOR FINDING DISK ADDRESS
0F22	4BC2C8	0F24	2587	UDEHLD	DC	CL(UDETHR)'.BH'	INDR FOR HELPTXT PTF LOG ENTRY
0F25	4BC2E2	0F27	2588	UDEBSS	DC	CL(UDETHR)'.BS'	INDR OF BASIC FILE PTF LOG ENTRY
0F28	0F3B	0F29	2589	UDEAD6	DC	AL(@CADDR)(UDEBF6)	ADDRESS IN PTF GOG BUFFER
0F2A	0006	0F2B	2590	UDED6C	DC	XL(@CADDR)'0006'	LENGTH OF PTF LOG ENTRY
			2591	*			
			2592	*		WORK AREAS	
			2593	*			
0F2C		0F2C	2594	UDEIND	DS	CL1	INDICATOR FOR ERROR FROM SDISKS
0F2C			2595		ORG	*-1	
0F2C	00	0F2C	2596		DC	XL1'00'	INITIALIZE INDICATOR
0F2D		0F2D	2597	UDELBS	DS	CL1	SAVE AREA-FILE LIBRARY ADDRESS
0F2E		0F2F	2598	UDEXRS	DS	CL(@CADDR)	INDEX REGISTER SAVE AREA
0F30		0F30	2599	UDENDR	DS	CL1	BYTE INDR FOR 'ALL' SPEC
0F30			2600		ORG	*-1	
0F30	00	0F30	2601		DC	XL1'00'	INITIALIZE INDICATOR
0F31		0F32	2602	UDEBSA	DS	CL(@DADDR)	SAVE \$BSADR HERE
0F33		0F35	2603	UDECMP	DS	CL(UDETHR)	SAVE AREA FOR TYPE IN PTF LOG
		0F36	2604	UDEBFS	EQU	*	LEFT BYTE OF BUFFER
0F36		1035	2605	UDEBUF	DS	CL(@SCTS)	BUFFER FOR PTF LOG & VOL LABEL
		0F3B	2606	UDEBF6	EQU	UDEBFS+UDEPFR	RIGHT BYTE OF PTF LOG ENTRY

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 16
					2608	*		
					2609	*	HALT FOR IPL SECTOR	
					2610	*		
1036	F0	00	00		2611	UDEHLT	HPL *-*,*-*	CODE FOR SETTING UP A HARD HALT
1037					2612		ORG *-2	* IN THE IPL SECTOR OF THE DISK
1037	006C			1038	2613		DC AL(@CADDR) (@HIPLE)	* FROM WHICH THE SYSTEM PROGRAM
1039	35	04	1040		2614		L UDEHAL+@OP1,@PSR	* FILE HAS BEEN DELETED
103D	C0	87	0000		2615	UDEHAL	B @ZERO	
					2616	*		
					2617	*	DPL FOR IPL SECTOR	
					2618	*		
					2619	*UDEDPL	DPL FUNC-@DPUT,DADDR=*-*,CNT-@B1,CADDR-UDEHLT	
				1041	2620	UDEDPL	EQU *	DISK PARAMETER LIST
1041	02			1041	2621		DC AL1(@DPUT)	REQUESTED FUNCTION
1042	0000			1043	2622		DC AL2(*-*)	DISK ADDRESS
1044	01			1044	2623		DC AL1(@B1)	SECTOR COUNT
1045	1036			1046	2624		DC AL2(UDEHLT)	BUFFER ADDRESS
					2625	***	END OF EXPANSION ***	
					2627	*		
					2628	*	DPL FOR PTF LOG MODIFICATION	
					2629	*		
					2630	*UDEPLP	DPL FUNC-@DGET,DADDR-#PTFDA,CNT-#@PTFS,CADDR-UDEBFS	
				1047	2631	UDEPLP	EQU *	DISK PARAMETER LIST
1047	01			1047	2632		DC AL1(@DGET)	REQUESTED FUNCTION
1048	00DC			1049	2633		DC AL2(#PTFDA)	DISK ADDRESS
104A	01			104A	2634		DC AL1(#@PTFS)	SECTOR COUNT
104B	0F36			104C	2635		DC AL2(UDEBFS)	BUFFER ADDRESS
					2636	***	END OF EXPANSION ***	
					2638	*		
					2639	*	DPL FOR MODIFIED PTF LOG	
					2640	*		
					2641	*UDEWRT	DPL FUNC-@DPUT,DADDR-#PTFDA,CNT-#@PTFS,CADDR-UDEBFS	
				104D	2642	UDEWRT	EQU *	DISK PARAMETER LIST
104D	02			104D	2643		DC AL1(@DPUT)	REQUESTED FUNCTION
104E	00DC			104F	2644		DC AL2(#PTFDA)	DISK ADDRESS
1050	01			1050	2645		DC AL1(#@PTFS)	SECTOR COUNT
1051	0F36			1052	2646		DC AL2(UDEBFS)	BUFFER ADDRESS
					2647	***	END OF EXPANSION **	
					2649	*		
					2650	*	DPL FOR VTOC-DISPLAY OVERLAY	
					2651	*		
					2652	*UDEDIS	DPL FUNC-@DGET,DADDR-#\$UDIS,CNT-##@UDI,CADDR-\$\$UDI	
				1053	2653	UDEDIS	EQU *	DISK PARAMETER LIST
1053	01			1053	2654		DC AL1(@DGET)	REQUESTED FUNCTION
1054	1B5C			1055	2655		DC AL2(\$UDIS)	DISK ADDRESS
1056	08			1056	2656		DC AL1(\$@UDI)	SECTOR COUNT
1057	0C00			1058	2657		DC AL2(\$\$UDI)	BUFFER ADDRESS
					2658	***	END OF EXPANSION **	
					2660	*		
					2661	*	DPL'S FOR VOLUME LABEL	
					2662	*		
					2663	*UDERVL	DPL FUNC-@DGET,CYL-UDECY0,SCTR-VOLR1,CNT-#@YLAB,CADDR-UDEBFS	

UDELVT - DELETE VTOC									
ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22 PAGE 17
				1059	2664	UDERV	EQU *		DISK PARAMETER LIST
	1059	01		1059	2665		DC AL1(@DGET)		REQUESTED FUNCTION
	105A	00		105A	2666		DC AL1(UDECY0)		CYLINDER ADDRESS
	105B	08		105B	2667		DC AL1(#VOLR1)		HEAD/SECTOR/DRIVE/DISK SPEC
	105C	01		105C	2668		DC AL1(#@VLAB)		SECTOR COUNT
	105D	0F36		105E	2669		DC AL2(UDEBFS)		BUFFER ADDRESS
				2670	***	END OF EXPANSION	***		
				2672	*UDEWVL	DPL	FUND-@DGET,DADDR=*-*,CNT-@B1,CADDR-UDEBFS		
	105F	01		105F	2673	UDEWVL	EQU *		DISK PARAMETER LIST
	1060	0000		105F	2674		DC AL1(@DGET)		REQUESTED FUNCTION
	1062	01		1061	2675		DC AL2(*-*)		DISK ADDRESS
	1062	01		1062	2676		DC AL1(@B1)		SECTOR COUNT
	1063	0F36		1064	2677		DC AL2(UDEBFS)		BUFFER ADDRESS
				2678	***	END OF EXPANSION	***		
				2680	*		\$CANI		

UDELVT - DELETE VTOC									
ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22 PAGE 17
				1059	2664	UDERV	EQU *		DISK PARAMETER LIST
	1059	01		1059	2665		DC AL1(@DGET)		REQUESTED FUNCTION
	105A	00		105A	2666		DC AL1(UDECY0)		CYLINDER ADDRESS
	105B	08		105B	2667		DC AL1(#VOLR1)		HEAD/SECTOR/DRIVE/DISK SPEC
	105C	01		105C	2668		DC AL1(#@VLAB)		SECTOR COUNT
	105D	0F36		105E	2669		DC AL2(UDEBFS)		BUFFER ADDRESS
				2670	***	END OF EXPANSION	***		
				2672	*UDEWVL	DPL	FUND-@DGET,DADDR=*-* ,CNT-@B1,CADDR-UDEBFS		
	105F	01		105F	2673	UDEWVL	EQU *		DISK PARAMETER LIST
	1060	0000		105F	2674		DC AL1(@DGET)		REQUESTED FUNCTION
	1062	01		1061	2675		DC AL2(*-*)		DISK ADDRESS
	1062	01		1062	2676		DC AL1(@B1)		SECTOR COUNT
	1063	0F36		1064	2677		DC AL2(UDEBFS)		BUFFER ADDRESS
				2678	***	END OF EXPANSION	***		
				2680	*		\$CANI		

UDELVT - DELETE VTOC									
ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22 PAGE 17
				1059	2664	UDERV	EQU *		DISK PARAMETER LIST
	1059	01		1059	2665		DC AL1(@DGET)		REQUESTED FUNCTION
	105A	00		105A	2666		DC AL1(UDECY0)		CYLINDER ADDRESS
	105B	08		105B	2667		DC AL1(#VOLR1)		HEAD/SECTOR/DRIVE/DISK SPEC
	105C	01		105C	2668		DC AL1(#@VLAB)		SECTOR COUNT
	105D	0F36		105E	2669		DC AL2(UDEBFS)		BUFFER ADDRESS
				2670	***	END OF EXPANSION	***		
				2672	*UDEWVL	DPL	FUND-@DGET,DADDR=*-* ,CNT-@B1,CADDR-UDEBFS		
	105F	01		105F	2673	UDEWVL	EQU *		DISK PARAMETER LIST
	1060	0000		105F	2674		DC AL1(@DGET)		REQUESTED FUNCTION
	1062	01		1061	2675		DC AL2(*-*)		DISK ADDRESS
	1062	01		1062	2676		DC AL1(@B1)		SECTOR COUNT
	1063	0F36		1064	2677		DC AL2(UDEBFS)		BUFFER ADDRESS
				2678	***	END OF EXPANSION	***		
				2680	*		\$CANI		

UDELVT - DELETE VTOC									
ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22 PAGE 17
				1059	2664	UDERV	EQU *		DISK PARAMETER LIST
	1059	01		1059	2665		DC AL1(@DGET)		REQUESTED FUNCTION
	105A	00		105A	2666		DC AL1(UDECY0)		CYLINDER ADDRESS
	105B	08		105B	2667		DC AL1(#VOLR1)		HEAD/SECTOR/DRIVE/DISK SPEC
	105C	01		105C	2668		DC AL1(#@VLAB)		SECTOR COUNT
	105D	0F36		105E	2669		DC AL2(UDEBFS)		BUFFER ADDRESS
				2670	***	END OF EXPANSION	***		
				2672	*UDEWVL	DPL	FUND-@DGET,DADDR=*-*,CNT-@B1,CADDR-UDEBFS		
	105F	01		105F	2673	UDEWVL	EQU *		DISK PARAMETER LIST
	1060	0000		1061	2674		DC AL1(@DGET)		REQUESTED FUNCTION
	1062	01		1062	2675		DC AL2(*-*)		DISK ADDRESS
	1063	0F36		1064	2676		DC AL1(@B1)		SECTOR COUNT
				1064	2677		DC AL2(UDEBFS)		BUFFER ADDRESS
				2678	***	END OF EXPANSION	***		
				2680	*		\$CANI		

UDELVT - DELETE VTOC									
ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22 PAGE 17
				1059	2664	UDERV	EQU *		DISK PARAMETER LIST
	1059	01		1059	2665		DC AL1(@DGET)		REQUESTED FUNCTION
	105A	00		105A	2666		DC AL1(UDECY0)		CYLINDER ADDRESS
	105B	08		105B	2667		DC AL1(#VOLR1)		HEAD/SECTOR/DRIVE/DISK SPEC
	105C	01		105C	2668		DC AL1(#@VLAB)		SECTOR COUNT
	105D	0F36		105E	2669		DC AL2(UDEBFS)		BUFFER ADDRESS
				2670	***	END OF EXPANSION	***		
				2672	*UDEWVL	DPL	FUND-@DGET,DADDR=*-* ,CNT-@B1,CADDR-UDEBFS		
	105F	01		105F	2673	UDEWVL	EQU *		DISK PARAMETER LIST
	1060	0000		1061	2674		DC AL1(@DGET)		REQUESTED FUNCTION
	1062	01		1062	2675		DC AL2(*-*)		DISK ADDRESS
	1062	01		1062	2676		DC AL1(@B1)		SECTOR COUNT
	1063	0F36		1064	2677		DC AL2(UDEBFS)		BUFFER ADDRESS
				2678	***	END OF EXPANSION	***		
				2680	*		\$CANI		

UDELVT - DELETE VTOC									
ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22 PAGE 17
				1059	2664	UDERV	EQU *		DISK PARAMETER LIST
	1059	01		1059	2665		DC AL1(@DGET)		REQUESTED FUNCTION
	105A	00		105A	2666		DC AL1(UDECY0)		CYLINDER ADDRESS
	105B	08		105B	2667		DC AL1(#VOLR1)		HEAD/SECTOR/DRIVE/DISK SPEC
	105C	01		105C	2668		DC AL1(#@VLAB)		SECTOR COUNT
	105D	0F36		105E	2669		DC AL2(UDEBFS)		BUFFER ADDRESS
				2670	***	END OF EXPANSION	***		
				2672	*UDEWVL	DPL	FUND-@DGET,DADDR=*-*,CNT-@B1,CADDR-UDEBFS		
	105F	01		105F	2673	UDEWVL	EQU *		DISK PARAMETER LIST
	1060	0000		105F	2674		DC AL1(@DGET)		REQUESTED FUNCTION
	1062	01		1061	2675		DC AL2(*-*)		DISK ADDRESS
	1062	01		1062	2676		DC AL1(@B1)		SECTOR COUNT
	1063	0F36		1064	2677		DC AL2(UDEBFS)		BUFFER ADDRESS
				2678	***	END OF EXPANSION	***		
				2680	*		\$CANI		

SCANIT - DELIMETER SCAN MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	11/11/22	PAGE 18
		2682+		*****			
		2683+	*	5703-XM1	COPYRIGHT IBM CORP. 1970		*
		2684+	*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083		*
		2685+	*				*
		2686+	*	*****			*
		2687+	*	STATUS			*
		2688+	*	VERSION 1 MODIFICATION 0			*
		2689+	*				*
		2690+	*	FUNCTION			*
		2691+	*	THE FUNCTION OF SCANIT IS TO SCAN PAST VALID DELIMITERS AND			*
		2692+	*	RETURN A POINTER TO THE FIRST CHARACTER THAT'S NOT A DELIMITER.			*
		2693+	*				*
		2694+	*	ENTRY POINTS			*
		2695+	*	* THE ENTRY POINT IS SCANIT.			*
		2696+	*	* THE CALLING SEQUENCE IS AS FOLLOWS:			*
		2697+	*	B	SCANIT		*
		2698+	*	WITH REGISTER 2 (@XR) POINTING TO THE FIRST CHARACTER TO BE			*
		2699+	*	EXAMINED.			*
		2700+	*				*
		2701+	*	INPUT			*
		2702+	*	NONE			*
		2703+	*				*
		2704+	*	OUTPUT			*
		2705+	*	NONE			*
		2706+	*				*
		2707+	*	EXTERNAL REFERENCES			*
		2708+	*	\$CAERR - ERROR CODE SAVE AREA			*
		2709+	*				*
		2710+	*	EXITS, NORMAL			*
		2711+	*	NORMAL EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO			*
		2712+	*	SCANIT IN THE CALLING ROUTINE. THE PSR (REGISTER 4) WILL CONTAIN			*
		2713+	*	A ZERO IF NO DELIMITERS WERE FOUND OR A HIGH CONDITION IF ONE OR			*
		2714+	*	MORE DELIMITERS WERE SCANNED.			*
		2715+	*				*
		2716+	*	EXITS, ERROR			*
		2717+	*	ERROR EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO			*
		2718+	*	SCANIT IN THE CALLING ROUTINE. THE PSR WILL CONTAIN A LOW			*
		2719+	*	CONDITION.			*
		2720+	*				*
		2721+	*	TABLES/WORKAREAS			*
		2722+	*	* SCACNT - AREA CONTAINING NUMBERS OF DELIMITERS SCANNED			*
		2723+	*	* SCAMMA - LOC WHERE SCACOM MAY BE MOVED IF ONE COMMA IS ALSO			*
		2724+	*	TO BE CONSIDERED A DELIMITER. MOVING SCACOF BACK INTO SCAMMA			*
		2725+	*	INDICATES THAT ONLY BLANKS SHOULD BE CONSIDERED DELIMITERS.			*
		2726+	*				*
		2727+	*	ATTRIBUTES			*
		2728+	*	RELOCATABLE AND RE-USABLE			*
		2729+	*				*
		2730+	*	CHARACTER CODE DEPENDENCY			*
		2731+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR			*
		2732+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.			*
		2733+	*				*
		2734+	*	NOTES			*
		2735+	*	ERROR PROCEDURES			*
		2736+	*	THE ONLY ERROR CONDITION DETECTED BY SCANIT IS THE CASE WHERE			*
		2737+	*	A CARRIAGE-RETURN CODE FOLLOWS A COMMA. UPON RETURN TO THE			*

SCANIT - DELIMETER SCAN MODULE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 11/11/22 PAGE 19

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2738+*      CALLING ROUTINE, @PSR WILL BE SET TO A LOW CONDITION, THE      *
2739+*      ERROR CODE IS SET IN $CAERR, AND MG WILU BE POINTING TO THE      *
2740+*      CARRIAGE-RETURN CHARACTER.                                         *
2741+*                                                                 *
2742+*      REGISTER USAGE                                                         *
2743+*      REGISTER 2 (@XR) IS USED AS A POINTER ACROSS THE AREA BEING        *
2744+*      SCANNED FOR DELIMITERS.                                              *
2745+*                                                                 *
2746+*      SAVED/RESTORED AREAS                                                  *
2747+*      UPON ENTRY TO SCANIT, REGISTER 8 (@ARR) IS SAVED AND USED AS        *
2748+*      THE RETURN ADDRESS.                                                  *
2749+*                                                                 *
2750+*      MODIFICATION CONSIDERATIONS                                           *
2751+*      NONE                                                                  *
2752+*                                                                 *
2753+*      REQUIRED MODULES                                                         *
2754+*      * @SYSEQ - COMMON SYSTEM EQUATES                                     *
2755+*      * @FXDEQ - FIXED NUCLEUS ADDRESSES EQUATES                           *
2756+*                                                                 *
2757+*      OTHER                                                                    *
2758+*      SCANIT IS INITIALIZED TO BYPASS BLANKS ONLY. IF SCACOM IS            *
2759+*      MOVED TO SCAMMA, ONE COMMA WILL BE SCANNED ALONG WITH BLANKS.        *
2760+*      THE INSTRUCTION TO DO THIS IS AS FOLLOWS:                           *
2761+*      MVI    SCAMMA,SCACOM                                                  *
2762+*                                                                 *
2763+*      TO DROP THE COMMA FROM ITS DELIMITER STATUS, SCACOF SHOULD BE        *
2764+*      MOVED TO SCAMMA, USING THE FOLLOWING INSTRUCTION:                     *
2765+*      MVI    SCAMMA,SCACOF                                                  *
2766+*                                                                 *
2767+*****

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2769+*

2770+* EQUATES USED IN THIS SUBROUTINE

2771+*

	0001	2772+SCAINC	EQU	1	TO INCREMENT POINTER
	0001	2773+SCACOM	EQU	@BNE	SWITCH TO ALLOW SCANNING COMMA
	0087	2774+SCACOF	EQU	@UCB	SWITCH TO SET OFF THE INDICATON
		2775+*			* FOR SCANNING A COMMA
	1065	2776+SCANIT	EQU	*	ENTRY POINT TO THIS SUBROUTINE
1065 34 08 10A1		2777+	ST	SCA500+@OP1,@ARR	SAVE RETURN ADDRESS
1069 34 02 10A3		2778+	ST	SCASVE,@XR	SAVE POINTER VALUE
106D 3C 04 03CD		2779+	MVI	\$CAERR,@@E110	SET ERROR CODE
1071 F2 87 03		2780+	J	SCA200	GO TO PROCESS
1074 E2 02 01		2781+SCA100	LA	SCAINC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR
1077 BD 40 00		2782+SCA200	CLI	0(,@XR),@BLANK	IS THIS CHAR BLANK ?
107A C0 81 1074		2783+	BE	SCA100	YES, FETCH NEXT ONE
107E BD 6B 00		2784+	CLI	0(,@XR),@COMMA	IS IT A COMMA ?
1081 F2 87 10		2785+SCA250	JC	SCA400,@UCB	UCS TO RETURN -- OR NOP IF
		2786+*			* SCAMMA IS ACTIVE AND CHAR
1084 E2 02 01		2787+SCA300	LA	SCAINC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR
1087 BD 40 00		2788+	CLI	0(,@XR),@BLANK	IS THIS CHAR A BLANK ?
108A C0 81 1084		2789+	BE	SCA300	YES, FETCH NEXT ONE
108E BD 1F 00		2790+	CLI	0(,@XR),@EOS+1	IS THIS EOS ?
1091 F2 82 0A		2791+	JL	SCA500	IF NOT, SKIP ERROR ROUTINE
1094 34 02 10A5		2792+SCA400	ST	SCACNT,@XR	SAVE NEW POINTER VALUE

SCANIT - DELIMETER SCAN MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	20
1098	0F	01	10A5	10A3	2793+	SLC	SCACNT(2),SCASVE				
					2794+*						SET PSR TO EQUAL IF POINTER
109E	C0	87	0000		2795+SCA500	B	*-*				* NOT ADVANCED
				1082	2796+SCAMMA	EQU	SCA250+@Q				YES, RETURN
					2797+*						TO SET SCAN COMMA INDICATOR
					2798+*		SAVE AREA				
					2799+*						
10A2				10A2	2800+SCASV1	EQU	*				FIRST BYTE OF SCASVE
				10A3	2801+SCASVE	DS	CL2				ORIGINAL POINTER VALUE SAVE
10A4				10A5	2802+SCACNT	DS	CL2				SAVE AREA FOR TOTAL CHAR SCAN
					2803+***			END OF SCANIT			***

SDISKS - DISK SPECIFICATION CHECKER

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 21
		2805		*****	
		2806	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		2807	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		2808	*		*
		2809		*****	
		2810	*	*STATUS	*
		2811	*	VERSION 1 MODIFICATION 0	*
		2812	*		*
		2813	*	*FUNCTION	*
		2814	*	* SDISKS CHECKS THE INPUT LINE BUFFER FOR A VALID COMPLETE DISK	*
		2815	*	SPECIFICATION.	*
		2816	*	* THE DISK AND DRIVE BITS ARE SET IN A TWO-BYTE DISK ADDRESS	*
		2817	*	FIELD IN THE OUTPUT AREA.	*
		2818	*	* THE DISK LABEL IS PLACED IN THE OUTPUT AREA.	*
		2819	*	* A POINTER TO THE VOL-ID TABLE ENTRY FOR THE SPECIFIED DISK IS	*
		2820	*	PLACED IN THE OUTPUT AREA.	*
		2821	*		*
		2822	*	*ENTRY POINTS	*
		2823	*	SDISKS -- THIS IS THE ONLY ENTRY POINT	*
		2824	*	THE CALLING SEQUENCES ARE AS FOLLOWS:	*
		2825	*	* B SDISKS - CHECK FOR A VALID COMPLETE DISK	*
		2826	*	MVI SDISKP,SDIUCB - CHECK FOR A VALID DISK-DRIVE	*
		2827	*	B SDISKS SPECIFICATION ONLY	*
		2828	*	SPECIFICATION	*
		2829	*	* MVI SDIBLN,SDIVOF - DISALLOW A COMMA SCAN FOLLOWING THE	*
		2830	*	B SDISKS DISK LABEL	*
		2831	*	* MVI SDINID,SDIVOF - CHECK IN THE VOL-ID TABLE FOR THE	*
		2832	*	B SDISKS SPECIFIED DISK LABEL ON THE SPECIFIED	*
		2833	*	DISK	*
		2834	*		*
		2835	*	*INPUT	*
		2836	*	* THE INPUT IS A POINTER IN THE INDEX REGISTER TO THE FIRST BYTE	*
		2837	*	OF THE DISK SPECIFICATION.	*
		2838	*	* UPON EXIT FROM THIS ROUTINE THE INDEX REGISTER IS POINTING	*
		2839	*	TO THE NEXT PARAMETER IN THE INPUT LINE	*
		2840	*	* THE BASE REGISTER IS SAVED AND RESTORED BEFORE RETURNING	*
		2841	*		*
		2842	*	*OUTPUT	*
		2843	*	SDITBL - TABLE CONTAINING THE FOLLOWING--LEFT BYTE	*
		2844	*	* BYTE DISPLACEMENT INTO THE VOL-ID TABLE OF THE LEFT BYTE OF	*
		2845	*	THE ENTRY FOR THE SPECIFIED DISK. -- ONE BYTE -- PRECEDED	*
		2846	*	BY ONE BYTE OF ZERO.	*
		2847	*	* DISK ADDRESS -- TWO BYTES -- ZERO EXCEPT FOR DISK-DRIVE BITS	*
		2848	*	* DISK LABEL -- SIX BYTES -- PADDED WITH BLANKS	*
		2849	*	THE ABOVE ELEMENTS ARE ORDERED IN THE TABLE AS THEY ARE LISTED	*
		2850	*		*
		2851	*	*EXTERNAL REFERENCES	*
		2852	*	SCANIT - ENTRY TO SCAN VALID DELIMITERS	*
		2853	*	SALPH6 - ENTRY TO SYNTAX CHECK VOL-ID	*
		2854	*	\$CAERR - ADDRESS OF ERROR CODE SAVE ARIA	*
		2855	*	\$VOLID - ADDRESS OF TABLE CONTAINING CURRENT DISK LABELS	*
		2856	*	\$DKSIZ - ADDRESS OF DISK SIZE INDICATOR	*
		2857	*	SALPHR - ADDRESS OF DISK LABEL IN SALPHA	*
		2858	*		*
		2859	*	*EXITS, NORMAL	*
		2860	*	* NORMAL EXIT IS TO THE INSTRUCTION FOLLOWING THE ALL TO SDISKS	*

SDISKS - DISK SPECIFICATION CHECKER

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 22
		2861	*	* THE PROGRAM STATUS REGISTER (PSR) IS SET HIGH	*
		2862	*	* THE INDEX REGISTER IS POINTING TO THE NEXT PARAMETER OR @EOS	*
		2863	*	* THE BASE REGISTER IS RESTORED	*
		2864	*		*
		2865	*	*EXITS, ERROR	*
		2866	*	* ERROR EXIT IS TO THE INSTRUCTION FOLLOWING THE CALL TO SDISKS	*
		2867	*	* THE PROGRAM STATUS REGISTER (PSR) IS SET LOW	*
		2868	*	* THE INDEX REGISTER IS POINTING TO THE PARAMETER OR DELIMITER IN	*
		2869	*	ERROR FOR SYNTAX ERRORS. FOR NON-SYNTAX ERRORS IT IS POINTING	*
		2870	*	OUTSIDE THE INPUT LINE BUFFER.	*
		2871	*	* THE BASE REGISTER IS RESTORED.	*
		2872	*	* THE APPROPRIATE ERROR CODE IS SET AT \$CAERR	*
		2873	*		*
		2874	*	*TABLES/WORKAREAS	*
		2875	*	SDITBL -- SEE OUTPUT FOR DESCRIPTION	*
		2876	*		*
		2877	*	*ATTRIBUTES	*
		2878	*	SDISKS IS REUSABLE	*
		2879	*		*
		2880	*	*CHARACTER CODE DEPENDENCY	*
		2881	*	THE OPERATION OF THIS MODULE DEPENDS UPON AN INTERNAL	*
		2882	*	REPRESENTATION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT	*
		2883	*	TO THE ONE USED AT ASSEMBLY TIME. THE CODING HAS BEEN ARRANGED	*
		2884	*	SO THAT REDEFINITION OF CHARACTER CONSTANTS, BY REASSEMBLY, WILL	*
		2885	*	RESULT IN A CORRECT MODULE FOR THE NEW DEFINITIONS.	*
		2886	*		*
		2887	*	*NOTES	*
		2888	*	ERROR PROCEDURES	*
		2889	*	* THE INDEX REGISTER IS SET FOR PROCEDURES ON DISPLAYING AN	*
		2890	*	UP-ARROW.	*
		2891	*	* THE PROGRAM STATUS REGISTER IS SET LOW.	*
		2892	*	* THE APPROPRIATE ERROR CODE IS SET AT \$CAERR.	*
		2893	*		*
		2894	*	REGISTER USAGE	*
		2895	*	* THE BASE REGISTER IS SAVED AND RESTORED	*
		2896	*	* THE INDEX REGISTER IS SET UP ACCORDING TO THE EXIT FROM SDISKS	*
		2897	*	SEE EXITS,NORMAL AND EYITS,ERROR	*
		2898	*	* THE PROGRAM STATUS REGISTER IS SET TO INDICATE WHETHER OR NOT	*
		2899	*	AN ERROR WAS FOUND. HIGH-NO ERROR --- LOW-ERROR	*
		2900	*	* THE ADDRESS RECALL REGISTER IS STORED IN THE RETURN BRANCH	*
		2901	*	INSTRUCTION UPON ENTRY TO SDISKS	*
		2902	*		*
		2903	*	SAVED/RESTORED AREAS	*
		2904	*	N/A	*
		2905	*		*
		2906	*	MODIFICATION CONSIDERATIONS	*
		2907	*	SDISKS IS USED BY MOST FUNCTIONS WHICH REQUIRE A COMPLETE DISK	*
		2908	*	SPECIFICATION AND MAY BE USED BY FUNCTIONS REQUIRING A PARTIAL	*
		2909	*	DISK SPECIFICATION (I.E. R1).	*
		2910	*		*
		2911	*	REQUIRED MODULES	*
		2912	*	SCANIT - SCAN BLANKS AND COMMA	*
		2913	*	SALPHA - CHECK VALIDITY OF DISK LABEL	*
		2914	*	@SYSEQ - COMMON SYSTEM EQUATES	*
		2915	*	@FXDEQ - SYSTEM NUCLEUS ADDRESSES AND INDICATOR EQUATES	*
		2916	*	@ERMEQ - ERROR MESSAGE EQUATES	*

SDISKS - DISK SPECIFICATION CHECKER

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE 23
					2917	*				*
					2918	*	OTHER			*
					2919	*	N/A			*
					2920	*****				
					2922	*****				
					2923	*				
					2924	*	INITIALIZATION			
					2925	*				
					2926	*****				
					2927	*	SDISKS ENTER BASE,SDISKS,EXIT,SDIEX, RW?PARR			
				10A6	2928		USING SDISKS,@BR			BASE ADDRESS SPECIFICATION
				10A6	2929	SDISKS	EQU *			MODULE ENTRY POINT
	10A6	34	01	117C	2930		ST SDIEX0+@OP1,@BR			SAVE PAR
	10AA	C2	01	10A6	2931		LA SDISKS,@BR			LOAD BASE REGISTER
	10AE	74	08	DA	2932		ST SDIEX2+@OP1(,@BR),@ARR			SAVE RETURN ADDRESS
					2933	***	END OF EXPANSION ***			
	10B1	74	02	C4	2934		ST SDI550+@OP1(,@BR),@XR			SAVE THE VALUE IN THE INDEX MEG
	10B4	5F	08	F0 F0	2935		SLC SDIRBL(,@BR),SDIRBL(SDILN9,@BR)			CLEAR OUTPUT FIELD
					2936	*				
					2937	*	DETERMINE DISK AND DRIVE			
					2938	*				
	10B8	BD	D9	00	2939		CLI 0(,@XR),@CHARR			IS THE REMOV. DISK SPECIFIED ?
	10BB	F2	81	09	2940		JE SDI100			IF SO GO TO DETERMINE DRIVE
	10BE	BD	C6	00	2941		CLI 0(,@XR),@CHARF			IS THE FIXED DISK SPECIFIED ?
	10C1	F2	01	0C	2942		JNE SDI150			RETURN TO CALLING PROGRAM
	10C4	7A	01	EA	2943	SDI050	SBN SDIDRK(,@BR),SDIMK1			SET BIT ON FOR FIXED DISK
	10C7	BD	F1	01	2944	SDI100	CLI 1(,@XR),SDI001			IS DRIVE 1 SPECIFIED ?
	10CA	F2	81	28	2945		JE SDI200			IF \$0 INCREMENT POINTER
	10CD	BD	F2	01	2946		CLI 1(,@XR),SDI002			IS DRIVE 2 SPECIFIED ?
	10D0	3C	11	03CD	2947	SDI150	MVI \$CAERR,@E131			SET ERROR CODE FOR INVALID
					2948	*				DISK-DRIVE SPECIFICATION
	10D4	F2	01	94	2949		JNE SDI600			EXIT TO CALLING PROGRAM
	10D7	7A	02	EA	2950		SBN SDIDRK(,@BR),SDIMK2			SET BIT FOR DRIVE 2
					2951	*				
					2952	*	TEST IF DRIVE REQUESTED IS WITHIN THE SYSTEM CONFIGURATION			
					2953	*				
	10DA	3C	39	03CD	2954		MVI \$CAERR,@E242			SET ERROR CODE
	10DE	78	01	EA	2955		TBN SDIDRK(,@BR),SDIMK1			TEST OF FIXED DISK
	10E1	F2	90	0A	2956		JF SDI160			NO - TAKE JUMP
	10E4	38	10	03D7	2957		TBN \$DKSIZ,\$DK800			TEST IF F2 IS IN SYSTEM
	10E8	F2	10	0A	2958		JT SDI200			JUMP IF F2 ON SYSTEM
	10EB	F2	87	75	2959		J SDI530			F2 NOT PRESENT - TAKE ERR EXIT
	10EE	39	18	03D7	2960	SDI160	TBF \$DKSIZ,\$DK600+\$DK800			TEST IF R2 IS ON SYSTEM
	10F2	F2	10	6E	2961		JT SDI530			NO - TAKE ERROR EXIT
					2963	*****				
					2964	*				
					2965	*	CHECK VOLID SPECIFIED			
					2966	*				
					2967	*****				
	10F5	E2	02	02	2968	SDI200	LA SDIX02(,@XR),@XR			INCREMENT @XR BY 2
	10F8	3C	01	1082	2969		MVI SCAMMA,SCACOM			SET INDICATOR TO ALLOW SCANNING
					2970	*				* OF COMMAS
	10FC	C0	87	1065	2971	B	SCANIT			SCAN PAST BLANKS AND COMMAS

SDISKS - DISK SPECIFICATION CHECKER

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 24
1100	F2	82	76	2972	JL		SDIEX0	IF DANGLING COMMA -- RETURN
1103	F2	80	7B	2973	SDI255 JC		SDI800,@NOP	JUMP IF ONLY DISK-DRIVE SPEC
1106	F2	01	11	2974	JNZ		SDI270	IF THERE IS NO ERROR GOTO SALPHA
1109	3C	10	03CD	2975	MVI		\$CAERR,@E130	SET ERROR CODE - 'MISSING PARM'
110D	BD	1E	00	2976	CLI		0(,@XR),@EOS	CHECK FOR EOS DIRECTLY FOLLOWING
				2977	*			* DISK-DRIVE SPEC
1110	F2	81	58	2978	JE		SDI600	TAKE ERROR EXIT
1113	3C	11	03CD	2979	SDI260 MVI		\$CAERR,@E131	SET ERROR CODE - 'INV PARAMETER'
1117	F2	87	4D	2980	J		SDI550	GO TO SET UP INDEX REGISTER
111A	F2	87	0B	2981	SDI270 JC		SDI300,@UCB	UNLESS RESET ALLOW COMMA SCAN
111D	3C	87	111B	2982	MVI		SDIBLN,@UCB	RESET INDR TO ALLOW COMMA SCAN
1121	3C	87	1082	2983	MVI		SCAMMA,SCACOF	SCAN BLANKS ONLY
1125	74	02	C4	2984	ST		SDI550+@OP1(,@BR),@XR	SAVE POINTER TO VOLUME LABEL
1128	C0	87	119B	2985	SDI300 B		SALPH6	GO TO SALPHA TO CHECK SYNTAX OR
				2986	*			* VALID
112C	4C	05	F0 125B	2987	MVC		SDIRBL(@VOLID,@BR),SALPHR+@VOLID-@B1	PLACE VALID FROM
				2988	*			* SALPHA INTO SDITBK
1131	F2	82	45	2989	JL		SDIEX0	IF ERROR WAS FOUND BY SALPHA
				2990	*			* RETURN TO CALLING ROUTINE
1134	F2	01	06	2991	SDI350 JNZ		SDI400	IF THERE IS NO ERROR FROM SALPHA
				2992	*			* FIND DISPLACEMENT INTO TABLE
1137	BD	1E	00	2993	CLI		0(,@XR),@EOS	TEST FOR EOS
113A	D0	01	6D	2994	BNE		SDI260(,@BR)	IF OTHER THAN EOS TAKE ERR EXIT
				2995	*			
				2996	*			DISPLACEMENT INTO VALID TABLE
				2997	*			
113D	5C	00	E8 EA	2998	SDI400 MVC		SDITBL(1,@BR),SDIDRK(,@BR)	MOVE DISK DRIVE SPECIFICATION
				2999	*			* TO FIRST BYTE OF TABLE
1141	5E	00	E8 E8	3000	ALC		SDITBL(,@BR),SDITBL(1,@BR)	ADD THIS SPECIFICATION TO
1145	5E	00	E8 E8	3001	ALC		SDITBL(,@BR),SDITBL(1,@BR)	* ITSELF 3 TIMES WHICH GIVES
1149	5E	00	E8 E8	3002	ALC		SDITBL(,@BR),SDITBL(1,@BR)	* THE DISPLACEMENT INTO THE
				3003	*			* VALID TABLE
				3004	*			
				3005	*			CHECK VOL-ID TABLE
				3006	*			
114D	F2	87	25	3007	SDI450 JC		SDI750,@UCB	IF INDICATOR IS NOT SET,SKIP
				3008	*			ROUTINE FOR CHECKING VALID
1150	5E	01	B1 E8	3009	ALC		SDI500+@OP1(,@BR),SDITBL(@CADDR,@BR)	ADD DISPLACEMENT
				3010	*			* INTO VALID TABLE
1154	1D	05	03FB F0	3011	SDI500 CLC		SDIID5,SDIRBL(@VOLID,@BR)	IS VALID GIVEN IN VALID TABLE ?
1159	3C	28	03CD	3012	MVI		\$CAERR,@E216	SET ERROR CODE FOR ENTRY NOT IN
				3013	*			VALID IN CASE NEEDED
115D	7C	87	A8	3014	MVI		SDINID(,@BR),SDIUCB	RESET INDICATOR FOR CHECKING
				3015	*			* VALID
1160	F2	81	12	3016	JE		SDI750	RETURN TO CALLING ROUTINE
1163	5C	01	C4 00	3017	SDI530 MVC		SDI550+@OP1(@CADDR,@BR),SDISKS(,@BR)	INCREMENT POINTER
				3018	*			* PAST BUFFER
				3020	*			
				3021	*			EXIT ROUTINE
				3022	*			
1167	C2	02	0000	3023	SDI550 LA		*-*,@XR	RESTORE INDEX REGISTER
116B	7D	F2	E7	3024	SDI600 CLI		SDITBL-1(,@BR),SDI002	SET @PSR TO BRANCH LOW -- ERROR
116E	F2	87	08	3025	J		SDIEX0	RETURN TO CALLER
1171	3C	80	1104	3026	SDI650 MVI		SDISKP,@NOP	RESET INDR TO CHECK VOLID
1175	5F	01	B1 E8	3027	SDI750 SLC		SDI500+@OP1(,@BR),SDITBL(@CADDR,@BR)	REINITIALIZE POINTER

SDISKS - DISK SPECIFICATION CHECKER

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 25
					3028	*SDIEX0	EXIT @BR,,RETURN	
1179	C2	01	0000		3029	SDIEX0	LA *-*,@BR	RESTORE @BR
117D	C0	87	0000		3030	SDIEX2	B *-*	RETURN TO CALLING PROGRAM
					3031	***	END OF EXPANSION ***	
					3033	*		
					3034	*	SYNTAX CHECK FOR DISK-DRIVE SPEC	
					3035	*		
1181	D0	01	CB		3036	SDI800	BNZ SDI650(,@BR)	NO ERROR -- RETURN TO CALLER
1184	BD	1E	00		3037		CLI 0(,@XR),@EOS	CHECK FOR @EOS
1187	D0	81	CB		3038		BE SDI650(,@BR)	TAKE THE NORMAL EXIT
118A	D0	87	6D		3039		B SDI260(,@BR)	GO TO SET THE ERROR CODE
					3040	*		
					3041	*		
					3042	*	EQUATED CONSTANTS	
					3043	*		
				0009	3044	SDILN9	EQU 9	LENGTH OF OUTPUT FIELD
				0002	3045	SDIX02	EQU X'02'	LENGTH FOR INCREMENTING @XR
					3046	*		
					3047	*	CONSTANTS AND WORK AREAS	
					3048	*		
118D	00			118D	3049		DC XL1'00'	BYTE FOR ADDING DISPLACEMENT TO
					3050	*		* A TWO BYTE FIELD
118E				1196	3051	SDIRBL	DS CL(SDILN9)	SPACE ALLOCATED FOR OUTPUT TABLE
					3052	*		
					3053	*	EQUATES	
					3054	*		
				118E	3055	SDITBL	EQU SDIRBL-8	LEFTMOST BYTE OF OUTPUT TABLE
				1190	3056	SDIDRK	EQU SDITBL+2	BYTE CONTAINING DISK-DRIVE BITS
				1191	3057	SDIVID	EQU SDITBL+3	AREA CONTAINING VOLID
				00F1	3058	SDI001	EQU C'1'	SYMBOL FOR DRIVE 1
				00F2	3059	SDI002	EQU C'2'	SYMBOL FOR DRIVE 2
				03FB	3060	SDIID5	EQU \$VOLID+5	RIGHT BYTE OF VOLID IN TABLE
				0087	3061	SDIUCB	EQU @UCB	INDICATOR FOR NOT CHECKING VOLID
				0080	3062	SDIVOF	EQU @NOP	INDICATOR FOR CHECKING VOLID
				1104	3063	SDISKP	EQU SDI255+@Q	Q-CODE OF AN INSTRUCTION
				111B	3064	SDIBLN	EQU SDI270+@Q	INDR TO SET FOR SCANNING BLANKS
				1135	3065	SDISLH	EQU SDI350+@Q	INDR TO SET TO ALLOW SLASH
					3066	*		* FOLLOWING VOLID
				0001	3067	SDIMK1	EQU X'01'	MASK FOR FIXED DISK
				0002	3068	SDIMK2	EQU X'02'	MASK FOR DRIVE 2
				114E	3069	SDINID	EQU SDI450+@Q	Q-CODE OF AN INSTRUCTION

SALPHA - SYNTAX CHECKER MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 27
		3073+		*****	
		3074+*	5703-XM1	COPYRIGHT IBM CORP. 1970	*
		3075+*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		3076+*			*
		3077+		*****	
		3078+*		STATUS	*
		3079+*		VERSION 1 MODIFICATION 0	*
		3080+*			*
		3081+*		FUNCTION	*
		3082+*		THE FUNCTION OF SALPHA IS TO SYNTAX CHECK AN 8 CHARACTER OR 6	*
		3083+*		CHARACTER ALPHAMERIC PARAMETER DETERMINED BY THE ENTRY POINT,	*
		3084+*		SALPH8 OR SALPH6 RESPECTIVELY. ENTRY AT SALPHA IMPLIES A REQUEST	*
		3085+*		THAT THE FIRST CHARACTER BE ALPHABETIC. A SYNTACTICALLY CORRECT	*
		3086+*		PARAMETER WILL BE SAVED AT SALPHR (LEFTMOST BYTE ADDRESS), THE	*
		3087+*		COUNT OF THE NUMBER OF VALID CMARACTERS, IF NEEDED, IS FOOD IN	*
		3088+*		SALCNT. UPON ENTRY, SALPHA REQUIRES INDEX RESISTER 2 (OM TO BE	*
		3089+*		ADDRESSING THE FIRST CHARACTER 0, THE PARAMETER TO BE SYNTAX	*
		3090+*		CHECKED. UPON NORMAL RETURN INDEX REGISTER 2 (@XR) WILL BE	*
		3091+*		ADDRESSING THE FIRST NON-DELIMITER FOLLOWING THE PARAMETER (NOTE	*
		3092+*		INPUT),	*
		3093+*			*
		3094+*		ENTRY POINTS	*
		3095+*		* SALPH8 - ENTRY POINT TO SYNTAX CHECK AN EIGHT CHARACTER	*
		3096+*		ALPHAMERIC PARAMETER WHOSE FIRST CHARACTER MUST BE	*
		3097+*		ALPHABETIC.	*
		3098+*		* SALPH6 - ENTRY POINT TO SYNTAX CHECK A SIX CHARACTER	*
		3099+*		ALPHAMERIC PARAMETER WHICH HAS NO RESTRICTIONS ON	*
		3100+*		THE TYPE OF THE FIRST CHARACTER. (NOTE MODIFICA-	*
		3101+*		TION CONSIDERATIONS)	*
		3102+*			*
		3103+*		INPUT	*
		3104+*		UPON ENTRY TO SALPHA, AT EITHER ENTRY POINT, INDEX REGISTER 2	*
		3105+*		(@XR) SHOULD BE ADDRESSING THE LEFTMOST CHARACTER OF THE PARAMETER*	*
		3106+*		TO BE SYNTAX CHECKED. ALSO, THE SWITCH 'SCAMMA' IN SCANIT SHOULD	*
		3107+*		BE SET FOR THE TYPE OF DELIMITER SCAN REQUESTED AFTER THE SYNTAX	*
		3108+*		CHECK. (IE. BLANKS ONLY OR BLANKS WITH 1 COMMA).	*
		3109+*			*
		3110+*		OUTPUT	*
		3111+*		OUTPUT FROM SALPHA INCLUDES THE SYNTAX CHECKED PARAMETER AT SALPHR*	*
		3112+*		(LEFTMOST BYTE OF SAVE AREA) AND THE COUNT OF VALID CHARACTERS	*
		3113+*		IN SALCNT, AND INDEX REGISTER 2 (@XR) WILL BE POINTING AT THE	*
		3114+*		FIRST NON-DELIMITER AFTER THE PARAMETER. THE ONLY EXCEPTION TO	*
		3115+*		THIS IS UPON DETECTION OF AN ERROR (SEE ERROR EXITS AND PROC.)	*
		3116+*			*
		3117+*		EXTERNAL REFERENCES	*
		3118+*		SCANIT - DELIMITER SCAN MODULE	*
		3119+*		\$CAERR - ADDR IN SYSTEM NUCLEUS-ERROR CODE SAVE AREA	*
		3120+*			*
		3121+*		EXITS, NORMAL	*
		3122+*		NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE WITH INDEX	*
		3123+*		REGISTER 2 (@XR) POINTING TO THE NEXT NON-DELIMITER	*
		3124+*		FOLLOWING THE PARAMETER AND WITH A NON-LOW CONDITION CODE	*
		3125+*		IN THE PROGRAM STATUS RESISTER (@PSR),	*
		3126+*			*
		3127+*		EXITS, ERROR	*
		3128+*		NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE WILH INDEX	*

SALPHA - SYNTAX CHECKER MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 28
		3129+	*	REGISTER 2 (@XR) POINTING TO THE LEFTMOST CHARACTER OF THE	*
		3130+	*	INVALID PARAMETER AND WITH A LOW CONDITION CODE IN THE	*
		3131+	*	PROGRAM STATUS REGISTER (@PSR),	*
		3132+	*		*
		3133+	*	TABLES/WORK AREAS	*
		3134+	*	ALL OF THE CONSTANTS AND WORK AREAS IN SALPHA ARE LOCATED AT THE	*
		3135+	*	END OF THE MODULE AND ARE ADDRESSED BY INDEX REGISTER 1 (RBR).	*
		3136+	*		*
		3137+	*	ATTRIBUTES	*
		3138+	*	REUSABLE, RELOCATABLE	*
		3139+	*		*
		3140+	*	CHARACTER CODE DEPENDENCY	*
		3141+	*	CHARACTER CODE DEPENDENCY CLASS - E	*
		3142+	*	THE OPERATION OF THIS MODULE DEPENDS UPON THE FOLLOWING PROPERTIES	*
		3143+	*	OF THE INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET:	*
		3144+	*	* THE FOLLOWING SPECIAL ALPHABETIC CHARACTERS ARE PART OF	*
		3145+	*	@SYSEQ AND ARE SPECIFICALLY COMPARED FOR:	*
		3146+	*	* @DOLAR	*
		3147+	*	* @NUMBR	*
		3148+	*	* @ASIGN	*
		3149+	*	* THE REMAINING-ALPHABETIC CHARACTERS ARE DEFINED TO BE	*
		3150+	*	INCLUSIVELY IN THE RANGE DEFINED BY THE FOLLOWING IN @SYSEQ:	*
		3151+	*	* @CHARA	*
		3152+	*	* @CHARZ	*
		3153+	*		*
		3154+	*	THE DECIMAL NUMBERS FALL INTO THE CATEGORY OF BEING GREATER	*
		3155+	*	THAN AN @CHARZ (IE. THIS IS DEFAULTED TO BY CHECKING METHOD)	*
		3156+	*	THE SPECIFIC INSTRUCTIONS WHICH REQUIRE MODIFICATION IF THESE	*
		3157+	*	PROPERTIES OF THE CHARACTER SET ARE CHANGED MAY BE IDENTIFIED BY:	*
		3158+	*	* SAL200 - FOR THE THREE SPECIAL CHARACTERS	*
		3159+	*	* SAL250 - FOR THE REMAINING ALPHABETIC RANGE	*
		3160+	*	* SAL425 - BRANCHES 'TO' THIS LOCATION IMPLY DEFAULT TO NUMERIC	*
		3161+	*		*
		3162+	*	NOTES	*
		3163+	*	ERROR PROCEDURES	*
		3164+	*	THE FOLLOWING ERROR CONDITIONS WILL RESULT IN AN ERROR CODE	*
		3165+	*	BEING SET IN \$CAERR AND AN ERROR EXIT BEING MADE (SEE EDITS,	*
		3166+	*	ERROR):	*
		3167+	*	* A NON-ALPHABETIC FIRST CHARACTER WHEN ENTRY WAS AT	*
		3168+	*	SALPH8.	*
		3169+	*	* A NON-ALPHAMERIC CHARACTER EMBEDDED IN A PARAMETER WHICH	*
		3170+	*	SALPH8 WAS CALLED TO CHECK.	*
		3171+	*	* A NON-ALPHAMERIC CHARACTER BEING FIRST OR EMBEDDED IN A	*
		3172+	*	PARAMETER WHICH SALPH6 WAS CALLED TO CHECK.	*
		3173+	*	* A PARAMETER OF GREATER THAN EIGHT CHARACTERS WHEN ENTRY	*
		3174+	*	WAS AT SALPH8.	*
		3175+	*	* A PARAMETER OF GREATER THAN SIX CHARACTERS WHEN ENTRY	*
		3176+	*	WAS AT SALPH6.	*
		3177+	*		*
		3178+	*	REGISTER USAGE	*
		3179+	*	INDEX REGISTER 1 (@BR) IS USED AS A BASE REGISTER THROUGHOUT	*
		3180+	*	THE EXECUTION OF THE MODULE. IT IS SAVED FOR THE CALL PROGRAM	*
		3181+	*	UPON ENTRY AND RESTORED UPON EXIT.	*
		3182+	*	INDEX REGISTER 2 (@XR) IS USED AS A PARAMETER PASSING REGISTER.	*
		3183+	*	UPON ENTRY IT CONTAINS THE ADDRESS OF THE LEFTMOST BYTE OF	*
		3184+	*	PARAMETER TO BE SYNTAX CHECKED AND UPON EXIT IT CONTAINS THE	*

SALPHA - SYNTAX CHECKER MODULE

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	11/11/22	PAGE	29
			3185+	*	ADDRESS OR THE FIRST NON-DELIMITER FOLLOWING THE PARAMETEP.	*			
			3186+	*	(NOTE ERROR EXISTS AND PROCEDURES),	*			
			3187+	*		*			
			3188+	*	SAVED/RESTORED AREAS	*			
			3189+	*	NONE	*			
			3190+	*		*			
			3191+	*	MODIFICATION CONSIDERATIONS	*			
			3192+	*	BECAUSE OF ITS CHARACTER CODE DEPENDENCY AND PARAMETER LENGTH	*			
			3193+	*	QUALIFICATIONS, ONE MUST TAKE SPECIAL CARE IN MODIFYING SALPHA,	*			
			3194+	*	ESPECIALLY THE CONSTANTS AND WORK AREAS AND THEIR RE-INITIAL,	*			
			3195+	*	IZATION. SALPHA IS MOST COMMONLY USED TO SYNTAX FILENAMES,	*			
			3196+	*	PASSWORDS, AND VOL-IDS AND IS THEREFORE USED BY THE MODULE	*			
			3197+	*	SUFFER (FILE SPECIFICATION SYNTAX CHECKER). THEREFORE, ANY	*			
			3198+	*	SIGNIFICANT CHANGE IN SALPHA WILL REQUIRE AN INVESTIGATION	*			
			3199+	*	into ITS USE AND IMPACT ON SUFFER.	*			
			3200+	*	SPECIAL NOTE: AN IRREGULAR USE OF SALPHA WHICH CAN BE	*			
			3201+	*	EFFECTED IS THE SYNTAY CHECK OF A PARAMETER WITH A MAXIMUM	*			
			3202+	*	OF 10 CHARACTERS. THIS IS DONE BY MODIFYING THE Q-CODE OF	*			
			3203+	*	THE INSTRUCTION AT SAL450 PRIOR TO ENTRANCE AT SALPH6, WITH	*			
			3204+	*	X'0A' OR ITS EQUIVALENT. (NOTE: ONE SUCH MODULE WHICH	*			
			3205+	*	USES THIS OPTION IS UINITL)	*			
			3206+	*		*			
			3207+	*	REQUIRED MODULES	*			
			3208+	*	SCANIT - DELIMITER SCAN ROUTINE	*			
			3209+	*	@DIREQ - SYSTEM LIBRARY DIRECTORY EQUATES	*			
			3210+	*	@ERMEQ - ERROR MESSAGE EQUATES	*			
			3211+	*	@FXDEQ - COMMON CORE LOCATIONS WITHIN THE SYSTEM NUCLEUS	*			
			3212+	*	@SYSEQ - COMMON SYSTEM SOFTWARE EQUATES	*			
			3213+	*		*			
			3214+	*	OTHER	*			
			3215+	*	N/A	*			
			3216+	*	*****	*			
			3218+	*	*****	*			
			3219+	*		*			
			3220+	*	SALPHA MODULE EQUATES	*			
			3221+	*		*			
			3222+	*	*****	*			
	0008		3223+	SALCT8 EQU	##LUEN	COUNT COMPARE FIELD			
			3224+	*					
	0006		3225+	SALCT6 EQU	@VOLID	COUNT COMPARE FIELD			
			3227+	*	*****	*			
			3228+	*		*			
			3229+	*	INITIALIZATION OF MODULE	*			
			3230+	*		*			
			3231+	*	*****	*			
			3233+	*SALPH8 ENTER CHECK	FILENAME OR PASSWORD				
	1197		3234+	SALPH8 EQU *	MODULE ENTRY POINT				
			3235+	*** END OF EXPANSION ***					
	1197	3A 80 1252	3237+	SBN	SALIDR,SAL008	SET ON SALPH8 INDR			
			3238+	*					
			3239+	*SALPH6 ENTER BASE-SALBSE,EXIT-SALND,@BR,,@ARR	VOL-ID CHECK				

SALPHA - SYNTAX CHECKER MODULE

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			11B7	3240+	USING	SALBSE,@BR	BASE ADDRESS SPECIFICATION
			119B	3241+SALPH6	EQU	*	MODULE ENTRY POINT
119B	34	01	124D	3242+	ST	SALND0+@OP1,@BR	SAVE ABA
119F	C2	01	11B7	3243+	LA	SALBSE,@BR	LOAD BASE RESISTER
11A3	74	08	9A	3244+	ST	SALND2+@OP1(,@BR),@ARR	SAVE RETURN ADDRESS
				3245+***	END OF	EXPANSION ***	
11A6	74	02	34	3247+	ST	SAL375+@OP1(,@BR),@XR	SAVE ERROR POINTER
				3249+*****			
				3250+*			*
				3251+*		INITIALIZE WORK AREAS AND VARIABLE INSTRUCTIONS	*
				3252+*			*
				3253+*****			
11A9	7C	40	A8	3254+SAL100	MVI	SALPR7(,@BR),@BLANK	BLANK OUT SALPAR FOR PROCESSING
11AC	5C	08	A7 A8	3255+	MVC	SALPR6(##LPEN+@B1,@BR),SALPR7(,@BR)	
11B0	7C	00	9C	3256+	MVI	SALCNT(,@BR),@ZERO	ZERO OUT COUNTER
11B3	5C	01	63 AA	3257+	MVC	SAL525+@OP1(2,@BR),SALPHS(,@BR)	MODIFY MOVE OF CHARACTER
				3259+*****			
				3260+*			*
				3261+*		CHECK EBCDIC CHARACTERS	*
				3262+*			*
				3263+*****			
				3264+*			
			11B7	3265+SALBSE	EQU	*	MODULE BASE ADDR
11B7	BD	5B	00	3266+SAL200	CLI	@ZERO(,@XR),@DOLAR	IS IT A '\$' ?
11BA	F2	81	32	3267+	JE	SAL400	YES, PROCESS CHARACTER
11BD	BD	7B	00	3268+	CLI	@ZERO(,@XR),@NUMBR	IS IT A '#' ?
11C0	F2	81	2C	3269+	JE	SAL400	YES, PROCESS CHARACTER
11C3	BD	7C	00	3270+	CLI	@ZERO(,@XR),@ASIGN	IS IT A '@' ?
11C6	F2	81	26	3271+	JE	SAL400	YES, PROCESS CHARACTER
				3272+*			
11C9	BD	C1	00	3273+	CLI	@ZERO(,@XR),@CHARA	IS IT AN ALPHA (A-Z) ?
11CC	F2	82	53	3274+SAL250	JL	SAL750	NO, CHECK FOR DELIMITERS
11CF	BD	E9	00	3275+	CLI	@ZERO(,@XR),@CHARZ	IS IT AN ALPHA (A-Z) ?
11D2	F2	04	1A	3276+	JNH	SAL400	YES, PROCESS CHARACTER
11D5	78	80	9B	3277+	TBN	SALIDR(,@BR),SAL008	ENTERED AT SALPH8 ?
11D8	F2	90	17	3278+	JF	SAL425	NO, CHECK IF NUMERIC
				3279+*			
11DB	78	01	9B	3280+	TBN	SALIDR(,@BR),SALFST	WAS FIRST CHAR FOUND ALPHA ?
11DE	3C	00	03CD	3281+	MVI	\$CAERR,@@E100	ALPHA CHAR REQUIRED--ERROR
11E2	F2	10	0D	3282+	JT	SAL425	YES, CONTINUE
11E5	75	04	16	3283+SAL350	L	SALERR(,@BR),@PSR	LOAD ERROR CODE - LOW
11E8	C2	02	0000	3284+SAL375	LA	*-*,@XR	RESTORE ERROR POINTER
11EC	F2	87	58	3285+	J	SAL800	TAKE ERROR FAIT
				3287+*****			
				3288+*			*
				3289+*		PROCESS ALPHAMERIC CHARACTER	*
				3290+*			*
				3291+*****			
11EF	7A	01	9B	3292+SAL400	SBN	SALIDR(,@BR),SALFST	SET ON ALPHA :NOR
				3293+*			
11F2	5E	00	9C 9E	3294+SAL425	ALC	SALCNT(1,@BR),SAL001(,@BR)	ADD 1 TO CHARACTER COUNTER
11F6	78	80	9B	3295+	TBN	SALIDR(,@BR),SAL008	WAS ENTRY AT SALPH8 ?

SALPHA - SYNTAX CHECKER MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	31
11F9	D0	90	52		3296+	BF	SAL450(,@BR)				NO, CHECK COUNT FOR VALUE OF SIX
11FC	7D	08	9C		3297+	CLI	SALCNT(,@BR),##LPEN				HAS COUNT EXCEEDED 8 ?
11FF	3C	02	03CD		3298+	MVI	\$CAERR,@E102				PASSWORD/FILENAME LENGTH ERROR
1203	D0	84	2E		3299+	BH	SAL350(,@BR)				YES, TAKE ERROR EXIT
1206	F2	87	0A		3300+	J	SAL500				NO, CONTINUE PROCESSING
1209	7D	06	9C		3301+	SAL450 CLI	SALCNT(,@BR),@VOLID				HAS COUNT EXCEEDED 6 ?
120C	3C	03	03CD		3302+	MVI	\$CAERR,@E103				INVALID VOL-ID LENGTH
1210	D0	84	2E		3303+	BH	SAL350(,@BR)				YES, TAKE ERROR EXIT
					3305+*						
					3306+*		MODIFY MOVE OF CHARACTER				
					3307+*						
1213	5E	01	63 9E		3308+	SAL500 ALC	SAL525+@OP1(2,@BR),SAL001(,@BR)				
1217	2C	00	0000 00		3309+	SAL525 MVC	*-*,@ZERO(1,@XR)				MOVE CHARACTER TO OUTPUT AREA
121C	E2	02	01		3310+	LA	@B1(,@XR),@XR				INCREMENT XR BY I
121F	D0	87	00		3311+	B	SAL200(,@BR)				CHECK NEXT CHARACTER
					3313+*****						
					3314+*						*
					3315+*		CHECK ERRORS AND BYPASS DELIMITERS				*
					3316+*						*
					3317+*****						
1222	7D	00	9C		3318+	SAL750 CLI	SALCNT(,@BR),@ZERO				ANY VALID CHARACTERS ?
1225	3C	10	03CD		3319+	SAL755 MVI	\$CAERR,@E130				REQUIRED PARAM MISSING
1229	F2	01	17		3320+	JNE	SAL775				YES, BYPASS DELIMITERS, EYIT
122C	BD	1E	00		3321+	CLI	@ZERO(,@XR),@EOS				IS IT EOS ?
122F	F2	81	0E		3322+	JE	SAL760				YES, ERROR EVIL
1232	78	80	9B		3323+	TBN	SALIDR(,@BR),SAL008				ENTERED AT SALPH8 ?
1235	3C	00	03CD		3324+	MVI	\$CAERR,@E100				ALPHABETIC CHAR REQUIRED
1239	F2	10	04		3325+	JT	SAL760				ERROR EYIT
123C	3C	01	03CD		3326+	MVI	\$CAERR,@E101				ALPHAMERIC CHAR REQUIRED
1240	D0	87	2E		3327+	SAL760 B	SAL350(,@BR)				ERROR EYIT
1243	C0	87	1065		3328+	SAL775 B	SCANIT				BYPASS DELIMITERS
					3330+*****						
					3331+*						*
					3332+*		SET OFF INDICATORS FOR POSSIBLE SALDHA RE-ENTRY				*
					3333+*						*
					3334+*****						
1247	7C	00	9B		3335+	SAL800 MVI	SALIDR(,@BR),@ZERO				
					3337+*****						
					3338+*						*
					3339+*		END OF MODULE PROCESSING				*
					3340+*						*
					3341+*****						
					3342+*	SALND EXIT	@BR,,RETURN				EXIT
124A	C2	01	0000		3343+	SALND0 LA	*-*,@BR				RESTORE @BR
124E	C0	87	0000		3344+	SALND2 B	*-*				RETURN TO CALLING PROGRAM
					3345+***	END OF EXPANSION	***				
					3347+*****						
					3348+*						*
					3349+*		DATA CONSTANTS, BUFFERS, AND WORK AREAS				*
					3350+*						*
					3351+*****						

SALPHA - SYNTAX CHECKER MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	32
1252				1252	3352+	SALIDR DS	CL1				1 BYTE OF FLAGS
1252					3353+	ORG	*-1				
1252	00			1252	3354+	DC	XL1'00'				INITIALIZED TO ZERO
				0080	3356+	SAL008 EQU	X'80'				ENTRY POINT INDICATOR
					3357+	*					* 0 - ENTERED AT SALPH6
					3358+	*					* 1 - ENTERED AT SALPH8
				0001	3359+	SALFST EQU	X'01'				FIRST CHARACTER IS ALPHA / INDR
					3360+	*					* 0 - CHARACTER IS NOT ALPHA
					3361+	*					* 1 - CHARACTER IS ALPHA
1253				1253	3362+	SALCNT DS	CL1				BYTE CHARACTER COUNTER
1253					3363+	ORG	*-1				
1253	00			1253	3364+	DC	XL1'00'				INITIALIZED TO ZERO
1254	0001			1255	3365+	SAL001 DC	XL2'0001'				COUNTER INCREMENT
				1256	3366+	SALPHR EQU	*				
1256				125F	3367+	DS	CL(##LUEN+2*@B1)				SYNTAX SAVE UNIT
1260	1255			1261	3368+	SALPHS DC	AL2(SALPHR-1)				ADDR FOR MODIFYING MOVE
				125F	3369+	SALPR7 EQU	SALPHR+##DPEN+2*@B1				ADDR IN SALPHR FOR CLANKINS
				125E	3370+	SALPR6 EQU	SALPHR+##DPEN+@B1				* OUT THE FIELD
				11CD	3371+	SALERR EQU	SAL250+@Q				ADDR ERROR CODE FOR LOAD
					3372+	***					END OF SALPHA ***

SUTOBA - SWITCH SYSTEM MODE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 33
		3374		*****	*
		3375	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		3376	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		3377	*		*
		3378		*****	*
		3379	*	*STATUS	*
		3380	*	VERSION 1 MODIFICATION 0	*
		3381	*		*
		3382	*	*FUNCTION	*
		3383	*	SUTOBA IS RESPONSIBLE FOR CHANGING THE APPROPRIATE INDICATORS AND	*
		3384	*	DISK ADDRESSES FOR #GUFUD AND #ERRPG, DEPENDING ON THE STATUS OF	*
		3385	*	THE NUCLEUS WORKAREA INDICATORS. \$NWRKR AND \$NWRFT.	*
		3386	*		*
		3387	*	*ENTRY POINTS	*
		3388	*	* THE ENTRY POINT IS SUTOBA.	*
		3389	*	* THE CALLING SEQUENCE IS AS FOLLOWS:	*
		3390	*	B SUTOBA	*
		3391	*		*
		3392	*	*INPUT	*
		3393	*	INPUT TO SUTOBA IS THE STATUS OF \$NWRKR AND \$NWRFT, THE WORKAREA	*
		3394	*	INDICATORS.	*
		3395	*		*
		3396	*	*OUTPUT	*
		3397	*	OUTPUT FROM SUTOBA IS THE CORRECT SYSTEM MODE AND THE CORRECT	*
		3398	*	DISK ADDRESSES OF #GUFUD AND #ERRPG IN THE NUCLEUS SET.	*
		3399	*		*
		3400	*	*EYTERWAL REFERENCES	*
		3401	*	* \$CAERR - ERROR CODE SAVE AREA	*
		3402	*	* \$INDR3 - NUCLEUS BYTE CONTAINING \$NWRKR AND \$NWRKF, THE	*
		3403	*	WORKAREA INDICATORS	*
		3404	*	* \$INDR2 - NUCLEUS BYTE CONTAINING \$CMODE. SYSTEM MODE INDICATOR	*
		3405	*	* \$GUFIO - LOCATION IN NUCLEUS OF DISK ADDRESS OF #GUFUD	*
		3406	*	* \$EQMAD - LOCATION IN NUCLEUS OF DISK ADDRESS OF #ERRPG	*
		3407	*	* \$BSADR - SYSTEM PROGRAM FILE BASE ADDRESS	*
		3408	*	* #@GUFU - WORKAREA ADDRESS OF #GUFUD	*
		3409	*	* #@ERRP - WORKAREA ADDRESS OF #ERRPG	*
		3410	*	* #SGUFU - SYSTEM PROGRAM FILE ADDRESS OF #GUFUD	*
		3411	*	* #SERRP - SYSTEM PROGRAM FILE ADDRESS OF #ERRPG	*
		3412	*		*
		3413	*	*EXITS,NORMAL	*
		3414	*	NORMAL EXIT FROM SUTOBA IS TO THE BYTE FOLLOWING THE BRANCH TO	*
		3415	*	SUTOBA IN THE CALLING ROUTINE.	*
		3416	*		*
		3417	*	*EXITS, ERROR	*
		3418	*	ERROR EXIT FROM SUTOBA IS TO THE USER-DEFINED LABEL, SUTERR.	*
		3419	*		*
		3420	*	*TABLES/NORKAREAS	*
		3421	*	NONE	*
		3422	*		*
		3423	*	*ATTRIBUTES	*
		3424	*	RELOCATABLE AND RE-USABLE	*
		3425	*		*
		3426	*	*CHARACTER CODE DEPENDENCY	*
		3427	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
		3428	*	INTERNAL REPRESENTATION OF THE ETTETNAI. CHARACTER SET.	*
		3429	*		*

SUTOBA - SWITCH SYSTEM MODE

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3430 *NOTES *
3431 *   ERROR PROCEDURES *
3432 *   SUTOBA DETECTS AN ERROR CONDITION IF THE SYSTEM MODE UPON ENTRY *
3433 *   IS BASIC AND THE CALLING ROUTINE HAS DELETED THE WOREAREA ON *
3434 *   EITHER R1 OR F1, WHEN THIS OCCURS, SUTOBA PLACES THE SYSTEM IN *
3435 *   UTILITY MODE AND EXITS TO THE USER-DEFINED LABEL, SUTERR, *
3436 *   WITH THE APPROPRIATE ERROR CODE SET IN $CAERR. *
3437 * *
3438 *   REGISTER USAGE *
3439 *   REGISTER 8 (@ARR) IS SAVED UPON ENTRY TO SUTOBA AND IS USED AS *
3440 *   THE RETURN ADDRESS TO THE CALLING ROUTINE. *
3441 * *
3442 *   SAVED/RESTORED AREAS *
3443 *   NONE *
3444 * *
3445 *   MODIFICATION CONSIDERATIONS *
3446 *   NONE *
3447 * *
3448 *   REQUIRED MODULES *
3449 *   * @SYSEQ - COMMON SYSTEM EQUATES *
3450 *   * @FXDEQ - NUCLEUS FIXED ADDRESS EQUATES *
3451 *   * @SPFEQ - SYSTEM PROGRAM FILE EQUATES FOR #GUFUD AND #ERRPG *
3452 *   * @ERMEQ - ERROR MESSAGE EQUATES (SELECTED ERROR CODES) *
3453 *   * @WKAEQ - SYSTEM WOREAREA EQUATES *
3454 * *
3455 *   OTHER *
3456 *   NONE *
3457 * *****

3459 *
3460 *   SWITCH TO BASIC MODE
3461 *
1262 34 08 12C4 1262 3462 SUTOBA EQU *   ENTRY POINT FOR SUTOBA
3463 ST SUT500+@OP1,@ARR   SAVE USERS RETURN ADDRESS
3464 *
1266 3C A1 03CD 3465 MVI $CAERR,@E572   NO WA ON F1-UTIL ENTERED ERR
126A 39 80 03D6 3466 TBF $INDR3,$NWRKF   IS A WORK AREA ON FIXED DISK ?
126E F2 90 0B 3467 JF SUT100   IF NOT, JUMP TO SET ERROR CODE
3468 *
1271 39 40 03D6 3469 TBF $INDR3,$NWRKR   IS A WORK AREA ON REMOVABLE DK ?
1275 F2 10 12 3470 JT SUT200   IF YES, SKIP SETTING ERROR CODE
3471 *
1278 3C A2 03CD 3472 MVI $CAERR,@E573   NO WA ON R1-UTIL ENTERED ERR
127C 38 02 03D5 3473 SUT100 TBN $INDR2,$CMODE   IS THIS BASIC MODE ?
1280 F2 90 1A 3474 JF SUT300   NO, GO PUT USER IN UTILITY MOE
3475 *
1283 3C 87 12BE 3476 MVI SUT400+@Q,@UCB   ELSE, SET SW TO TAKE ERROR EXIT
1287 F2 87 13 3477 J SUT300   JUMP INTO UTILITY SECTION
3478 *
128A 3A 02 03D5 3479 SUT200 SBN $INDR2,$CMODE   SET BASIC MODE INDR ON
128E 0C 01 0582 12C7 3480 MVC $GUFIO-1(@DADDR),SUTWGU   STORE WORK FILE ADDRESSES OF
1294 0C 01 0471 12C9 3481 MVC $ERMAD-1(@DADDR),SUTWER   * GUFUDI AND ERRPGM IN NUCLEUS
129A F2 87 20 3482 J SUT400   RETURN TO CALLING ROUTINE
3483 *
3484 *   SWITCH TO UTILITY MODE

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SUTOBA - SWITCH SYSTEM MODE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 35
					3485	*		
129D	3B	02	03D5		3486	SUT300 SBF	\$INDR2,\$CMODE	SET UTILITY MODE INDR ON
					3487	*		
12A1	0E	01	12CB 0587		3488		ALC SUTPGU(@DADDR),\$BSADR	INCR PROD FILE ADDRESSES OF
12A7	0E	01	12CD 0587		3489		ALC SUTPER(@DADDR),\$BSADR	* GUFUDI AND ERRPGM BY 4BSADR
					3490	*		
12AD	0C	01	0582 12CB		3491		MVC \$GUFIO-1(@DADDR),SUTPGU	STORE INCREMENTED ADDRESSES OF
12B3	0C	01	0471 12CD		3492		MVC \$ERMAD-1(@DADDR),SUTPER	* GUFUDI AND ERRPGM IN NUCLEUS
					3493	*		
12B9	31	10	12C5		3494		LIO SUTCL1,@CLOFF	TURN OFF COMMAND LIGHT ONE
12BD	C0	80	04A1		3495	SUT400 BC	SUTERR,@NOP+*-*	IF BASIC DESIRED AND UTILITY
					3496	*		* ENTERED. GO TO SUTERR
12C1	C0	87	0000		3497	SUT500 B	*-*	ELSE, RETURN TO USER
					3498	*		
					3499	*	CONSTANTS AND SAVE AREAS IN SOMA	
					3500	*		
12C5	01			12C5	3501	SUTCL1 DC	IL1'1'	KEY NO. FOR COMMAND LIGHT ONE
12C6	0401			12C7	3502	SUTWGU DC	AL(@DADDR)(#@GUFU)	SET UP CONSTANTS WHOSE ADDRESS
12C8	0441			12C9	3503	SUTWER DC	AL(@DADDR)(#@ERRP)	* IS THE WORK AREA ADDRESS
					3504	*		
				12CA	3505	SUT600 EQU	*	START OF GUFUDI SPF ADDR
12CA				12CB	3506	SUTPGU DS	AL(@DADDR)	AREA TO CONTAIN SYSTEM PROGRAM
12CA					3507	ORG	SUT600	* FILE DISK ADDRESS OF GUFUDI,
12CA	1880			12CB	3508	DC	AL(@DADDR)(#\$GUFU)	* INITIALLY
					3509	*		
				12CC	3510	SUT700 EQU	*	START OR ERRPSM SPF ADDR
12CC				12CD	3511	SUTPER DS	AL(@DADDR)	AREA TO CONTAIN SYSTEM PROGRAM.
12CC					3512	ORG	SUT700	* FILE DISK ADDRESS OF ERRPGM
12CC	18C0			12CD	3513	DC	AL(@DADDR)(#\$ERRP)	* INITIALLY

UALLOC UTKUSE - PROCESS THE TRACK USAGE MASK

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 36
			3515		*****	
			3516	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
			3517	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
			3518	*		*
			3519		*****	
			3520	*	STATUS	*
			3521	*	VERSION 1 MODIFICATION 0	*
			3522	*		*
			3523	*	FUNCTION	*
			3524	*	* UTKUSE IS A UTILITY ROUTINE USED TO PROCESS THE TRACK USAGE	*
			3525	*	MASK, WHICH IS LOCATED WITHIN THE VOLUME LABEL, LOCATED ON	*
			3526	*	CYLINDER 0 (SECTOR 2) OF EVERY DISK PACK.	*
			3527	*	* THE TRACK USAGE MASK IS A FIELD OF 51 BYTES WHICH CONTAINS A	*
			3528	*	MASK OF BITS IN A ONE-TO-ONE CORRESPONDENCE WITH EACH TRACK ON	*
			3529	*	THE DISK. IF THE BIT FOR A TRACK IS OFF, THE TRACK IS UNUSED. IF*	
			3530	*	THE BIT IS ON, THE TRACK HAS BEEN ASSIGNED OR IS NOT AVAILABLE.	*
			3531	*	THE LOGICAL ORDER OF THE BIT MASKS IS FROM RIGHT TO LEFT WITH	*
			3532	*	TWO BITS ASSIGNED TO EACH CYLINDER. THE RIGHTMOST BIT OF EACH	*
			3533	*	TWO BIT REFERENCES TRACK 0 OF THE CYLINDER AND TO ITS LEFT IS	*
			3534	*	TRACK 1 OF THE CYLINDER IN QUESTION,	*
			3535	*	* THE TYPES OF FUNCTIONS AVAILABLE ARE:	*
			3536	*	1. ASSIGN SPACE	*
			3537	*	2. RELEASE SPACE	*
			3538	*	3. TEST FOR SPACE AVAILABILITY	*
			3539	*	4. TEST FOR ABSOLUTE NON-AVAILABILITY OF SPACE	*
			3540	*	5. TEST FOR SPECIFIED CYLINDER SPACE AS CLOSE TO CYLINDER NUMBER*	
			3541	*	TEN (10) AS POSSIBLE	*
			3542	*		*
			3543	*	ENTRY POINTS	*
			3544	*	THE ENTRY POINTS TO UTKUSE ARE UTKINP OR UTKPRC DEPENDING UPON	*
			3545	*	WHETHER THE VOLUME LABEL IS READ OR NOT BEFORE PROCESSING THE	*
			3546	*	TRACK USAGE MASK	*
			3547	*		*
			3548	*	INPUT	*
			3549	*	THE INPUT IS THE READING OF THE VOLUME LABEL IF UTKINP IS THE	*
			3550	*	ENTRY POINT	*
			3551	*		*
			3552	*	OUTPUT	*
			3553	*	NONE	*
			3554	*		*
			3555	*	EXTERNAL REFERENCES	*
			3556	*	TKSYLN - INITIAL CYLINDER NUMBER TO PROCESS	*
			3557	*	TKSCYL - NUMBER OF CYLINDERS TO PROCESS	*
			3558	*	TKSADR - CORE ADDRESS OF VOLUME LABEL	*
			3559	*	\$DISKN - DISK IOCR	*
			3560	*		*
			3561	*	EXITS, NORMAL	*
			3562	*	NORMAL EXIT IS BACK TO THE CALLING ROUTINE WITH THE PSR REGISTER	*
			3563	*	SET TO TRUE	*
			3564	*		*
			3565	*	EXITS, ERROR	*
			3566	*	ERROR EXIT IS BACK TO THE CALLING ROUTINE WITH THE PSR REGISTER	*
			3567	*	SET TO FALSE	*
			3568	*		*
			3569	*	TABLES/WORK AREAS	*
			3570	*	CONSTANTS AND THE DPL LIST TO INPUT THE VOLUME LABEL ARE LOCATED	*

UALLOC UTKUSE - PROCESS THE TRACK USAGE MASK

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 37
			3571 *	AT THE END OF THE EXECUTABLE CODE	*
			3572 *		*
			3573 *	ATTRIBUTES	*
			3574 *	RELOCATABLE AND REUSABLE	*
			3575 *		*
			3576 *	CHARACTER CODE DEPENDENCE	*
			3577 *	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
			3578 *	INTERNAL REPRESENTATION OR THE EXTERNAL CHARACTER SET	*
			3579 *		*
			3580 *	NOTES	*
			3581 *	ERROR PROCEDURES	*
			3582 *	UTKUSE IS EXITED WITH THE PSR SET TO FALSE IF:	*
			3583 *	1. ILLEGAL NUMBER OF CYLINDERS TO PROCESS.	*
			3584 *	2. ILLEGAL INITIAL CYLINDER NUMBER.	*
			3585 *	3. THE END OF THE TRACK USAGE MASK IS ENCOUNTERED BEFORE ALL	*
			3586 *	CYLINDERS HAVE BEEN PROCESSED.	*
			3587 *		*
			3588 *	REGISTER USAGE	*
			3589 *	INDEX REGISTER 1 (@BR), INDEX REGISTER 2 (@XR), AND THE ARR	*
			3590 *	REGISTERS ARE SAVED AND RESTORED. THE INDEX REGISTER 2 (@XR)	*
			3591 *	IS USED.	*
			3592 *		*
			3593 *	SAVED/RESTORED AREAS	*
			3594 *	NONE	*
			3595 *		*
			3596 *	MODIFICATION CONSIDERATIONS	*
			3597 *	NONE	*
			3598 *		*
			3599 *	REQUIRED MODULES	*
			3600 *	@SYSEQ - COMMON SYSTEM EQUATES	*
			3601 *	TVSAVE - VTOC COMMON SAVE AREAS AND EQUATES	*
			3602 *	TKSAVE - VOLUME LABEL COMMON SAVE AREAS AND EQUATES	*
			3603 *		*
			3604 *	OTHER	*
			3605 *	NONE	*
			3606 *	*****	*
			3608 *	UTKUSE ENTER EXIT-UTKED,@BR,@XR,@ARR	
		12CE	3609	UTKUSE EQU *	MODULE ENTRY POINT
12CE	34 01 13DD		3610	ST UTKED0+@OP1,@BR	SAVE @BR
12D2	34 02 13E1		3611	ST UTKED1+@OP1,@XR	SAVE @XR
12D6	34 08 13E5		3612	ST UTKED2+@OP1,@ARR	SAVE RETURN ADDRESS
			3613	*** END OF EXPANSION ***	
12DA	C0 87 13E6		3614	UTK025 B UTKREP	BRANCH TO HUAD DISK
12DE	F2 87 0C		3615	J UTK070	JUMP TO PROCESS MASK
			3616	*UTK050 ENTER EXIT-UTKEDAR,@XR,@ARR	
		12E1	3617	UTK050 EQU *	MODULE ENTRY POINT
12E1	34 01 13DD		3618	ST UTKED0+@OP1,@BR	SAVE @BR
12E5	34 02 13E1		3619	ST UTKED1+@OP1,@XR	SAVE @XR
12E9	34 08 13E5		3620	ST UTKED2+@OP1,@ARR	SAVE RETURN ADDRESS
			3621	*** END OF EXPANSION ***	
			3622	*	
			3623	*	
			3624	FOLLOWING CHECKS FOR VALID #CYLINDERS/	
			3625	CYLINDER #	

UALLOC UTKUSE - PROCESS THE TRACK USAGE MASK

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 38
	12ED	3C 00	1418		3626	UTK070	MVI UTKDEF,@ZERO	ZERO DEFAULT FLAG
	12F1	0C 00	1419 142F		3627		MVC UTKFLS(UTKUPD),TKSYLN	SAVE FILE NAME
	12F7	3D FF	142F		3628		CLI TKSYNL,UTKFLG	DEFAULT CASE ?
	12FB	F2 01	08		3629		JNE UTK075	JUMP IF NOT A DEFAULT
	12FE	3C FF	1418		3630		MVI UTKDEF,UTKFLG	SET FLAG FOR DEFAULT
	1302	3C 0A	142F		3631		MVI TKSYNL,UTKTEN	SET CYL # TO 10
	1306	0D 00	140C 1430		3632	UTK075	CLC UTKONE(UTKUPD),TKSCYL	VALID # CYLINDERS ?
	130C	F2 84	BD		3633		JH UTK600	FORCE ERROR EXIT
	130F	0D 00	1410 1430		3634		CLC UTKLIM(UTKUPD),TKSCYL	VALID # CYLINDERS ?
	1315	F2 82	B4		3635		JL UTK600	FORCE ERROR EMIT
					3636	*		
					3637	*	INITIALIZE FOR TRACK USAGE MASK ALGORITHM	
					3638	*		
	1318	0C 00	1417 142F		3639	UTK080	MVC UTKCNT(UTKUPD),TKSYLN	SET UP CYLINDER COUNT
	131E	3C 00	140E		3640		MVI UTKCYL,@ZERO	CLEAR CYLINDER COUNT
	1322	0C 00	1365 142F		3641		MVC UTK300+4(UTKUPD),TKSYLN	MOVE CYLINDER #
	1328	3C FF	140A		3642		MVI UTKCHK,UTKFLG	SET FLAG FOR SUCESSFUL EXIT
	132C	0C 01	136D 1432		3643		MVC UTK400+3(@CADDR),TKSADR	SET UP TOP OF VOL LABEL
	1332	0E 01	136D 1414		3644		ALC UTK400+3(@CADDR),UTKLBB	POINT TO TRACK USAGE MASK
	1338	0C 01	1412 136D		3645		MVC UTKEND(@CADDR),UTK400+3	MOVE SART OF MASK
	133E	0F 01	1412 1416		3646		SLC UTKEND(@CADDR),UTKFAR	CALCULATE END OF MASK
					3647	*		
					3648	*	FOLLOWING PERFORMS ALGORITHM:	
					3649	*	DIVIDE CYLINDER # BY 4	
					3650	*	QUOTIENT = INIT DISP. WITHIN TRACK USAGE MASK	
					3651	*	REMAINDER = INIT DISPLACEMENT WITHIN CYL TABLE	
					3652	*		
	1344	0D 00	1365 140D		3653	UTK100	CLC UTK300+4(UTKUPD),UTKFOR	REMAINDER < 4 ?
	134A	F2 82	10		3654		JL UTK250	JUMP IF REM < 4
	134D	0F 00	1365 140D		3655	UTK200	SLC UTK300+4(UTKUPD),UTKFOR	SUBTRACT '4' FROM CYLINDER #
	1353	0F 01	136D 140C		3656		SLC UTK400+3(@CADDR),UTKONE	MOVE POINTER TO NEYT
	1359	C0 87	1344		3657		B UTK100	BRANCH TO CONTINUE PROCESS
					3658	*		
					3659	*	FOLLOWING SCANS TRACK USAGE MASK PERFORMING	
					3660	*	FUNCTION SPECIFIED WITH BOUNDS CHECKS	
					3661	*		
	135D	C2 02	1406		3662	UTK250	LA UTKTBL,@XR	POINT XR TO TOP OF CYLINDER TOL
	1361	2C 00	136B 00		3663	UTK300	MVC UTK400+1(UTKUPD),*-*(@XR)	MOVE RELATIVE BIT TEST
	1366	38 01	140C		3664		TBN UTKONE,UTKUPD	FORCE PSR EQUAL
	136A	38 80	0000		3665	UTK400	TBN *-*,@NOP	PERFORM FUNCTION REQUESTED
	136E	F2 10	1A		3666		JT UTK500	JUMP IF CONDITION TRUE
	1371	38 FF	1418		3667		TBN UTKDEF,UTKFLG	DEFAULT FLAG SET ?
	1375	F2 90	54		3668		JF UTK600	JUMP IF NOT A DEFAULT
	1378	0E 00	142F 140C		3669		ALC TKSYNL(UTKUPD),UTKONE	INCREMENT CYLINDER POINTER
	137E	0D 00	142F 1410		3670		CLC TKSYNL(UTKUPD),UTKLIM	CYLINDER # WITHIN LIMITS ?
	1384	F2 81	45		3671		JE UTK600	JUMP TO ERROR PROGH
	1387	C0 87	1318		3672		B UTK080	BRANCH TO FOR REQRUSIVE SEW,"
	138B	0E 00	140E 140C		3673	UTK500	ALC UTKCYL(UTKUPD),UTKONE	UPDATE CYLINDER COUNT
	1391	0D 00	140E 1430		3674		CLC UTKCYL(UTKUPD),TKSCYL	COMPARE CYL COUNT WITH # CYLS
	1397	F2 81	36		3675		JE UTK650	JUMP IF COMPLETED ALL CYLS
	139A	0E 00	1417 140C		3676		ALC UTKCNT(UTKUPD),UTKONE	INCREMENT CYL COUNT
	13A0	0E 00	1365 140C		3677		ALC UTK300+4(UTKUPD),UTKONE	INCREMENT DISPLACEMENT
	13A6	0D 01	136D 1412		3678		CLC UTK400+3(@CADDR),UTKEND	END OF TRACK USAGE MASK ?
	13AC	F2 01	07		3679		JNE UTK525	JUMP IF NOT AT END
	13AF	3D 03	1365		3680		CLI UTK300+4,UTKTRE	VERY LAST CYL ?
	13B3	F2 81	16		3681		JE UTK600	JUMP IF LAST CYLINDER

UALLOC UTKUSE - PROCESS THE TRACK USAGE MASK

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 39
	13B6	3D 04	1365		3682	UTK525	CLI UTK300+4,UTKBOT	BOTTOM OF CYL TABLE ?
	13BA	C0 01	1361		3683		BNE UTK300	BRANCH IF NOT AT BOTTOM
	13BE	3C 00	1365		3684		MVI UTK300+4,@ZERO	MOVE POINTER TO TOP OF CYL TBL
	13C2	0F 01	136D 140C		3685		SLC UTK400+3(@CADDR),UTKONE	UPDATE POINTER
	13C8	C0 87	1361		3686	UTK550	B UTK300	GO PROCESS NEXT ENTRY
	13CC	3C 00	140A		3687	UTK600	MVI UTKCHK,@ZERO	FORCE UNSUCCESSFUL EXIT
					3688	*		
					3689	*		
					3690	*	FOLLOWING CHECK FOR RELEASE/ASSIGN FUNCTION	
					3691	*	AND WRITES VOLUMN LABEL TO DISK IF NOT	
					3692	*	A TEST FUNCTION	
	13D0	38 FF	140A		3693	UTK650	TBN UTKCHK,UTKFLG	TEST FLAG FOR E'!T
	13D4	0C 00	142F 1419		3694		MVC TKSYN(UTKUPD),UTKFLS	RESTORE FILE NAME
					3695	*UTKED	EXIT @BR,@XR,RETURN	
	13DA	C2 01	0000		3696	UTKED0	LA *-*,@BR	RESTORE @BR
	13DE	C2 02	0000		3697	UTKED1	LA *-*,@XR	RESTORE @XR
	13E2	C0 87	0000		3698	UTKED2	B *-*	RETURN TO CALLING PROGRAM
					3699	***	END OF EXPANSION ***	
					3700	*		
					3701	*	FOLLOWING ROUTINE READ/WRITES VOLUMN	
					3702	*	LABEL TO DISK	
					3703	*		
	13E6	34 08	1405		3704	UTKREP	ST UTKSTP+3,@ARR	SAVE ARR FOR RETURN
	13EA	0C 01	141F 1432		3705		MVC UTKAD1+5(@CADDR),TKSADR	SET UP DATA ADDRESS
	13F0	0C 01	141C 1434		3706		MVC UTKAD1+2(@CADDR),TKSDSK	SET UP DISK ADDRESS
					3707	*UTKOUT	DISK URKADI-WAIT	WRITE/READ DISK & WAIT
	13F6	C0 87	0025		3708	UTKOUT	B \$DISKN	PERFORM PHYSICAL DISC OP
	13FA	141A		13FB	3709		DC AL2(UTKAD1)	DPL ADDRESS
	13FC	C0 87	0025		3710		B \$DISKN	WAIT AND CHECK DISK ERRORS
	1400	057F		1401	3711		DC AL2(\$WAITF)	WAIT DPL ADDRESS
					3712	***	END OF EYPANSION ***	
	1402	C0 87	0000		3713	UTKSTP	B *-*	RETURN TO CALL
					3714	*		
					3715	*	CONSTANTS USED IN UTKUSE	
					3716	*		
	1406	03		1406	3717	UTKTBL	DC XL1'03'	CYLINDER TABLE TO CHECK
	1407	0C		1407	3718		DC XL1'0C'	EACH TWO-BIT ENTRY IN
	1408	30		1408	3719		DC XL1'30'	EACH BYTE OF THE TRACK
	1409	C0		1409	3720		DC XL1'C0'	USEAGE MASK
	140A			140A	3721	UTKCHK	DS CL1	EXIT FLAG
	140B	0001		140C	3722	UTKONE	DC IL2'1'	UPDATE FACTOR
	140D	04		140D	3723	UTKFOR	DC IL1'4'	DIVISION FACTOR
	140E			140E	3724	UTKCYL	DS CL1	CYLINDER COUNT
	140F	00		140F	3725	UTKZER	DC IL1'00'	MIN CYL #
	1410	CB		1410	3726	UTKLIM	DC IL1'203'	MAX # CYLINDERS
	1411			1412	3727	UTKEND	DS CL(@CADDR)	TEMPORARY SAVE AREA
	1413	00A8		1414	3728	UTKLBB	DC AL2(\$#TUSE)	DISPLACEMENT OF TRACK
	1415	0032		1416	3729	UTKFAR	DC AL2(UTKLST)	LENGTH OF MASK
	1417			1417	3730	UTKCNT	DS CL1	PRESENT CYLINDER #
	1418			1418	3731	UTKDEF	DS CL1	CYL# 10 DEFAULT FLAG
	1419			1419	3732	UTKFLS	DS CL1	TKSYLN TEMPORARY SAVE
					3733	*		
					3734	*	DPL OF PARAMETER LIST TO READ/WRITE	
					3735	*	VOLUMN LABEL TO DISK	
					3736	*		
					3737	*UTKAD1	DPL FUNC-@DGET,DADDR-#VOLR1,CNT-#@VLAB	

UALLOC UTKUSE - PROCESS THE TRACK USAGE MASK

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 40
			141A	3738	UTKAD1 EQU	*	DISK PARAMETER LIST
141A	01		141A	3739	DC	AL1(@DGET)	REQUESTED FUNCTION
141B	0008		141C	3740	DC	AL2(#VOLR1)	DISK ADDRESS
141D	01		141D	3741	DC	AL1(#@VLAB)	SECTOR COUNT
141E	0000		141F	3742	DC	AL2(*-*)	BUFFER ADDRESS
				3743	***	END OF EXPANSION ***	
				3744	*		
				3745	*	EQUATES USED IN UTKUSE	
				3746	*		
			0001	3747	UTKUPD EQU	1	UPDATE FACTOR
			12E1	3748	UTKPRC EQU	UTK050	ENTRY POINT TO
				3749	*		BYPASS DISK READ
			12CE	3750	UTKINP EQU	UTKUSE	ENTRY POINT TO READ DISK
			136A	3751	UTKTYP EQU	UTK400	TYPE OF FUNCTION TO PERFORM
			0038	3752	UTKTBN EQU	X'38'	TEST FOR ALLOCATION OF SPACE
			0039	3753	UTKTBF EQU	X'39'	TEST FOR NON-ALLOCATION
			003A	3754	UTKSBN EQU	X'3A'	ASSIGN DISK SPACE
			003B	3755	UTKSBF EQU	X'3B'	RELEASE DISK SPACE
			0004	3756	UTKBOT EQU	4	BOTTOM OF CYLINDER TABLE
			00FF	3757	UTKFLG EQU	X'FF'	EXIT FLAG
			0032	3758	UTKLST EQU	X'32'	END OF MASK
			0003	3759	UTKTRE EQU	3	LAST CYL# BIT POSIT
			000A	3760	UTKTEN EQU	X'0A'	CYLINDER #10 DEFAULT

UTKUSE - TRACK USAGE MASK PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 41
		3762		*****	
		3763	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		3764	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		3765	*		*
		3766		*****	
		3767	*	*STATUS	*
		3768	*	VERSION 1 MODIFICATION 0	*
		3769	*		*
		3770	*	*FUNCTION	*
		3771	*	* TKSARE IS A COMMON SAVE ARE AND EQUATE MAODULE USED TP PROVIDE	*
		3772	*	COMMUNICATION BETWEEN MODULES AND THE VOLUME LABEL.	*
		3773	*	* TKSARE IS USED AS A PARAMETER HOLDER MODULE FOR MODULES USING	*
		3774	*	THE MODULE UTVTOC (VTOC ROUTINES)	*
		3775	*	* THE PARAMETERS PASSED TO TKSARE BY THE VTOC ROUTINE USERS	*
		3776	*	ARE AS FOLLOWS: BIS FILES INDICATOR, INITIAL CYLINDER NUMBER,	*
		3777	*	NUMBER OF CYLINDERS TO PROCESS, CORE ADDRESS OF VOLUME LABEL,	*
		3778	*	DISK ADDRESS OF VOLUME LABEL.	*
		3779	*		*
		3780	*	*ENTRY POINTS	*
		3781	*	NONE	*
		3782	*		*
		3783	*	*INPUT	*
		3784	*	NONE	*
		3785	*		*
		3786	*	*OUTPUT	*
		3787	*	NONE	*
		3788	*		*
		3789	*	*EXTERNAL REFERENCES	*
		3790	*	NONE	*
		3791	*		*
		3792	*	*EXITS, NORMAL	*
		3793	*	NONE	*
		3794	*		*
		3795	*	*EXITS, ERROR	*
		3796	*	NONE	*
		3797	*		*
		3798	*	*TABLES/WORK AREAS	*
		3799	*	NONE	*
		3800	*		*
		3801	*	*ATTRIBUTES	*
		3802	*	NONE	*
		3803	*		*
		3804	*	*CHARACTER CODE DEPENDENCY	*
		3805	*	NONE	*
		3806	*		*
		3807	*	*NOTES	*
		3808	*	ERROR PROCEDURES	*
		3809	*	NONE	*
		3810	*		*
		3811	*	REGISTER USAGE	*
		3812	*	NONE	*
		3813	*		*
		3814	*	SAVED/RESTORED AREAS	*
		3815	*	NONE	*
		3816	*		*
		3817	*	MODIFICATION CONSIDERATIONS	*

UTKUSE - TRACK USAGE MASK PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	42
		3818	*		NONE				*
		3819	*						*
		3820	*		REQUIRED MODULES				*
		3821	*		NONE				*
		3822	*						*
		3823	*		OTHER				*
		3824	*		NONE				*
		3825	*****						
		1420	3827	TKSAVE	EQU *				START OF VOLUMM LABEL AREA
		1421	3828	TKSVTC	EQU TKS	SAVE+1			VTOL POINTER
		1422	3829	TKSPTG	EQU TKS	SVTC+1			PTF VTOL TAG NO.
		1423	3830	TKSPTZ	EQU TKS	PTG+1			PTF SIZE
		1425	3831	TKSPAD	EQU TKS	PTZ+2			PTF DADDR
		1426	3832	TKSLSZ	EQU TKS	PAD+1			LIBRARY SIZE
		1427	3833	TKSLTG	EQU TKS	LSZ+1			LIBRARY VTOL TAG NO.
		1428	3834	TKSWAT	EQU TKS	LTG+1			WORK AREA VTOL NO.
		1429	3835	TKSSPF	EQU TKS	WAT+1			SYS.PROG.FILE VTOL NO.
		142B	3836	TKSBIS	EQU TKS	SPF+2			BIS SYSTEM FILE DADDR
		142D	3837	TKSBLD	EQU TKS	BIS+2			BIS USER LIBRARY DADDR
		142E	3838	TKSBFI	EQU TKS	BLD+1			BIS FILES INN
		142F	3839	TKSYLN	EQU TKS	BFI+1			CYLINDER #
		1430	3840	TKSCYL	EQU TKS	YLN+1			# CYLINDERS
		1432	3841	TKSADR	EQU TKS	CYL+2			DADDR OF VOLUMN LABEL
		1434	3842	TKSDSK	EQU TKS	ADR+2			DISK ADDRESS
1420			3843		ORG	TKSAVE			
1420	4040404040404040	1435	3844	TKSLNK	DC	22CL1' '			INITIALIZE AREA TO BLANKS

UALLOC ?????? - ????

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 43
		3846		*****	
		3847	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		3848	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		3849	*		*
		3850		*****	
		3851	*	*STATUS	*
		3852	*	VERSION 1 MODIFICATION 0	*
		3853	*		*
		3854	*	*FUNCTION	*
		3855	*	* TVSAVE IS A COMMON SAVE AREA AND EQUATE MODULE USED TO PROVIDE	*
		3856	*	COMMUNICATION BETWEEN MODULES AND THE VTOC (VOLUME TABLE OF	*
		3857	*	CONTENTS),	*
		3858	*	* TVSAVE IS USED AS A PARAMETER HOLDER MODULE FOR MODULES USING	*
		3859	*	THE MODULE UTVTOC (VTOC ROUTINES).	*
		3860	*	* THE PARAMETERS PASSED TO TVSAVE BY THE VTOC ROUTINE USERS	*
		3861	*	ARE AS FOLLOWS: FILE NAME. DISK ADDRESS OF VTOC INDEX.	*
		3862	*		*
		3863	*	*ENTRY POINTS	*
		3864	*	NONE	*
		3865	*		*
		3866	*	*INPUT	*
		3867	*	NONE	*
		3868	*		*
		3869	*	*OUTPUT	*
		3870	*	NONE	*
		3871	*		*
		3872	*	*EXTERNAL REFERENCES	*
		3873	*	NONE	*
		3874	*		*
		3875	*	*EXITS, NORMAL	*
		3876	*	NONE	*
		3877	*		*
		3878	*	*EXITS, ERROR	*
		3879	*	NONE	*
		3880	*		*
		3881	*	*TABLES/WORK AREAS	*
		3882	*	NONE	*
		3883	*		*
		3884	*	*ATTRIBUTES	*
		3885	*	NONE	*
		3886	*		*
		3887	*	*CHARACTER CODE DEPENDENCY	*
		3888	*	NONE	*
		3889	*		*
		3890	*	*NOTES	*
		3891	*	ERROR PROCEDURES	*
		3892	*	NONE	*
		3893	*		*
		3894	*	REGISTER USAGE	*
		3895	*	NONE	*
		3896	*		*
		3897	*	SAVED/RESTORED AREAS	*
		3898	*	NONE	*
		3899	*		*
		3900	*	MODIFICATION CONSIDERATIONS	*
		3901	*	NONE	*

UALLOC ?????? - ????

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	11/11/22	PAGE	44
					3902	*					*
					3903	*	REQUIRED MODULES				*
					3904	*	NONE				*
					3905	*					*
					3906	*	OTHER				*
					3907	*	NONE				*
					3908	*****					
				1436	3910	TVSTRT	EQU *				START OR VTOC INDEV
				143E	3911	TVSFIL	EQU TVSTRT+8				FILE NAME PER SE
				1440	3912	TVSDAD	EQU TVSFIL+2				DAADR OF VTOC INDEX
				1442	3913	TVSDSK	EQU TVSDAD+2				DISK ADDRESS OF VTOC INDEX
1436					3914		ORG TVSTRT				
1436	4040404040404040			1443	3915		DC 14CL1' '				INITIALIZE AREA TO BLANKS
					3916	***	END OF EXPANSION ***				
					3917	*	PATCH				
					3918	*****					
					3919	*	PATCH AREA #1				*
					3920	*****					
					3921	*					
					3922	***	CALCULATE AREA LEFT IN THIS SECTOR				
					3923	*					
1500				1444	3924	\$\$\$\$L1	EQU *				START OF PATCH AREA 1
					3925		ORG *,256,0				SET LOC COUNTER TO NEXT SECTOR
				1500	3926	\$\$\$\$T1	EQU *				DEFINE ADDR OF SCTR BOUNDARY
1444					3927		ORG \$\$\$\$L1				SET LOC COUNTER TO START OF
					3928	*					* PATCH AREA
1444				14FF	3929	\$\$\$\$\$1	DS CL(\$\$\$\$T1-\$\$\$\$L1)				PATCH AREA
					3930	*****					

[illegible]

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 11/11/22 PAGE 46
		3938		*****	
		3939	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		3940	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		3941	*		*
		3942		*****	
		3943	*	STATUS	*
		3944	*	VERSION 1 MODIFICATION 0	*
		3945	*		*
		3946	*	FUNCTION	*
		3947	*	* UTVTOC PERFORMS VARIOUS FILE SPECIFICATION FUNCTIONS UPON THE	*
		3948	*	VTOC (VOLUME TABLE OF CONTENTS) AND VOLUME LABEL. THE FUNCTIONS	*
		3949	*	ARE ENVOCKED THROUGH PARAMETERS PROVIDED BY THE USER PROGRAM.	*
		3950	*	* UTVTOC IS A UTILITY PROGRAM USED TO MANIPULATE FILE	*
		3951	*	SPECIFICATIONS WITHIN THE VTOC AND VOLUME LABEL. ANY OF THE	*
		3952	*	FIVE (5) BASIC BIS FILES OR ANY FILE SPECIFIED BY THE FILE NAME	*
		3953	*	CAN BE PROCESSED.	*
		3954	*	* THE TYPES OF FUNCTIONS WITH ENTRY POINTS ARE:	*
		3955	*	UTVDEL - DELETE FILE	*
		3956	*	UTVEXP - EXPAND FILE	*
		3957	*	UTVSHK - CONTRACT FILE	*
		3958	*	UTVIST - INSERT FILE	*
		3959	*	UTVDFT - INSERT FILE AS CLOSE TO SPF FILE AS POSSIBLE	*
		3960	*	UTVINP - OBTAIN INFORMATION ABOUT VTOC FILE	*
		3961	*		*
		3962	*	ENTRY POINTS	*
		3963	*	THE ENTRY IS BASED UPON THE DESIRED FUNCTION	*
		3964	*		*
		3965	*	INPUT	*
		3966	*	THE INPUT IS THE READING OF THE VOLUME LABEL, VTOC INDEX, *	*
		3967	*	FORMAT 1 ENTRIES FROM DISK	*
		3968	*		*
		3969	*	OUTPUT	*
		3970	*	THE OUTPUT IS THE WRITING OF THE VOLUME LABEL, VTOC INDEX,	*
		3971	*	FORMAT 1 ENTRIES TO DISK	*
		3972	*		*
		3973	*	EXTERNAL REFERENCES	*
		3974	*	TKSYLN - INITIAL CYLINDER NUMBER TO PROCESS (1 BYTE)	*
		3975	*	TKSCYL - NUMBER OF CYLINDERS TO PROCESS (1 BYTE)	*
		3976	*	TVSFIL - FILE NAME (8 BYTES)	*
		3977	*	TKSADR - ADDRESS OF VOLUME LABEL IN CORE (2 BYTES)	*
		3978	*	TVSDSK - DISK DADDR OF VTOC INDE, (2 BYTES)	*
		3979	*	\$CIMSK - ADDR OF THE INQUIRY REQUEST INDICATOR	*
		3980	*	\$DISKN - ENTRY POINT TO DISK IOCR	*
		3981	*	TKSBFI - BIS FILE INDICATOR (1 BYTE)	*
		3982	*		*
		3983	*	EXITS, NORMAL	*
		3984	*	NORMAL EXIT IS BACK TO THE CALLING ROUTINE WITH PSR REGISTER	*
		3985	*	SET TO TRUE	*
		3986	*		*
		3987	*	EXITS, ERROR	*
		3988	*	ERROR EXIT IS BACK TO THE CALLING ROUTINE WITH THE PSR REGISTER	*
		3989	*	SET TO FALSE	*
		3990	*		*
		3991	*	TABLESWORK AREAS	*
		3992	*	* CONSTANTS AND THE DPL LIST TO INPUT/OUTPUT VOLUME LABEL, VTOC	*
		3993	*	INDEX AND FORMAT 1 ENTRIES ARE AT THE END OR THE EXEC CODE	*

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 47
				3994	*	*	UTVTOC MUST BE THE LAST ASSEMBLED; FOR THE INPUT/OUTPUT	*
				3995	*		BUFFERS ARE DIRECTLY BEHIND TO CONSTANT AREA	*
				3996	*			*
				3997	*	ATTRIBUTES		*
				3998	*		RELOCATABLE AND REUSABLE	*
				3999	*			*
				4000	*	CHARACTER CODE DEPENDENCY		*
				4001	*		THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
				4002	*		INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET	*
				4003	*	NOTES		*
				4004	*	ERROR PROCEDURES		*
				4005	*		UTVTOC IS EXITED WITH THE PSR SET TO FALSE IF:	*
				4006	*		1. INVALID VTOC DISK ADDRESS PARAMETER	*
				4007	*		2. INABILITY TO FIND FILE NAME	*
				4008	*		3. INVALID NUMBER OF CYLINDERS AND/OR INITIAL CYLINDER NUMBER	*
				4009	*		4. INVALID FILE INDICATOR (BIS FILE)	*
				4010	*		UTVTOC IS EXITED WITH THE PSR SET TO LOW IF AN ATTEMPT IS MADE	*
				4011	*		TO PERFORM A FUNCTION (OTHER THAN INSERTION) WHEN FILE DOES	*
				4012	*		NOT EXIST.	*
				4013	*			*
				4014	*	REGISTER USAGE		*
				4015	*		INDEX REGISTER 1 (@BR), INDEX REGISTER 2 (@XR), AND THE ARR	*
				4016	*		REGISTER ARE SAVED AND RESTORED. THE INDEX REGISTER 2 (@XR) IS	*
				4017	*		USED.	*
				4018	*			*
				4019	*	SAVED/RESTORED AREAS		*
				4020	*		NONE	*
				4021	*			*
				4022	*	MODIFICATION CONSIDERATIONS		*
				4023	*		NONE	*
				4024	*			*
				4025	*	REQUIRED MODULES		*
				4026	*		@SYSEQ - COMMON SYSTEM EQUATES	*
				4027	*		TVSAVE - VTOC COMMON SAVE AREAS AND EQUATES	*
				4028	*		TKSAVE - VOLUME LABEL COMMON SAVE AREAS AND EQUATES	*
				4029	*		UTVUSE - TRACK USAGE MASK PROGRAM	*
				4030	*		@VOLEQ - VOLUME LABEL EQUATES	*
				4031	*		@VTCEQ - VTOC EQUATES	*
				4032	*			*
				4033	*	OTHER		*
				4034	*		NONE	*
				4035	*	*****		*
				1564	4037	UTVTOC EQU *	DELETE VTOC ENTRY POINT	
1564	3C	01	19D5		4038	MVI UTVCOD,UTVFG1	MOVE FLAG FOR DELETION	
1568	3C	00	19DD		4039	MVI UTVSAV,@ZERO	MOVE ZERO TO LAST BYTE OF UTVSAV	
156C	0C	06	19DC 19DD		4040	MVC UTVSAV-1(\$@LNG-1),UTVSAV	RECURSIVELY ZERO HOLDER	
1572	F2	87	3B		4041	J UTV145	JUMP TO READ VTOC INDEV	
1575	3C	10	19D5		4042	UTV050 MVI UTVCOD,UTVFG5	SET CODE FOR CYL# 10 INSERT	
1579	3C	FF	142F		4043	MVI TKSYNL,UTKFLG	SET DEFAULT CODE	
157D	F2	87	04		4044	J UTV115	JUMP TO MOVE FILE NAME	
1580	3C	02	19D5		4045	UTV100 MVI UTVCOD,UTVFG2	MOVE CODE FOR INSERTION	
1584	0C	07	19DD 143E		4046	UTV115 MVC UTVSAV(\$@LNG),TVSFIL	TEMPORARILY SAVE FILE NAME	
158A	0C	07	19EE 143E		4047	MVC UTVSV1(\$@LNG),TVSFIL	SAVE FILE NAME	
1590	3C	00	143E		4048	MVI TVSFIL,@ZERO	MOVE ZERO TO LAST BYTE OF TVSFIL	

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 48
	1594	0C 06 143D 143E		4049		MVC	TVSFIL-1(\$@SLNG-1),TVSFIL	RECURSIVELY ZERO HOLDER
	159A	F2 87 08		4050		J	UTV125	JUMP TO READ VTOC INDEX
	159D	3C FF 19D4		4051	UTV117	MVI	UTVTYP,UTVFLG	INIT FOR INFO PROCESS
	15A1	3C 04 19D5		4052	UTV120	MVI	UTVCOD,UTVFG3	MOVE CODE FOR EXPANSION
	15A5	3C 39 136A		4053	UTV125	MVI	UTKTYP,UTKTBF	SET CODE FOR SPACE TEST
	15A9	F2 87 08		4054		J	UTV170	JUMP TO SAVE FILE NAME
	15AC	3C 08 19D5		4055	UTV140	MVI	UTVCOD,UTVFG4	MOVE FLAG FOR SHRINKAGE
	15B0	3C 3B 136A		4056	UTV145	MVI	UTKTYP,UTKSBF	SET CODE TO RELEASE SPACE
	15B4	3C FF 19DE		4057	UTV170	MVI	UTVCHK,UTVFLG	SET CODE FOR SUCESSFUL EXIT
	15B8	0C 01 19F0 1432		4058		MVC	UTVSV2(@CADDR),TKSADR	SAVE DISK DADDR
	15BE	0C 00 19F1 1430		4059		MVC	UTVSV3(UTVONE),TKSCYL	SAVE # CYLINDERS
	15C4	0C 00 19F2 142F		4060		MVC	UTVSV4(UTVONE),TKSYLN	SAVE INITIAL CYLINDER ?
	15CA	39 12 19D5		4061		TBF	UTVCOD,UTVFG2+UTVFG5	INSERTION ?
	15CE	F2 90 06		4062		JF	UTV175	JUMP IF INSERTION
	15D1	0C 07 19EE 143E		4063		MVC	UTVSV1(\$@SLNG),TVSFIL	SAVE FILE NAME
	15D7	0C 01 1432 19E5		4064	UTV175	MVC	TKSADR(@CADDR),UTVADR	SET VOL LABEL DADDR
				4065	*UTV180	ENTER	EXIT,UTVED,@BR,@XR,@ARR	
			15DD	4066	UTV180	EQU	*	MODULE ENTRY POINT
	15DD	34 01 1965		4067		ST	UTVED0+@OP1,@BR	SAVE @BR
	15E1	34 02 1969		4068		ST	UTVED1+@OP1,@XR	SAVE @XR
	15E5	34 08 196D		4069		ST	UTVED2+@OP1,@ARR	SAVE RETURN ADDRESS
				4070	***	END OF EXPANSION	***	
				4071	*			
				4072	*		READ VTOC INDEX/VOLUMN LABEL (IF NON-BIS)	
				4073	*			
	15E9	3C 01 19C7		4074		MVI	UTVIDX,@DGET	SET FOR READ (DISK)
	15ED	3C 80 0476		4075		MVI	\$CIMSK,@NOP	MASK CONSOLE INTERRUPTS
	15F1	0C 01 19C9 1442		4076		MVC	UTVIDX+2(@CADDR),TVSDSK	MOVE DISK DADDR TO DPL LIST
				4077	*	DISK	UTVIDX,WAIT	REAL VTOC INDEX, WAIT
	15F7	C0 87 0025		4078		B	\$DISKN	PERFORM PHYSICAL DISK OP
	15FB	19C7		15FC	4079	DC	AL2(UTVIDX)	DPL ADDRESS
	15FD	C0 87 0025		4080		B	\$DISKN	WAIT AND CHECK DISK ERRORS
	1601	057F		1602	4081	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
				4082	***	END OF EXPANSION	***	
	1603	3C 01 19DF		4083		MVI	UTVTAG,UTVONE	ZERO TAG INDEX COUNTER
	1607	3C 33 19E0		4084		MVI	UTVLIM,UTVUPR+1	SET MAY NUMBER OF TAGS
	160B	3D 00 142E		4085		CLI	TKSBFI,@ZERO	BIS FILE ?
	160F	F2 81 92		4086		JE	UTV350	JUMP IF NOT BIS FILE
	1612	3C 08 19C3		4087	UTV200	MVI	UTVVOL+2,UTVEGT	INITIALIZE FOR MIN DISK
	1616	38 01 1442		4088		TBN	TVSDSK,UTVONE	REMOVABLE DISK ?
	161A	F2 90 04		4089		JF	UTV220	JUMP IF NOT REMOVABLE
	161D	3A 01 19C3		4090		SBN	UTVVOL+2,UTVONE	SET REMOVABLE BIT ON
	1621	38 02 1442		4091	UTV220	TBN	TVSDSK,UTVTWO	SPINDLE 2 ?
	1625	F2 90 04		4092		JF	UTV250	JUMP IF NOT SPINDLE 2
	1628	3A 02 19C3		4093		SBN	UTVVOL+2,UTVTWO	SET SPINDLE 2 BIT ON
	162C	3C 01 19C1		4094	UTV250	MVI	UTVVOL,@DGET	SET FOR READ FACTION (DISK)
				4095	*	DISK	UTVVOL,WAIT	READ VOLUMN LABEL (DISK)
	1630	C0 87 0025		4096		B	\$DISKN	PERFORM PHYSICAL DISK OP
	1634	19C1		1635	4097	DC	AL2(UTVVOL)	DPL ADDRESS
	1636	C0 87 0025		4098		B	\$DISKN	WAIT AND CHECK DISK ERRORS
	163A	057F		163B	4099	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
				4100	***	END OF EXPANSION	***	
				4101	*			
				4102	*		INITIALIZE TO SEARCH VTOC INDEX	
				4103	*			
	163C	39 12 19D5		4104		TBF	UTVCOD,UTVFG2+UTVFG5	AN INSERTION ?

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1640	F2	90	61	4105	JF	UTV350	JUMP IF AN INSERTION
1643	C2	02	19F5	4106	UTV260	LA UTVAR1,@XR	POINT XR TO TOP OF VOL ;ABEL
1647	0C	00	164E 142E	4107	MVC	UTV265+UTVONE(UTVONE),TKSBFI	MOVE BIT CODE
164D	B8	00	FF	4108	UTV265	TBN \$#TIDR(,@XR),*-*	FILE EXIST ?
1650	F2	10	08	4109	JT	UTV267	YES, FILE EYISTS
1653	3D	01	19E3	4110	CLI	UTVZER,UTVONE	FORCE LOW CONDITION
1657	C0	87	1962	4111	B	UTVED0	EXIT FROM ROUTINE
165B	38	80	142E	4112	UTV267	TBN TKSBF1,\$#TSYM	SYSTEM PROG FILE ?
165F	F2	90	08	4113	JF	UTV270	JUMP IF NOT SPF FILE
1662	2C	00	19E0 FA	4114	MVC	UTVLIM(UTVONE),\$#TSYS(,@XR)	MOVE SPF TAG # TO INDEX
1667	F2	87	3A	4115	J	UTV350	JUMP TO SEARCH VTOC INDEX
166A	39	60	142E	4116	UTV270	TBF TKSBF1,\$#TWR1+\$#TWF1	WORK AREA R1/F1 FILE ?
166E	F2	10	08	4117	JT	UTV290	JUMP IF NOT WORK AREA FILE
1671	2C	00	19E0 F9	4118	MVC	UTVLIM(UTVONE),\$#TWRK(,@XR)	MOVE WORK AREA TAG# TO INDEX
1676	F2	87	2B	4119	J	UTV350	JUMP TO SEARCH VTOC INDEX
1679	38	10	142E	4120	UTV290	TBN TKSBF1,\$#TLIF	LIBRARY FILE ?
167D	F2	90	08	4121	JF	UTV300	JUMP IF NOT LIBRARY FILE
1680	2C	00	19E0 F8	4122	MVC	UTVLIM(UTVONE),\$#TLIB(,@XR)	MOVE LIB FILE TAG# TO INDEX
1685	F2	87	1C	4123	J	UTV350	JUMP TO SEARCH VTOC INDEX
1688	38	08	142E	4124	UTV300	TBN TKSBF1,\$#TPFL	PTF FILE ?
168C	F2	90	08	4125	JF	UTV325	JUMP IF NOT PTF FILE
168F	2C	00	19E0 F3	4126	MVC	UTVLIM(UTVONE),\$#TPTF(,@XR)	MOVE PTF TAG TO INDEX
1694	F2	87	0D	4127	J	UTV350	JUMP TO SEARCH VTOC
1697	38	04	142E	4128	UTV325	TBN TKSBF1,\$#THEL	HELP FILE ?
169B	C0	90	1871	4129	BF	UTV465	BRANCH IF NOT HELP FILE
169F	2C	00	19E0 F0	4130	MVC	UTVLIM(UTVONE),\$#THVT(,@XR)	MOVE HELP FILE TAG ?
				4131	*		
				4132	*		SEARCH VTOC INDEX FOR TAG # /FILE NAME
				4133	*		
16A4	C2	02	1B02	4134	UTV350	LA UTVAR2+@\$FIL,@XR	POINT XR TO FIRST FILE NAME
16A8	0D	00	19DF 19E0	4135	UTV360	CLC UTVTAG(UTVONE),UTVLIM	TAG NUMBER FOUND
16AE	F2	81	15	4136	JE	UTV370	JUMP IF NOT FOUND
16B1	2D	07	143E 00	4137	CLC	TVSFIL(\$@\$LNG),0(,@XR)	NON-BIS FILE NAME FCJND ?
16B6	F2	81	18	4138	JE	UTV390	JUMP IF FILE NAME FOUND ?
16B9	E2	02	0A	4139	UTV365	LA @\$INC(,@XR),@XR	UPDATE TO NEYT TAG
16BC	0E	00	19DF 19E1	4140	ALC	UTVTAG(UTVONE),UTVDLT	INCREMENT TAG NUMBER
16C2	C0	87	16A8	4141	B	UTV360	BRANCH TO CHECK FILE NAME
16C6	3D	33	19DF	4142	UTV370	CLI UTVTAG,UTVUPR+1	TAG # IN LIMITS ?
16CA	F2	01	13	4143	JNE	UTV395	JUMP IF NOT END OF VTOC
16CD	C0	87	1871	4144	B	UTV465	BRANCH TO ERROR MOM
16D1	3D	00	142E	4145	UTV390	CLI TKSBF1,@ZERO	BIS FILE ?
16D5	F2	81	08	4146	JE	UTV395	BRANCH TO UPDATE TO NEYT TAG
16D8	39	12	19D5	4147	TBF	UTVCOD,UTVFG2+UTVFG5	INSERTION ?
16DC	C0	10	16B9	4148	BT	UTV365	BRANCH IF NOT INSERTION
16E0	38	01	19D5	4149	UTV395	TBN UTVCOD,UTVFG1	DELETION FUNCTION ?
16E4	F2	90	63	4150	JF	UTV420	JUMP IF NOT DELETION
				4151	*		
				4152	*		PROCESS VTOC DELETION FUNCTION
				4153	*		
16E7	8C	07	00 19DD	4154	UTV400	MVC 0(\$@\$LNG,@XR),UTVSAV	ZERO VTOC FILE NAME
16EC	C0	87	196E	4155	B	UTV900	BRANCH TO READ FILE LABEL
16F0	2C	00	142F 1F	4156	MVC	TKSYLN(UTVONE),\$@\$SRT-1(,@XR)	MOVE START DADDR OF FILE
16F5	0C	00	19D3 142F	4157	MVC	UTVCLS(UTVONE),TKSYLN	SAVE INIT CYLINDER #
16FB	2C	00	1430 21	4158	MVC	TKSCYL(UTVONE),\$@\$END-1(,@XR)	CALCULATE FILE SIZE F1
1700	2F	00	1430 1F	4159	SLC	TKSCYL(UTVONE),\$@\$SRT-1(,@XR)	FINDING DIFF BETWEEN END
1705	AF	3E	3F 3F	4160	SLC	\$@\$LTH-1(\$@\$LTH-1,@XR),\$@\$LTH-1(,@XR)	ZERO F1 ENTRY

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 50
	1709	C0	87	12E1	4161	B	UTKPRC	RELEASE CYLINDER SPACE
	170D	C0	90	1871	4162	BF	UTV465	BRANCH TO ERR PGM IF FALSE
	1711	3C	02	19CD	4163	MVI	UTVFIL,@DPUT	SET DPL TO WRITE
					4164	*	DISK UTVFIL	WRITE MODIFIED FL ENTRY TO DISK
	1715	C0	87	0025	4165	B	\$DISKN	PERFORM PHYSICAL DISK OP
	1719	19CD		171A	4166	DC	AL2(UTVFIL)	DPL ADDRESS
					4167	***	END OF EXPANSION ***	
	171B	C2	02	1BF5	4168	LA	UTVAR2+UTVFLG+1,@XR	INITIALIZE XR
	171F	8E	00	FF 19E1	4169	ALC	@\$AVL(UTVONE,@XR),UTVDLT	UPDATE # TAGS FREE
	1724	3C	02	19C7	4170	MVI	UTVIDX,@DPUT	SET FOR DISK WRITE
					4171	*	DISK UTVIDX, WAIT	WRITE VTOC TO DISK
	1728	C0	87	0025	4172	B	\$DISKN	PERFORM PHYSICAL DISK OP
	172C	19C7		172D	4173	DC	AL2(UTVIDX)	DPL ADDRESS
	172E	C0	87	0025	4174	B	\$DISKN	WAIT AND CHECK DISK ERRORS
	1732	057F		1733	4175	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
					4176	***	END OF EXPANSION ***	
	1734	0C	00	19DF 19E3	4177	MVC	UTVTAG(UTVONE),UTVZER	ZERO VOL LABEL TAG #
	173A	0C	00	1430 19E3	4178	MVC	TKSCYL(UTVONE),UTVZER	ZERO VOL LABEL START DADDY
	1740	0C	00	142F 19E3	4179	MVC	TKSYLN(UTVONE),UTVZER	ZERO VOL LABEL FILE SIZE
	1746	C0	87	18AB	4180	B	UTV600	JUMP TO PROCESS VOL LABEL
					4181	*		
					4182	*	PROCESS INSERTION FUNCTION	
					4183	*		
	174A	34	02	17FB	4184	UTV420	ST UTV430+3,@XR	SAVE XR POINTER IN VTOC
	174E	39	12	19D5	4185	TBF	UTVCOD,UTVFG2+UTVFG5	INSERTION ?
	1752	F2	10	31	4186	JT	UTV424	NO, GO READ FILE LABEL
	1755	3C	01	19F4	4187	MVI	UTVSCP,UTVONE	INITLZ VTOC ENTRIES CTR TO 1
	1759	C2	02	1B02	4188	LA	UTVAR2+@\$FIL,@XR	POINT REGISTER TO FIRST ENTRY
	175D	2D	07	19DD 00	4189	UTV421	CLC UTVSAV(\$@LNG),0(@XR)	IF A SCP FILE WITH SATE NAME AS
	1762	3C	74	03CD	4190	MVI	\$CAERR,@E478	* ONE DESIRED HERE. SET ERR CODE
	1766	F2	01	08	4191	JNE	UTV422	* AND RETURN - ELSE SEARCH MORE
	1769	3D	00	19E1	4192	CLI	UTVDLT,@ZERO	FORCE PSR HIGH
	176D	C0	87	1962	4193	B	UTVED0	TAKE ERROR EXIT
	1771	0E	00	19F4 19E1	4194	UTV422	ALC UTVSCP(1),UTVDLT	POINT TO NEYT INDEY ENTRY
	1777	E2	02	0A	4195	LA	@\$INC(@XR),@XR	POINT REGISTER TO NEXT ENTRY
	177A	3D	33	19F4	4196	CLI	UTVSCP,UTVUPR+1	END OF VTOC INDEX ?
	177E	C0	82	175D	4197	BL	UTV421	NO, BRANCH BACK TO KEEP LOOKING
	1782	35	02	17FB	4198	L	UTV430+3,@XR	RESET XR TO INDEX ENTRY
	1786	C0	87	196E	4199	UTV424	B UTV900	READ FILE LABEL
	178A	39	12	19D5	4200	TBF	UTVCOD,UTVFG2+UTVFG5	INSERTION ?
	178E	F2	10	9C	4201	JT	UTV450	JUMP IF AN INSERTION
	1791	C0	87	12E1	4202	B	UTKPRC	TEST FOR SPACE AVAILABLE
	1795	F2	90	D9	4203	JF	UTV465	ERROR EMIT-NO SPACE
	1798	38	10	19D5	4204	TBN	UTVCOD,UTVFG5	INSERTION ?
	179C	F2	90	12	4205	JF	UTV425	JUMP IF NOT INSERTION
	179F	0C	00	142F 1417	4206	MVC	TKSYLN(UTVONE),UTKCNT	MOVE LAST CYL
	17A5	0F	00	142F 1430	4207	SLC	TKSYLN(UTVONE),TKSCYL	SUBTRACT # CYLS
	17AB	0E	00	142F 19E1	4208	ALC	TKSYLN(UTVONE),UTVDLT	INCREMENT BY 1
	17B1	3C	3A	136A	4209	UTV425	MVI UTKTYP,UTKSBN	SET CODE FOR SPACE ALLOCATION
	17B5	C0	87	12E1	4210	B	UTKPRC	ALLOCATE SPACE
	17B9	C0	90	1871	4211	BF	UTV465	BRANCH TO ERR PGM IF FALSE
	17BD	8C	07	0A 19DD	4212	MVC	@\$FIN(\$@LNG,@XR),UTVSAV	INSERT FILE NAME
	17C2	8C	01	12 19E3	4213	MVC	@\$TYP(@CADDR,@XR),UTVZER	ZERO FILE TYPE
	17C7	38	10	19D5	4214	TBN	UTVCOD,UTVFG5	INSERTION ?
	17CB	F2	90	1B	4215	JF	UTV427	JUMP IF NOT INSERTION
	17CE	8C	00	21 1417	4216	MVC	@\$END-1(UTVONE,@XR),UTKCNT	MOVE LAST CYL

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 11/11/22 PAGE 51
	17D3	8E 00 21 19E1		4217		ALC	\$\$END-1(UTVONE,@XR),UTVDLT POINT ADDR TO NEXT AVAIL TRK	
	17D8	AC 00 1F 21		4218		MVC	\$\$SRT-1(UTVONE,@XR),\$\$END-1(,@XR) MOVE START DADDR	
	17DC	8F 00 1F 1430		4219		SLC	\$\$SRT-1(UTVONE,@XR),TKSCYL SUBTRACT . CYLINDERS	
	17E1	2C 00 19F3 1F		4220		MVC	UTVSRT(UTVONE),\$\$SRT-1(,@XR) SAVE INIT CYL	
	17E6	F2 87 0F		4221		J	UTV430 JUMP TO PROCESS VILE NAME	
	17E9	8C 00 1F 142F		4222	UTV427	MVC	\$\$SRT-1(UTVONE,@XR),TKSYLN MOVE FILE START DADDR	
	17EE	8C 00 21 142F		4223		MVC	\$\$END-1(UTVONE,@XR),TKSYLN MOVE FILE START DADDR	
	17F3	8E 00 21 1430		4224		ALC	\$\$END-1(UTVONE,@XR),TKSCYL CALCULATE END DADDR	
	17F8	C2 02 0000		4225	UTV430	LA	*-*,@XR POINT XR IN FILE LABEL	
	17FC	8C 07 00 19DD		4226		MVC	0(\$@LNG,@XR),UTVSAV MOVE FILE NAME TO LABEL	
	1801	C2 02 1BF5		4227		LA	UTVAR2+UTVFLG+1,@XR INITIALIZE XR	
	1805	8F 00 FF 19E1		4228		SLC	\$\$AVL(UTVONE,@XR),UTVDLT SUBTRACT # FREE TAGS	
	180A	3C 02 19C7		4229		MVI	UTVIDX,@DPUT SET FOR DISK WRITE	
				4230	*	DISK	UTVIDX,WAIT WRITE VTOC TO DISK	
	180E	C0 87 0025		4231		B	\$DISKN PERFORM PHYSICAL DISK OP	
	1812	19C7	1813	4232		DC	AL2(UTVIDX) DPL ADDRESS	
	1814	C0 87 0025		4233		B	\$DISKN WAIT AND CHECK DISK ERRORS	
	1818	057F	1819	4234		DC	AL2(\$WAITF) WAIT DPL ADDRESS	
				4235	***		END OF EXPANSION ***	
	181A	3C 02 19CD		4236	UTV435	MVI	UTVFIL,@DPUT SET FOR DISK WRITE	
				4237	*	DISK	UTVFIL,WAIT WRITE FILE LABEL TO DISK	
	181E	C0 87 0025		4238		B	\$DISKN PERFORM PHYSICAL DISK OP	
	1822	19CD	1823	4239		DC	AL2(UTVFIL) DPL ADDRESS	
	1824	C0 87 0025		4240		B	\$DISKN WAIT AND CHECK DISK ERRORS	
	1828	057F	1829	4241		DC	AL2(\$WAITF) WAIT OFT ADDRESS	
				4242	***		END OF EXPANSION ***	
	182A	F2 87 7E		4243	UTV440	J	UTV600 JUMP TO PROCESS VOL LABEL	
				4244	*			
				4245	*		PROCESS SHRINKAGE FUNCTION	
				4246	*			
	182D	38 08 19D5		4247	UTV450	TBN	UTVCOD,UTVFG4 SHRINK FUNCTION ?	
	1831	F2 90 2A		4248		JF	UTV460 JUMP IF EXPANSION	
	1834	2C 00 142F 21		4249		MVC	TKSYLN(UTVONE),\$\$END-1(,@XR) MOVE END DADDR	
	1839	0F 00 142F 1430		4250		SLC	TKSYLN(UTVONE),TKSCYL CALCULATE START CYL DADDR	
	183F	8C 00 21 142F		4251		MVC	\$\$END-1(,@XR),TKSYLN MOVE CYLINDER #	
	1844	C0 87 12E1		4252		B	UTKPRC RELEASE SPACE	
	1848	F2 90 26		4253		JF	UTV465 JUMP TO ERR PGM IF FALSE	
	184B	2C 00 1430 21		4254		MVC	TKSCYL(UTVONE),\$\$END-1(,@XR) CALCULATE FILE SIZE	
	1850	2F 00 1430 1F		4255		SLC	TKSCYL(UTVONE),\$\$SRT-1(,@XR) SUBTRACT END - START	
	1855	2C 00 142F 1F		4256		MVC	TKSYLN(UTVONE),\$\$SRT-1(,@XR) MOVE START DADDR	
	185A	C0 87 181A		4257		B	UTV435 JUMP TO PROCESS VOL LABEL	
				4258	*			
				4259	*		PROCESS EXPANSION FUNCTION	
				4260	*			
	185E	2C 00 142F 21		4261	UTV460	MVC	TKSYLN(UTVONE),\$\$END-1(,@XR) FORM END DADDR	
	1863	3D FF 19D4		4262		CLI	UTVTYP,UTVFLG INFO PROCESS ?	
	1867	F2 81 1F		4263		JE	UTV500 JUMP IF INFO PROCESS	
	186A	C0 87 12E1		4264		B	UTKPRC TEST FOR SPACE AVAILABLE	
	186E	F2 10 07		4265		JT	UTV470 JUMP IF AVAILABLE	
	1871	3C 00 19DE		4266	UTV465	MVI	UTVCHK,@ZERO FORCE ERROR EXIT	
	1875	F2 87 CE		4267		J	UTV750 JUMP TO EXIT ROUTINE	
	1878	3C 3A 136A		4268	UTV470	MVI	UTKTYP,UTKSBN SET CODE TO ASSIGN SPACE	
	187C	C0 87 12E1		4269		B	UTKPRC ASSIGN SPACE	
	1880	C0 90 1871		4270		BF	UTV465 BRANCH TO ERR PGM IF FALSE	
	1884	8E 00 21 1430		4271		ALC	\$\$END-1(,@XR),TKSCYL CALCULATE END DADDR	
	1889	2C 00 1430 21		4272	UTV500	MVC	TKSCYL(UTVONE),\$\$END-1(,@XR) CALCULATE FILE SIZE	

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188E	2F	00	1430	1F	4273	SLC	TKSCYL(UTVONE),@\$SRT-1(,@XR)	VOLUME LABEL
1893	2C	00	142F	1F	4274	MVC	TKSYLN(UTVONE),@\$SRT-1(,@XR)	FROM START DADDR
1898	38	FF	19D4		4275	TBN	UTVTYP,UTVFLG	INFO PROCESS ?
189C	C0	90	181A		4276	BF	UTV435	BRANCH IF NOT INFO
18A0	3C	00	19D4		4277	MVI	UTVTYP,@ZERO	INIT FOR REGULAR PROCESS
18A4	3D	00	19E3		4278	CLI	UTVZER,@ZERO	FORCE PSQ NON-LOW
18A8	F2	87	B7		4279	J	UTVED0	EXIT FROM ROUTINE
					4280	*		
					4281	*	PROCESS VOLUMN LABEL	
					4282	*		
18AB	3D	00	142E		4283	UTV600 CLI	TKSBFI,@ZERO	BIS FILE ?
18AF	F2	81	94		4284	JE	UTV750	JUMP IF NOT BIS FILE
18B2	C2	02	19F5		4285	LA	UTVAR1,@XR	POINT XR TO TOP OF VOL LABEL
18B6	38	80	142E		4286	TBN	TKSBFI,\$#TSYM	SYSTEM PROGRAM FILE ?
18BA	F2	90	0D		4287	JF	UTV620	JUMP IF NOT 5PF FILE
18BD	8C	00	FA 19DF		4288	MVC	\$#TSYS(UTVONE,@XR),UTVTAG	SAVE SP, TAG. TO VOL LBL
18C2	8C	00	FB 142F		4289	MVC	\$#TBIS-1(UTVONE,@XR),TKSYLN	MOVE SPF FILE DADDR
18C7	F2	87	50		4290	J	UTV670	JUMP TO PROCESS FILE !DR
18CA	39	60	142E		4291	UTV620 TBF	TKSBFI,\$#TWR1+\$#TWF1	WORK AREA FILE (RI/F1)?
18CE	F2	10	0D		4292	JT	UTV640	JUMP IF NOT WARY AREA FILE
18D1	8C	00	F9 19DF		4293	MVC	\$#TWRK(UTVONE,@XR),UTVTAG	MOVE WORK AREA TAG.
18D6	8C	00	D7 03DF		4294	MVC	\$#TWAL(UTVONE,@XR),\$LEVEL	SET WORKAREA RELEASE LEVEL
18DB	F2	87	3C		4295	J	UTV670	JUMP TO PROCESS FILE IDR
18DE	38	10	142E		4296	UTV640 TBN	TKSBFI,\$#TLIF	LIBRARY FILE ?
18E2	F2	90	12		4297	JF	UTV660	JUMP IF NOT LIB FILE
18E5	8C	00	F8 19DF		4298	MVC	\$#TLIB(UTVONE,@XR),UTVTAG	MOVE LIBRARY TAG. TO VOL LBL
18EA	8C	00	F7 1430		4299	MVC	\$#TLSZ(UTVONE,@XR),TKSCYL	MOVE LIBRARY SIZE TO VOL LBL
18EF	8C	00	FD 142F		4300	MVC	\$#TLAD-1(UTVONE,@XR),TKSYLN	MOVE LIBRARY DADDR
18F4	F2	87	23		4301	J	UTV670	JUMP TO PROCESS FILE IDR
18F7	38	08	142E		4302	UTV660 TBN	TKSBFI,\$#TPFL	PTF FILE
18FB	F2	90	12		4303	JF	UTV665	JUMP IF NOT PTF FILE
18FE	8C	00	F4 1430		4304	MVC	\$#TPSZ(UTVONE,@XR),TKSCYL	MOVE PTF SIZE TO VOL LBL
1903	8C	00	F5 142F		4305	MVC	\$#TPAD-1(UTVONE,@XR),TKSYLN	MOVE PTF DADDR
1908	8C	00	F3 19DF		4306	MVC	\$#TPTF(UTVONE,@XR),UTVTAG	MOVE PTF TAG# TO VOL LBL
190D	F2	87	0A		4307	J	UTV670	JUMP TO INIT FILE INDR
1910	8C	00	F0 19DF		4308	UTV665 MVC	\$#THVT(UTVONE,@XR),UTVTAG	MOVE HELP FILE TAG #
1915	8C	00	F1 142F		4309	MVC	\$#THAD-1(UTVONE,@XR),TKSYLN	MOVE HELP FILE DADDR
191A	0C	00	192E 142E		4310	UTV670 MVC	UTV680+1(UTVONE),TKSBFI	INITIALIZE FILE INDR
1920	0C	00	1934 142E		4311	MVC	UTV700+1(UTVONE),TKSBFI	TO MODIFY VOLUMN LABEL
1926	38	01	19D5		4312	TBN	UTVCOD,UTVFG1	DELETION ?
192A	F2	10	06		4313	JT	UTV700	JUMP IF NOT INSERTION
192D	BA	00	FF		4314	UTV680 SBN	\$#TIDR(,@XR),*-*	SET FILE INDR ON
1930	F2	87	03		4315	J	UTV720	JUMP TO WRITE VOL LABEL TO DISK
1933	BB	00	FF		4316	UTV700 SBF	\$#TIDR(,@XR),*-*	SET FILE INDR OFF
1936	3C	02	19C1		4317	UTV720 MVI	UTVVOL,@DPUT	SET FOR DISK WRITE FUNCTION
					4318	*	DISK UTVVOL,WAIT	WRITE VOL LABEL TO DISK
193A	C0	87	0025		4319	B	\$DISKN	PERFORM PHYSICAL DISK OP
193E	19C1			193F	4320	DC	AL2(UTVVOL)	DPL ADDRESS
1940	C0	87	0025		4321	B	\$DISKN	WAIT AND CHECK DISK ERRORS
1944	057F			1945	4322	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
					4323	***	END OF EXPANSION ***	
1946	38	FF	19DE		4324	UTV750 TBN	UTVCHK,UTVFLG	TEST FOR SUCESSFUL EXIT
194A	0C	07	143E 19EE		4325	MVC	TVSFIL(\$@\$LNG),UTVSV1	SAVE FILE NAME
1950	0C	01	1432 19F0		4326	MVC	TKSADR(@CADDR),UTVSV2	SAVE DISK DADDR
1956	0C	00	1430 19F1		4327	MVC	TKSCYL(UTVONE),UTVSV3	SAVE # CYLINDERS
195C	0C	00	142F 19F2		4328	MVC	TKSYLN(UTVONE),UTVSV4	SAVE INITIAL CAL #

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4329 *UTVED EXIT @BR,@XR,RETURN
1962 C2 01 0000 4330 UTVED0 LA *-*,@BR RESTORE @BR
1966 C2 02 0000 4331 UTVED1 LA *-*,@XR RESTORE @XR
196A C0 87 0000 4332 UTVED2 B *-* RETURN TO CALLING PROGRAM
4333 *** END OF EXPANSION ***
4334 *
4335 * FOLLOWING:
4336 * 1. CALCULATES FILE LABEL DADDR FROM VTOC TAG
4337 * 2. READS FILE LABEL SECTOR FROM DISK
4338 * 3. POINTS NR TO FILE LABEL
4339 *
196E 34 08 19C0 4340 UTV900 ST UTV960+3,@ARR SAVE ARR FOR EXIT
1972 3C 01 19CD 4341 MVI UTVFIL,@DGET SET FOR READ FUNCTION
1976 2C 00 19CF 01 4342 MVC UTVFIL+2(UTVONE),$$SCT(,@XR) MOVE SCTR #
197B 38 01 19C9 4343 TBN UTVIDX+2,UTVONE FIXED DISK DRIVE ?
197F F2 90 04 4344 JF UTV920 JUMP IF NOT FL
1982 3A 01 19CF 4345 SBN UTVFIL+2,UTVONE SET ON FIXED BIT
1986 38 02 19C9 4346 UTV920 TBN UTVIDX+2,UTVTWO SPINDLE 2 ?
198A F2 90 04 4347 JF UTV930 JUMP IF NOT SPINDLE 2
198D 3A 02 19CF 4348 SBN UTVFIL+2,UTVTWO SET SPINDLE 2 BIT ON
1991 2C 00 19AE 02 4349 UTV930 MVC UTV950+2(UTVONE),$$BYT(,@XR) MOVE DISP
1996 0F 00 19AE 19E6 4350 SLC UTV950+2(UTVONE),UTVLGH CALCULATE 1ST BYTE OF FILE LBL
4351 * FILE LABEL SECTOR
4352 * DISK UVFIL,WAIT READ FILE LABEL,NAIT
199C C0 87 0025 4353 B $DISKN PERFORM PHYSICAL DISK OP
19A0 19CD 19A1 4354 DC AL2(UTVFIL) DPL ADDRESS
19A2 C0 87 0025 4355 B $DISKN WAIT AND CHECK DISK ERRORS
19A6 057F 19A7 4356 DC AL2($WAITF) WAIT DPL ADDRESS
4357 *** END OF EXPANSION ***
19A8 C2 02 1CF5 4358 LA UTVAR3,@XR POINT XR TO FILE LABEL SECTOR
19AC E2 02 00 4359 UTV950 LA *-*(,@XR),@XR INCREMENT XR TO FILE LABEL
19AF B8 80 22 4360 TBN $$END(,@XR),UTVBIT IS THIS RELEASE ONE ADDRESS ?
19B2 F2 90 08 4361 JF UTV960 NO, GO RETURN
4362 * ADJUST ADDR TO REFLECT NEXT AVAILABLE TRACK
4363 * IF THE ADDR IS LEFTOVER FROM THE FIRST RELEASE
19B5 8E 00 21 19E1 4364 ALC $$END-1(1,@XR),UTVDLT INCR CYL BY ONE
19BA BC 00 22 4365 MVI $$END(,@XR),@ZERO SET TRK TO ZERO
19BD C0 87 0000 4366 UTV960 B *-* EXIT TO CALLING ROUTINE
4367 *
4368 * DPL LIST TO READ/WRITE VOLUMN LABEL TO DISK
4369 *
4370 *UTVVOL DPL FUNC-@DGET,DADDR-VOLR1,CNT-#@VLAB,CADDR-UTVAR1
19C1 01 19C1 4371 UTVVOL EQU * DISK PARAMETER LIST
19C2 0008 19C3 4372 DC AL1(@DGET) REQUESTED FUNCTION
19C4 01 19C4 4373 DC AL2(#VOLR1) DISK ADDRESS
19C5 19F5 19C6 4374 DC AL1(#@VLAB) SECTOR COUNT
4375 DC AL2(UTVAR1) BUFFER ADDRESS
4376 *** END OF EXPANSION
4377 *
4378 * DPL LIST TO READ/WRITE VTOC INDEX TO DISK
4379 *
4380 *UTVIDX DPL FUNC-@DGET,DADD-$VTCRI,CNT-#@VCNT,CADDR-UTVAR2
19C7 01 19C7 4381 UTVIDX EQU * DISK PARAMETER LIST
19C8 0024 19C9 4382 DC AL1(@DGET) REQUESTED FUNCTION
19CA 02 19CA 4383 DC AL2(#VTCR1) DISK ADDRESS
4384 DC AL1(#@VCNT) SECTOR COUNT

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19CB	1AF5	19CC	4385	DC	AL2(UTVAR2)	BUFFER ADDRESS
			4386	***	END OF EXPANSION ***	
			4387	*		
			4388	*	DPL LIST TO READ/WRITE FILE LABEL TO DISK	
			4389	*		
			4390	*	UTVFIL DPL FUNC-@DGET,CNT-#@VLAB,CADOR-UTVAR3	
		19CD	4391	UTVFIL EQU	*	DISK PARAMETER LIST
19CD	01	19CD	4392	DC	AL1(@DGET)	REQUESTED FUNCTION
19CE	00	19CE	4393	DC	AL1(*-*)	CYLINDER ADDRESS
19CF	00	19CF	4394	DC	AL1(*-*)	HEAD/SECTOR/DRIVE/DISK SPEC
19D0	01	19D0	4395	DC	AL1(@VLAB)	SECTOR COUNT
19D1	1CF5	19D2	4396	DC	AL2(UTVAR3)	BUFFER ADDRESS
			4397	***	END OF EXPANSION ***	
			4398	*		
			4399	*	CONSTANTS USED IN UTVTOC	
			4400	*		
19D3		19D3	4401	UTVCLS DS	CL1	INITIAL CYL #
19D4	00	19D4	4402	UTVTYP DC	XL1'00'	INFO FLAG
19D5		19D5	4403	UTVCOD DS	CL1	FUNCTION FLAG
19D6		19DD	4404	UTVSAV DS	CL8	TEMPORARY FILE NAME
19DE		19DE	4405	UTVCHK DS	CL1	(UN)SUCCESSFUL EXIT CODE
19DF		19DF	4406	UTVTAG DS	CL1	TAG NUMBER COUNT
19E0		19E0	4407	UTVLIM DS	CL1	MAXIMUM TAG NUMBER
19E1	01	19E1	4408	UTVDLT DC	IL1'01'	INC FACTOR
19E2	0000	19E3	4409	UTVZER DC	IL(@CADDR)'00'	CONSTANT FACTOR
19E4	19F5	19E5	4410	UTVADR DC	AL2(UTVAR1)	DADDR OF VOLUMN LABEL
19E6	3F	19E6	4411	UTVLGH DC	AL1(\$@LTH-1)	LENGTH OF FILE LABEL-1
19E7		19EE	4412	UTVSV1 DS	CL8	FILE SAVE AREA
19EF		19F0	4413	UTVSV2 DS	CL(@CADDR)	DISK DADDR
19F1		19F1	4414	UTVSV3 DS	CL1	# CYLINDERS
19F2		19F2	4415	UTVSV4 DS	CL1	INITIAL CYL #
19F3		19F3	4416	UTVSRT DS	CL1	SAVED INIT CYL #
19F4		19F4	4417	UTVSCP DS	XL1	COUNTER FOR VTOC SEARCH
			4418	*		
			4419	*	EQUATES USED IN UTVTOC	
			4420	*		
		0001	4421	UTVFG1 EQU	X'01'	VTOC FILE DELETION
		0002	4422	UTVFG2 EQU	X'02'	VTOC FILE INSERTION
		0004	4423	UTVFG3 EQU	X'04'	VTOC FILE EXPANSION
		0008	4424	UTVFG4 EQU	X'08'	VTOC FILE SHRINKAGE
		0010	4425	UTVFG5 EQU	X'10'	VTOC FILE INSERT
		00FF	4426	UTVFLG EQU	X'FF'	SUCCESSFUL EXIT CODE
		0080	4427	UTVBIT EQU	X'80'	TRACK 1 BIT
		1564	4428	UTVDEL EQU	UTVTOC	ENTRY POINT FOR DELETION
		1575	4429	UTVDFT EQU	UTV050	ENTRY POINT FOR INSERT
		1580	4430	UTVIST EQU	UTV100	ENTRY POINT FOR INSERTION
		159D	4431	UTVINP EQU	UTV117	ENTRY POINT FOR INFO
		15A1	4432	UTVEXP EQU	UTV120	ENTRY POINT FOR EXPANSION
		15AC	4433	UTVSHK EQU	UTV140	ENTRY POINT FOR SHRINKAGE
		0001	4434	UTVONE EQU	1	CONSTANT FACTOR
		0002	4435	UTVTWO EQU	2	CONSTANT FACTOR
		0008	4436	UTVEGT EQU	8	CONSTANT FACTOR
		0032	4437	UTVUPR EQU	X'32'	MAXIMUM # TAGS
		19F5	4438	UTVAR1 EQU	*	VOLUMN LABEL BUFFER AREA
		1AF5	4439	UTVAR2 EQU	UTVAR1+256	VTOC INDEX BUFFER AREA
		1CF5	4440	UTVAR3 EQU	UTVAR2+512	FILE LABEL BUFFER AREA

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1DF5 4441 UTVAR4 EQU UTVAR3+256
 4442 PRINT ON
FFFF 4443 END

TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY = 0

CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$\$\$	001	0C00	2108	
\$\$\$\$\$1	188	14FF	3929	
\$\$\$\$\$2	100	1563	3936	
\$\$\$\$L1	001	1444	3924	3927 3929
\$\$\$\$T1	001	1500	3926	3929
\$\$ZERO	001	0000	0223	0224 0226 0227 0228 0232
\$#TALT	001	0075	0754	
\$#TBIS	001	00FC	0766	4289*
\$#TCET	001	0069	0753	
\$#TCYL	001	005C	0752	
\$#THAD	001	00F2	0758	4309*
\$#THEL	001	0004	0778	2409 4128
\$#THVT	001	00F0	0757	4130 4308*
\$#TIDR	001	00FF	0768	4108 4314* 4316*
\$#TLAD	001	00FE	0767	4300*
\$#TLBL	001	0008	0749	
\$#TLIB	001	00F8	0763	4122 4298*
\$#TLIF	001	0010	0776	2464 4120 4296
\$#TLSZ	001	00F7	0762	4299*
\$#TOID	001	005B	0751	
\$#TPAD	001	00F6	0761	4305*
\$#TPFL	001	0008	0777	2422 4124 4302
\$#TPSZ	001	00F4	0760	4304*
\$#TPTF	001	00F3	0759	4126 4306*
\$#TRES	001	00D7	0770	
\$#TSUS	001	00EF	0756	
\$#TSYM	001	0080	0773	2471 4112 4286
\$#TSYS	001	00FA	0765	4114 4288*
\$#TUSE	001	00A8	0755	3728
\$#TVOL	001	0002	0748	
\$#TVTC	001	000A	0750	
\$#TWAL	001	00D7	0769	4294*
\$#TWF1	001	0020	0775	2432 4116 4291
\$#TWRK	001	00F9	0764	4118 4293*
\$#TWR1	001	0040	0774	2429 4116 4291
\$@\$AVL	001	00FF	1326	4169* 4228*
\$@\$BYT	001	0002	1312	4349
\$@\$END	001	0022	1328	4158 4216* 4217* 4218 4223* 4224* 4249 4251* 4254 4261 4271* 4272 4360 4364* 4365*
\$@\$FIL	001	000D	1308	4134 4188
\$@\$FIN	001	000A	1322	4212*
\$@\$INC	001	000A	1314	4139 4195
\$@\$LNG	001	0008	1309	4040 4046 4047 4049 4063 4137 4154 4189 4212 4226 4325
\$@\$LTH	001	0040	1321	4160 4160 4160* 4411
\$@\$LUE	001	0006	1316	
\$@\$RTN	001	0011	1323	
\$@\$SCT	001	0001	1310	4342
\$@\$SRT	001	0020	1325	4156 4159 4218* 4219* 4220 4222* 4255 4256 4273 4274
\$@\$TGS	001	0032	1315	
\$@\$TYP	001	0012	1324	4213*
\$ABORT	001	0010	0336	
\$BASIC	001	0080	0394	
\$BIGCD	001	0080	0470	
\$BLDPL	001	0579	0603	0605
\$BLNOE	001	0569	0593	
\$BLOAD	001	0522	0584	0586 0589 0602 0603

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$BLRTN	001	0550	0592	0593
\$BRSAV	001	03C5	0281	0282
\$BSADR	001	0587	0608	0610 2513 3488 3489
\$BUFPT	001	03E3	0489	0490
\$CABLD	001	04B4	0562	0563
\$CAERK	001	0469	0539	0542 2537
\$CAERR	001	03CD	0287	0289 2306* 2338* 2399* 2402* 2518* 2533* 2536* 2779* 2947* 2954* 2975* 2979* 3012* 3281* 3298* 3302* 3319* 3324* 3326* 3465* 3472* 4190*
\$CAIPL	001	049D	0558	0560
\$CALLI	001	0008	0479	
\$CARDI	001	0001	0250	
\$CARPL	001	04A1	0560	0562 2528 2529
\$CIENT	001	0483	0549	0550
\$CIEXT	001	0480	0548	0549
\$CIMSK	001	0476	0545	0548 2475* 4075*
\$CISUS	001	0496	0553	0558
\$CLBFR	001	0010	0437	
\$CMDKY	001	0008	0349	
\$CMODE	001	0002	0399	3473 3479 3486
\$CONFG	001	03DD	0462	0472
\$CRPOS	001	03E2	0488	0489
\$CRTAD	001	044D	0527	0528
\$CRTAV	001	0002	0343	
\$CRTDN	001	0002	0367	
\$CRTIN	001	03D3	0364	0371
\$CRTNO	001	0004	0346	
\$CRTPU	001	0004	0368	
\$CRTSP	001	0008	0369	
\$CRTUP	001	0001	0366	
\$CRUSH	001	0080	0475	
\$CSDPL	001	050E	0574	0575
\$C0001	001	0464	0531	0537
\$DATE	001	043A	0512	0513
\$DBGUF	001	03E0	0474	0483
\$DBLOK	001	0001	0424	
\$DFDET	001	03E8	0495	0496
\$DISKN	001	0025	0226	2480 2482 2490 2492 2499 2501 2507 2509 2546 2548 2564 2566 3708 3710 4078 4080 4096 4098 4165 4172 4174 4231 4233 4238 4240 4319 4321 4353 4355
\$DKERR	001	0008	0405	
\$DKSIZ	001	03D7	0449	0457 0498 2957 2960
\$DK100	001	0001	0451	
\$DK200	001	0002	0452	
\$DK400	001	0004	0453	
\$DK600	001	0008	0454	2960
\$DK800	001	0010	0455	2957 2960
\$DPLSV	001	0449	0523	0525
\$DTNMB	001	0040	0270	
\$DTRDR	001	0040	0358	
\$ENDNU	001	0600	0617	
\$ERDPL	001	046F	0542	0544
\$ERFIL	001	0040	0297	
\$ERHRD	001	0004	0429	2517
\$ERKEY	001	0080	0301	
\$ERLOG	001	0345	0231	
\$ERMAD	001	0472	0544	0545 3481* 3492*

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$ERPND	001	0004	0402	
\$ERRCT	001	03CF	0303	
\$ERRPG	001	03CE	0291	
\$ERSFL	001	0035	0296	
\$ERSTK	001	0030	0294	
\$ER050	001	0363	0232	
\$ER1N2	001	0050	0299	
\$EXADR	001	0517	0577	0579
\$EXCMD	001	0001	0331	
\$EXFTR	001	043B	0513	0518
\$FCIND	001	0010	0409	
\$FDIND	001	0040	0416	
\$FEARR	001	0004	0224	
\$FEMAP	001	0588	0610	0611
\$FILIB	001	03DA	0460	0461 2453 2455 2460*
\$FITIN	001	0010	0385	
\$FUIND	001	0020	0414	
\$GUFIO	001	0583	0607	0608 3480* 3491*
\$GUFIR	001	0008	0259	
\$HISTE	001	042E	0510	0511
\$HIST1	001	0435	0511	0512
\$HRDER	001	0020	0355	
\$INDR1	001	03D4	0371	0397
\$INDR2	001	03D5	0397	0422 3473 3479* 3486*
\$INDR3	001	03D6	0422	0449 2439* 2442* 2517* 3466 3469
\$INLNO	001	03CF	0289	0291 0303 0310
\$INRPT	001	0020	0267	
\$IOIND	001	03D2	0338	0364
\$IOPGS	001	0010	0478	
\$IOYES	001	0002	0253	
\$IPLDV	001	05FF	0614	0617
\$IRKEY	001	0020	0477	
\$KEYBD	001	03E1	0483	0488
\$KEYCD	001	03C3	0247	0281
\$KEYDT	001	0040	0391	
\$KE090	001	00DE	0227	
\$KE130	001	01D5	0228	
\$KYBSY	001	0010	0264	
\$LDRTN	001	0571	0602	
\$LEVEL	001	03DF	0472	0474 4294
\$LIST	001	0002	0426	
\$LMRGN	001	03C1	0242	0244
\$LNPTR	001	0080	0361	
\$LOADB	001	054A	0586	
\$LOADR	001	051A	0579	0582
\$LPRIO	001	03EA	0496	
\$LPROS	001	03E5	0491	0493
\$LPRP3	001	03E4	0490	0491
\$MOUNT	001	0020	0440	
\$MPDWN	001	0001	0340	
\$NEXTB	001	03E6	0493	0494
\$NEXTL	001	03E7	0494	0495
\$NOENB	001	0008	0432	
\$NOLST	001	0004	0256	
\$NUCBS	001	03C0	0239	0240
\$NWRKF	001	0080	0445	2442 3466

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$NWRKR	001	0040	0442	2439 3469
\$PASWD	001	042D	0509	0510 2277
\$PAUSD	001	04BA	0563	0565
\$PAUSE	001	0002	0333	
\$PGMDT	001	0020	0388	
\$PGMST	001	0010	0352	
\$PKERT	001	0419	0507	0509
\$PLST1	001	0454	0528	0529
\$PLST2	001	045B	0529	0530
\$PLST3	001	0462	0530	0531
\$PRDEV	001	044B	0525	0527
\$PRESN	001	0002	0376	
\$PROCI	001	0001	0373	
\$PRPOS	001	03C2	0244	0247
\$PSDBR	001	04FA	0568	
\$PSDXR	001	04F2	0567	0568
\$PSTEP	001	0004	0334	
\$PSTMT	001	0008	0335	
\$PTCH1	001	03F5	0498	0502
\$READY	001	0080	0418	
\$REORD	001	0040	0476	
\$RLOAD	001	051E	0582	0584 2320
\$RMGRN	001	03C0	0240	0242
\$RSTR	001	04D6	0565	0567 0569 0574
\$RUNIT	001	0001	0312	
\$SFAID	001	050D	0570	
\$SPRNT	001	0465	0537	0539
\$SRTRN	001	04FE	0569	0570
\$STEPT	001	0002	0313	
\$SWPCR	001	0511	0575	0577
\$TABLN	001	03CB	0284	0287
\$TFLOW	001	0008	0319	
\$TRACE	001	0004	0314	
\$TRALL	001	0010	0320	
\$TROVR	001	054E	0589	0592
\$TRUNK	001	0080	0272	
\$TRVAR	001	0020	0321	
\$UNMSK	001	048D	0550	0553
\$USRDR	001	03DC	0461	0462 2461 2461*
\$VMDEF	001	0080	0325	
\$VOLF1	001	03FE	0504	0505
\$VOLF2	001	040E	0506	
\$VOLID	001	03F6	0502	0503 0507 2278 3060
\$VOLR1	001	03F6	0503	0504
\$VOLR2	001	0406	0505	0506
\$WAITF	001	057F	0605	0607 2483 2493 2502 2510 2549 2567 3711 4081 4099 4175 4234 4241 4322 4356
\$WFDEF	001	0040	0519	
\$WFLOK	001	0008	0382	
\$WFNME	001	0443	0518	0523
\$WSIND	001	0004	0379	
\$XIND1	001	03D0	0310	0329
\$XIND2	001	03D1	0329	0338
\$XIND3	001	03D8	0457	0460
\$XPREC	001	0040	0322	
\$XRSAB	001	03C7	0282	0284 2305

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\$ZTRAD	001	05A2	0611	
\$12K	001	0004	0466	
\$16CKY	001	0008	0468	
\$16K	001	0002	0465	
\$22IMP	001	0001	0463	
###BL	001	0000	1105	
###CK	001	0000	1233	
###CN	001	0000	1201	
###CO	001	0000	0993	
###CS	001	0000	1053	
###DR	001	0000	0797	
###ER	001	0000	0997	
###FS	001	0000	1093	
###IN	001	0000	1237	
###PW	001	0000	1241	
###RS	001	0000	1073	
###SA	001	0000	1061	
###SS	001	0000	1057	
###VU	001	0600	1017	
###0T	001	0700	0789	
###1T	001	0000	0793	
###BCO	001	0600	0805	
###BOV	001	0800	1077	
###DPR	001	0700	0813	
###DRE	001	0889	0829	
###DSP	001	2800	0849	
###ECM	001	0C00	1109	
###EFK	001	0C00	1129	
###ERR	001	0C00	1101	
###EXM	001	0C00	0989	
###FIL	001	0E00	1069	
###FIS	001	0E00	1065	
###FML	001	0200	1197	
###FMS	001	0200	1037	
###GRA	001	0889	0961	
###GUF	001	0C00	1097	
###INL	001	0600	1177	
###INS	001	0600	0801	
###KAL	001	0C00	0965	
###KCA	001	0C00	1181	
###KCH	001	0C00	0933	
###KCN	001	0C00	1049	
###KCT	001	0C00	0901	
###KDE	001	0C00	0897	
###KDI	001	0D00	0977	
###KDN	001	0C00	0885	
###KDO	001	0E00	0981	
###KED	001	0C00	0821	
###KEN	001	0C00	0825	
###KEX	001	0C00	0845	
###KGO	001	0C00	0817	
###KHE	001	0C00	1001	
###KKE	001	0C00	1229	
###KLI	001	0C00	0905	
###KLL	001	0920	1205	
###KLO	001	0C00	0909	

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\$\$\$KME	001	0D00	0889	
\$\$\$KMO	001	0C00	0833	
\$\$\$KNA	001	0C00	0945	
\$\$\$KOV	001	0E00	0865	
\$\$\$KPA	001	0C00	0841	
\$\$\$KPO	001	0C00	0929	
\$\$\$KPR	001	0C00	0953	
\$\$\$KRE	001	0C00	0873	
\$\$\$KRL	001	0700	0969	
\$\$\$KRM	001	0C00	0837	
\$\$\$KRN	001	0700	0857	
\$\$\$KRO	001	0D00	0861	
\$\$\$KRS	001	0C00	1185	
\$\$\$KRU	001	0C00	0881	
\$\$\$KRV	001	0800	0973	
\$\$\$KSA	001	0C00	0917	
\$\$\$KSE	001	0E00	0957	
\$\$\$KSO	001	0C20	1009	
\$\$\$KSS	001	0C00	0941	
\$\$\$KSV	001	0980	0937	
\$\$\$KSY	001	0C00	0949	
\$\$\$KWI	001	0C00	0877	
\$\$\$KWR	001	0C00	0869	
\$\$\$LOA	001	0600	0809	
\$\$\$MIP	001	0C00	1005	
\$\$\$SDS	001	0C00	1117	
\$\$\$SFF	001	0E00	1121	
\$\$\$SFL	001	0F00	1113	
\$\$\$SFO	001	1500	1085	
\$\$\$SFS	001	0C00	1081	
\$\$\$SPA	001	0C00	0921	
\$\$\$SPO	001	0806	0925	
\$\$\$SPS	001	0C00	0913	
\$\$\$STR	001	1600	1089	
\$\$\$TDC	001	1000	0893	
\$\$\$TSY	001	1000	0853	
\$\$\$TVK	001	0FC0	1029	
\$\$\$UAL	001	0C00	1045	
\$\$\$UAT	001	0900	1141	
\$\$\$UCD	001	0900	1149	
\$\$\$UCN	001	0C00	1133	
\$\$\$UCP	001	0700	1137	
\$\$\$UDE	001	0C00	1153	2107
\$\$\$UDI	001	0C00	1157	2657
\$\$\$UEX	001	0C00	1041	
\$\$\$UIN	001	0C00	1145	
\$\$\$UPA	001	0C00	1125	
\$\$\$UPO	001	0C00	1193	
\$\$\$UPT	001	0C00	1189	
\$\$\$VCR	001	2000	0985	
\$\$\$VLO	001	0600	1021	
\$\$\$VOD	001	0600	1025	
\$\$\$VVM	001	0000	1033	
\$\$\$VXI	001	0600	1013	
\$\$\$ZDU	001	1100	1165	
\$\$\$ZLB	001	1100	1209	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$ZLO	001	1100	1169	
\$\$\$ZLV	001	0F00	1225	
\$\$\$ZL1	001	0F00	1213	
\$\$\$ZL2	001	0F00	1217	
\$\$\$ZL3	001	0C00	1221	
\$\$\$ZTR	001	1000	1161	
\$\$\$ZUT	001	0C00	1173	
\$\$#BLN	001	18D4	1104	
\$\$#CKT	001	2118	1232	
\$\$#CNF	001	2000	1200	
\$\$#COR	001	0800	0992	
\$\$#CSA	001	1000	1052	
\$\$#DRT	001	0000	0796	
\$\$#ERM	001	0928	0996	
\$\$#FSP	001	1880	1092	
\$\$#INV	001	212C	1236	
\$\$#PWR	001	2300	1240	
\$\$#RSP	001	1780	1072	
\$\$#SAV	001	1180	1060	
\$\$#SSA	001	1128	1056	
\$\$#VUF	001	0B08	1016	
\$\$#0TR	001	0000	0788	
\$\$#1TR	001	0080	0792	
\$\$@#BL	001	0001	1106	
\$\$@#CK	001	0004	1234	
\$\$@#CN	001	0001	1202	
\$\$@#CO	001	003A	0994	
\$\$@#CS	001	003A	1054	
\$\$@#DR	001	0008	0798	
\$\$@#ER	001	0032	0998	
\$\$@#FS	001	0030	1094	
\$\$@#IN	001	003A	1238	
\$\$@#PW	001	00C0	1242	
\$\$@#RS	001	0030	1074	
\$\$@#SA	001	0108	1062	
\$\$@#SS	001	0001	1058	
\$\$@#VU	001	0002	1018	
\$\$@#0T	001	0018	0790	
\$\$@#1T	001	0018	0794	
\$\$@BCO	001	0018	0806	
\$\$@BOV	001	0018	1078	
\$\$@DPR	001	0005	0814	
\$\$@DRE	001	0001	0830	
\$\$@DSP	001	0004	0850	
\$\$@ECM	001	0006	1110	
\$\$@EFK	001	0002	1130	
\$\$@ERR	001	0003	1102	
\$\$@EXM	001	0003	0990	
\$\$@FIL	001	0009	1070	
\$\$@FIS	001	0009	1066	
\$\$@FML	001	0052	1198	
\$\$@FMS	001	0052	1038	
\$\$@GRA	001	0003	0962	
\$\$@GUF	001	0010	1098	
\$\$@INL	001	0010	1178	
\$\$@INS	001	0010	0802	

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#\$@KAL	001	000F	0966	
#\$@KCA	001	000C	1182	
#\$@KCH	001	000C	0934	
#\$@KCN	001	0010	1050	
#\$@KCT	001	0009	0902	
#\$@KDE	001	0010	0898	
#\$@KDI	001	0005	0978	
#\$@KDN	001	0010	0886	
#\$@KDO	001	000C	0982	
#\$@KED	001	000E	0822	
#\$@KEN	001	0006	0826	
#\$@KEX	001	0003	0846	
#\$@KGO	001	0002	0818	
#\$@KHE	001	000C	1002	
#\$@KKE	001	0006	1230	
#\$@KLI	001	0011	0906	
#\$@KLL	001	0001	1206	
#\$@KLO	001	0008	0910	
#\$@KME	001	0003	0890	
#\$@KMO	001	0004	0834	
#\$@KNA	001	0008	0946	
#\$@KOV	001	0009	0866	
#\$@KPA	001	0005	0842	
#\$@KPO	001	000D	0930	
#\$@KPR	001	0009	0954	
#\$@KRE	001	0002	0874	
#\$@KRL	001	0004	0970	
#\$@KRM	001	0003	0838	
#\$@KRN	001	0003	0858	
#\$@KRO	001	000A	0862	
#\$@KRS	001	000A	1186	
#\$@KRU	001	0003	0882	
#\$@KRV	001	000D	0974	
#\$@KSA	001	0011	0918	
#\$@KSE	001	0004	0958	
#\$@KSO	001	0005	1010	
#\$@KSS	001	000B	0942	
#\$@KSV	001	0002	0938	
#\$@KSY	001	000F	0950	
#\$@KWI	001	0002	0878	
#\$@KWR	001	0002	0870	
#\$@LOA	001	0013	0810	
#\$@MIP	001	000D	1006	
#\$@SDS	001	0004	1118	
#\$@SFF	001	0008	1122	
#\$@SFL	001	0005	1114	
#\$@SFO	001	0003	1086	
#\$@SFS	001	0011	1082	
#\$@SPA	001	0004	0922	
#\$@SPO	001	0003	0926	
#\$@SPS	001	0001	0914	
#\$@STR	001	0002	1090	
#\$@TDC	001	0003	0894	
#\$@TSY	001	0003	0854	
#\$@TVK	001	0001	1030	
#\$@UAL	001	0011	1046	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$@UAT	001	000C	1142	
#\$@UCD	001	000B	1150	
#\$@UCN	001	0009	1134	
#\$@UCP	001	000F	1138	
#\$@UDE	001	000E	1154	
#\$@UDI	001	0008	1158	2656
#\$@UEX	001	000E	1042	
#\$@UIN	001	000F	1146	
#\$@UPA	001	0004	1126	
#\$@UPO	001	0005	1194	
#\$@UPT	001	0012	1190	
#\$@VCR	001	0008	0986	
#\$@VLO	001	0002	1022	
#\$@VOD	001	0016	1026	
#\$@VVM	001	0030	1034	
#\$@VXI	001	0002	1014	
#\$@ZDU	001	0008	1166	
#\$@ZLB	001	0002	1210	
#\$@ZLO	001	000C	1170	
#\$@ZLV	001	0006	1226	
#\$@ZL1	001	0007	1214	
#\$@ZL2	001	000D	1218	
#\$@ZL3	001	000A	1222	
#\$@ZTR	001	0001	1162	
#\$@ZUT	001	0014	1174	
#\$BCOM	001	0080	0804	
#\$BOLV	001	1780	1076	
#\$DPRI	001	014C	0812	
#\$DREA	001	0200	0828	
#\$DSPL	001	0240	0848	
#\$ECMA	001	1900	1108	
#\$EFKE	001	1990	1128	
#\$ERRP	001	18C0	1100	3513
#\$EXMS	001	07D4	0988	
#\$FILN	001	1724	1068	
#\$FIST	001	1700	1064	
#\$FMLN	001	1E00	1196	
#\$FMST	001	0D00	1036	
#\$GRAP	001	0690	0960	
#\$GUFU	001	1880	1096	3508
#\$INLN	001	1C84	1176	
#\$INST	001	0020	0800	
#\$KALL	001	06A4	0964	
#\$KCAL	001	1CC4	1180	
#\$KCHA	001	053C	0932	
#\$KCND	001	0F80	1048	
#\$KCTL	001	03BC	0900	
#\$KDEL	001	035C	0896	
#\$KDIS	001	0744	0976	
#\$KDNT	001	0300	0884	
#\$KDOV	001	0780	0980	
#\$KEDI	001	0188	0820	
#\$KENA	001	01C4	0824	
#\$KEXT	001	0234	0844	
#\$KGOS	001	0180	0816	
#\$KHEL	001	0A30	1000	

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#\$KEY	001	2100	1228	
#\$KLIS	001	0400	0904	
#\$KLLA	001	2004	1204	
#\$KLOG	001	0444	0908	
#\$KMER	001	030C	0888	
#\$KMOU	001	0204	0832	
#\$KNAM	001	05C0	0944	
#\$KOVN	001	0290	0864	
#\$KPAS	001	0220	0840	
#\$KPOO	001	0508	0928	
#\$KPRT	001	063C	0952	
#\$KREA	001	02BC	0872	
#\$KRLA	001	0700	0968	
#\$KRMO	001	0214	0836	
#\$KRNU	001	0280	0856	
#\$KROV	001	028C	0860	
#\$KRSU	001	1D24	1184	
#\$KRUN	001	02CC	0880	
#\$KRVL	001	0710	0972	
#\$KSAV	001	0488	0916	
#\$KSET	001	0680	0956	
#\$KSOV	001	0AC8	1008	
#\$KSSP	001	0594	0940	
#\$KSVL	001	058C	0936	
#\$KSYM	001	0600	0948	
#\$KWID	001	02C4	0876	
#\$KWRI	001	02B4	0868	
#\$LOAD	001	0100	0808	
#\$MIPP	001	0A80	1004	
#\$SDSY	001	192C	1116	
#\$SFFI	001	193C	1120	
#\$SFLO	001	1918	1112	
#\$SFOV	001	1844	1084	
#\$SFSY	001	1800	1080	
#\$SPAC	001	04CC	0920	
#\$SPOV	001	04DC	0924	
#\$SPSY	001	0484	0912	
#\$STRO	001	1850	1088	
#\$TDCK	001	0350	0892	
#\$TSYK	001	0250	0852	
#\$TVKB	001	0BAC	1028	
#\$UALL	001	0F00	1044	
#\$UATR	001	1A38	1140	
#\$UCDI	001	1AD8	1148	
#\$UCNF	001	19B8	1132	
#\$UCPL	001	19DC	1136	
#\$UDEL	001	1B24	1152	
#\$UDIS	001	1B5C	1156	2655
#\$UEXL	001	0EA8	1040	
#\$UINI	001	1A88	1144	
#\$UPAC	001	1980	1124	
#\$UPOV	001	1D24	1192	
#\$UPTF	001	1D5C	1188	
#\$VCRT	001	07B4	0984	
#\$VLOA	001	0B80	1020	
#\$VODK	001	0B88	1024	

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 11/11/22 PAGE 66

#\$VVMR 001 0C00 1032
#\$VXIT 001 0B00 1012
#\$ZDUM 001 1BA4 1164
#\$ZLBM 001 2008 1208
#\$ZLOA 001 1BC4 1168
#\$ZLVR 001 20B0 1224
#\$ZL1M 001 2010 1212
#\$ZL2M 001 2030 1216
#\$ZL3M 001 2088 1220
#\$ZTRA 001 1B9C 1160
#\$ZUTM 001 1C14 1172
##DNEA 001 0001 0671
##DNEF 001 0003 0672
##DNER 001 0005 0673
##DNE1 001 0004 0670
##DNHC 001 0000 0667
##DNHR 001 0003 0669
##DNHY 001 0001 0668
##DPEA 001 0009 0645
##DPEN 001 0007 0644
##DPER 001 000B 0646
##DPE1 001 0004 0643
##DPHC 001 0000 0641
##DPHR 001 0003 0642
##DUEA 001 0009 0656
##DUED 001 0012 0661
##DUEF 001 000B 0657
##DUEH 001 002B 0662
##DUEI 001 000C 0658
##DUEL 001 000F 0660
##DUEN 001 0007 0655
##DUER 001 0031 0663
##DUES 001 000D 0659
##DUE1 001 000C 0654
##DUHA 001 0001 0650
##DUHB 001 0003 0651
##DUHC 001 0004 0652
##DUHR 001 000B 0653
##LAAA 001 0002 0682
##LAHC 001 0001 0681
##LN 001 0001 0710
##LNE 001 0006 0716
##LNEF 001 0002 0714
##LNEZ 001 0002 0715
##LNH 001 0004 0713
##LNHY 001 0001 0711
##LNHZ 001 0002 0712
##LP 001 0004 0686
##LPE 001 000C 0691
##LPEN 001 0008 0688
##LPEZ 001 0002 0689
##LPH 001 0004 0690
##LPHZ 001 0003 0687
##LU 001 0002 0695
##LUE 001 0032 0706
##LUED 001 0003 0703

3369 3370

3255 3297

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##LUEF 001 0002 0699
##LUEH 001 0019 0704
##LUEI 001 0001 0700
##LUEL 001 0002 0702
##LUEN 001 0008 0698 3223 3367
##LUES 001 0001 0701
##LUEZ 001 0006 0705
##LUH 001 000C 0697
##LUHZ 001 0007 0696
##MNHM 001 002A 0739
##MPHM 001 0055 0724
##MUEG 001 0020 0731
##MUEK 001 0040 0730
##MUEO 001 0004 0734
##MUEP 001 0080 0729
##MUER 001 0008 0733
##MUEV 001 0002 0735
##MUEX 001 0010 0732
##MUHM 001 000A 0728
##RN 001 0000 0630
##RP 001 0001 0631
##R1 001 0007 0633
##R2 001 0005 0632
#@#BAD 001 0455 1429
#@#IO1 001 0459 1437
#@#IO2 001 045D 1438
#@#TAT 001 0941 1465
#@#TBA 001 09A1 1469
#@#TFS 001 0941 1463
#@#TSY 001 0941 1467
#@#VFP 001 0700 1455
#@#VLP 001 093D 1458
#@#WDB 001 050C 1450
#@#WFT 001 0500 1448
@@#BA 001 0001 1430
@@#IO 001 0001 1442
@@#SC 001 0002 1439
@@#TA 001 0010 1466
@@#TB 001 0010 1470
@@#TS 001 0005 1468
@@#TW 001 0020 1464
@@#VM 001 0100 1459
@@#WD 001 00BD 1451
@@#WF 001 0003 1449
@@#04 001 0004 1441
@@#08 001 0008 1440
@@#BOV 001 0018 1418
@@#ECM 001 0006 1432
@@#ERR 001 0003 1426
@@#GUF 001 0010 1422
@@#LDS 001 0002 1428
@@#SDS 001 0004 1424
@@#SFF 001 0008 1436
@@#SFL 001 0005 1434
@@#SFO 001 0005 1444
@@#SFS 001 0011 1420

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
###VSF	001	0010	1472	
###VSL	001	000F	1473	
###VTR	001	0001	1457	
#@BOVL	001	0400	1417	
#@CORS	001	0005	1379	
#@ECMA	001	0481	1431	
#@ERRP	001	0441	1425	3503
#@GUFU	001	0401	1421	3502
#@LDSV	001	044D	1427	
#@MVSD	001	0001	1387	
#@NERO	001	0003	1381	
#@OBRA	001	0002	1383	
#@PTFL	001	0006	1402	2274 2557 2560
#@PTFS	001	0001	1401	2634 2645
#@SDSY	001	04AD	1423	
#@SFFI	001	04BD	1435	
#@SFLO	001	0499	1433	
#@SFOV	001	04C4	1443	
#@SFSY	001	0480	1419	
#@VCNT	001	0002	1399	4384
#@VLAB	001	0001	1394	2668 3741 4374 4395
#@VLSD	001	0001	1385	
#@VSFI	001	09A1	1471	
#@VTRL	001	0708	1456	
#@WAF1	001	0401	1416	
#@WAR1	001	0400	1415	
#CNDIS	001	0001	1354	
#CNFIG	001	0005	1390	
#CORSV	001	0010	1378	
#DKEXT	001	0002	1361	
#FIGSC	001	0001	1391	
#HISCT	001	0006	1368	
#HISDX	001	0003	1363	
#HISLN	001	0008	1360	1361
#HISN1	001	0003	1366	
#HISN2	001	0005	1367	
#HISTC	001	0007	1370	
#HISTN	001	0009	1372	
#HISTQ	001	0000	1364	
#HISTR	001	0001	1365	
#HISTS	001	0008	1371	
#HISTV	001	000F	1373	
#HSEND	001	0007	1369	
#HSENT	001	0001	1362	
#IOSDR	001	0019	1389	
#MVSDR	001	000D	1386	
#NEROV	001	009C	1380	
#OBRAD	001	001D	1382	
#PKCNT	001	0002	1347	
#PKMRW	001	002B	1348	
#PKRDD	001	0003	1345	
#PKRTD	001	0003	1344	
#PKRTL	001	0004	1351	
#PKVRD	001	000B	1349	
#PKVWD	001	0007	1350	
#PKWTD	001	0001	1346	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
#PTFDA	001	00DC	1400	2633 2644
#RDWTL	001	0004	1352	
#SDRDK	001	0011	1388	
#UDEL	001	0C07	2111	
#UDELV	001	0000	0001	
#VLSDR	001	000C	1384	
#VLTBE	001	0008	1339	
#VOLF1	001	0009	1392	
#VOLNG	001	0006	1337	1339 1361
#VOLOC	001	0005	1338	
#VOLR1	001	0008	1393	2667 3740 4373
#VTCF1	001	0025	1396	
#VTCF2	001	0027	1398	
#VTCR1	001	0024	1395	4383
#VTCR2	001	0026	1397	
@@E001	001	0000	2010	2012
@@E003	001	0001	2012	2014
@@E004	001	0002	2014	2016
@@E005	001	0003	2016	2018
@@E006	001	0004	2018	2020
@@E007	001	0005	2020	2022
@@E008	001	0006	2022	2024
@@E009	001	0007	2024	2026
@@E010	001	0008	2026	2028
@@E011	001	0009	2028	2030
@@E012	001	000A	2030	2032
@@E013	001	000B	2032	2034
@@E014	001	000C	2034	2036
@@E015	001	000D	2036	2038
@@E016	001	000E	2038	2040
@@E017	001	000F	2040	2042
@@E018	001	0010	2042	2044
@@E019	001	0011	2044	2046
@@E020	001	0012	2046	2048
@@E021	001	0013	2048	2050
@@E023	001	0014	2050	2052
@@E024	001	0015	2052	2054
@@E025	001	0016	2054	2056
@@E026	001	0017	2056	2058
@@E027	001	0018	2058	2060
@@E028	001	0019	2060	2062
@@E029	001	001A	2062	2064
@@E030	001	001B	2064	2066
@@E031	001	001C	2066	2068
@@E032	001	001D	2068	2070
@@E035	001	001E	2070	2072
@@E036	001	001F	2072	2074
@@E037	001	0020	2074	2076
@@E038	001	0021	2076	2078
@@E039	001	0022	2078	2080
@@E040	001	0023	2080	2082
@@E041	001	0024	2082	2084
@@E042	001	0025	2084	2086
@@E043	001	0026	2086	2088
@@E044	001	0027	2088	2090
@@E045	001	0028	2090	2092

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@@E046	001	0029	2092	2094			
@@E060	001	002A	2094	2096			
@@E080	001	002B	2096				
@@E100	001	0000	1482	1484	3281	3324	
@@E101	001	0001	1484	1486	3326		
@@E102	001	0002	1486	1488	3298		
@@E103	001	0003	1488	1490	3302		
@@E110	001	0004	1490	1492	2779		
@@E112	001	0005	1492	1494			
@@E113	001	0006	1494	1496			
@@E114	001	0007	1496	1498			
@@E115	001	0008	1498	1500			
@@E116	001	0009	1500	1502			
@@E117	001	000A	1502	1504			
@@E120	001	000B	1504	1506			
@@E122	001	000C	1506	1508			
@@E123	001	000D	1508	1510			
@@E124	001	000E	1510	1512			
@@E129	001	000F	1512	1514			
@@E130	001	0010	1514	1516	2533	2975	3319
@@E131	001	0011	1516	1518	2536	2947	2979
@@E133	001	0012	1518	1520	2399		
@@E134	001	0013	1520	1522			
@@E135	001	0014	1522	1524			
@@E136	001	0015	1524	1526			
@@E137	001	0016	1526	1528			
@@E138	001	0017	1528	1530			
@@E139	001	0018	1530	1532			
@@E142	001	0019	1532	1534	2306		
@@E143	001	001A	1534	1536	2338		
@@E150	001	001B	1536	1538			
@@E151	001	001C	1538	1540			
@@E160	001	001D	1540	1542			
@@E162	001	001E	1542	1544			
@@E163	001	001F	1544	1546			
@@E164	001	0020	1546	1548			
@@E200	001	0021	1548	1550			
@@E205	001	0022	1550	1552			
@@E210	001	0023	1552	1554			
@@E211	001	0024	1554	1556			
@@E212	001	0025	1556	1558			
@@E213	001	0026	1558	1560			
@@E215	001	0027	1560	1562			
@@E216	001	0028	1562	1564	3012		
@@E217	001	0029	1564	1566			
@@E220	001	002A	1566	1568			
@@E221	001	002B	1568	1570			
@@E222	001	002C	1570	1572			
@@E223	001	002D	1572	1574			
@@E225	001	002E	1574	1576			
@@E226	001	002F	1576	1578			
@@E227	001	0030	1578	1580			
@@E228	001	0031	1580	1582			
@@E229	001	0032	1582	1584	2402		
@@E230	001	0033	1584	1586			
@@E232	001	0034	1586	1588			

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@@E234	001	0035	1588	1590	
@@E237	001	0036	1590	1592	
@@E240	001	0037	1592	1594	
@@E241	001	0038	1594	1596	
@@E242	001	0039	1596	1598	2954
@@E248	001	003A	1598	1600	
@@E249	001	003B	1600	1602	
@@E250	001	003C	1602	1604	
@@E251	001	003D	1604	1606	
@@E252	001	003E	1606	1608	
@@E253	001	003F	1608	1610	
@@E254	001	0040	1610	1612	
@@E255	001	0041	1612	1614	
@@E256	001	0042	1614	1616	
@@E300	001	0043	1616	1618	
@@E301	001	0044	1618	1620	
@@E302	001	0045	1620	1622	
@@E303	001	0046	1622	1624	
@@E304	001	0047	1624	1626	
@@E305	001	0048	1626	1628	
@@E308	001	0049	1628	1630	
@@E310	001	004A	1630	1632	
@@E315	001	004B	1632	1634	
@@E316	001	004C	1634	1636	
@@E320	001	004D	1636	1638	
@@E325	001	004E	1638	1640	
@@E330	001	004F	1640	1642	
@@E335	001	0050	1642	1644	
@@E338	001	0051	1644	1646	
@@E340	001	0052	1646	1648	
@@E350	001	0053	1648	1650	
@@E351	001	0054	1650	1652	
@@E352	001	0055	1652	1654	
@@E360	001	0056	1654	1656	
@@E361	001	0057	1656	1658	
@@E362	001	0058	1658	1660	
@@E371	001	0059	1660	1662	
@@E380	001	005A	1662	1664	
@@E390	001	005B	1664	1666	
@@E400	001	005C	1666	1668	
@@E410	001	005D	1668	1670	
@@E415	001	005E	1670	1672	
@@E417	001	005F	1672	1674	
@@E420	001	0060	1674	1676	
@@E430	001	0061	1676	1678	
@@E432	001	0062	1678	1680	
@@E433	001	0063	1680	1682	
@@E450	001	0064	1682	1684	
@@E451	001	0065	1684	1686	
@@E460	001	0066	1686	1688	
@@E461	001	0067	1688	1690	
@@E464	001	0068	1690	1692	
@@E465	001	0069	1692	1694	
@@E466	001	006A	1694	1696	
@@E467	001	006B	1696	1698	
@@E469	001	006C	1698	1700	

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 11/11/22 PAGE 72

@@E470	001	006D	1700	1702	
@@E471	001	006E	1702	1704	
@@E473	001	006F	1704	1706	
@@E474	001	0070	1706	1708	
@@E475	001	0071	1708	1710	
@@E476	001	0072	1710	1712	
@@E477	001	0073	1712	1714	
@@E478	001	0074	1714	1716	4190
@@E479	001	0075	1716	1718	
@@E480	001	0076	1718	1720	
@@E481	001	0077	1720	1722	
@@E482	001	0078	1722	1724	
@@E483	001	0079	1724	1726	
@@E484	001	007A	1726	1728	
@@E485	001	007B	1728	1730	
@@E486	001	007C	1730	1732	
@@E487	001	007D	1732	1734	
@@E488	001	007E	1734	1736	
@@E489	001	007F	1736	1738	
@@E490	001	0080	1738	1740	
@@E491	001	0081	1740	1742	
@@E492	001	0082	1742	1744	
@@E493	001	0083	1744	1746	
@@E494	001	0084	1746	1748	
@@E495	001	0085	1748	1750	
@@E496	001	0086	1750	1752	
@@E497	001	0087	1752	1754	
@@E498	001	0088	1754	1756	
@@E500	001	0089	1756	1758	
@@E501	001	008A	1758	1760	
@@E530	001	008B	1760	1762	
@@E531	001	008C	1762	1764	
@@E535	001	008D	1764	1766	
@@E540	001	008E	1766	1768	
@@E541	001	008F	1768	1770	
@@E542	001	0090	1770	1772	
@@E543	001	0091	1772	1774	
@@E544	001	0092	1774	1776	
@@E545	001	0093	1776	1778	
@@E546	001	0094	1778	1780	
@@E547	001	0095	1780	1782	
@@E548	001	FFFF	1986		
@@E549	001	0096	1782	1784	
@@E550	001	0097	1784	1786	
@@E551	001	0098	1786	1788	
@@E552	001	0099	1788	1790	
@@E553	001	009A	1790	1792	
@@E554	001	009B	1792	1794	
@@E555	001	009C	1794	1796	
@@E556	001	009D	1796	1798	
@@E558	001	009E	1798	1800	2518
@@E570	001	009F	1800	1802	
@@E571	001	00A0	1802	1804	
@@E572	001	00A1	1804	1806	3465
@@E573	001	00A2	1806	1808	3472
@@E574	001	00A3	1808	1810	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E575	001	FFFF	1988	
@@E578	001	00A4	1810	1812
@@E579	001	FFFF	1990	
@@E580	001	FFFF	1992	
@@E585	001	00A5	1812	1814
@@E595	001	FFFF	1994	
@@E597	001	FFFF	1996	
@@E598	001	FFFF	1998	
@@E600	001	00A6	1814	1816
@@E601	001	00A7	1816	1818
@@E602	001	00A8	1818	1820
@@E603	001	00A9	1820	1822
@@E604	001	00AA	1822	1824
@@E606	001	00AB	1824	1826
@@E607	001	00AC	1826	1828
@@E608	001	00AD	1828	1830
@@E609	001	00AE	1830	1832
@@E610	001	00AF	1832	1834
@@E611	001	00B0	1834	1836
@@E612	001	00B1	1836	1838
@@E613	001	00B2	1838	1840
@@E614	001	00B3	1840	1842
@@E700	001	00B4	1842	1844
@@E701	001	00B5	1844	1846
@@E710	001	00B6	1846	1848
@@E712	001	00B7	1848	1850
@@E713	001	00B8	1850	1852
@@E714	001	00B9	1852	1854
@@E715	001	00BA	1854	1856
@@E716	001	00BB	1856	1858
@@E717	001	00BC	1858	1860
@@E718	001	00BD	1860	1862
@@E720	001	00BE	1862	1864
@@E721	001	00BF	1864	1866
@@E723	001	00C0	1866	1868
@@E724	001	00C1	1868	1870
@@E725	001	00C2	1870	1872
@@E726	001	00C3	1872	1874
@@E727	001	00C4	1874	1876
@@E728	001	00C5	1876	1878
@@E729	001	00C6	1878	1880
@@E730	001	00C7	1880	1882
@@E732	001	00C8	1882	1884
@@E752	001	00C9	1884	1886
@@E753	001	00CA	1886	1888
@@E754	001	00CB	1888	1890
@@E755	001	00CC	1890	1892
@@E756	001	00CD	1892	1894
@@E757	001	00CE	1894	1896
@@E758	001	00CF	1896	1898
@@E759	001	00D0	1898	1900
@@E760	001	00D1	1900	1902
@@E761	001	00D2	1902	1904
@@E762	001	00D3	1904	1906
@@E763	001	00D4	1906	1908
@@E764	001	00D5	1908	1910

CROSS REFERENCE															
SYMBOL	LEN	VALUE	DEFN	REFERENCES	VER 15, MOD 00 11/11/22 PAGE 74										
@@E765	001	00D6	1910	1912											
@@E766	001	00D7	1912	1914											
@@E767	001	00D8	1914	1916											
@@E768	001	00D9	1916	1918											
@@E769	001	00DA	1918	1920											
@@E770	001	00DB	1920	1922											
@@E771	001	00DC	1922	1924											
@@E772	001	00DD	1924	1926											
@@E773	001	00DE	1926	1928											
@@E774	001	00DF	1928	1930											
@@E775	001	00E0	1930	1932											
@@E776	001	00E1	1932	1934											
@@E777	001	00E2	1934	1936											
@@E778	001	00E3	1936	1938											
@@E779	001	00E4	1938	1940											
@@E780	001	00E5	1940	1942											
@@E781	001	00E6	1942	1944											
@@E782	001	00E7	1944	1946											
@@E783	001	00E8	1946	1948											
@@E784	001	00E9	1948	1950											
@@E785	001	00EA	1950	1952											
@@E786	001	00EB	1952	1954											
@@E790	001	00EC	1954	1956											
@@E791	001	00ED	1956	1958											
@@E792	001	00EE	1958	1960											
@@E793	001	00EF	1960	1962											
@@E794	001	00F0	1962	1964											
@@E795	001	00F1	1964	1966											
@@E796	001	00F2	1966	1968											
@@E797	001	00F3	1968	1970											
@@E798	001	00F4	1970	1972											
@@E800	001	FFFF	2000												
@@E801	001	FFFF	2002												
@@E802	001	FFFF	2004												
@@E803	001	FFFF	2006												
@@E804	001	FFFF	2008												
@@E900	001	00F5	1972	1974											
@@E901	001	00F6	1974	1976											
@@E902	001	00F7	1976	1978											
@@E903	001	00F8	1978	1980											
@@E905	001	00F9	1980	1982											
@@E906	001	00FA	1982	1984											
@@E910	001	00FB	1984												
@ARR	001	0008	0016	2388	2542	2777	2932	3244	3463	3612	3620	3704	4069	4340	
@ASIGN	001	007C	0071	3270											
@ASTER	001	005C	0069												
@BCRDL	001	0050	0088												
@BE	001	0081	0043												
@BF	001	0090	0052												
@BH	001	0084	0041												
@BL	001	0082	0042												
@BLANK	001	0040	0065	2782	2788	3254									
@BM	001	0082	0054												
@BNE	001	0001	0046	2773											

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SYMBOL	LEN	VALUE	DEFN	REFERENCES												VER 15, MOD 00	11/11/22	PAGE	75	
@BNM	001	0002	0057																	
@BNOL	001	0020	0050																	
@BNOZ	001	0008	0049																	
@BNP	001	0004	0056																	
@BNZ	001	0001	0058																	
@BOL	001	00A0	0048																	
@BOZ	001	0088	0047																	
@BP	001	0084	0053																	
@BR	001	0001	0013	2303	2304*	2308	2312	2314	2328	2330	2336	2339	2342	2343	2347					
				2353	2354	2360	2366	2372	2378	2379	2393	2398	2401	2410	2410					
				2414	2415	2417	2418	2423	2424	2444	2448	2455	2456	2457	2465					
				2472	2472	2513	2514	2515	2521	2543	2544	2558	2558	2559	2559					
				2561	2928	2930	2931*	2932	2934	2935	2935	2943	2950	2955	2984					
				2987	2994	2998	2998	3000	3000	3001	3001	3002	3002	3009	3009					
				3011	3014	3017	3017	3024	3027	3027	3029*	3036	3038	3039	3240					
				3242	3243*	3244	3247	3254	3255	3255	3256	3257	3257	3277	3280					
				3283	3292	3294	3294	3295	3296	3297	3299	3301	3303	3308	3308					
				3311	3318	3323	3327	3335	3343*	3610	3618	3696*	4067	4330*						
@BT	001	0010	0051																	
@BZ	001	0081	0055																	
@B1	001	0001	0063	2623	2676	2987	3255	3310	3367	3369	3370									
@CADDR	001	0002	0142	2462	2515	2543	2558	2589	2590	2598	2613	3009	3017	3027	3643					
				3644	3645	3646	3656	3678	3685	3705	3706	3727	4058	4064	4076					
				4213	4326	4409	4413													
@CARDL	001	0060	0087																	
@CHARA	001	00C1	0072	3273																
@CHARF	001	00C6	0073	2941																
@CHARR	001	00D9	0074	2939																
@CHARZ	001	00E9	0075	3275																
@CLOFF	001	0010	0094	3494*																
@CLON	001	0011	0093																	
@COMMA	001	006B	0066	2784																
@CPLUS	001	004E	0079																	
@DADDR	001	0002	0140	2276	2343	2344	2344	2345	2345	2346	2346	2435	2437	2457	2461					
				2477	2478	2488	2513	2586	2602	3480	3481	3488	3489	3491	3492					
				3502	3503	3506	3508	3511	3513											
@DBFR1	001	0004	0129																	
@DBFR2	001	0005	0130																	
@DCALK	001	0001	0081																	
@DCBCY	001	0009	0115																	
@DCBT1	001	0050	0117																	
@DCNT	001	0003	0128																	
@DCST1	001	0040	0116																	
@DCTRL	001	0000	0125																	
@DCYL	001	0001	0126																</	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@DSPIN	001	0002	0131	
@DTRSZ	001	0018	0085	
@DVBCY	001	0007	0108	
@DVRFY	001	0031	0136	
@DWAIT	001	00FF	0137	
@DWBCY	001	0005	0103	
@DWSIZ	001	00C0	0105	
@DWTB1	001	0003	0104	
@DZERO	001	00F0	0064	
@D1	001	0002	0026	2356* 2362* 2368* 2374* 2380*
@EOF	001	001C	0077	
@EOFTC	001	0075	0162	
@EOS	001	001E	0076	2335 2352 2395 2400 2790 2976 2993 3037 3321
@FDDBC	001	0000	0195	
@FDE1	001	000C	0200	
@FDFNA	001	000B	0198	
@FDHLN	001	0002	0208	
@FDLNC	001	0002	0193	
@FDNSC	001	0003	0210	
@FDSD	001	0000	0206	
@FLACE	001	0009	0197	
@FLDBC	001	0001	0196	
@FLENT	001	0004	0201	
@FLFNA	001	0002	0199	
@FLHLN	001	0002	0209	
@FLLNC	001	0002	0194	
@FLNSC	001	0001	0211	
@FLSD	001	0001	0207	
@HCEPK	001	003C	1274	
@HCOPS	001	001C	1281	
@HCOPY	001	081C	1276	
@HCRHE	001	7858	1297	
@HDNRY	001	1008	1262	
@HDRHE	001	7854	1295	
@HDRLN	001	0007	0092	
@HDRV1	001	7840	1287	
@HDRV2	001	7844	1289	
@HDTRD	001	1040	1258	
@HDTRJ	001	1010	1260	
@HERPG	001	087C	1264	
@HFEHT	001	0804	1279	
@HIPLE	001	006C	1271	2613
@HKBER	001	2040	1254	
@HKBHE	001	7848	1291	
@HLOGE	001	1844	1266	
@HPRER	001	0070	1256	
@HPRHE	001	784C	1293	
@HUNSF	001	1850	1269	
@IAR	001	0010	0017	
@INDEX	001	0001	0156	0157
@INST3	001	0003	0032	
@INST4	001	0004	0033	
@INST5	001	0005	0034	
@INST6	001	0006	0035	
@I1IAR	001	00C0	0020	
@LINSZ	001	00F4	0084	

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SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 11/11/22 PAGE 77

@MAPEN	001	0005	0089	
@MINCR	001	2000	0083	
@MINUS	001	0060	0080	
@NOP	001	0080	0040	2331 2475 2973 3026 3062 3495 3665 4075
@NUMBR	001	007B	0070	3268
@OPD2	001	0004	0029	
@OP1	001	0003	0027	2311* 2388* 2462* 2542* 2543* 2558* 2614 2777* 2930* 2932* 2934* 2984* 3009* 3017* 3027* 3242* 3244* 3247* 3257* 3308* 3463* 3610* 3611* 3612* 3618* 3619* 3620* 4067* 4068* 4069*
@OP2	001	0005	0031	
@PCTRL	001	0000	0149	
@PDATA	001	0003	0151	
@PGCSZ	001	0020	0082	0083
@PPLNG	001	0004	0148	
@PRCNT	001	0001	0150	
@PRETR	001	00C0	0154	
@PRINT	001	0040	0152	0154
@PSR	001	0004	0015	2614* 3283*
@PWAIT	001	00FF	0158	
@P1IAR	001	0020	0018	
@P2IAR	001	0040	0019	
@Q	001	0001	0024	2331* 2544* 2559* 2796 3063 3064 3065 3069 3371 3476*
@REGL	001	0002	0012	
@RETRN	001	0080	0153	0154
@RLDWN	001	004F	0159	
@RTRNC	001	0080	0161	
@SBLN	001	0005	0170	
@SBLNL	001	0002	0184	
@SCTS	001	0100	0100	2275 2403 2605
@SDFLN	001	0007	0090	
@SDF0	001	0000	0166	
@SDF1	001	0001	0167	
@SDF2	001	0002	0168	
@SDF3	001	0003	0169	
@SECCY	001	0030	0086	
@SIST	001	0001	0181	
@SLASH	001	0061	0067	
@SLAST	001	0002	0183	
@SMIDL	001	0003	0182	
@SNULL	001	0080	0173	
@SONLY	001	0000	0180	
@STEXT	001	0007	0172	
@STYPE	001	0006	0171	
@TBCNT	001	0000	0160	
@TBLEF	001	0010	0155	0157
@TBLIX	001	0011	0157	
@UCB	001	0087	0039	2774 2785 2981 2982 3007 3061 3476
@UPARW	001	005A	0078	
@VADDR	001	0002	0141	
@VENTA	001	0056	0113	
@VMDDV	001	00FE	0114	
@VMFD1	001	0000	0109	
@VMFD2	001	0001	0110	
@VMRS3	001	0002	0112	
@VMTRL	001	0001	0111	
@VOLID	001	0006	0091	2276 2987 2987 3011 3225 3301

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@VQ	001	0001	0025	2562											
@WSFIT	001	0500	0101												
@WSTBL	001	0503	0102												
@XR	001	0002	0014	2305*	2307	2310	2310*	2311	2312	2314	2316	2316*	2324	2324*	2325
				2327	2327*	2328	2332	2332*	2335	2337*	2352	2354	2360	2366	2372
				2378	2389	2390	2390*	2395	2397*	2400	2403	2403*	2552*	2553	2555
				2557	2560	2560*	2778	2781	2781*	2782	2784	2787	2787*	2788	2790
				2792	2934	2939	2941	2944	2946	2968	2968*	2976	2984	2993	3023*
				3037	3247	3266	3268	3270	3273	3275	3284*	3309	3310	3310*	3321
				3611	3619	3662*	3663	3697*	4068	4106*	4108	4114	4118	4122	4126
				4130	4134*	4137	4139	4139*	4154	4156	4158	4159	4160	4160	4168*
				4169	4184	4188*	4189	4195	4195*	4198*	4212	4213	4216	4217	4218
				4218	4219	4220	4222	4223	4224	4225*	4226	4227*	4228	4249	4251
				4254	4255	4256	4261	4271	4272	4273	4274	4285*	4288	4289	4293
				4294	4298	4299	4300	4304	4305	4306	4308	4309	4314	4316	4331*
@ZERO	001	0000	0062	4342	4349	4358*	4359	4359*	4360	4364	4365				
				2615	3256	3266	3268	3270	3273	3275	3309	3318	3321	3335	3626
				3640	3684	3687	4039	4048	4085	4145	4192	4266	4277	4278	4283
				4365											
SALBSE	001	11B7	3265	3240	3243										
SALCNT	001	1253	3362	3256*	3294*	3297	3301	3318							
SALCT6	001	0006	3225												
SALCT8	001	0008	3223												
SALERR	003	11CD	3371	3283											
SALFST	001	0001	3359	3280	3292										
SALIDR	001	1252	3352	3237*	3277	3280	3292*	3295	3323	3335*					
SALND0	004	124A	3343	3242*											
SALND2	004	124E	3344	3244*											
SALPHR	001	1256	3366	2987	3368	3369	3370								
SALPHS	002	1261	3368	3257											
SALPH6	001	119B	3241	2985											
SALPH8	001	1197	3234												
SALPR6	001	125E	3370	3255*											
SALPR7	001	125F	3369	3254*	3255										
SAL001	002	1255	3365	3294	3308										
SAL008	001	0080	3356	3237	3277	3295	3323								
SAL100	003	11A9	3254												
SAL200	003	11B7	3266	3311											
SAL250	003	11CC	3274	3371											
SAL350	003	11E5	3283	3299	3303	3327									
SAL375	004	11E8	3284	3247*											
SAL400	003	11EF	3292	3267	3269	3271	3276								
SAL425	004	11F2	3294	3278	3282										
SAL450	003	1209	3301	3296											
SAL500	004	1213	3308	3300											
SAL525	005	1217	3309	3257*	3308*										
SAL750	003	1222	3318	3274											
SAL755	004	1225	3319												
SAL760	003	1240	3327	3322	3325										
SAL775	004	1243	3328	3320											
SAL800	003	1247	3335	3285											
SCACNT	002	10A5	2802	2792*	2793*										
SCACOF	001	0087	2774	2309	2983										
SCACOM	001	0001	2773	2391	2969										
SCAINC	001	0001	2772	2781	2787										
SCAMMA	003	1082	2796	2309*	2391*	2969*	2983*								

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SCANIT	001	1065	2776	2317 2333 2392 2971 3328
SCASVE	002	10A3	2801	2778* 2793
SCASV1	001	10A2	2800	
SCA100	003	1074	2781	2783
SCA200	003	1077	2782	2780
SCA250	003	1081	2785	2796
SCA300	003	1084	2787	2789
SCA400	004	1094	2792	2785
SCA500	004	109E	2795	2777* 2791
SDIBLN	003	111B	3064	2982*
SDIDRK	009	1190	3056	2943* 2950* 2955 2998
SDIEX0	004	1179	3029	2930* 2972 2989 3025
SDIEX2	004	117D	3030	2932*
SDIID5	001	03FB	3060	3011
SDILN9	001	0009	3044	2935 3051
SDIMK1	001	0001	3067	2943 2955
SDIMK2	001	0002	3068	2950
SDINID	003	114E	3069	2340* 3014*
SDIRBL	009	1196	3051	2935 2935* 2987* 3011 3055
SDISKP	003	1104	3063	3026*
SDISKS	001	10A6	2929	2341 2928 2931 3017
SDISLH	003	1135	3065	
SDITBL	009	118E	3055	2344 2345 2346 2435 2437 2457 2462 2477 2478 2488 2515 2998* 3000 3000* 3001 3001* 3002 3002* 3009 3024 3027 3056 3057
SDIUCB	001	0087	3061	3014
SDIVID	009	1191	3057	
SDIVOF	001	0080	3062	2340
SDIX02	001	0002	3045	2968
SDI001	001	00F1	3058	2944
SDI002	001	00F2	3059	2946 3024
SDI050	003	10C4	2943	
SDI100	003	10C7	2944	2940
SDI150	004	10D0	2947	2942
SDI160	004	10EE	2960	2956
SDI200	003	10F5	2968	2945 2958
SDI255	003	1103	2973	3063
SDI260	004	1113	2979	2994 3039
SDI270	003	111A	2981	2974 3064
SDI300	004	1128	2985	2981
SDI350	003	1134	2991	3065
SDI400	004	113D	2998	2991
SDI450	003	114D	3007	3069
SDI500	005	1154	3011	3009* 3027*
SDI530	004	1163	3017	2959 2961
SDI550	004	1167	3023	2934* 2980 2984* 3017*
SDI600	003	116B	3024	2949 2978
SDI650	004	1171	3026	3036 3038
SDI750	004	1175	3027	3007 3016
SDI800	003	1181	3036	2973
SUTCL1	001	12C5	3501	3494
SUTERR	001	04A1	2529	3495
SUTOBA	001	1262	3462	2527
SUTPER	002	12CD	3511	3489* 3492
SUTPGU	002	12CB	3506	3488* 3491
SUTWER	002	12C9	3503	3481
SUTWGU	002	12C7	3502	3480

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SUT100	004	127C	3473	3467
SUT200	004	128A	3479	3470
SUT300	004	129D	3486	3474 3477
SUT400	004	12BD	3495	3476* 3482
SUT500	004	12C1	3497	3463*
SUT600	001	12CA	3505	3507
SUT700	001	12CC	3510	3512
TKSADR	001	1432	3841	3643 3705 3842 4058 4064* 4326*
TKSAVE	001	1420	3827	3828 3843
TKSBFI	001	142E	3838	2409* 2422* 2429* 2432* 2464* 2471* 3839 4085 4107 4112 4116 4120 4124 4128 4145 4283 4286 4291 4296 4302 4310 4311
TKSBIS	001	142B	3836	3837
TKSBLD	001	142D	3837	3838
TKSCYL	001	1430	3840	3632 3634 3674 3841 4059 4158* 4159* 4178* 4207 4219 4224 4250 4254* 4255* 4271 4272* 4273* 4299 4304 4327*
TKSDSK	001	1434	3842	3706
TKSLNK	001	1435	3844	
TKSLSZ	001	1426	3832	3833
TKSLTG	001	1427	3833	3834
TKSPAD	001	1425	3831	3832
TKSPTG	001	1422	3829	3830
TKSPTZ	001	1423	3830	3831
TKSSPF	001	1429	3835	3836
TKSVTC	001	1421	3828	3829
TKSWAT	001	1428	3834	3835
TKSYLN	001	142F	3839	3627 3628 3631* 3639 3641 3669* 3670 3694* 3840 4043* 4060 4156* 4157 4179* 4206* 4207* 4208* 4222 4223 4249* 4250* 4251 4256* 4261* 4274* 4289 4300 4305 4309 4328*
TVSDAD	001	1440	3912	3913
TVSDSK	001	1442	3913	2343* 2344* 4076 4088 4091
TVSFIL	001	143E	3911	3912 4046 4047 4048* 4049 4049* 4063 4137 4325*
TVSTRT	001	1436	3910	3911 3914
UDEAD6	002	0F29	2589	2543
UDEALL	004	0EFA	2577	2328
UDEBFS	001	0F36	2604	2486 2496* 2552 2606 2635 2646 2669 2677
UDEBF6	001	0F3B	2606	2589
UDEBIS	001	0001	2288	
UDEBLK	001	0F1F	2585	
UDEBSA	002	0F32	2602	2513* 2514* 2515
UDEBSS	003	0F27	2588	2472
UDEBUF	256	1035	2605	2562 2562*
UDECMP	003	0F35	2603	2410* 2472* 2553
UDECX1	002	0F1E	2584	
UDECY0	001	0000	2281	2666
UDEDAD	002	0F21	2586	2343
UDED6	002	0F2B	2590	2558 2559
UDEDIS	001	1053	2653	2321
UDEDLT	006	0EF6	2576	2312
UDEDPL	001	1041	2620	2477* 2508
UDEDSH	001	0060	2263	2307 2325
UDEDSP	007	0EF0	2575	2314
UDEEIT	001	0008	2268	2354 2354 2356 2372 2372 2374 2578 2581
UDEFOR	001	0004	2269	2328 2328 2577
UDEHAL	004	103D	2615	2614
UDEHLD	003	0F24	2587	2410
UDEHLP	008	0F02	2578	2354

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
UDEHLT	003	1036	2611	2624
UDEIND	001	0F2C	2594	
UDEION	001	0000	2280	2453
UDEIPL	001	00FE	2287	2496*
UDELBS	001	0F2D	2597	2455* 2456* 2457
UDELIB	007	0F0C	2580	2366
UDELMK	001	00FC	2296	2456
UDELNZ	001	00FF	2275	2544
UDELN1	001	0006	2270	2312 2312 2324 2576
UDELN2	001	0007	2271	2314 2314 2316 2575
UDEMKA	001	0080	2295	2330 2347 2414 2417 2423 2444 2448 2465 2521
UDEMKA	001	0001	2293	2437
UDEMKA	001	0002	2294	2435
UDEMKA	001	00FC	2297	2514
UDENAV	001	0080	2286	2486
UDENDR	001	0F30	2599	2330* 2347 2414 2417 2423 2444 2448 2465 2521
UDEPFR	001	0005	2274	2557 2606
UDEPLP	001	1047	2631	2345* 2547
UDEPSL	001	0008	2273	
UDEPSR	001	0426	2277	2459*
UDEPTF	003	0F05	2579	2360
UDERVL	001	1059	2664	2478* 2481
UDESCP	001	0002	2289	2496
UDESEV	001	0007	2267	2366 2366 2368 2580
UDESIX	001	0006	2266	2378 2378 2380 2582
UDESTM	006	0F1A	2582	2378
UDESYS	001	0047	2285	2486
UDETHR	001	0003	2265	2332 2360 2360 2362 2410 2472 2553 2579 2587 2588 2603
UDETWO	001	0002	2272	2553 2583 2584
UDEVID	001	0008	2276	
UDEVLL	002	0F1C	2583	
UDEVOL	001	03FC	2278	2463*
UDEWKA	008	0F14	2581	2372
UDEWRT	001	104D	2642	2346* 2565
UDEWVL	001	105F	2673	2488* 2491 2497* 2500
UDEXRS	002	0F2F	2598	2389* 2397
UDEZER	001	0000	2279	2459 2460 2463
UDE000	001	0000	2264	2555
UDE050	004	0C3C	2320	
UDE075	003	0C42	2324	2313
UDE078	004	0C5F	2333	2326
UDE080	003	0C66	2335	2318
UDE100	004	0C6C	2337	2311*
UDE125	004	0C70	2338	2315 2329
UDE150	004	0C77	2340	2334
UDE200	003	0C9F	2352	
UDE220	004	0CA5	2354	
UDE230	004	0CB7	2360	2355
UDE240	004	0CC9	2366	2361
UDE250	004	0CDB	2372	2367
UDE260	004	0CED	2378	2373
UDE300	004	0CFF	2388	2357 2363 2369 2375 2381
UDE320	003	0D07	2390	2356* 2362* 2368* 2374* 2380*
UDE330	004	0D25	2399	2348 2394
UDE340	004	0D2F	2402	2396
UDE350	003	0D33	2403	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
UDE360	004	0D36	2404	2331* 2388*
UDE400	004	0D3A	2409	2358
UDE420	003	0D57	2417	2412
UDE450	004	0D5D	2422	2364 2416
UDE500	004	0D6B	2429	2376
UDE530	004	0D81	2435	2431
UDE535	004	0D96	2442	2438
UDE537	001	0D9A	2443	2436 2440
UDE540	003	0DA4	2448	2434
UDE600	004	0DAA	2453	2370 2446
UDE640	006	0DCF	2462	2454 2458
UDE650	004	0DD5	2463	2462*
UDE660	004	0DD9	2464	
UDE700	004	0DE7	2471	2382
UDE720	004	0E48	2507	2487
UDE740	005	0E54	2513	2303 2304 2505
UDE780	004	0E64	2517	
UDE790	003	0E6F	2521	2474
UDE800	004	0E78	2525	2424 2466
UDE830	004	0E7F	2527	2415 2445 2516 2522
UDE860	004	0E87	2533	2336 2353
UDE865	004	0E8E	2536	2379 2398
UDE895	004	0E92	2537	2308 2339 2342 2393 2401 2418 2449 2519 2523 2526 2534
UDE900	004	0E96	2542	2413 2476
UDE930	004	0EA2	2546	
UDE950	005	0EB2	2553	2561
UDE955	003	0EBA	2555	
UDE957	005	0EC1	2557	2543* 2558*
UDE960	003	0ECE	2560	2554
UDE970	006	0ED4	2562	2544* 2556 2559*
UDE980	004	0EE6	2570	2542*
UTKAD1	001	141A	3738	3705* 3706* 3709
UTKBOT	001	0004	3756	3682
UTKCHK	001	140A	3721	3642* 3687* 3693
UTKCNT	001	1417	3730	3639* 3676* 4206 4216
UTKCYL	001	140E	3724	3640* 3673* 3674
UTKDEF	001	1418	3731	3626* 3630* 3667
UTKED0	004	13DA	3696	3610* 3618*
UTKED1	004	13DE	3697	3611* 3619*
UTKED2	004	13E2	3698	3612* 3620*
UTKEND	002	1412	3727	3645* 3646* 3678
UTKFAR	002	1416	3729	3646
UTKFLG	001	00FF	3757	3628 3630 3642 3667 3693 4043
UTKFLS	001	1419	3732	3627* 3694
UTKFOR	001	140D	3723	3653 3655
UTKINP	001	12CE	3750	
UTKLBB	002	1414	3728	3644
UTKLIM	001	1410	3726	3634 3670
UTKLST	001	0032	3758	3729
UTKONE	002	140C	3722	3632 3656 3664 3669 3673 3676 3677 3685
UTKOUT	004	13F6	3708	
UTKPRC	001	12E1	3748	4161 4202 4210 4252 4264 4269
UTKREP	004	13E6	3704	3614
UTKSBF	001	003B	3755	4056
UTKSBN	001	003A	3754	4209 4268
UTKSTP	004	1402	3713	3704*

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
UTKTBF	001	0039	3753	4053
UTKTBL	001	1406	3717	3662
UTKTBN	001	0038	3752	
UTKTEN	001	000A	3760	3631
UTKTRE	001	0003	3759	3680
UTKTYP	004	136A	3751	4053* 4056* 4209* 4268*
UTKUPD	001	0001	3747	3627 3632 3634 3639 3641 3653 3655 3663 3664 3669 3670 3673 3674 3676 3677 3694
UTKUSE	001	12CE	3609	3750
UTKZER	001	140F	3725	
UTK025	004	12DA	3614	
UTK050	001	12E1	3617	3748
UTK070	004	12ED	3626	3615
UTK075	006	1306	3632	3629
UTK080	006	1318	3639	3672
UTK100	006	1344	3653	3657
UTK200	006	134D	3655	
UTK250	004	135D	3662	3654
UTK300	005	1361	3663	3641* 3653 3655* 3677* 3680 3682 3683 3684* 3686
UTK400	004	136A	3665	3643* 3644* 3645 3656* 3663* 3678 3685* 3751
UTK500	006	138B	3673	3666
UTK525	004	13B6	3682	3679
UTK550	004	13C8	3686	
UTK600	004	13CC	3687	3633 3635 3668 3671 3681
UTK650	004	13D0	3693	3675
UTVADR	002	19E5	4410	4064
UTVAR1	001	19F5	4438	4106 4285 4375 4410 4439
UTVAR2	001	1AF5	4439	4134 4168 4188 4227 4385 4440
UTVAR3	001	1CF5	4440	4358 4396 4441
UTVAR4	001	1DF5	4441	
UTVBIT	001	0080	4427	4360
UTVCHK	001	19DE	4405	4057* 4266* 4324
UTVCLS	001	19D3	4401	4157*
UTVCOD	001	19D5	4403	4038* 4042* 4045* 4052* 4055* 4061 4104 4147 4149 4185 4200 4204 4214 4247 4312
UTVDEL	001	1564	4428	
UTVDFT	004	1575	4429	
UTVDLT	001	19E1	4408	4140 4169 4192 4194 4208 4217 4228 4364
UTVED0	004	1962	4330	4067* 4111 4193 4279
UTVED1	004	1966	4331	4068*
UTVED2	004	196A	4332	4069*
UTVEGT	001	0008	4436	4087
UTVEXP	004	15A1	4432	
UTVFG1	001	0001	4421	4038 4149 4312
UTVFG2	001	0002	4422	4045 4061 4104 4147 4185 4200
UTVFG3	001	0004	4423	4052
UTVFG4	001	0008	4424	4055 4247
UTVFG5	001	0010	4425	4042 4061 4104 4147 4185 4200 4204 4214
UTVFIL	001	19CD	4391	4163* 4166 4236* 4239 4341* 4342* 4345* 4348* 4354
UTVFLG	001	00FF	4426	4051 4057 4168 4227 4262 4275 4324
UTVIDX	001	19C7	4381	4074* 4076* 4079 4170* 4173 4229* 4232 4343 4346
UTVINP	004	159D	4431	
UTVIST	004	1580	4430	
UTVLGH	001	19E6	4411	4350
UTVLIM	001	19E0	4407	4084* 4114* 4118* 4122* 4126* 4130* 4135
UTVONE	001	0001	4434	4059 4060 4083 4088 4090 4107 4107* 4110 4114 4118 4122 4126

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SYMBOL	LEN	VALUE	DEFN	REFERENCES						VER 15, MOD 00 11/11/22 PAGE 84					
				4130	4135	4140	4156	4157	4158	4159	4169	4177	4178	4179	4187
				4206	4207	4208	4216	4217	4218	4219	4220	4222	4223	4224	4228
				4249	4250	4254	4255	4256	4261	4272	4273	4274	4288	4289	4293
				4294	4298	4299	4300	4304	4305	4306	4308	4309	4310	4311	4327
				4328	4342	4343	4345	4349	4350						
UTVSAV	008	19DD	4404	4039*	4040	4040*	4046*	4154	4189	4212	4226				
UTVSCP	001	19F4	4417	4187*	4194*	4196									
UTVSHK	004	15AC	4433												
UTVSRT	001	19F3	4416	4220*											
UTVSV1	008	19EE	4412	4047*	4063*	4325									
UTVSV2	002	19F0	4413	4058*	4326										
UTVSV3	001	19F1	4414	4059*	4327										
UTVSV4	001	19F2	4415	4060*	4328										
UTVTAG	001	19DF	4406	4083*	4135	4140*	4142	4177*	4288	4293	4298	4306	4308		
UTVTOC	001	1564	4037	2411	2425	2430	2433	2467	2473	2525	4428				
UTVTWO	001	0002	4435	4091	4093	4346	4348								
UTVTYP	001	19D4	4402	4051*	4262	4275	4277*								
UTVUPR	001	0032	4437	4084	4142	4196									
UTVVOL	001	19C1	4371	4087*	4090*	4093*	4094*	4097	4317*	4320					
UTVZER	002	19E3	4409	4110	4177	4178	4179	4213	4278						
UTV050	004	1575	4042	4429											
UTV100	004	1580	4045	4430											
UTV115	006	1584	4046	4044											
UTV117	004	159D	4051	4431											
UTV120	004	15A1	4052	4432											
UTV125	004	15A5	4053	4050											
UTV140	004	15AC	4055	4433											
UTV145	004	15B0	4056	4041											
UTV170	004	15B4	4057	4054											
UTV175	006	15D7	4064	4062											
UTV180	001	15DD	4066												
UTV200	004	1612	4087												
UTV220	004	1621	4091	4089											
UTV250	004	162C	4094	4092											
UTV260	004	1643	4106												
UTV265	003	164D	4108	4107*											
UTV267	004	165B	4112	4109											
UTV270	004	166A	4116	4113											
UTV290	004	1679	4120	4117											
UTV300	004	1688	4124												

[illegible]