

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

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



ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	2
0000			1	#KDELE	START 0				
			2		PRINT ON,NODATA				
			3	*	@SYS EXP-N				
			214+		PRINT ON				
			215	*	@FXD EXP-N				
			620+		PRINT ON				
			621	*	@CAN EXP-N				
			724+		PRINT ON				
			725	*	@WKA EXP-N				
			795+		PRINT ON				
			796	*	@DIR EXP-N				
			916+		PRINT ON				
			917	*	@ERM EXP-N				
			1539+		PRINT ON				
			1540	*	@SPF EXP-N				
			2003+		PRINT ON				



## #KDELE - DELETE SYSTEM COMMAND

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 4
		2006		*****	
		2007	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		2008	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		2009	*		*
		2010		*****	
		2011	*	*STATUS -	*
		2012	*	VERSION 1 MODIFICATION 0	*
		2013	*		*
		2014	*	*FUNCTION	*
		2015	*	KDELET IS DESIGNED TO PERFORM THE FUNCTIONS OF THE DELETE	*
		2016	*	COMMAND. IT WILL DELETE LINES FROM THE PROGRAM IN THE WORK	*
		2017	*	FILE OR WILL DELETE SINGLE FILES FROM A USER LIBRARY. THE	*
		2018	*	THIRD FUNCTION IS TO DELETE ALL FILES IN THE CURRENT USER'S	*
		2019	*	LIBRARY WHICH ARE NOT POOLED OR PROTECTED. IF NONE OF THE	*
		2020	*	CURRENT USER'S SAVED FILES ARE POOLED OR PROTECTED, THE PASS-	*
		2021	*	WORD IS ALSO DELETED.	*
		2022	*	AS EACH FILE IS DELETED, THE DISK SPACE IS RELINQISHED TO THE	*
		2023	*	NULL DIRECTORY. IF THE NULL DIRECTORY BECOMES FULL, A CALL IS	*
		2024	*	MADE TO LOAD SPACKU TO PACK THE LIBRARY. AFTER THE LIBRARY	*
		2025	*	IS PACKED, KDELET IS RELOADED TO FINISH THE DELETE OPERATION.	*
		2026	*		*
		2027	*	*ENTRY POINTS	*
		2028	*	THE FIRST EXECUTABLE INSTRUCTION FOLLOWING THE PROGRAM HEADER	*
		2029	*	INDEX REGISTER 2 (@XR) IS ADDRESSING THE FIRST BYTE IN THE	*
		2030	*	COMMAND LINE FOLLOWING THE KEYWORD.	*
		2031	*		*
		2032	*	*INPUT	*
		2033	*	INPUT TO THE KEYWORD IS THE ADDRESS WITHIN THE INPUT LINE BUFFER	*
		2034	*	OF THE COMMAND LINE TO BE SYNTAX CHECKED-MADE IN \$XRSV.	*
		2035	*		*
		2036	*	*OUTPUT	*
		2037	*	OUTPUT FROM KDELET FOR DELETE OF A LINE NUMBER LIST IS THE BINARY	*
		2038	*	LIST TRANSFERRED TO GUFUDI IN \$\$SLIB VIA A BRANCH TO \$CARPL.	*
		2039	*		*
		2040	*	*EXTERNAL REFERENCES	*
		2041	*	DL2ICS - TWO TRACK LOGICAL DISK IOCS	*
		2042	*	SCANIT - DELIMITER SCAN ROUTINE	*
		2043	*	SFINDF - FILE SEARCH CONTROL ROUTINE	*
		2044	*	SGETDB - PASSMORD DIRECTORY SEARCH: USER BLOCK ACCESS	*
		2045	*	SLLIST - SYNTAX CHECK AND CONVERT LINE NUMBER LIST	*
		2046	*	STORIN - STORES IN NULL DIRECTORY BLOCK	*
		2047	*	SUFFER - FILE SPECIFICATION SYNTAX CHECKER	*
		2048	*	TSMLES - DATA MANAGEMENT COMMUNICATION REGIONS	*
		2049	*	\$\$FLIB - FILE LIBRARY ADDR PASS AREA TO SPACKU	*
		2050	*	\$NUCBS - SYSTEM NUCLEUS BASE ADDRESS	*
		2051	*	\$CAERR - SYSTEM NUCLEUS ERROR CODE SAVE AREA	*
		2052	*	\$CAERK - SYSTEM NUCLEUS ERROR EXIT ADDRESS	*
		2053	*	\$CARPL - SYSTEM NUCLEUS NORMAL RETURN ADDRESS	*
		2054	*	\$BRSAV - INDEX REGISTER 1 (@BR) NUCLEUS SAVE AREA	*
		2055	*	\$XRSV - INDEX REGISTER 2 (@XR) NUCLEUS SAVE AREA	*
		2056	*	\$RLOAD - ADDR IN SYSTEM NUCLEUS-BLAST LOAD PGM NOT ON CYL 4	*
		2057	*	\$DISKN - SYSTEM NUCLEUS PHYSICAL DISK IOCS	*
		2058	*	\$WAITF - ADDR IN SYSTEM NUCLEUS-DISK WAIT DPL	*
		2059	*	\$DPLSV - ADDR IN SYSTEM NUCLEUS-DPI SAVE AREA	*
		2060	*	\$\$PRNT - ADDR IN SYSTEM NUCLEUS-ENTRY TO SYSTEM PRINTER IOCR	*
		2061	*	\$CIMSK - ADDR IN SYSTEM NUCLEUS-IR MASK INDR	*

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 5
		2062	*	\$FILIB - ADDR IN SYSTEM NUCLEUS-CURRENT FILE LIBRARY DADDR	*
		2063	*	\$PASWD - ADDR IN SYSTEM NUCLEUS-CURRENT USER PASSWORD	*
		2064	*	\$USRDR - ADDR IN SYSTEM NUCLEUS-REL DISP TO 1ST USER BLOCK	*
		2065	*	\$WFNME - ADDR IN SYSTEM NUCLEUS-CURRENT WORK FILE NAME	*
		2066	*	\$WFDEF - MASK FOR \$WFNME - WORK FILE DEFINED INDR	*
		2067	*	\$INDR1 - ADDR IN SYSTEM NUCLEUS-WORKFILE STATUS INDRS	*
		2068	*	\$WSIND - MASK IN \$INDR1 - WORKING STORAGE INDR	*
		2069	*	\$WFLOK - MASK IN \$INDR1 - WORK FILE PROTECT INDR	*
		2070	*	\$PGMDT - MASK IN \$INDR1 - PROGRAM GENERATED DATA FILE INDR	*
		2071	*	\$INDR2 - ADDR IN SYSTEM NUCLEUS-SYSTEM INDRS	*
		2072	*	\$READY - MASK IN \$INDR2 - PRINT 'READY' INDR	*
		2073	*	\$FDIND - MASK IN \$INDR2 - LINE NUMBER LIST FOR DELETION	*
		2074	*	\$INDR3 - ADDR IN SYSTEM NUCLEUS-SYSTEM INDRS	*
		2075	*	\$ERHRD - MASK IN \$INDR3 - ERROR PROGRAM HARD ERROR INDR	*
		2076	*		*
		2077	*	*EXITS, NORMAL	*
		2078	*	\$CARPL - NORMAL EXIT ADDRESS IN SYSTEM NUCLEUS	*
		2079	*		*
		2080	*	*EXITS, ERROR	*
		2081	*	\$CAERK - ERROR EXIT ADDRESS IN SYSTEM NUCLEUS	*
		2082	*	(NOTE ERROR PROCEDURES)	*
		2083	*		*
		2084	*	*TABLES/WORK AREAS	*
		2085	*	ALL CHARACTER CONSTANTS & PPL'S USED TO PRINT MESSAGES FOR THE	*
		2086	*	INTERACTION WITH THE USER ARE LOCATED AT THE BEGINNING OF THE	*
		2087	*	MODULE TO ENABLE THEM TO BE MODIFIED FOR WORLD TRADE CONSIDERATION*	*
		2088	*	KDELET'S OTHER CONSTANTS. DPI'S, AND WORKAREAS ARE SEPARATED INTO	*
		2089	*	TWO GROUPS: INTERNAL PPL'S AND CHARACTER CONSTANTS, AND DPL'S.	*
		2090	*	CONSTANTS, AND WORK AREAS FOR PROCESSING (AT THE END OF MODULE).	*
		2091	*	(NOTE: CHARACTER CODE DEPENDENCY)	*
		2092	*		*
		2093	*	*ATTRIBUTES	*
		2094	*	RELOCATABLE	*
		2095	*		*
		2096	*	*CHARACTER CODE DEPENDENCY CLASS - C	*
		2097	*	THE OPERATION OF THIS MODULE DEPENDS UPON AN INTERNAL REPRESENTA-	*
		2098	*	TION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT TO THE ONE	*
		2099	*	USED AT ASSEMBLY TIME. THE CODING HAS BEEN ARRANGED SO THAT RE-	*
		2100	*	DEFINITION OF CHARACTER CONSTANTS, BY REASSEMBLY, WILL RESULT IN	*
		2101	*	A CORRECT MODULE FOR THE NEW DEFINITIONS. THE FOLLOWING ARE THE	*
		2102	*	SPECIAL CONSIDERATIONS FOR THIS MODULE:	*
		2103	*	* CHARACTER CONSTANT STRINGS WHICH ARE USED AS INFORMATIVE	*
		2104	*	MESSAGES OR ERROR MESSAGES FOR THE USER ARE LOCATED IN A	*
		2105	*	GROUP AT THE BEGINNING OF THE MODULE WITH ADEQUATE EXPANSION	*
		2106	*	AREA INCLUDED FOR WORLD TRADE CONSIDERATIONS FOR TRANSLATION	*
		2107	*	TO FOREIGN LANGUAGES.	*
		2108	*	* PPL'S USED TO PRINT THE ABOVE MENTIONED CHARACTER CONSTANTS	*
		2109	*	ARE LOCATED ADJACENT TO THEM FOR LENGTH REVISION.	*
		2110	*	* @SYSEQ TO CONSIDER - USED FOR IMMEDIATE COMPARES ETC.	*
		2111	*	* @EOS	*
		2112	*	* @ZERO	*
		2113	*	* @B1	*
		2114	*	* @DZERO	*
		2115	*	* @MINUS	*
		2116	*	* @ASTER	*
		2117	*		*

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 6
		2118	*	NOTES	*
		2119	*	ERROR PROCEDURES	*
		2120	*	THE FOLLOWING CONDITIONS WILL CAUSE AN ERROR CODE TO BE SAVED	*
		2121	*	IN \$CAERR, AND AN ERROR EXIT CO BE MADE TO \$CAERK IN THE	*
		2122	*	SYSTEM NUCLEUS:	*
		2123	*	* SYNTAX ERROR IN LINE-NUMBER-LIST DETECTED BY SLLIST AND	*
		2124	*	C4BIN2.	*
		2125	*	* SYNTAX ERROR IN USER-FILE-SPECIFICATION DETECTED BY SUFFER	*
		2126	*	SALPHA, KDELET, OR SCANIT.	*
		2127	*	* SYNTAX ERROR IN SPECIFYING 'DELETE-ALL' DETECTED BY THE	*
		2128	*	MODULE KDELET.	*
		2129	*	* SPECIFICATION OF 'DELETE-ALL' WITHOUT A PASSWORD BEING IN	*
		2130	*	EFFECT.	*
		2131	*	* SPECIFICATION OF A ONE-STAR FILE IN A USER-FILE-SPECIFI-	*
		2132	*	CATION.	*
		2133	*	* PASSWORD NOT FOUND ON THE SPECIFIED VOLUME OR ON THE	*
		2134	*	DEFAULTED VOLUME.	*
		2135	*	* FILENAME NOT FOUND ON THE SPECIFIED VOLUME OR ON THE	*
		2136	*	DEFAULTED VOLUME.	*
		2137	*	* VOLUME-ID WHICH WAS SPECIFIED. CAN'T BE RESOLVED.	*
		2138	*		*
		2139	*	REGISTER USAGE	*
		2140	*	INITIALLY, INDEX REGISTER 1 (@BR) IS USED AS A BASE REGISTER	*
		2141	*	WHILE SYNTAX CHECKING IS DONE. AT THE SAME TIME. INDEX REGI-	*
		2142	*	STER 2 (@XR) IS INDEXING THE INPUT LINE BUFFER FOR SYNTAX	*
		2143	*	CHECK.	*
		2144	*	THESE REMAIN CONSTANT IN THEIR USE FOR THE DELETION OF A LINE	*
		2145	*	NUMBER LIST. FOR DELETION OF A SPECIFIC FILE, BOTH REGISTERS	*
		2146	*	ARE THEN USED AS POINTERS AND INDEXES IN BUFFERS CONTAINING	*
		2147	*	USER DIRECTORY BLOCKS. THE SAME USAGE IS EMPLOYED IN DELETE-	*
		2148	*	ALL.	*
		2149	*		*
		2150	*	SAVED/RESTORED AREAS	*
		2151	*	N/A	*
		2152	*		*
		2153	*	MODIFICATION CONSIDERATIONS	*
		2154	*	* WHEN THE DELETION OF A LINE-NUMBER-LIST IS REQUESTED.	*
		2155	*	KDELET SUPPLIES THE CONVERTED BINARY LINE-NUMBER-LIST TO	*
		2156	*	GUFUDI VIA THE SECONDARY LINE INPUT BUFFER AT \$\$SLIB.	*
		2157	*	THEREFORE, WHEN MODIFICATION OF KDELET IS NECESSARY, BE	*
		2158	*	CERTAIN NOT TO OVERLAY THIS CORE ADDRESS. (NOTE THAT THE	*
		2159	*	CONVERSION OF THE LIST IS MADE DIRECTLY INTO \$\$SLIB+9).	*
		2160	*	* NOTE THAT THE TSMLES COMMUNICATIONS REGION HAS BEEN BROKEN	*
		2161	*	UP (IE. PART OF THE FIELDS OVERLAY EXECUTABLE CODE) SO	*
		2162	*	THAT A BASE REGISTER MAY BE USED TO ADDRESS THE FIELDS OR	*
		2163	*	SO THAT OPTIMUM USE OF BUFFER SPACE COULD BE MADE.	*
		2164	*		*
		2165	*	REQUIRED MODULES	*
		2166	*	@SYSEQ - COMMON SYSTEM SOFTWARE EQUATES	*
		2167	*	@FXDEQ - FIXED ADDRESSES IN SYSTEM NUCLEUS	*
		2168	*	@CANEQ - FIXED ADDRESSES OUTSIDE SYSTEM NUCLEUS	*
		2169	*	@WKAEQ - WORK AREA EQUATES	*
		2170	*	@SPFEQ - SYSTEM PROGRAM FILE EQUATES	*
		2171	*	@DIREQ - SYSTEM LIBRARY DIRECTORY EQUATES	*
		2172	*	@ERMEQ - ERROR MESSAGE EQUATES	*
		2173	*	C4BIN2 - CONVERT DECIMAL TO BINARY	*

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ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	7
		2174	*		DL2ICS - TWO TRACK LOGICAL DISK IOCS				*
		2175	*		SALPHA - FILENAME, PASSWORD, VOLID ALPHAMERIC SYNTAX CHECKER				*
		2176	*		SCANIT - DELIMITER SCAN ROUTINE				*
		2177	*		SFINDF - FILE SEARCH CONTROL ROUTINE				*
		2178	*		SGETDB - PASSWORD DIRECTORY SEARCH; USER BLOCK ACCESS				*
		2179	*		SLLIST - SYNTAX CHECK AND CONVERT LINE NUMBER LIST				*
		2180	*		SRCHFN - FILENAME SEARCH ROUTINE				*
		2181	*		STORIN - STORES IN NULL DIRECTORY BLOCK				*
		2182	*		SUFFER - FILE SPECIFICATION SYNTAX CHECKER				*
		2183	*		SVOLID - RESOLVES SPECIFIED VOL-ID PHYSICAL LOCATION				*
		2184	*		TSMLES - DATA MANAGEMENT COMMON AREAS				*
		2185	*						*
		2186	*	OTHER					*
		2187	*		SPECIAL NOTES:				*
		2188	*		* THE I/O ROUTINES ARE REQUIRED TO BE CORE RESIDENT FOR				*
		2189	*		EXECUTION.				*
		2190	*		* THE COMMAND MAY BE ABORTED VIA INQUIRY REQUEST UNTIL				*
		2191	*		PHYSICAL DISK WRITES ARE STARTED.				*
		2192	*		*****				*



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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	8
					2194	*****					
					2195	*					*
					2196	*	KDELET PROGRAM EQUATES - DELETE COMMAND				*
					2197	*					*
					2198	*****					*
					2199	*					*
				0002	2200	KDELN2 EQU	2				LENGTH CODE
				0003	2201	KDELN3 EQU	3				LENGTH CODE
				0007	2202	KDELN7 EQU	7				LENGTH CODE
				0009	2203	KDELN9 EQU	9				LENGTH CODE
				0100	2204	KDE256 EQU	256				LENGTH CODE
					2205	*					
				0002	2206	KDEDS2 EQU	2				DISPLACEMENT
				0003	2207	KDEDS3 EQU	3				DISPLACEMENT
				0006	2208	KDEDS6 EQU	6				DISPLACEMENT
				0007	2209	KDEDS7 EQU	7				DISPLACEMENT
				0009	2210	KDED09 EQU	9				DISPLACEMENT
				0014	2211	KDED20 EQU	20				DISPLACEMENT
				0022	2212	KDED34 EQU	34				DISPLACEMENT
				00FF	2213	KDE255 EQU	255				DISPLACEMENT
					2214	*					
				06FD	2215	KDESV# EQU	\$\$FLIB-2				CNT OF FILES SAVED BEFORE PACK
				06FB	2216	KDEDL# EQU	KDESV#-2				CNT OF FILES DELETED IN BLOCK
					2217	*					
				0469	2218	SFIERR EQU	\$CAERK				ERROR EXIT ADDRESS
					2219	*					*
					2220	*****					
					2222	*	HDR #KDELE				PROGRAM NAME
					2223	*****					
					2224	*	PROGRAM HEADER FOR DISK LOAD				*
					2225	*****					
					2226	*#\$KDEL EQU	X'035C'				DISK ADDR OF #KDELE
					2227	*\$\$KDE EQU	X'0C00'				CORE LOAD ADDRESS OF #KDELE
					2228	*\$@KDE EQU	016				SECTOR CNT OF #KDELE
0C00					2229	ORG	\$\$KDE				CORE LOAD ADDRESS
				0C00	2230	\$\$\$\$\$ EQU	*				FIRST LOCATION IN PROGRAM
0C00	7BD2C4C5D3C5			0C05	2231	DC	CL6'#KDELE'				PROGRAM NAME
0C06	1B			0C06	2232	DC	IL1'027'				PROGRAM NUMBER OF #KDELE
				0C07	2233	#KDEL EQU	*				ENTRY POINT TO PROGRAM
					2234	***	END OF EXPANSION ***				
					2236	KDELET B	KDE000				BYPASS MESSAGE TEXT
					2237	*					*
					2238	*****					

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ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 9
			2240		*****		
			2241	*		*	
			2242	*	MTEXT @@M080=@PRINT,@@M081=@PRINT,@@M082=@PRETR,@@M083=@PRETR,		
			2243	*	@@M300=@PRETR,PATCH=020		
			2244		*****		
			2245	*	PPL'S AND TEXT FOR MESSAGE	*	
			2246		*****		
0C0B	40		0C0B	2247	@M080 DC	AL1(@PRINT) PRINT CONTROL FUNCTION	
0C0C	07		0C0C	2248	DC	IL1'07' LENGTH OF MESSAGE	
0C0D	0C1F		0C0E	2249	DC	AL(@CADDR)(@@T080) ADDR OF MESSAGE	
			2250	*			
0C0F	40		0C0F	2251	@M081 DC	AL1(@PRINT) PRINT CONTROL FUNCTION	
0C10	0A		0C10	2252	DC	IL1'10' LENGTH OF MESSAGE	
0C11	0C26		0C12	2253	DC	AL(@CADDR)(@@T081) ADDR OF MESSAGE	
			2254	*			
0C13	C0		0C13	2255	@M082 DC	AL1(@PRETR) PRINT CONTROL FUNCTION	
0C14	08		0C14	2256	DC	IL1'08' LENGTH OF MESSAGE	
0C15	0C30		0C16	2257	DC	AL(@CADDR)(@@T082) ADDR OF MESSAGE	
			2258	*			
0C17	C0		0C17	2259	@M083 DC	AL1(@PRETR) PRINT CONTROL FUNCTION	
0C18	0C		0C18	2260	DC	IL1'12' LENGTH OF MESSAGE	
0C19	0C38		0C1A	2261	DC	AL(@CADDR)(@@T083) ADDR OF MESSAGE	
			2262	*			
0C1B	C0		0C1B	2263	@M300 DC	AL1(@PRETR) PRINT CONTROL FUNCTION	
0C1C	37		0C1C	2264	DC	IL1'55' LENGTH OF MESSAGE	
0C1D	0C44		0C1E	2265	DC	AL(@CADDR)(@@T300) ADDR OF MESSAGE	
			2266	*			
			0C1F	2267	@T080 EQU	* LEFT BYTE OF MESSAGE	
0C1F	40D7D6D6D3C5C4		0C25	2268	DC	CL007' POOLED'	
			0C26	2269	@T081 EQU	* LEFT BYTE OF MESSAGE	
0C26	40D7D9D6E3C5C3E3		0C2F	2270	DC	CL010' PROTECTED'	
			0C30	2271	@T082 EQU	* LEFT BYTE OF MESSAGE	
0C30	40C4C5D3C5E3C5C4		0C37	2272	DC	CL008' DELETED'	
			0C38	2273	@T083 EQU	* LEFT BYTE OF MESSAGE	
0C38	40D5D6E360C4C5D3		0C43	2274	DC	CL012' NOT-DELETED'	
			0C44	2275	@T300 EQU	* LEFT SYIE OF MESSAGE	
0C44	C5D9D9D6D940F5F8		0C76	2276	DC	CL051'ERROR 580 DUPLICATE DISK LABELS - SPECIFY DISK LOCA'	
0C77	E3C9D6D5		0C7A	2277	DC	CL004'TION'	
			2278	*			
			2279	*	PATCH AREA FOR MESSAGES		
			2280	*			
0C7B			0C8E	2281	\$\$\$001 DS	CL020 MSG EXPANSION PATCH AREA	
			2282	***	END OF EXPANSION ***		
			2283	*		*	
			2284	*****			

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE 10
					2286	*****				
					2287	*				*
				0C8F	2288	KDE000 EQU *	START EXECUTION			
				03C0	2289	USING \$NUCBS,@BR	BASE ADDRESS			
0C8F	C2	01	03C0		2290	LA \$NUCBS,@BR	LOAD BASE ADDR			
					2291	*				
0C93	75	02	07		2292	L \$XRSV(,@BR),@XR	LOAD XR WITH INPUT ADDR			
0C96	34	02	0E2B		2293	ST KDE280+@OP1,@XR	SAVE XR FOR RELOAD BY SPACKU			
					2294	*				*
					2295	*****				*
					2296	*				*
					2297	CHECK FOR VALID PARAMETERS				*
					2298	*				*
					2299	*****				*
					2300	*				*
0C9A	C0	87	1A51		2301	B SCANIT	BYPASS BLANKS			
0C9E	F2	81	3D		2302	JZ KDE160	CHECK FOR ALL PARAMETER			
					2303	*				
0CA1	BD	F0	00		2304	CLI @ZERO(,@XR),@DZERO	IS A LINE NR LIST SPECIFIED ?			
0CA4	F2	82	A0		2305	JL KDE200	NO, CHECK FILE SPEC			
					2306	*				*
					2307	*****				

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 11
				2309		*****		
				2310		*		*
				2311		*	CHECK WORK FILE STATUS	*
				2312		*		*
				2313		*****		
				2314		*		*
0CA7	78	40	83	2315		TBN	\$WFNME(,@BR),\$WFDEF	IS WORK FILE DEFINED ?
0CAA	7C	2A	0D	2316		MVI	\$CAERR(,@BR),@@E220	WORK FILE NOT DEFINED
0CAD	F2	90	1B	2317		JF	KDE050	NO, TAKE ERROR EXIT
				2318		*		
0CB0	78	04	14	2319		TBN	\$INDR1(,@BR),\$WSIND	IS WORK FILE EMPTY ?
0CB3	7C	2F	0D	2320		MVI	\$CAERR(,@BR),@@E226	WORK FILE IS EMPTY
0CB6	F2	10	12	2321		JT	KDE050	YES, TAKE ERROR EXIT
				2322		*		
0CB9	78	08	14	2323		TBN	\$INDR1(,@BR),\$WFLOK	IS WORK FILE PROTECTED ?
0CBC	7C	2C	0D	2324		MVI	\$CAERR(,@BR),@@E222	WORK FILE IS PROTECTED
0CBF	F2	10	09	2325		JT	KDE050	YES, TAKE ERROR EXIT
				2326		*		
0CC2	78	20	14	2327		TBN	\$INDR1(,@BR),\$PGMDT	IS FILE PROGRAM GEN DATA FILE ?
0CC5	7C	2B	0D	2328		MVI	\$CAERR(,@BR),@@E221	FILE IS A PROGRAM GEN DATA FILE
0CC8	F2	90	06	2329		JF	KDE075	NO, CONTINUE PROCESSING
				2330		*		
0CCB	E2	02	FF	2331	KDE050	LA	KDE255(,@XR),@XR	GET XR OUT OF INPUT BUFFER
0CCE	D0	87	A9	2332		B	\$CAERK(,@BR)	TAKE ERROR EXIT
				2333		*		*
				2334		*****		
				2335		*		*
				2336		*	PROCESS LINE NUMBER LIST PARAMETER	*
				2337		*		*
				2338		*****		
				2339		*		*
0CD1	C0	87	1A92	2340	KDE075	B	SLLIST	CONVERT LINE NUMBER LIST
0CD5	D0	82	A9	2341		BL	\$CAERK(,@BR)	IF ERROR - EXIT
				2342		*		
0CD8	7A	C0	15	2343		SBN	\$INDR2(,@BR),\$FDIND+\$READY	SET 'DELETE LINE NUMBER LIST'
				2344		*		* INDR FOR GUFUDI
0CDB	D0	87	E1	2345	KDE150	B	\$CARPL(,@BR)	LOAD GUFUDI
				2346		*		*
				2347		*****		

## #KDELE - DELETE SYSTEM COMMAND

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 12
		2349		*****	
		2350	*		*
		2351	*	PROCESS ALL PARAMETER	*
		2352	*		*
		2353		*****	
		2354	*		*
0CDE BD 1E 00		2355	KDE160 CLI	@ZERO(,@XR),@EOS	IS EOS SPECIFIED ?
0CE1 7C 10 0D		2356	MVI	\$CAERR(,@BR),@@E130	REQUIRED PARAMETER MISSING
0CE4 D0 81 A9		2357	BE	\$CAERK(,@BR)	ERROR EXIT
		2358	*		
0CE7 BD 60 00		2359	CLI	@ZERO(,@XR),@MINUS	IS IT A DASH DELIMITER ?
0CEA 7C 18 0D		2360	MVI	\$CAERR(,@BR),@@E139	INVALID DELIMITER
0CED D0 01 A9		2361	BNE	\$CAERK(,@BR)	ERROR EXIT
		2362	*		
0CF0 E2 02 01		2363	LA	@B1(,@XR),@XR	INDEX PAST DASH
0CF3 8D 02 02 0D3C		2364	CLC	KDEDS2(KDELN3,@XR),KDEALL	IS IT A VALID 'ALL' ?
0CF8 7C 1A 0D		2365	MVI	\$CAERR(,@BR),@@E143	INVALID SECONDARY KEYWORD
0CFB D0 01 A9		2366	BNE	\$CAERK(,@BR)	TAKE ERROR EXIT
		2367	*		
0CFE 34 02 0D1C		2368	ST	KDE165+@OP1,@XR	SAVE ERROR POINTER
0D02 E2 02 03		2369	LA	KDEDS3(,@XR),@XR	BYPASS 'ALL' PARAMETER
		2370	*		
0D05 C0 87 1A51		2371	B	SCANIT	GET NEXT NON-BLANK
		2372	*		
0D09 7C 1A 0D		2373	MVI	\$CAERR(,@BR),@@E143	INVALID SECONDARY KEYWORD
0D0C F2 81 07		2374	JZ	KDE162	JUMP AROUND SAVE
0D0F 34 02 0D1C		2375	ST	KDE165+@OP1,@XR	SAVE ERROR POINTER
0D13 7C 12 0D		2376	MVI	\$CAERR(,@BR),@@E133	TOO MANY PARAMETERS
		2377	*		
0D16 BD 1E 00		2378	KDE162 CLI	@ZERO(,@XR),@EOS	IS IT EOS ?
0D19 C2 02 0000		2379	KDE165 LA	*-*,@XR	RESTORE ERROR POINTER
0D1D D0 01 A9		2380	BNE	\$CAERK(,@BR)	ERROR EXIT
		2381	*		*
		2382		*****	

#KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 13
				2384		*****			
				2385		*			*
				2386		*	VERIFY REQUEST OF DELETE-ALL		*
				2387		*			*
				2388		*****			*
				2389		*			*
0D20	7D	00	19	2390		CLI	\$FILIB-1(,@BR),@ZERO	IS VALID USER LOGGED ON ?	
0D23	7C	21	0D	2391	KDE170	MVI	\$CAERR(,@BR),@@E200	VALID USER NOT LOGGED ON	
0D26	E2	02	FF	2392		LA	KDE255(,@XR),@XR	GET XR OUT OF INPUT BUFFER	
0D29	D0	81	A9	2393		BE	\$CAERK(,@BR)	TAKE ERROR EXIT	
				2394		*			
0D2C	0C	01	0CE7 0D3E	2395		MVC	KDEMS2+KDED09(KDELN2),KDEBLK	BLANK MESSAGE AREA BETWEEN	
				2396		*		* FILENAME AND HEADER	
0D32	3C	80	0476	2397		MVI	\$CIMSK,@NOP	MASK INTERRUPTS	
0D36	C0	87	0EEB	2398		B	KDE500	PROCESS DELETE	
				2399		*			*
				2400		*****			

## #KDELE - DELETE SYSTEM COMMAND

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 14
			2402	*****	*
			2403	*	*
			2404	* 'ALL' CONSTANT AND MESSAGES	*
			2405	*	*
			2406	*****	*
			2407	*	*
0D3A	C1D3D3	0D3C	2408	KDEALL DC CL3 'ALL'	SECONDARY KEYWORD
			2409	*	
		0CDE	2410	KDEMS2 EQU KDE160	ADDR MESSAGE BUFFER
			2411	*	
0D3D	4040	0D3E	2412	KDEBLK DC CL2 ' '	BLANK MESSAGE PARTS
			2413	*	*
			2414	*****	*
			2415	*	*
		0023	2416	KDEL35 EQU 35	MESSAGE COUNT
			2417	*	
			2418	*KDEPP2 PPL FUNC-@PRINT,CNT-KDEL35,CADDR-KDEMS2	PRINT FILE AND HEAD
		0D3F	2419	KDEPP2 EQU *	PPL ADDRESS
0D3F	40	0D3F	2420	DC AL1 (@PRINT)	FUNCTION REQUESTED
0D40	23	0D40	2421	DC AL1 (KDEL35)	PRINT COUNT
0D41	0CDE	0D42	2422	DC AL2 (KDEMS2)	DATA ADDRESS
			2423	*** END OF EXPANSION ***	
		0008	2425	KDEL08 EQU 8	MESSAGE COUNT
			2426	*	
			2427	*KDEPP4 PPL FUNC-@PRINT,CNT-KDEL08,CADDR-KDEMS2	PRINT PASSWORD
		0D43	2428	KDEPP4 EQU *	PPL ADDRESS
0D43	40	0D43	2429	DC AL1 (@PRINT)	FUNCTION REQUESTED
0D44	08	0D44	2430	DC AL1 (KDEL08)	PRINT COUNT
0D45	0CDE	0D46	2431	DC AL2 (KDEMS2)	DATA ADDRESS
			2432	*** END OF EXPANSION ***	
			2433	*	*
			2434	*****	*

#KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 15
					2436	*****	*****		
					2437	*			*
					2438	*	PROCESS FILE SPECIFICATION		*
					2439	*			*
					2440	*****	*****		*
					2441	*			*
0D47	C0	87	17B2		2442	KDE200 B	SUFFER	SYNTAX CHECK FILE SPEC	
0D4B	D0	82	A9		2443	BL	\$CAERK(,@BR)	ERROR - EXIT	
					2444	*			
0D4E	BD	1E	00		2445	CLI	@ZERO(,@XR),@EOS	AT EOS ?	
0D51	7C	12	0D		2446	MVI	\$CAERR(,@BR),@@E133	TOO MANY PARAMETERS	
0D54	D0	01	A9		2447	BNE	\$CAERK(,@BR)	NO, ERROR EXIT	
					2448	*			*
					2449	*****	*****		*
					2450	*			*
					2451	*	DETERMINE FILE TYPE		*
					2452	*			*
					2453	*****	*****		*
					2454	*			*
0D57	C2	02	0C8F		2455	LA	KDE000,@XR	SET BASE ADDR	
				0C8F	2456	USING	KDE000,@XR	ESTABLISH BASE	
					2457	*			
0D5B	BD	5C	06		2458	CLI	SMPSWD-##DPEN(,@XR),@ASTER	IS IT ** SPECIFICATION ?	
0D5E	F2	81	09		2459	JE	KDE205	YES, FIND DIRECTORY	
					2460	*			
0D61	BD	5C	06		2461	CLI	SMPSWD-##DPEN(,@XR),@ASTER	POOLED FILE SPECIFIED ?	
0D64	7C	14	0D		2462	MVI	\$CAERR(,@BR),@@E135	POOLED FILE CANT BE DELETED	
0D67	D0	81	A9		2463	BE	\$CAERK(,@BR)	YES, ERROR EXIT	
					2464	*			*
					2465	*****	*****		*



## #KDELE - DELETE SYSTEM COMMAND

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 16
		2467		*****	
		2468	*		*
		2469	*	FIND FILE ENTRY AND TEST	*
		2470	*		*
		2471		*****	
		2472	*		*
0D6A BC 00 16		2473	KDE205 MVI	SMIND1(,@XR),@ZERO	INITIALIZE SHALES INDR
		2474	*		
0D6D C0 87 1559		2475	B	SFINDF	SEARCH FOR PASSWORD AND FILE
		2476	*		
0D71 B9 88 16		2477	KDE220 TBF	SMIND1(,@XR),SM1FNE+SM1PNF	FILE OR PASSWORD MISSING
0D74 D0 90 A9		2478	BF	\$CAERK(,@BR)	YES, TAKE ERROR EXIT
		2479	*		*
		2480		*****	
		2481	*		*
		2482	*	READ IN NULL DIRECTORY FOR DELETION PROCESS	*
		2483	*		*
		2484		*****	
		2485	*		*
		2486	*	DSKL2 KDENUL, WAIT	READ NULL DIRECTORY
0D77 C0 87 1309		2487	B	DL2ICS	PERFORM RELATIVE DISK OP
0D7B 123A	0D7C	2488	DC	AL2(KDENUL)	DPL AIINESS
0D7D C0 87 0025		2489	B	\$DISKN	WAIT AND CHECK FOR DISK ERRORS
0D81 057F	0D82	2490	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
		2491	***	END OF EXPANSION	***
0D83 3C 80 0476		2493	MVI	\$CIMSK,@NOP	MASK INTERRUPTS
		2494	*		*
		2495		*****	

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 17
				2497		*****		
				2498	*			*
				2499	*	INITIALIZE POINTERS TO BUFFERS		*
				2500	*			*
				2501		*****		
				2502	*			*
0D87	8D	01	1C 1239	2503		CLC	SMUDBA(@CADDR,@XR),KDEBF1	IS BUF1 THE CURRENT BUFFER ?
0D8C	F2	01	07	2504		JNE	KDE230	NO, MODIFY BUFFER ASSIGNMENT
				2505	*			
0D8F	C2	02	19B2	2506		LA	SMUDB2,@XR	LOAD XR AS POINTER TO THE
0D93	F2	87	04	2507		J	KDE240	* SECONDARY BUFFER - BUF2
				2508	*			
0D96	C2	02	17B2	2509	KDE230	LA	SMUDB1,@XR	LOAD XR AS POINTER TO SECONDARY
				2510	*			* BUFFER - BUF2
0D9A	35	02	0CA7	2511	KDE240	L	SMUDEA,@XR	LOAD BR AS POINTER TO PRIMARY
				2512	*			* BUFFER - USER ENTRY
				2513	*			*
				2514		*****		
				2515	*			*
				2516	*	CHECK FILE STATUS		*
				2517	*			*
				2518		*****		
				2519	*			*
0D9E	78	10	0D	2520		TBN	##DUES(,@BR),##MUEX	IS FILE POOLED ?
0DA1	3C	4A	03CD	2521		MVI	\$CAERR,@E310	POOLED FILE
0DA5	F2	10	11	2522		JT	KDE243	YES, ERROR EXIT
				2523	*			
0DA8	78	08	0D	2524		TBN	##DUES(,@BR),##MUER	IS IT PROTECTED ?
0DAB	F2	90	0F	2525		JF	KDE245	NO, CONTINUE PROCESS
				2526	*			
0DAE	3D	5C	0C96	2527		CLI	SMPSWD-##DPEN+@B1,@ASTER	** FILE ?
0DB2	F2	81	08	2528		JE	KDE245	YES, PROCESS DELETION
				2529	*			
0DB5	3C	27	03CD	2530		MVI	\$CAERR,@E215	CAN'T DELETE THIS FILE
0DB9	C0	87	0469	2531	KDE243	B	\$CAERK	TAKE ERROR EXIT
				2532	*			*
				2533		*****		

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE 18
				2535		*****				
				2536	*					*
				2537	*	SEE IF BLOCKS ARE LINKED				*
				2538	*					*
				2539	*****					*
				2540	*					*
0DBD	35	01	0CAB	2541	KDE245	L	SMUDBA,@BR			LOAD BR WITH ADDR OF ACTIVE
				2542	*					* BUFFER
0DC1	34	01	122D	2543		ST	KDEDP1+@DBFR2,@BR			SAVE ADDR OF CURRENT BUFFER
0DC5	1C	01	122A 01	2544		MVC	KDEDP1+@DSAD(@DADDR),##DUHA(,@BR)			SAVE DADDR
0DCA	34	02	0EBD	2545		ST	KDE410+@OP1,@XR			SAVE ADDR FOR ZERO OF LINK
				2546	*					
0DCE	4D	01	03 123C	2547	KDE250	CLC	##DUHB(@DADDR,@BR),KDEZER			IS PRIMARY BUFFER LINKED ?
0DD3	F2	81	37	2548		JE	KDE270			NO, RELINQUISH ENTRY TO NULL
				2549	*					
0DD6	3C	80	0E3F	2550		MVI	KDE300+@Q,@NOP			MODIFY JUMP FOR LINKED BUF1
0DDA	3C	80	0E6F	2551		MVI	KDE350+@Q,@NOP			MODIFY JUMP FOR LINKED BUF1
0DDE	34	01	0EBD	2552		ST	KDE410+@OP1,@BR			SAVE ADDR FOR ZERO OF LINK
0DE2	34	02	1233	2553		ST	KDEDP2+@DBFR2,@XR			SAVE CORE ADDR
0DE6	2C	01	1230 01	2554		MVC	KDEDP2+@DSAD(@DADDR),##DUHA(,@XR)			SAVE DADDR
				2555	*					
0DEB	C0	87	0025	2556	*KDE260	DISK	\$WAITF			WAIT FOR DATA TRANSFER
0DEF	057F			2557	KDE260	B	\$DISKN			PERFORM PHYSICAL DISK OP
				0DF0	2558	DC	AL2(\$WAITF)			DPL ADDRESS
				2559	***	END OF EXPANSION	***			
0DF1	8D	01	03 123C	2561		CLC	##DUHB(@DADDR,@XR),KDEZER			IS SECONDARY BUFFER LINKED ?
0DF6	F2	81	14	2562		JE	KDE270			NO, RELINQUISH ENTRY TO NULL
				2563	*					
0DF9	2C	01	1245 01	2564		MVC	KDEOLD(@DADDR),##DUHA(,@XR)			SAVE RELATIVE DISK ADDR OF
				2565	*					* SECONDARY BUFFER BLOCK
0DFE	2C	01	1230 03	2566		MVC	KDEDP2+@DSAD(@DADDR),##DUHB(,@XR)			GET LINK TO NEXT BLOCK
				2567	*					
0E03	C0	87	1309	2568	*	DSKL2	KDEDP2			READ LINKED BLOCK
0E07	122E			2569	B	DL2ICS				PERFORM RELATIVE DISK OP
				0E08	2570	DC	AL2(KDEDP2)			DPL ADDRESS
				2571	***	END OF EXPANSION	***			
0E09	C0	87	0DEB	2573		B	KDE260			CHECK NEXT BLOCK
				2574	*					*
				2575	*****					*

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 19
					2577	*****		
					2578	*		*
					2579	*	STORE ENTRY IN NULL DIRECTORY	*
					2580	*		*
					2581	*****		
					2582	*		*
0E0D	0C	01	0CB3	123C	2583	KDE270 MVC	SMNETD(@CADDR),KDEZER	ZERO CADDR
0E13	3C	08	0CB3		2584	MVI	SMNETD,##LUEN	SUPPLY CADDR OF NULL DIRECTORY
0E17	0E	01	0CB3	0CA7	2585	ALC	SMNETD(@CADDR),SMUDEA	* ENTRY TO STORIN
					2586	*		
0E1D	C0	87	13A2		2587	B	STORIN	STORE IN NULL DIRECTORY
					2588	*		
0E21	38	20	0CA5		2589	TBN	SMIND1,SM1STN	SHOULD NULL DIRCTRY BE PACKED ?
0E25	F2	90	16		2590	JF	KDE300	NO, CONTINUE PROCESSING
					2591	*		
					2592	*****		
					2593	*		*
					2594	*	PACK NULL DIRECTORY	*
					2595	*		*
					2596	*****		
					2597	*		*
0E28	C2	02	0000		2598	KDE280 LA	*-*,@XR	RESTORE XR
0E2C	0C	01	06FF	0CA9	2599	MVC	\$\$FLIB(@DADDR),SMBFDA	SAVE LIBRARY ADOR
0E32	0C	05	0449	1221	2600	MVC	\$DPLSV(@DPLNG),KDEKDE+@DBFR2	SAVE DELETE DPL
					2601	*		
					2602	*	RLOAD KDESPU	LOAD SPACEU
0E38	C0	87	051E		2603	B	\$RLOAD	LOAD AND EXECUTE PGN
0E3C	1222			0E3D	2604	DC	AL2(KDESPU)	DPL ADDRESS
					2605	***	END OF EXPANSION ***	
					2606	*		*
					2607	*****		

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 20
				2609		*****		
				2610	*			*
				2611	*	GET LAST DB		*
				2612	*			*
				2613	*****			*
				2614	*			*
0E3E	F2	87	04	2615	KDE300 JC	KDE310,@UCB	JUMP IF BUF1 NOT LINKED	
				2616	*			
0E41	35	01	1233	2617	L	KDEDP2+@DBFR2,@BR	LOAD BR AS POINTER TO BUF2	
				2618	*			
0E45	4F	00	04 123D	2619	KDE310 SLC	##DUHC(##LAHC,@BR),KDEONE	DECREMENT ENTRY COUNT	
0E4A	1C	00	1249 04	2620	MVC	KDECNT,##DUHC(##LAHC,@BR)	SAVE COUNT	
0E4F	35	02	0CA7	2621	L	SMUDEA,@XR	ADDR DELETED ENTRY	
				2622	*			
0E53	3D	00	1249	2623	CLI	KDECNT,@ZERO	COUNTER = 0 ?	
0E57	F2	81	35	2624	JE	KDE400	YES, PROCESS BLOCK	
				2625	*			*
				2626	*****			*
				2627	*			*
				2628	*	GET ADDR LAST ENTRY AND MOVE TO DELETED SPOT		*
				2629	*			*
				2630	*****			*
				2631	*			*
0E5A	D2	01	0C	2632	LA	##LUH(,@BR),@BR	INDEX PAST BLOCK HEADER	
				2633	*			
0E5D	D2	01	32	2634	KDE320 LA	##LUE(,@BR),@BR	INDEX TO NEXT ENTRY TO FIND	
				2635	*		* LAST ENTRY	
0E60	0F	00	1249 123D	2636	SLC	KDECNT(1),KDEONE	IS THIS THE LAST ENTRY 7	
0E66	C0	01	0E5D	2637	BNZ	KDE320	NO, GET NEXT ONE	
				2638	*			
0E6A	9C	31	31 31	2639	MVC	##DUER(##LUE,@XR),##DUER(,@BR)	MOVE LAST ENTRY OVER THE	
				2640	*		* DELETED ENTRY	
				2641	*			*
				2642	*****			*

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	21
				2644		*****					
				2645	*						*
				2646	*		WRITE DATA BLOCKS BACK TO DISK				*
				2647	*						*
				2648		*****					*
				2649	*						*
0E6E	F2	87	0A	2650	KDE350	JC	KDE370,@UCB			JUMP IF BUF1 NOT LINKED	
				2651	*						
0E71	3C	02	122E	2652	KDE360	MVI	KDEDP2,@DPUT			CHANGE FUNCTION CODE	
				2653	*KDE365	DSKL2	KDEDP2			WRITE SECONDARY BUFFER	
0E75	C0	87	1309	2654	KDE365	B	DL2ICS			PERFORM RELATIVE DISK OP	
0E79	122E			2655		DC	AL2(KDEDP2)			DPL ADDRESS	
			0E7A	2656	***	END OF EXPANSION	***				
				2658	*KDE370	DSKL2	KDEDP1			WRITE PRIMARY BUFFER	
0E7B	C0	87	1309	2659	KDE370	B	DL2ICS			PERFORM RELATIVE DISK OP	
0E7F	1228			2660		DC	AL2(KDEDP1)			DPL ADDRESS	
			0E80	2661	***	END OF EXPANSION	***				
				2663		MVI	KDENUL,@DPUT			CHANGE FUNCTION CODE	
0E81	3C	02	123A	2664	*		DSKL2 KDENUL			WRITE NULL DIRECTORY	
0E85	C0	87	1309	2665		B	DL2ICS			PERFORM RELATIVE DISK OP	
0E89	123A			2666		DC	AL2(KDENUL)			DPI ADDRESS	
			0E8A	2667	***	END OF EXPANSION	***				
				2669		B	\$CARPL			EXIT	
0E8B	C0	87	04A1	2670	*						
				2671		*****					

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE 22
				2673		*****				
				2674	*					*
				2675	*		STORE BLOCK IN SECONDARY BUFFER INTO NULL DIRECTORY			*
				2676	*					*
				2677		*****				*
				2678	*					*
0E8F	4D	01	01	0CB9	2679	KDE400	CLC ##DUHA(@DADDR,@BR),SMFUDA IS THIS FIRST USER BLOCK ?			
0E94	C0	81	0E7B		2680	BE	KDE370 YES, DO NOT RELINQUISH			
				2681	*					
0E98	4C	01	03	1243	2682	MVC	##DUHB(@CADDR,@BR),KDEZR2 LENGTH OF BLOCK FOR RELINQUISH			
0E9D	34	01	0CB3		2683	ST	SMNETD,@BR CADDR OF ENTRY FOR DELETION			
				2684	*					
0EA1	9C	31	31	3D	2685	MVC	##DUER(##LUE,@XR),##DUER+##LUH(,@BR) SAVE ENTRY			
				2686	*					
0EA5	C0	87	13A2		2687	B	STORIN RELINQUISH ENTRY			
				2688	*					
0EA9	38	20	0CA5		2689	TBN	SMIND1,SM1STN SHOULD NULL DIRECTORY BE PACKED			
0EAD	C0	10	0E0D		2690	BT	KDE270 YES, PACK IT			
				2691	*					
0EB1	0D	01	1245	123C	2692	CLC	KDEOLD(@CADDR),KDEZER OLD BLOCK EMPTY			
0EB7	F2	01	16		2693	JNE	KDE420 NO, GET :T			
				2694	*					
0EBA	C2	02	0000		2695	KDE410	LA *-*,@XR LOAD BUFFER HOOP			
0EBE	34	02	122D		2696	ST	KDEDP1+@DBFR2,@XR SAVE CORE ADDR			
0EC2	2C	01	122A	01	2697	MVC	KDEDP1+@DSAD(@DADDR),##DUHA(,@XR) SAVE DADDR			
0EC7	8C	01	03	123C	2698	MVC	##DUHB(@CADDR,@XR),KDEZER ZERO FORWARD LINK			
0ECC	C0	87	0E7B		2699	B	KDE370 WRITE BUFFER 1			
				2700	*					*
				2701		*****				*

#KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE 23
					2703	*****				
					2704	*				*
					2705	*	GET OLD DATA BLOCK			*
					2706	*				*
					2707	*****				*
					2708	*				*
0ED0	0C	01	1230	1245	2709	KDE420 MVC	KDEDP2+@DSAD(@DADDR),KDEOLD GET OLD BUFFER ADDR			
					2710	*				
					2711	*	DSKL2 KDEDP2, WAIT READ OLD BLOCK			
0ED6	C0	87	1309		2712	B	DL2ICS PERFORM RELATIVE DISK OP			
0EDA	122E			0EDB	2713	DC	AL2(KDEDP2) DPL ADDRESS			
0EDC	C0	87	0025		2714	B	\$DISKN WAIT AND CHECK DISK ERRORS			
0EE0	057F			0EE1	2715	DC	AL2(\$WAITF) WAIT DPL ADDRESS			
					2716	***	END OF EXPANSION ***			
0EE2	4C	01	03	123C	2718	MVC	##DUHB(@CADDR,@BR),KDEZER ZERO LINK INDR			
0EE7	C0	87	0E71		2719	B	KDE360 WRITE DIRECTORIES			
					2720	*				*
					2721	*****				*



## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 24
				2723		*****			
				2724	*				*
				2725	*	DELETE-ALL --- DELETE FILES AND PASSWORD			*
				2726	*				*
				2727		*****			*
				2728	*				*
0EEB	1C	01	0CA9 1A	2729	KDE500 MVC	SMBFDA(@DADDR), \$FILIB(, @BR)	PRIME SGETDB - SEARCH FOR		
0EF0	1C	07	0C9C 6D	2730	MVC	SMPSWD(##LPEN), \$PASWD(, @BR)	* PASSWORD; READ USER BLOCK		
0EF5	3C	00	0CA5	2731	MVI	SMIND1, @ZERO	ZERO SMALES INDR		
				2732	*				
0EF9	C0	87	1675	2733	B	SGETDB	GET PASSWORD DIRECTORY		
				2734	*				
0EFD	38	08	0CA5	2735	TBN	SMIND1, SM1PNF	WAS LOGGED ON PASSWORD FOUND		
0F01	F2	90	09	2736	JF	KDE510	YES, CONTINUE PROCESSING		
0F04	7C	99	0D	2737	MVI	\$CAERR(, @BR), @@E552	TRAGIC DISK ERROR-PASSWORD		
0F07	7A	04	16	2738	SBN	\$INDR3(, @BR), \$ERHRD	SET HALT INDR		
0F0A	D0	87	A9	2739	B	\$CAERK(, @BR)	ERROR EXIT		
				2740	*				
0F0D	C0	87	1309	2741	*KDE510	DSKL2 KDENUL	READ NULL DIRECTORY		
0F11	123A			2742	KDE510 B	DL2ICS	PERFORM RELATIVE DISK OP		
				2743	DC	AL2(KDENUL)	DPL ADDRESS		
				2744	***	END OF EXPANSION ***			
				2746	*	DISK \$WAITF	WAIT FOR DIRECTORIES		
0F13	C0	87	0025	2747	B	\$DISKN	PERFORM PHYSICAL DISK OP		
0F17	057F			2748	DC	AL2(\$WAITF)	DPI ADDRESS		
				2749	***	END OF EXPANSION ***			
				2750	*				
0F19	3C	02	123A	2751	MVI	KDENUL+@DCTRL, @DPUT	CHANGE FUNCTION CODE		
				2752	*				*
				2753	*****				*

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 25
				2755		*****		
				2756	*			*
				2757	*	SET POINTERS, CHECK STATUS, SET COUNTS		*
				2758	*			*
				2759		*****		*
				2760	*			*
0F1D	4D	05	89	1221	2761	CLC	\$DPLSV(@VOLID,@BR),KDEKDE+@DBFR2 WAS SPACKU LOADED ?	
0F22	F2	01	27		2762	JNE	KDE516 NO, DO FIRST TIME ROUTINES	
				2763	*			
0F25	0D	01	06FD	123C	2764	CLC	KDESV#(2*@B1),KDEZER WERE ANY FILES SAVED ?	
0F2B	F2	81	0A		2765	JE	KDE512 NO, CHECK DELETED COUNT	
0F2E	3C	02	1016		2766	MVI	KDE625+@Q,@BNL SET SUBTRACT SWITCH	
0F32	0C	01	1247	06FD	2767	MVC	KDE#SV(2*@B1),KDESV# SET UP SAVED COUNTER	
				2768	*			
0F38	3D	00	06FB		2769	KDE512 CLI	KDEDL#,@ZERO FILES DELETED IN CURR BLOCK ?	
0F3C	F2	81	13		2770	JE	KDE518 NO, CONTINUE TO PROCESSING	
0F3F	3C	02	0FC4		2771	MVI	KDE585+@Q,@BNL SET SUBTRACT SWITCH	
0F43	0C	00	1248	06FB	2772	MVC	KDE#DL(@B1),KDEDL# SET UP DELETED COUNTER	
0F49	F2	87	06		2773	J	KDE518 BYPASS ZERO OF SAVED COUNT	
				2774	*			
0F4C	0C	01	06FD	123C	2775	KDE516 MVC	KDESV#(2*@B1),KDEZER ZERO COUNT SAVED 1ST TIME THRU	
0F52	3C	00	06FB		2776	KDE518 MVI	KDEDL#,@ZERO ZERO COUNT DELETED ALWAYS	
0F56	7C	FF	89		2777	MVI	\$DPLSV(,@BR),X'FF' RESET INDR SO SPACKU NOT IMPLIED	
				2778	*			
0F59	0C	FF	18B1	18B1	2779	MVC	SMUDB1+KDE255(KDE256),SMUDB1+KDE255 MOVE BLOCK 1 TO	
0F5F	0C	FF	1BB1	19B1	2780	MVC	SMAEND-@B1(KDE256),SMUDB2-@B1 * BUF2	
				2781	*			
0F65	3C	00	17B6		2782	MVI	SMUDB1+##DUHC,@ZERO ZERO MAX COUNT	
				2783	*			
0F69	C2	02	17BE		2784	LA	SMUDB1+##DUE1,@XR SET POINTER TO ENTRY SAVE AREA	
0F6D	C2	01	19BE		2785	KDE520 LA	SMUDB2+##DUE1,@BR SET POINTER TO ENTRY TEST AREA	
0F71	3D	00	19B6		2786	CLI	SMUDB2+##DUHC,@ZERO IS COUNT OF BLOCK IN BUF2 0 ?	
0F75	F2	01	0E		2787	JNE	KDE560 NO, CHECK ENTRIES	
				2788	*			
0F78	0D	01	19B5	123C	2789	CLC	SMUDB2+##DUHB(@DADDR),KDEZER IS BLOCK LINKED ?	
0F7E	C0	01	10D5		2790	BNE	KDE730 YES, CHECK RELIQ. INDR	
0F82	C0	87	118B		2791	B	KDE860 CHECK PASSWORD DIRECTORY	
				2792	*			*
				2793		*****		

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 26
					2795	*****		
					2796	*		*
					2797	*	CHECK ENTRY STATUS	*
					2798	*		*
					2799	*****		
					2800	*		*
0F86	78	08	0D		2801	KDE560 TBN	##DUES(,@BR),##MUER	IS FILE PROTECTED ?
0F89	F2	90	08		2802	JF	KDE565	NO, SEE IF POOLED
					2803	*		
0F8C	3C	80	1023		2804	MVI	KDE630+@Q,@NOP	SET PROTECTED SWITCH
0F90	3C	87	0F9B		2805	MVI	KDE570+@Q,@UCB	SET 'NOT DELETED' SWITCH
					2806	*		
0F94	78	10	0D		2807	KDE565 TBN	##DUES(,@BR),##MUER	IS FILE POOLED ?
0F97	F2	10	58		2808	JT	KDE600	YES, SAVE ENTRY
0F9A	F2	80	59		2809	KDE570 JC	KDE610,@NOP	JUMP IF 'NOT DELETED'
					2810	*		
0F9D	34	01	0CB3		2811	KDE580 ST	SMNETD,@BR	GET CADDR OF ENTRY FOR DELETION
0FA1	0E	01	0CB3 1241		2812	ALC	SMNETD(@CADDR),KDE008	ESTABLISH ADDRESS
					2813	*		
0FA7	C0	87	13A2		2814	B	STORIN	STORE IN NULL DIRECTORY
					2815	*		
0FAB	38	20	0CA5		2816	TBN	SMIND1,SM1STN	SHOULD DIRECTORY BE PACKED ?
0FAF	C0	10	0E28		2817	BT	KDE280	YES, CALL SPACKU
					2818	*		
0FB3	1C	07	0CE5 07		2819	MVC	KDEMS2+KDEDS7(##LUEN),##DUEN(,@BR)	MOVE FILENAME TO BUF
0FB8	1C	18	0D00 07		2820	MVC	KDEMS2+KDED34(##LUEH),##DUEN(,@BR)	
					2821	*		
0FBD	0F	00	1248 123D		2822	SLC	KDE#DL(@B1),KDEONE	DECREMENT DELETED COUNT AND BY-
0FC3	F2	80	1C		2823	KDE585 JC	KDE590,@NOP	* PASS PRINT UNTIL ZERO- SPACKU
0FC6	3C	80	0FC4		2824	MVI	KDE585+@Q,@NOP	RESET SWITCH
					2825	*		
					2826	*	SPRNT KDEPP2	PRINT FILE AND HEADER
0FCA	C0	87	0465		2827	B	\$SPRNT	PRINT ON SYSTEM PRINTER
0FCE	0D3F			0FCF	2828	DC	AL2(KDEPP2)	PPL ADDRESS
					2829	*** END OF EXPANSION ***		
					2831	*	SPRNT @M082	PRINT 'DELETED'
0FD0	C0	87	0465		2832	B	\$SPRNT	PRINT ON SYSTEM PRINTER
0FD4	0C13			0FD5	2833	DC	AL2(@M082)	PPL ADDRESS
					2834	*** END OF EXPANSION ***		
					2836	*	DISK \$WAITF	WAIT FOR DISK OP
0FD6	C0	87	0025		2837	B	\$DISKN	PERFORM PHYSICAL DISK OP
0FDA	057F			0FDB	2838	DC	AL2(\$WAITF)	DPL ADDRESS
					2839	*** END OF EXPANSION ***		
0FDC	0E	00	06FB 123D		2841	ALC	KDEDL#(@B1),KDEONE	ADD TO BLOCK DELETED COUNT
					2842	*		
0FE2	0F	00	19B6 123D		2843	KDE590 SLC	SMUDB2+##DUHC(##LAHC),KDEONE	DECREMENT COUNT AND IF ZERO
0FE8	F2	81	E1		2844	JZ	KDE700	* PROCESS BLOCK -
0FEB	D2	01	32		2845	LA	##LUE(,@BR),@BR	* OTHERWISE INDEX TO NEXT
0FEE	C0	87	0F86		2846	B	KDE560	* ENTRY AND TEST STATUS
					2847	*		*
					2848	*****		

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 27
				2850		*****		
				2851	*			*
				2852	*	CHECK SAVED COUNT AND SAVE ENTRY		*
				2853	*			*
				2854	*****			*
				2855	*			*
0FF2	3C	80	1030	2856	KDE600	MVI	KDE635+@Q,@NOP	SET POOLED SWITCH
0FF6	3C	80	0F9B	2857	KDE610	MVI	KDE570+@Q,@NOP	RESET SWITCH
				2858	*			
0FFA	3D	0A	17B6	2859	KDE620	CLI	SMUDB1+##DUHC,##MUHM	MAX COUNT = MAX ?
0FFE	F2	81	5A	2860		JE	KDE670	YES GET NEXT BLOCK
				2861	*			
1001	9C	31	31 31	2862		MVC	##DUER(##LUE,@XR),##DUER(,@BR)	SAVE ENTRY
				2863	*			*
				2864	*****			*
				2865	*			*
				2866	*	PRINT MESSAGE - FILE NOT DELETED		*
				2867	*			*
				2868	*****			*
				2869	*			*
1005	1C	07	0CE5 07	2870		MVC	KDEMS2+KDEDS7(##LUEN),##DUEN(,@BR)	MOVE FILENAME
100A	1C	18	0D00 2B	2871		MVC	KDEMS2+KDED34(##LUEH),##DUEH(,@BR)	* AND HEADER
				2872	*			
100F	0F	01	1247 123D	2873		SLC	KDE#SV(2*@B1),KDEONE	DECREMENT SAVED COUNT AND BYPAS
1015	F2	80	36	2874	KDE625	JC	KDE645,@NOP	* PRINT UNTIL ZERO - SPACKU
1018	3C	80	1016	2875		MVI	KDE625+@Q,@NOP	RESET SWITCH
				2876	*			
				2877	*	SPRNT KDEPP2		PRINT MESSAGE
101C	C0	87	0465	2878		B	\$SPRNT	PRINT ON SYSTEM PRINTER
1020	0D3F			1021 2879		DC	AL2(KDEPP2)	PPL ADDRESS
				2880	***	END OF EXPANSION	***	
				2882	KDE630	JC	KDE635,@UCB	JUMP IF NOT PROTECTED
				2883	*	SPRNT @@M081		PRINT PROTECTED
1025	C0	87	0465	2884		B	\$SPRNT	PRINT ON SYSTEM PRINTER
1029	0C0F			102A 2885		DC	AL2(@@M081)	PPL ADDRESS
				2886	***	END OF EXPANSION	***	
				2888		MVI	KDE630+@Q,@UCB	RESET 'PROTECT SWITCH'
102F	F2	87	0A	2889	KDE635	JC	KDE640,@UCB	JUMP IF NOT POOLED
				2890	*	SPRNT @@M080		PRINT POOLED
1032	C0	87	0465	2891		B	\$SPRNT	PRINT ON SYSTEM PRINTER
1036	0C0B			1037 2892		DC	AL2(@@M080)	PPL ADDRESS
				2893	***	END OF EXPANSION	***	
				2895		MVI	KDE635+@Q,@UCB	RESET 'POOLED SWITCH'
				2896	*KDE640	SPRNT @@M083		PRINT NOT DELETED
103C	C0	87	0465	2897	KDE640	B	\$SPRNT	PRINT ON SYSTEM PRINTER
1040	0C17			1041 2898		DC	AL2(@@M083)	PPL ADDRESS
				2899	***	END OF EXPANSION	***	
				2901	*	DISK \$WAITF		WAIT FOR DISK OP
1042	C0	87	0025	2902		B	\$DISKN	PERFORM PHYSICAL DISK OP
1046	057F			1047 2903		DC	AL2(\$WAITF)	DPL ADDRESS
				2904	***	END OF EXPANSION	***	

[illegible]

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 29
					2915	*****	*****	
					2916	*		*
					2917	*	SAVE BLOCK WITH MAX COUNT AND NULL DIRECTORY	*
					2918	*		*
					2919	*****	*****	
					2920	*		*
105B	3A	80	124A		2921	KDE670 SBN	KDEIDR,KDEREL SET ON 'DON'T RELINQUISH' INDR	
					2922	*		
105F	0C	01	17B5 19B3		2923	MVC	SMUDB1+##DUHB(@DADDR),SMUDB2+##DUHA MODIFY BUFFERS	
					2924	*	* FORWARD LINK	
1065	0C	01	122A 17B3		2925	MVC	KDEDP1+@DSAD(@DADDR),SMUDB1+##DUHA	
					2926	*		
106B	C0	87	1309		2927	DSKL2 KDEDP1	WRITE BLOCK 1	
					2928	B DL2ICS	PERFORM RELATIVE DISK OP	
106F	1228			1070	2929	DC AL2(KDEDP1)	DPL ADDRESS	
					2930	***	END OF EXPANSION ***	
					2932	*	DSKL2 KDENUL WRITE NULL DIRECTORY	
1071	C0	87	1309		2933	B DL2ICS	PERFORM RELATIVE DISK OP	
1075	123A			1076	2934	DC AL2(KDENUL)	DPL ADDRESS	
					2935	***	END OF EXPANSION ***	
1077	3C	00	06FB		2937	MVI KDEDL#,@ZERO	ZERO BLOCK DELETED COUNT	
					2938	*		
107B	3A	08	124A		2939	SBN KDEIDR,KDE1BF	SET ON BUFFER 'SAVED' INDR	
					2940	*		
107F	0C	0B	17BD 19BD		2941	MVC	SMUDB1+##DUHR(##LUH),SMUDB2+##DUHR MOVE HEADER	
1085	C2	02	17BE		2942	LA	SMUDB1+##DUE1,@XR LOAD POINTER	
1089	34	01	03C5		2943	ST \$BRSAV,@BR	SAVE CURRENT BR	
108D	0C	00	1249 19B6		2944	MVC	KDEECT(##LAHC),SMUDB2+##DUHC MOVE COUNT TO COUNTER	
					2945	*		
1093	9C	31	31 31		2946	KDE680 MVC	##DUER(##LUE,@XR),##DUER(@BR) MOVE ENTRY	
1097	0F	00	1249 123D		2947	SLC	KDEECT(##LAHC),KDEONE DECREMENT COUNTER	
109D	F2	81	0A		2948	JZ	KDE690 IF ZERO, RE-INITIALIZE	
10A0	E2	02	32		2949	LA	##LUE(@XR),@XR INDEX POINTER	
10A3	D2	01	32		2950	LA	##LUE(@BR),@BR INDEX POINTER	
10A6	C0	87	1093		2951	B	KDE680 GET NEXT ENTRY	
					2952	*		*
					2953	*****	*****	

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 30
					2955	*****	*****		
					2956	*			*
					2957	*	SAVE NON-DELETED ENTRIES AND RE-INITIALIZE		*
					2958	*			*
					2959	*****	*****		*
					2960	*			*
10AA	0C	01	122A 17B3		2961	KDE690 MVC	KDEDP1+@DSAD(@DADDR),SMUDB1+##DUHA SUPPLY DISK ADDR		
					2962	*			
					2963	*	DSKL2 KDEDP1 WRITE OUT BLOCK		
10B0	C0	87	1309		2964	B	DL2ICS PERFORM RELATIVE DISK OP		
10B4	1228			10B5	2965	DC	AL2(KDEDP1) DPL ADDRESS		
					2966	***	END OF EXPANSION ***		
					2968	*	DISK \$WAITF WAIT FOR DISK OP		
10B6	C0	87	0025		2969	B	\$DISKN PERFORM PHYSICAL DISK OP		
10BA	057F			10BB	2970	DC	AL2(\$WAITF) DPL ADDRESS		
					2971	***	END OF EXPANSION ***		
10BC	3C	00	17B6		2973	MVI	SMUDB1+##DUHC,@ZERO SET MAX COUNT TO ZERO		
10C0	35	01	03C5		2974	L	\$BRSAV,@BR RELOAD BR		
10C4	C2	02	17BE		2975	LA	SMUDB1+##DUE1,@XR RELOAD XR		
10C8	C0	87	0F86		2976	B	KDE560 CHECK FILE STATUS		
					2977	*			*
					2978	*****	*****		*
					2979	*			*
					2980	*	CHECK BUF2 LINK AND RELINQUISH IDR		*
					2981	*			*
					2982	*****	*****		*
					2983	*			*
10CC	0D	01	19B5 123C		2984	KDE700 CLC	SMUDB2+##DUHB(@DADDR),KDEZER IS BUFFER LINKED ?		
10D2	F2	81	71		2985	JE	KDE800 NO, CHECK RELIQ INDR		
					2986	*			
10D5	38	80	124A		2987	KDE730 TBN	KDEIDR,KDEREL SHOULD THE BLK BE RELINQUISH ?		
10D9	F2	90	1A		2988	JF	KDE750 YES, RELINQUISH BLOCK		
					2989	*			
10DC	3B	80	124A		2990	SBF	KDEIDR,KDEREL TURN OFF INDR		
10E0	0C	01	1230 19B5		2991	MVC	KDEDP2+@DSAD(@DADDR),SMUDB2+##DUHB SUPPLY ADDR		
					2992	*			
					2993	*	DSKL2 KDEDP2,WAIT READ NEXT BLOCK		
10E6	C0	87	1309		2994	B	DL2ICS PERFORM RELATIVE DISK OP		
10EA	122E			10EB	2995	DC	AL2(KDEDP2) DPL ADDRESS		
10EC	C0	87	0025		2996	B	\$DISKN WAIT AND CHECK DISK ERRORS		
10F0	057F			10F1	2997	DC	AL2(\$WAITF) WAIT DPL ADDRESS		
					2998	***	END OF EXPANSION ***		
10F2	C0	87	0F6D		3000	B	KDE520 CHECK NEWLY READ ENTRIES		
					3001	*			*
					3002	*****	*****		*



## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 31
				3004		*****		
				3005	*			*
				3006	*		RELINQUISH BLOCK 2 - GET NEXT BLOCK	*
				3007	*			*
				3008		*****		
				3009	*			*
10F6	0C	01	0CB3 1233	3010	KDE750	MVC	SMNETD(@CADDR),KDE2DP CADDR NEW NULL ENTRY	
10FC	0C	01	1230 19B5	3011		MVC	KDEDP2+@DSAD(@DADDR),SMUDB2+##DUHB GET ADDR NEXT BLOCK	
1102	0C	01	19B5 1243	3012		MVC	SMUDB2+##DUHB(##LNEF),KDEZR2 SET NULL ENTRY SECTOR COUNT	
				3013	*			
1108	C0	87	13A2	3014		B	STORIN RELINQUISH BLOCK IN BUF2	
				3015	*			
110C	38	20	0CA5	3016		TBN	SMIND1,SM1STN SHOULD WE PACK ?	
1110	C0	10	0E28	3017		BT	KDE280 YES, LOAD SPACKU	
				3018	*			
				3019	*		DSKL2 KDED P2, WAIT READ NEXT BLOCK	
1114	C0	87	1309	3020		B	DL2ICS PERFORM RELATIVE DISK OP	
1118	122E			1119 3021		DC	AL2(KDED P2) DPL ADDRESS	
111A	C0	87	0025	3022		B	\$DISKN WAIT AND CHECK DISK ERRORS	
111E	057F			111F 3023		DC	AL2(\$WAITF) WAIT DPL ADDRESS	
				3024	***		END OF EXPANSION ***	
				3025	*			
1120	0C	01	17B5 19B3	3026		MVC	SMUDB1+##DUHB(@DADDR),SMUDB2+##DUHA MODIFY BUF1 LINK	
				3027	*			
1126	0C	01	122A 17B3	3028		MVC	KDEDP1+@DSAD(@DADDR),SMUDB1+##DUHA SUPPLY ADDRESS	
				3029	*			
112C	3C	00	06FB	3030		MVI	KDEDL#,@ZERO ZERO POCK DELETED COUNT	
				3031	*			
				3032	*		DSKL2 KDED P1 WRITE BUF1	
1130	C0	87	1309	3033		B	DL2ICS PERFORM RELATIVE DISK OP	
1134	1228			1135 3034		DC	AL2(KDED P1) DPL ADDRESS	
				3035	***		END OF EXPANSION ***	
				3036	*			
				3037	*		DSKL2 KDENUL WRITE NULL DIRECTORY	
1136	C0	87	1309	3038		B	DL2ICS PERFORM RELATIVE DISK OP	
113A	123A			113B 3039		DC	AL2(KDENUL) DPL ADDRESS	
				3040	***		END OF EXPANSION ***	
				3041	*			
				3042	*		DISK \$WAITF WAIT FOR DISK OP	
113C	C0	87	0025	3043		B	\$DISKN PERFORM PHYSICAL DISK OP	
1140	057F			1141 3044		DC	AL2(\$WAITF) DPL ADDRESS	
				3045	***		END OF EXPANSION ***	
				3046	*			
1142	C0	87	0F6D	3047		B	KDE520 CHECK COUNT	
				3048	*			*
				3049		*****		



## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 32
					3051	*****	*****	
					3052	*		*
					3053	*	CHECK RELIQ INDR AND STORE BLOCK	*
					3054	*		*
					3055	*****	*****	
					3056	*		*
1146	38	80	124A		3057	KDE800 TBN	KDEIDR,KDEREL SHOULD BLOCK BE RELIOUSHED ?	
114A	F2	10	28		3058	JT	KDE830 NO, CHECK MAX COUNT	
					3059	*		
114D	0C	01	0CB3 1233		3060	MVC	SMNETD(@CADDR),KDE2DP SUPPLY CADDR NULL ENTRY	
1153	0C	01	19B5 1243		3061	MVC	SMUDB2+##DUHB(##LNEF),KDEZR2 SUPPLY COUNT	
					3062	*		
1159	C0	87	13A2		3063	B	STORIN STORE BLOCK	
					3064	*		
115D	38	20	0CA5		3065	TBN	SMIND1,SM1STN PACK ?	
1161	C0	10	0E28		3066	BT	KDE280 YES, LOAD SPACKU	
					3067	*		
1165	3D	00	17B6		3068	CLI	SMUDB1+##DUHC,@ZERO IS COUNT ZERO ?	
1169	F2	81	1F		3069	JE	KDE860 YES, CHECK PASSWORD STATUS	
					3070	*		
116C	0C	01	17B5 123C		3071	MVC	SMUDB1+##DUHB(@DADDR),KDEZER ZERO FORWARD LINK	
1172	F2	87	07		3072	J	KDE840	
					3073	*		*
					3074	*****	*****	
					3075	*		*
					3076	*	WRITE OUT BLOCK1 AND EXIT	*
					3077	*		*
					3078	*****	*****	
					3079	*		*
1175	3D	00	17B6		3080	KDE830 CLI	SMUDB1+##DUHC,@ZERO IS COUNT ZERO ?	
1179	F2	81	0F		3081	JE	KDE860 YES, RELINQUISH	
					3082	*		
117C	0C	01	122A 17B3		3083	KDE840 MVC	KDEDP1+@DSAD(@DADDR),SMUDB1+##DUHA SUPPLY DADDR	
					3084	*		
					3085	*	DSKL2 KDEDP1 WRITE BUF1	
1182	C0	87	1309		3086	B	DL2ICS PERFORM RELATIVE DISK OP	
1186	1228			1187	3087	DC	AL2(KDEDP1) DPL ADDRESS	
					3088	***	END OF EXPANSION ***	
1188	F2	87	87		3090	J	KDE950 EXIT	
					3091	*		*
					3092	*****	*****	

#KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 33
				3094		*****			
				3095		*			*
				3096		*	STORE BLOCK 1 AND TEST PASSWORD DELETE		*
				3097		*			*
				3098		*****			*
				3099		*			*
118B	0C	01	0CB3 122D	3100	KDE860	MVC	SMNETD(@CADDR),KDE1DP SET UP NULL ENTRY		
1191	0C	01	17B5 1243	3101		MVC	SMUDB1+##DUHB(##LNEF),KDEZR2		
				3102		*			
1197	C0	87	13A2	3103		B	STORIN STORE IN NULL DIRECTORY		
				3104		*			
119B	38	20	0CA5	3105		TBN	SMIND1,SM1STN SHOULD DIRECTORY BE PACKED ?		
119F	C0	10	0E28	3106	KDE870	BT	KDE280 YES, PACK		
				3107		*			
11A3	38	08	124A	3108	KDE880	TBN	KDEIDR,KDE1BF SHOULD PASSWORD BE RELINQ ?		
11A7	F2	10	68	3109		JT	KDE950 NO, EXIT		
				3110		*			*
				3111		*****			

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 34
					3113	*****	*****	
					3114	*		*
					3115	*	DELETE PASSWORD	*
					3116	*		*
					3117	*****	*****	
					3118	*		*
					3119	*KDE900	DSKL2 KDED P3, WAIT	READ PASSWORD DIRECTORY
11AA	C0	87	1309		3120	KDE900	B DL2ICS	PERFORM RELATIVE DISK OP
11AE	1234			11AF	3121		DC AL2(KDED P3)	DPL ADDRESS
11B0	C0	87	0025		3122		B \$DISKN	WAIT AND CHECK DISK ERRORS
11B4	057F			11B5	3123		DC AL2(\$WAITF)	WAIT DPL ADDRESS
					3124	***	END OF EXPANSION ***	
					3125	*		
11B6	0C	00	1249 17B2		3126	MVC	KDEECT(##LAHC), SMUDB1+##DPHC	GET ENTRY COUNT
11BC	C2	01	17B5		3127	LA	SMUDB1+##DPHR, @BR	ADDR END HEADER
					3128	*		
11C0	D2	01	0C		3129	KDE940	LA ##LPE(, @BR), @BR	GET NEXT ENTRY
11C3	0F	00	1249 123D		3130	SLC	KDEECT(##LAHC), KDEONE	END OF LAST ENTRY ?
11C9	C0	01	11C0		3131	BNZ	KDE940	NO, GET NEXT
					3132	*		
11CD	35	02	0CB7		3133	L	SMPEAD, @XR	
11D1	2C	07	0CE5 07		3134	MVC	KDEMS2+##DPEN(##LUEN), ##DPEN(, @XR)	MOVE PASSWORD
11D6	9C	0B	0B 00		3135	MVC	##DPER(##LPE, @XR), @ZERO(, @BR)	OVERLAY ENTRY
11DA	0F	00	17B2 123D		3136	SLC	SMUDB1+##DPHC(##LAHC), KDEONE	
11E0	3C	02	1234		3137	MVI	KDED P3+@DCTRL, @DPUT	CHANGE FUNCTION CODE
					3138	*		
					3139	*	DSKL2 KDED P3	WRITE PASSWORD DIRECTORY
11E4	C0	87	1309		3140	B	DL2ICS	PERFORM RELATIVE DISK OP
11E8	1234			11E9	3141	DC	AL2(KDED P3)	DPL ADDRESS
					3142	***	END OF EXPANSION ***	
					3144	*	DSKL2 KDENUL	WRITE NULL DIRECTORY
11EA	C0	87	1309		3145	B	DL2ICS	PERFORM RELATIVE DISK OP
11EE	123A			11EF	3146	DC	AL2(KDENUL)	DPL ADDRESS
					3147	***	END OF EXPANSION ***	
					3149	*	SPRNT KDEPP4	PRINT PASSWORD
11F0	C0	87	0465		3150	B	\$SPRNT	PRINT ON SYSTEM PRINTER
11F4	0D43			11F5	3151	DC	AL2(KDEPP4)	PPL ADDRESS
					3152	***	END OF EXPANSION ***	
					3154	*	SPRNT @@M002	PRINT DELETED
11F6	C0	87	0465		3155	B	\$SPRNT	PRINT ON SYSTEM PRINTER
11FA	0C13			11FB	3156	DC	AL2(@@M082)	PPL ADDRESS
					3157	***	END OF EXPANSION ***	
					3158	*		*
					3159	*****	*****	

#KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 35
					3161	*****			
					3162	*			*
					3163	*	CLEAR LOGGED ON STATUS		*
					3164	*			*
					3165	*****			*
					3166	*			*
11FC	0C	01	03DA	123C	3167	MVC	\$FILIB(@DADDR),KDEZER	CLEAR FILE LIB ADDR	
1202	0C	01	03DC	123C	3168	MVC	\$USRDR(@DADDR),KDEZER	CLEAR USER LIB ADDR	
1208	3C	40	042D		3169	MVI	\$PASWD,@BLANK	CLEAR PASSWORD	
120C	0C	06	042C	042D	3170	MVC	\$PASWD-@B1(KDELN7),\$PASWD		
					3171	*			
					3172	*KDE950	DSKL2 KDENUL	WRITE NULL DIRECTORY	
1212	C0	87	1309		3173	KDE950	B DL2ICS	PERFORM RELATIVE DISK OP	
1216	123A			1217	3174	DC	AL2(KDENUL)	DPL ADDRESS	
					3175	***	END OF EXPANSION ***		
1218	C0	87	04A1		3177	KDE990	B \$CARPL	EXIT	
					3178	*			*
					3179	*****			*

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 36
				3181	*****	
				3182	*	*
				3183	DATA CONSTANTS, BUFFERS, AND WORK AREAS	*
				3184	*	*
				3185	*****	*
				3186	*	*
				3187	*KDEKDE DPL FUNC-@DGET,DADDR-#\$KDEL,CNT-#\$KDE,CADDR-\$\$KDE	
			121C	3188	KDEKDE EQU *	DISK PARAMETER LIST
121C	01		121C	3189	DC AL1(@DGET)	REQUESTED FUNCTION
121D	035C		121E	3190	DC AL2(#\$KDEL)	DISK ADDRESS
121F	10		121F	3191	DC AL1(##KDE)	SECTOR COUNT
1220	0C00		1221	3192	DC AL2(##KDE)	BUFFER ADDRESS
				3193	*** END OF EXPANSION ***	
				3195	*KDESPU DPL FUNC-@DGET,DADDR-\$\$SPAC,CNT-\$\$SPA,CADDR-\$\$SPA	
			1222	3196	KDESPU EQU *	DISK PARAMETER LIST
1222	01		1222	3197	DC AL1(@DGET)	REQUESTED FUNCTION
1223	04CC		1224	3198	DC AL2(##SPAC)	DISK ADDRESS
1225	04		1225	3199	DC AL1(##@SPA)	SECTOR COUNT
1226	0C00		1227	3200	DC AL2(##SPA)	BUFFER ADDRESS
				3201	*** END OF EXPANSION ***	
				3203	*KDEDP1 DPL FUNC-@DPUT,CNT-##LU	
			1228	3204	KDEDP1 EQU *	DISK PARAMETER LIST
1228	02		1228	3205	DC AL1(@DPUT)	REQUESTED FUNCTION
1229	00		1229	3206	DC AL1(*-*)	CYLINDER ADDRESS
122A	00		122A	3207	DC AL1(*-*)	HEAD/SECTOR/DRIVE/DISK SPEC
122B	02		122B	3208	DC AL1(##LU)	SECTOR COUNT
122C	0000		122D	3209	DC AL2(*-*)	BUFFER ADDRESS
				3210	*** END OF EXPANSION ***	
122C				3212	ORG *-2	
122C	17B2		122D	3213	KDE1DP DC AL2(SMUDB1)	ADDR BUF1
				3214	*	
				3215	*KDEDP2 .DPL FUNC-@DGET,CNT-##LU	
			122E	3216	KDEDP2 EQU *	DISK PARAMETER LIST
122E	01		122E	3217	DC AL1(@DGET)	REQUESTED FUNCTION
122F	00		122F	3218	DC AL1(*-*)	CYLINDER ADDRESS
1230	00		1230	3219	DC AL1(*-*)	HEAD/SECTOR/DRIVE/DISK SPEC
1231	02		1231	3220	DC AL1(##LU)	SECTOR COUNT
1232	0000		1233	3221	DC AL2(*-*)	BUFFER ADDRESS
				3222	*** END OF EXPANSION ***	
1232				3224	ORG *-2	
1232	19B2		1233	3225	KDE2DP DC AL2(SMUDB2)	ADDR BUF2
				3226	*	*
				3227	*****	

#KDELE - DELETE SYSTEM COMMAND

ERR LOC		OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22		PAGE 37
				3229	*****			
				3230	*			*
				3231	*KDEDP3 DPL    FUNC-@DGET,DADDR-##RP,CNT-##LP,CADDR-SMUDB1			
			1234	3232	KDEDP3 EQU    *			
1234	01		1234	3233	DC    AL1(@DGET)			DISK PARAMETER LIST
1235	0001		1236	3234	DC    AL2(##RP)			REQUESTED FUNCTION
1237	04		1237	3235	DC    AL1(##LP)			DISK ADDRESS
1238	17B2		1239	3236	DC    AL2(SMUDB1)			SECTOR COUNT
				3237	*** END OF EXPANSION ***			BUFFER ADDRESS
				3239	*KDENUL DPL    FUNC-@DGET,DADDR-##RN,CNT-##LN,CADDR=KDEBUF			
			123A	3240	KDENUL EQU    *			DISK PARAMETER LIST
123A	01		123A	3241	DC    AL1(@DGET)			REQUESTED FUNCTION
123B	0000		123C	3242	DC    AL2(##RN)			DISK ADDRESS
123D	01		123D	3243	DC    AL1(##LN)			SECTOR COUNT
123E	1559		123F	3244	DC    AL2(KDEBUF)			BUFFER ADDRESS
				3245	*** END OF EXPANSION ***			
				3246	*			*
				3247	*****			

## #KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 38
					3249	*****		
					3250	*		*
1240	0008			1241	3251	KDE008 DC	XL2'0008'	INCREMENT
					3252	*		
1242	0002			1243	3253	KDEZR2 DC	XL2'0002'	SECTOR COUNT OF USER DB
					3254	*		
1244				1245	3255	KDESAV DS	XL2	SAVE AREA FOR DADDR OF LAST BLK
1244					3256	ORG	KDESAV-1	RESET LOCATION COUNTER
1244	0000			1245	3257	DC	XL2'0000'	INITIALIZED FOR COMPARE
				1245	3258	KDEOLD EQU	KDESAV	SAVE AREA FOR BLOCK ADDR
					3259	*		
1246				1247	3260	KDE#SV DS	XL2	COUNTER FOR SPACKU RELOAD
1246					3261	ORG	KDE#SV-1	RESET LOCATION COUNTER
1246	0000			1247	3262	DC	XL2'0000'	INITIALIZED TO ZERO
1248				1248	3263	KDE#DL DS	XL1	COUNTER FOR SPACKU RELOAD
1248					3264	ORG	KDE#DL	RESET LOCATION COUNTER
1248	00			1248	3265	DC	XL1'00'	INITIALIZED TO ZERO
					3266	*		
1249				1249	3267	KDECNT DS	CL1	COUNTER AREA
				1249	3268	KDEECT EQU	KDECNT	ENTRY COUNT FOR DELETE ALL
					3269	*		
				123C	3270	KDEZER EQU	KDENUL+@DSAD	COMPARE CONSTANT FOR FORWARD
					3271	*		* LINK
				123D	3272	KDEONE EQU	KDENUL+@DCNT	INCREMENT - DECREMENT
					3273	*		
				123F	3274	KDENDR EQU	KDENUL+@DBFR2	CADDR OF NULL DIRECTORY
					3275	*		
				1239	3276	KDEBF1 EQU	KDEDP3+@DBFR2	CADDR OF BUFFER IN TSMLES
					3277	*		*
					3278	*****		

#KDELE - DELETE SYSTEM COMMAND

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 39
					3280		*****	
					3281		*	*
124A	80			124A	3282	KDEIDR DC	XL1'80'	INITIALIZED WITH KDEREL ON
					3283		*	
				0080	3284	KDEREL EQU	X'80'	BLOCK RELINQUISH INDR
					3285		*	* 1 - DON'T RELINQUISH
					3286		*	* 0 - RELINQUISH
				0008	3287	KDE1BF EQU	X'08'	BUFFER SAVE INDR
					3288		*	* 1 - BLOCK HAS BEEN SAVED
					3289		*	* 0 - NO BLOCKS SAVED
					3290		*	*
					3291		*****	



#KDELE - DELETE SYSTEM COMMAND

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 40
			3293	* PATCH 190,1	
			3294	*****	
			3295	* PATCH AREA 1 *	
			3296	*****	
124B		1308	3297	\$\$\$\$\$1 DS CL190 PATCH AREA FOR PROGRAM	
			3298	*****	
			3299	* \$DL2P	

## DL2ICS - TWO TRACK LOGICAL IOCR

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	05/06/22	PAGE 41
		3301+	*****				
		3302+	*	5703-XM1 COPYRIGHT IBM CORP 1970			*
		3303+	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE. 120-2083			*
		3304+	*				*
		3305+	*****				*
		3306+	*	STATUS -			*
		3307+	*	VERSION 1 MODIFICATION 0			*
		3308+	*				*
		3309+	*	FUNCTION			*
		3310+	*	DL2ICS CONVERTS A RELATIVE DISK ADDRESS TO A PHYSICAL DISK			*
		3311+	*	ADDRESS AND COMBINES IT WITH A BASE ADDRESS PLACED IN DL2RAD			*
		3312+	*	BY THE CALLER.			*
		3313+	*	THE RELATIVE DISK ADDRESS IS A TWO BYTE CYLINDER SECTOR COUNT			*
		3314+	*	IN THE CALLERS DISK PARAMETER LIST (DPL).			*
		3315+	*	THE COUNT IS A CYLINDER SECTOR DISPLACEMENT FROM THE BASE			*
		3316+	*	ADDRESS PLACED IN DL2RAD			*
		3317+	*	DL2ICS IS USED TO PROCESS DATA ON THE FIXED OR REMOVABLE DISK			*
		3318+	*	ON EITHER DRIVE AND PROVIDES THE INTERFACE TO \$DISKN.			*
		3319+	*	THE PHYSICAL DISK ADDRESS IS PLACED IN A COPY OF THE USERS DPL			*
		3320+	*	IN DL2ICS AND A CALL IS MADE TO \$DISKN TO PERFORM THE REQUESTED			*
		3321+	*	OPERATION.			*
		3322+	*				*
		3323+	*	ENTRY POINTS			*
		3324+	*	THE ENTRY IS DL2ICS. THE BASE REGISTER IS SAVED AND RESTORED			*
		3325+	*	ON RETURN. THE INDEX REGISTER IS NOT USED.			*
		3326+	*	THE FORMAT OF THE CALLING SEQUENCE IS AS FOLLOWS:			*
		3327+	*	B DL2ICS			*
		3328+	*	DC AL2(PARMLT)			*
		3329+	*	WHERE PARMLT IS THE ADDR OF THE PARAMETER LIST TO BE PROCESSED.			*
		3330+	*				*
		3331+	*	INPUT			*
		3332+	*	THE INPUT IS A TWO BYTE BASE DISK ADDRESS PLACED IN			*
		3333+	*	DL2RAD AND A SIX BYTE DPL. THE SAME FORMAT AS THE DPL FOR			*
		3334+	*	\$DISKN EXCEPT FOR THE DISK ADDRESS WHICH IS A RELATIVE CYLINDER			*
		3335+	*	AND SECTOR DISPLACEMENT FROM THE BASE ADDRESS IN DL2RAD.			*
		3336+	*				*
		3337+	*	OUTPUT			*
		3338+	*	NONE.			*
		3339+	*				*
		3340+	*	EXTERNAL REFERENCES			*
		3341+	*	\$DISKN - ENTRY TO PHYSICAL DISK ROUTINE IS THE SYSTEM NUCLEUS.			*
		3342+	*				*
		3343+	*	EXITS, NORMAL			*
		3344+	*	NORMAL - EXIT IS TO THE FIRST INSTRUCTION FOLLOWING THE POINTER			*
		3345+	*	TO THE DPL. THE BASE REGISTER IS RESTORED. THE RETURN ADDRESS			*
		3346+	*	IS THE ADDRESS RECALL REGISTER (ARR) +2.			*
		3347+	*				*
		3348+	*	EXITS, ERROR			*
		3349+	*	NONE			*
		3350+	*				*
		3351+	*	TABLES/WORK AREAS			*
		3352+	*	THE CONSTANTS AND WORK AREAS RESIDE AT THE END OF THE EXECUTABLE			*
		3353+	*	CODE AND ARE REFERENCED BY A DISPLACEMENT RELATIVE TO THE VALUE			*
		3354+	*	IN INDEX REGISTER 1 (@BR).			*
		3355+	*	DL2SEC AND DL2SAD ARE EQUATED TO OPERAND LOCATIONS IN THE			*
		3356+	*	EXECUTABLE CODE TO ELIMINATE EXCESS WORKING STORAGE.			*

## DL2ICS - TWO TRACK LOGICAL IOCR

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER	MOD	00	05/06/22	PAGE	42
					3357+	*							
					3358+	*	ATTRIBUTES						
					3359+	*	* DL2ICS IS REUSABLE						
					3360+	*							
					3361+	*	CHARACTER CODE DEPENDENCY						
					3362+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR						
					3363+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.						
					3364+	*							
					3365+	*	NOTES						
					3366+	*	ERROR PROCEDURES						
					3367+	*	NONE						
					3368+	*							
					3369+	*	REGISTER USAGE						
					3370+	*	INDEX REGISTER 1 (@BR) IS SAVED AND RESTORED. THIS REGISTER IS						
					3371+	*	USED DURING EXECUTION. REGISTER 2 (@BR) IS NOT USED.						
					3372+	*							
					3373+	*	SAVED/RESTORED AREAS						
					3374+	*	NONE						
					3375+	*							
					3376+	*	MODIFICATION CONSIDERATIONS						
					3377+	*	NONE						
					3378+	*							
					3379+	*	REQUIRED MODULES						
					3380+	*	@SYSEQ - COMMON SYSTEM EQUATES.						
					3381+	*	@FXDEQ - SYSTEM NUCLEUS ADDRESSES AND INDICATORS VALUES EQUATES						
					3382+	*							
					3383+	*	OTHER						
					3384+	*	DL2ICS MAY BE USED TO CONVERT THE DISK ADDRESS ONLY AND NOT TO						
					3385+	*	CALL \$DISKN IF THE USER MOVES A UCB CODE TO DL2SWH.						
					3386+	*	THIS OPTION IS NOT STANDARD USAGE.						
					3387+	*	*****						
				130D	3388+		USING DL2000,@BR						
					3389+		ESTABLISH ADDRESSABILITY						
				0001	3390+DL2E01	EQU	X'01'						
				0002	3391+DL2E02	EQU	X'02'						
				0018	3392+DL2E18	EQU	X'18'						
				0060	3393+DL2E60	EQU	X'60'						
				0083	3394+DL2TSD	EQU	X'83'						
				007C	3395+DL2E7C	EQU	X'7C'						
				1309	3396+DL2ICS	EQU	*						
	1309	34	01	138A	3397+	ST	DL2900+@OP1,@BR						
				130D	3398+DL2000	EQU	*						
				130D	3399+	LA	DL2000,@BR						
	1311	76	08	8A	3400+	A	DL2C01(,@BR),@ARR						
	1314	74	08	14	3401+	ST	DL2001+@DOP2(,@BR),@ARR						
	1317	76	08	8A	3402+	A	DL2C01(,@BR),@ARR						
	131A	74	08	81	3403+	ST	DL2910+@OP1(,@BR),@ARR						
					3404+	*							
	131D	4C	01	1D 0000	3405+DL2001	MVC	DL2002+@DOP2(@DADDR,@BR),*-*						
	1322	5E	01	1D 8C	3406+	ALC	DL2002+@DOP2(@CADDR,@BR),DL2C05(,@BR)						
	1326	4C	05	92 0000	3407+DL2002	MVC	DL2DPL(@DPLNG,@BR),*-*						
	132B	5F	00	8F 86	3408+DL2005	SLC	DL2LST+@DSAD(DL2E01,@BR),DL2C48(,@BR)						
	132F	F2	82	07	3409+	JM	DL2006						
	1332	5E	00	8E 8A	3410+	ALC	DL2LST+@DCYL(DL2E01,@BR),DL2C01(,@BR)						
	1336	D0	87	1E	3411+	B	DL2005(,@BR)						
	1339	5E	00	8F 86	3412+DL2006	ALC	DL2LST+@DSAD(DL2E01,@BR),DL2C48(,@BR)						

## DL2ICS - TWO TRACK LOGICAL IOCR

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 43
					3413+*			
					3414+*		GET THE LOGICAL SECTOR FROM THE DPL. THE NUMBER IS LEFT ADJUSTED	
					3415+*		TO COMAE IT MTN THE POINTER ESTABLISHED PRIOR TO AN ENTRY.	
133D	5C	00	1D 8F		3416+	MVC	DL2SEC(DL2E01,@BR),DL2LST+@DSAD(,@BR) GET SECTOR NUMBER	
1341	7C	00	8F		3417+	MVI	DL2LST+@DSAD(,@BR),@ZERO CLEAR SECTOR BYTE	
					3418+*			
					3419+*		MOVE THE RELATIVE START TO THE DFL	
					3420+*			
1344	5E	01	8F 94		3421+	ALC	DL2LST+@DSAD(DL2E02,@BR),DL2RAD(,@BR) DL2RAD TO DPL	
1348	7D	18	1D		3422+	CLI	DL2SEC(,@BR),DL2E18 IS COUNT OVER A TRACK	
134B	F2	82	08		3423+	JL	DL2008 NO GO CHANGE A PHYSICAL ADOR	
134E	5E	01	8F 85		3424+	ALC	DL2LST+@DSAD(DL2E02,@BR),DL2K80(,@BR) BUMP TRACK VALUE	
1352	5F	00	1D 88		3425+	SLC	DL2SEC(1,@BR),DL2K18(,@BR) DECR BY TRACK VALUE	
1356	5E	00	1D 1D		3426+DL2008	ALC	DL2SEC(1,@BR),DL2SEC(,@BR) SHIFT LEFT 1	
135A	5E	00	1D 1D		3427+	ALC	DL2SEC(1,@BR),DL2SEC(,@BR) SHIFT LEFT	
135E	5C	00	14 8F		3428+	MVC	DL2SAD(DL2E01,@BR),DL2LST+@DSAD(,@BR) GET SECTOR ADDRESS	
					3429+*			
					3430+*		ZERO OUT THE SECTOR COUNT AND LEAVE THE DISK. SPINDLE AND	
					3431+*		TRACK BITS AS IS TO BE RE INSERTED AFTER THE SECTOR HAS BEEN	
					3432+*		LOCATES.	
					3433+*			
1362	7B	7C	8F		3434+	SBF	DL2LST+@DSAD(,@BR),DL2E7C TURN OFF	
1365	7B	83	14		3435+	SBF	DL2SAD(,@BR),DL2TSD OFF TRACK SPINDLE DISK	
1368	5E	00	14 1D		3436+	ALC	DL2SAD(DL2E01,@BR),DL2SEC(,@BR) COMBINE SECTOR COUNTS	
136C	7D	60	14		3437+DL2010	CLI	DL2SAD(,@BR),DL2E60 TEST IF TRACK CROSSED	
136F	F2	82	08		3438+	JL	DL2100	
					3439+*			
					3440+*		INCREMENT TRACK BIT. OVERFLOW INTO THE CYLINDER COUNT.	
					3441+*			
1372	5E	01	8F 85		3442+	ALC	DL2LST+@DSAD(DL2E02,@BR),DL2K80(,@BR)	
1376	5F	00	14 83		3443+	SLC	DL2SAD(1,@BR),DL2K60(,@BR) DECR BY TRACK VALUE	
					3444+*			
137A	5E	00	8F 14		3445+DL2100	ALC	DL2LST+@DSAD(1,@BR),DL2SAD(,@BR) INSERT SECTOR COUNT	
					3446+*			
137E	F2	80	06		3447+DL2110	JC	DL2900,@NOP CONVERSION SWITCH	
				137F	3448+DL2SWH	EQU	DL2110+@Q ADDR OF Q CODE FOR SWITCH	
1381	C0	87	0025		3449+	B	\$DISKN GO PROCESS I/O	
1385	139A			1386	3450+	DC	AL2(DL2LST) ADDRESS OF DPL	
1387	C2	01	0000		3451+DL2900	LA	*-*,@BR RESTORE CALLERS BASE	
138B	C0	87	0000		3452+DL2910	B	*-*	
					3453+*****			
					3454+*		CONSTANTS	
					3455+*****			
138F	0060			1390	3456+DL2K60	DC	XL2'0060' SECTOR COUNT OF 24 LEFT ADJUSTD	
1391	0080			1392	3457+DL2K80	DC	XL2'0080' BIT FOR INCREMENTING TRACK	
1393	30			1393	3458+DL2C48	DC	IL1'48' CYLINDER VALUE FOR 1 DISK	
1394	0018			1395	3459+DL2K18	DC	XL2'18' HEX SECTORS PER TRACK	
1396	0001			1397	3460+DL2C01	DC	IL2'1' CONSTANT FOR REGISTER MODE	
1398	0005			1399	3461+DL2C05	DC	IL2'5' DISP TO RIGHT END OF DPL	
					3462+*****			
					3463+*		WORK AREA	
					3464+*****			
				139A	3465+DL2LST	EQU	* LIST HIGH END	
139A				139F	3466+DL2DPL	DS	CL(@DPLNG) WORKING DPL	
				139C	3467+DL2PHY	EQU	DL2LST+@DSAD POINTER TO PHYSICAL DADDR	
				1321	3468+DL2SAD	EQU	DL2001+@DOP2 SAVE SECTOR BYTE FROM DPI	

[illegible]

13A0

```
WORKING SECTOR ADDRESS FIELD
USER RELATIVE STARTING ADDR.
END OF DL2ICS
```

\* \* \*

## STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 45
		3476+	*****		*
		3477+	*	5703-XM1 COPYRIGHT IBM CORP, 1970	*
		3478+	*	REFER TO INSTRUCTIONS ON COPY RIGHT NOTICE, 120-2083	*
		3479+	*		*
		3480+	*****		*
		3481+	*	STATUS	*
		3482+	*	VERSION 1 MODIFICATION 0	*
		3483+	*		*
		3484+	*	FUNCTION	*
		3485+	*	* STORIN WILL INSERT AN ENTRY IN THE NULL DIRECTORY. IF THE ENTRY	*
		3486+	*	IS CONTIGUOUS WITH ANY OTHER ENTRY ALREADY IN THE DIRECTORY, IT	*
		3487+	*	IS COMBINED WITH THAT ENTRY, IF THE ENTRY IS CONTIGUOUS TO TWO	*
		3488+	*	ENTRIES THE THREE ENTRIES ARE COMBINED INTO ONE AND THE	*
		3489+	*	DIRECTORY IS COMPRESSED,	*
		3490+	*	* IF THE ENTRY IS NOT CONTIGUOUS TO ANY OTHER ENTRY IT IS ADDED	*
		3491+	*	TO THE END OF THE DIRECTORY OR INSERTED IN SEQUENCE.	*
		3492+	*	* IF THE DIRECTORY IS FULL THE INDICATOR IN SMIND1 IS SET AND	*
		3493+	*	THE RETURN TAKEN,	*
		3494+	*		*
		3495+	*	ENTRY POINTS	*
		3496+	*	STORIN - ENTRY TO STORE A NULL ENTRY IN THE DIRECTORY. @BR	*
		3497+	*	AND @XR ARE SAVED AND RESTORED ON RETURN. THE	*
		3498+	*	CALLING SEQUENCE IS AS FOLLOWS:	*
		3499+	*	B STORIN	*
		3500+	*	RETURN IS TO THE FIRST INSTRUCTION FOLLOWING THE	*
		3501+	*	BRANCH TO STORIN,	*
		3502+	*		*
		3503+	*	INPUT	*
		3504+	*	* THE ADDRESS OF THE LEFT BYTE OF THE ENTRY TO BE MADE IN THE	*
		3505+	*	DIRECTORY MUST BE IN SMNETD,	*
		3506+	*	* THE ADDRESS OF THE NULL DIRECTORY MUST BE IN SMNDBA.	*
		3507+	*		*
		3508+	*	OUTPUT	*
		3509+	*	NONE.	*
		3510+	*		*
		3511+	*	EXTERNAL REFERENCES	*
		3512+	*	SMNETD - LOCATION OF THE ADDRESS OF THE ENTRY	*
		3513+	*	SMNDBA - LOCATION OF NULL DIRECTORY BUFFER ADDRESS.	*
		3514+	*	SMIND1 - LOCATION OF INDICATOR BYTE IN TSMLES.	*
		3515+	*	SM1STN - VALUE OF FULL DIRECTORY INDICATOR.	*
		3516+	*		*
		3517+	*	EXITS, NORMAL	*
		3518+	*	RETURN IS TO THE LOCATION POINTED TO BY THE @ARR. IF THE ENTRY	*
		3519+	*	WAS MADE SM1STN IS 0, IF THE DIRECTORY IS FULL AND THE ENTRY	*
		3520+	*	CAN NOT BE MADE SM1STN IN SMIND1 IS SET TO 1.	*
		3521+	*		*
		3522+	*	EXITS, ERROR	*
		3523+	*	NONE	*
		3524+	*		*
		3525+	*	TABLES/NORKAREAS	*
		3526+	*	NONE	*
		3527+	*		*
		3528+	*	ATTRIBUTES	*
		3529+	*	RELOCATABLE, REUSABLE	*
		3530+	*		*
		3531+	*	CHARACTER CODE DEPENDENCY	*

## STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 46
		3532+*		THE OPERATION OF THIS MODULE DEPENDS UPON AS INTERNAL	*
		3533+*		REPRESENTATION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT	*
		3534+*		TO THE USED AT ASSEMBLY TIME, THE CODING HAS BEEN ARRANGED SO	*
		3535+*		THAT REDEFINITION OF THE CHARACTER CONSTANTS, BY REASSEMBLY, WILL	*
		3536+*		RESULT IN A CORRECT MODULE FOR THE NEW DEFINITIONS.	*
		3537+*			*
		3538+*	NOTES		*
		3539+*	ERROR PROCEDURES		*
		3540+*	NONE		*
		3541+*			*
		3542+*	REGISTER USAGE		*
		3543+*		* @BR AND @XR ARE SAVED AND RESTORED ON RETURN.	*
		3544+*		@ARR IS SAVED IN THE BRANCH TO RETURN.	*
		3545+*		* @BR IS USED AS A BASE REGISTER DURING EXECUTION.	*
		3546+*		@XR IS USED A POINTER TO THE NULL DIRECTORY.	*
		3547+*			*
		3548+*	SAVED/RESTORED AREAS		*
		3549+*	NONE		*
		3550+*			*
		3551+*	MODIFICATION CONSIDERATIONS		*
		3552+*		TO CALCULATE THE END OF THE NULL DIRCTY STORIN MULTIPLIES THE	*
		3553+*		NUMBER OF ENTRIES BY SIX, IF THE LENGTH OF THE NULL ENTRY IS	*
		3554+*		CHANGED, THIS CODING MUST BE UPDATED.	*
		3555+*			*
		3556+*	REQUIRED MODULES		*
		3557+*		@SYSEQ - SYSTEM SOFTWARE EQUATES	*
		3558+*		@DIREQ - LIBRARY DIRECTORY EQUATES	*
		3559+*		TSMLES - DATA MANAGEMENT COMMUNICATIONS AREA	*
		3560+*			*
		3561+*	OTHER		*
		3562+*	NONE		*
		3563+*	*****		*



# STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 47
				13A2	3565+	STORIN	EQU *	ENTRY TO STORE IN NULL DIRCTY
				142B	3566+		USING STOR30,@BR	BASE
13A2	34	01	14B1		3567+		ST STOR90+@OP1,@BR	SAVE BASE
				0001	3568+	STORE1	EQU 1	Q CODE VALUE
13A6	C2	01	142B		3569+		LA STOR30,@BR	LOAD BASE ADDR
13AA	74	02	8A		3570+		ST STOR95+@OP1(,@BR),@XR	SAVE INDEX
13AD	74	08	8E		3571+		ST STOR99+@OP1(,@BR),@ARR	SAVE RETURN
					3572+*			
					3573+*			
					3574+*		INITALIZE POINTERS AND COUNTERS	
13B0	7C	80	01		3575+		MVI STOR31(,@BR),@NOP	NO PREVIOUS ENTRY SWITCH
13B3	5C	01	06 A5		3576+		MVC STOR35+@OP1(@CADDR,@BR),STO70A(,@BR)	NEW ENTRY SWITCH
13B7	35	02	0CB3		3577+		L SMNETD,@XR	GET NEW ENTRY ADDR
13BB	6C	03	92 03		3578+		MVC STORWE(STOENL,@BR),##DNEF(,@XR)	MOVE INTO WORKAREA
13BF	35	02	123F		3579+		L SMNDBA,@XR	PICKUP POINTER TO BUFFER AREA
13C3	74	02	35		3580+		ST STOR45(,@BR),@XR	SAVE BUFFER ADDR
13C6	74	02	73		3581+		ST STO048+@OP1(,@BR),@XR	SAVE BUFFER POINTER
13C9	6C	00	A3 00		3582+		MVC STOENC(##LAHC,@BR),##DPHC(,@XR)	COUNT TO NEW ENTRY
13CD	6C	00	9D 00		3583+		MVC STORWC(##LAHC,@BR),##DPHC(,@XR)	PICKUP ENTRY COUNT
					3584+*			
					3585+*		TEST ENTRY COUNT FOR MAX ENTRIES OR ZERO ENTRIES	
					3586+*			
13D1	7D	2A	9D		3587+		CLI STORWC(,@BR),##MNHM	TEST MAX ENTRY COUNT
13D4	F2	81	13		3588+		JE STOR10	GO SET SWITCH NO NEW ENTRIES
13D7	7C	80	ED		3589+		MVI STOR70+@Q(,@BR),@NOP	SET SWITCH TO ALLOW ENTRY
13DA	7D	00	9D		3590+		CLI STORWC(,@BR),@ZERO	TEST IF DIRCTY EMPTY
13DD	F2	01	0D		3591+		JNE STOR14	GO COMPARE ENTRIES
					3592+*			
13E0	BC	01	00		3593+		MVI ##DNHC(,@XR),STORE1	INITIALIZE COUNTER
					3594+*			
					3595+*		MOVE THE ENTRY INTO THE DIRCTY	
					3596+*			
13E3	9C	05	09 94		3597+		MVC ##LNH+##DNER(##LNE,@XR),STORWE+##LNEZ(,@BR)	
13E7	D0	87	83		3598+		B STOR90(,@BR)	GO RETURN
					3599+*			
13EA	7C	87	ED		3600+	STOR10	MVI STOR70+@Q(,@BR),@UCB	SWITCH NO NEW ENTRIES
13ED	E2	02	04		3601+	STOR14	LA ##DNE1(,@XR),@XR	BUMP TO FIRST ENTRY
13F0	6D	01	90 01		3602+	STOR15	CLC STORWE-##LNEF(@DADDR,@BR),##DNEA(,@XR)	COMPARE NEW/DIRCTY
13F4	F2	82	14		3603+		JL STOR20	NEW LOWER
13F7	74	02	30		3604+		ST STORPA(,@BR),@XR	SAVE PREVIOUS ENTRY ADDR
13FA	5F	00	9D 9F		3605+		SLC STORWC(1,@BR),STORC1(,@BR)	DECK ENTRY COUNT
13FE	F2	81	7F		3606+		JE STOR47	GO SETUP TO CALC CURRENT HIGH
1401	7C	87	01		3607+		MVI STOR31(,@BR),@UCB	SET PREVIOUS ENTRY SWITCH
1404	E2	02	06		3608+		LA ##LNE(,@XR),@XR	BUMP POINTER TO NEXT ENTRY
1407	C0	87	13F0		3609+		B STOR15	BACK FOR NEXT ENTRY
					3610+*			
					3611+*		FOUND POSSIBLE POSITION FOR NEW ENTRY	
					3612+*			
140B	5C	03	B2 92		3613+	STOR20	MVC STORWK(STOENL,@BR),STORWE(,@BR)	
140F	D0	87	C5		3614+		B STOR60(,@BR)	GO CALC HIGH END
					3615+*			
					3616+*		TEST IF ADDR OF HIGH END IS CONTIGUOUS TO NEXT ENTRY	
					3617+*			
1412	7C	80	1F		3618+		MVI STO39A+@Q(,@BR),@NOP	DONT COMBINE
1415	6D	01	B0 01		3619+		CLC STORCS(@CADDR,@BR),##DNEA(,@XR)	COMPARE ADDR
1419	F2	01	0F		3620+		JNE STOR30	JUMP NOT CONTIGUOUS



## STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 05/06/22 PAGE 48

141C	9E	01	03	92		3621+	ALC	##DNEF(##LNEF,@XR),STORWE(,@BR)	ADD NEW COUNT TO ENTRY
1420	9C	01	01	90		3622+	MVC	##DNEA(@DADDR,@XR),STORWA(,@BR)	MOVE IN NEW ENTRY
						3623+*			
1424	5C	01	06	54		3624+	MVC	STOR35+@OP1(@CADDR,@BR),STORET(,@BR)	GET RETURN CADDR
1428	7C	87	1F			3625+	MVI	STO39A+@Q(,@BR),@UCB	ALLOW ENTRIES BE COMBINED
						3626+*			
						3627+*		TEST IF PREVIOUS ENTRY THAT MAY BE CONTIGUOUS. TEST IF	
						3628+*		SWITCH ON OR OFF, @UCB IS ON. @NOP IS NO PREVIOUS ENTRY.	
						3629+*			
142B	F2	00	04		142C	3630+STOR30	JC	STOR38,*-*	PREVIOUS ENTRY SWITCH
						3631+STOR31	EQU	STOR30+@Q	
						3632+*			
						3633+*		IF NEW ENTRY TO BE ADDED GO TO STOR70. IF NO NEW ENTRY	
						3634+*		GO TO RETURN ROUTINE.	
						3635+*			
142E	C0	87	0000			3636+STOR35	B	*-*	RETURN OR GO MAKE ENTRY
						3637+*			
						3638+*		SET UP TO CALCULATE HIGH END ADDR OF PREVIOUS ENTRY	
						3639+*		PICK UP THE DISPLACEMENT TO THE PREVIOUS ENTRY	
						3640+*			
1432	5E	01	30	94		3641+STOR38	ALC	STORPA(@CADDR,@BR),STOCLN(,@BR)	BUMP TO RIGHT END
1436	5C	01	13	30		3642+	MVC	STOR39+@DOP2(@CADDR,@BR),STORPA(,@BR)	
143A	4C	03	B2	0000		3643+STOR39	MVC	STORWK(STOENL,@BR),*-*	MOVE PREVIOUS ENTRY TO WORKAREA
						3644+*			
143F	D0	87	C5			3645+	B	STOR60(,@BR)	CALC HIGH END
						3646+*			
1442	5D	01	90	B0		3647+	CLC	STORCW(@DADDR,@BR),STORCS(,@BR)	
1446	D0	01	03			3648+	BNE	STOR35(,@BR)	GO RETURN OR MAKE NEW ENTRY
1449	F2	00	0C			3649+STO39A	JC	STOR40,*-*	SWITCH FOR COMBINING ENTRIES
						3650+*			
						3651+*		NEW ENTRY IS CONTIGUOUS TO PREVIOUS ENTRY BUR NOT NEXT	
						3652+*			
144C	5C	01	28	30		3653+	MVC	STO39B+@OP1(@CADDR,@BR),STORPA(,@BR)	
1450	1E	01	0000	92		3654+STO39B	ALC	*-*,STORWE(##LNEF,@BR)	NEW COUNT TO PREVIOUS ENTRY
1455	F2	87	56			3655+	J	STOR90	GO RETURN
						3656+*			
						3657+*		NEW ENTRY HAS FILED A SPACE BETWEEN TO FORMER ENTRIES.	
						3658+*		COMBINE THE THREE ENTRIES INTO THE FIRST ENTRY.	
						3659+*			
1458	2E	01	0000	03	145B	3660+STOR40	ALC	*-*,##DNEF(##LNEF,@XR)	ADD COUNT FIELDS
						3661+STORPA	EQU	STOR40+@OP1	
						3662+*			
						3663+*		PICK UP POINTER TO START OF BUFFER TO DECR COUNT	
						3664+*			
145D	1F	00	0000	9F	1460	3665+STOR46	SLC	*-*,STORC1(##LAHC,@BR)	DECR HEADER ENTRY COUNT
						3666+STOR45	EQU	STOR46+@OP1	ADDR OF DIRCTY ADDR
1462	E2	02	05			3667+	LA	##DNER(,@XR),@XR	BUMP TO RIGHT END
						3668+*			
1465	5F	00	9D	9F		3669+	SLC	STORWC(1,@BR),STORC1(,@BR)	DECR WORK ENTRY COUNT
1469	F2	81	42			3670+	JE	STOR90	IF LAST ENTRY RETURN
						3671+*			
						3672+*		SET UP POINTERS TO SQUEEZE UP THE DIRCTY. THE CURRENT	
						3673+*		ENTRY IS DELETED BY OVERLAYING IT WITH THE REMAINDER OF	
						3674+*		THE DIRCTY.	
						3675+*			
146C	74	02	B0			3676+	ST	STOR52(,@BR),@XR	SAVE THE TO ADDR

# STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 49
146F	E2	02	06		3677+	LA	##LNE(,@XR),@XR	BUMP TO NEXT ENTRY
1472	74	02	B2		3678+	ST	STOR53(,@BR),@XR	SET THE FROM CADDR
1475	5C	01	A1 98		3679+	MVC	STORAM(@CADDR,@BR),STOREL(,@BR) POSITIVE MODIFIER	
1479	D0	87	AA		3680+	B	STOR50(,@BR)	GO MOVE ENTRY
147C	C0	87	14AE		3681+STO047	B	STOR90	GO RETURN
				147F	3682+STORET	EQU	STO047+@OP1	POINTER TO RETURN ACTION
					3683+*			
					3684+*		ALL ENTRIES TESTED, CURRENT ENTRY LAST ONE. CALCULATE	
					3685+*		HIGH END ADDR TO CHECK IF NEW ENTRY IS CONTIGUOUS.	
					3686+*			
1480	6C	03	B2 03		3687+STOR47	MVC	STORWK(STOENL,@BR),##DNEF(,@XR)	
					3688+*			
1484	D0	87	C5		3689+	B	STOR60(,@BR)	GO CALC HIGH END
					3690+*			
					3691+*		TEST IF HIGH ADDR EQUAL TO START OF NEW ENTRY, IF NO GO	
					3692+*		MAKE NEW ENTRY, IF YES ADD NEW COUNT TO CURRENT ENTRY.	
					3693+*			
1487	5D	01	90 B0		3694+	CLC	STORCW(@CADDR,@BR),STORCS(,@BR) TEST HIGH AND NEW ENTRY	
148B	F2	81	15		3695+	JE	STOR48	JUMP IF CONTIGUOUS
148E	7D	87	ED		3696+	CLI	STOR70+@Q(,@BR),@UCB	TEST IF NEW ENTRY IS ALLOWED
1491	F2	81	16		3697+	JE	STOR80	ERROR EXIT
1494	E2	02	06		3698+	LA	##LNE(,@XR),@XR	BUMP TO NEXT ENTRY
1497	9C	05	05 94		3699+	MVC	##DNER(##LNE,@XR),STORWE+##LNEZ(,@BR) MOVE IN ENTRY	
149B	1E	00	0000 9F		3700+STO048	ALC	*-*(##LAHC),STORC1(,@BR)	BUMP ENTRY COUNT
14A0	F2	87	0B		3701+	J	STOR90	GO RETURN
					3702+*			
14A3	9E	01	03 92		3703+STOR48	ALC	##DNEF(##LNEF,@XR),STOREC(,@BR) NEW COUNT TO CURRENT	
14A7	F2	87	04		3704+	J	STOR90	GO RETURN
					3705+*			
					3706+*		ERROR RETURN ACTION IF NO ENTRIES CAN BE MADE	
					3707+*			
14AA	3A	20	0CA5		3708+STOR80	SBN	SMIND1,SM1STN	TURN ON INDICATOR
					3709+*			
					3710+*		ALL ACTION COMPLETE GO BACK TO CALLER	
					3711+*			
14AE	C2	01	0000		3712+STOR90	LA	*-*,@BR	RESTORE CALLERS REGS
14B2	C2	02	0000		3713+STOR95	LA	*-*,@XR	
14B6	C0	87	0000		3714+STOR99	B	*-*	RETURN TO THE CALLER

## STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 50
			3716+	*****	*****	
			3717+	*	CONSTANTS AND WORK AREA	*
			3718+	*****	*****	
14BA		14BD	3719+	STORWE DS	IL(@DADDR+##LNEF)	WORK AREA FOR NEW ENTRY
		14BB	3720+	STORCW EQU	STORWE-##LNEF	NEW ENTRY ADDR
		14BD	3721+	STOREC EQU	STORWE	POINTER TO ENTRY COUNT
		14BB	3722+	STORWA EQU	STORWE-##LNEF	ENTRY ADDR
14BE 0003		14BF	3723+	STOCLN DC	AL2(##DNEF)	DISPLACEMENT TO RIGHT END
14C0 FFFE		14C1	3724+	STORDR DC	AL2(@ZERO-##LNEZ)	
14C2 0006		14C3	3725+	STOREL DC	AL2(##LNE)	INCR POINTERS
14C4 0030		14C5	3726+	STOC48 DC	IL2'48'	INCR POINTERS
14C6 FFFA		14C7	3727+	STORMN DC	AL2(@ZERO-##LNE)	NEGATIVE MODIFIER
14C8		14C8	3728+	STORWC DS	AL(##LAHC)	
14C9 0001		14CA	3729+	STORC1 DC	IL2'1'	INCR VALUE FOR COUNTERS
		0002	3730+	STORE2 EQU	2	FIELD LENGTH FOR ADD AND SUBTR
14CB		14CC	3731+	STORAM DS	IL(@CADDR)	ADDR MODIFIER FOR MOVE ROUTINE
		0004	3732+	STOENL EQU	@DADDR+##LNEF	LENGTH OF ADDR AND SECTOR COUNT
14CD		14CE	3733+	STOENC DS	IL2	ENTRY COUNT
14CF 1517		14D0	3734+	STO70A DC	AL2(STOR70)	CADDR OF INSERT NEW ENTRY
14D1 0004		14D2	3735+	STORHL DC	AL2(##LNH)	LENGTH OF HEADER
14D3 14BD		14D4	3736+	STOENA DC	AL2(STORWE)	ADDR OF ENTRY

## STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 05/06/22 PAGE 51

3738+\*  
 3739+\*  
 3740+\* THE FOLLOWING SUBROUTINE WILL MOVE THE END PORTION OF  
 3741+\* THE DIRCTY FORWARD OR BACKWARD DEPEND1NG ON THE VALUE  
 3742+\* OF THE MODIFIER PLUGGED IN BY THE CALLING ROUTINE.  
 3743+\* THE TO AND FROM ADDR FOR THE MOVE ARE ALSO PLUGGED IN  
 3744+\* BY THE CALLING ROUTINE,  
 14D5 74 08 EB 3745+STOR50 ST STO067+@OP1(,@BR),@ARR SAVE RETURN  
 3746+\*  
 14D8 0C 05 0000 0000 3747+STOR51 MVC \*-\*(##LNE),\*-\* MOVE ENTRY AS SPECIFIED  
 14DB 3748+STOR52 EQU STOR51+@OP1 LOCATION OF TO ADDR  
 14DD 3749+STOR53 EQU STOR51+@OP2 LOCATION OF FROM ADDR  
 14DE 5F 00 9D 9F 3750+STOR55 SLC STORWC(1,@BR),STORC1(,@BR) DECR WORK COUNT  
 14E2 F2 81 2E 3751+ JE STO067 ZERO COUNT RETURN  
 14E5 5E 01 B0 A1 3752+ ALC STOR52(@CADDR,@BR),STORAM(,@BR) MODIFY THE TO ADDR  
 14E9 5E 01 B2 A1 3753+ ALC STOR53(@CADDR,@BR),STORAM(,@BR) MODIFY FROM ADDR  
 14ED D0 87 AD 3754+ B STOR51(,@BR) GO MOVE NEXT ENTRY

3756+\*  
 3757+\* THE FOLLOWING ROUTINE WILL CALCULATE THE HIGH END ADDR  
 3758+\* OF THE SPECIFIED ENTRY.  
 3759+\*  
 14F0 74 08 EB 3760+STOR60 ST STO067+@OP1(,@BR),@ARR SAVE RETURN  
 14DD 3761+STORWK EQU STOR53 WORK AREA TO CALC HIGH ADOR  
 14DA 3762+STORC0 EQU STORWK-##DNEF POINTER TO LEFT BYTE  
 14DB 3763+STORCS EQU STORWK-##LNEF ENTRY DADDR  
 3764+\*  
 14F3 5C 00 E6 AF 3765+ MVC STO064+@Q(,@BR),STORC0(1,@BR) GET CYL BYTE  
 14F7 7C 00 AF 3766+ MVI STORC0(,@BR),@ZERO CLEAR HIGH ORDER CYL BYTE  
 14FA 5E 01 B0 B2 3767+ ALC STORCS(##LNEF,@BR),STORWK(,@BR) ADD IN LENGTH  
 3768+\*  
 14FE 5F 01 B0 9A 3769+STOR65 SLC STORCS(STORE2,@BR),STOC48(,@BR) DECR IT CYL VALUE  
 1502 F2 82 07 3770+ JL STOR66 GO RESTORE  
 3771+\*  
 1505 5E 00 E6 9F 3772+ ALC STO064+@Q(1,@BR),STORC1(,@BR) BUMP CYL  
 1509 D0 87 D3 3773+ B STOR65(,@BR) BACK TO DECK AGAIN  
 150C 5E 01 B0 9A 3774+STOR66 ALC STORCS(STORE2,@BR),STOC48(,@BR) RESTORE REMAINDER  
 1510 7C 00 AF 3775+STO064 MVI STORC0(,@BR),\*-\* MORE CYL COUNT  
 1513 C0 87 0000 3776+STO067 B \*-\* RETURN

3778+\*  
 3779+\* THE FOLLOWING ROUTINE WILL INSERT A NEW ENTRY INTO THE  
 3780+\* DIRCTY IF THE SWITCH HAS BEEN SET TO ALLEW ENTRIES, IF  
 3781+\* A NEW ENTRY MUST BE MADE AND THE DIRCTY IS FULL THE ERROR  
 3782+\* EXIT IS TAKEN AND AN INDICATOR IS SET TO NOTE THE LIERART  
 3783+\* AREA SHOULD BE PACKED.  
 3784+\* NOTE - THIS ROUTINE DEPENDS ON THE NULL ENTRY BEING SIX  
 3785+\* BYTES.  
 3786+\*  
 1517 C0 00 14AA 3787+STOR70 BC STOR80,\*-\* BRANCH IF FULL SWITCH SET  
 3788+\*  
 1516 3789+STOSAV EQU STO067+@OP1 TEMP WORK AREA

## STORIN - STORE IN NULL DIRCTY BLOCK SUBROUTINE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 52
	151B	7C	00	A2	3790+	MVI	STOENC-1(,@BR),@ZERO	CLEAR HIGH ORDER BYTE
	151E	7C	00	EA	3791+	MVI	STOSAV-1(,@BR),@ZERO	CLEAR HIGH ORDER BYTE
	1521	5E	01	A3 A3	3792+	ALC	STOENC(##LNEF,@BR),STOENC(,@BR)	DOUBLE COUNT
	1525	5C	00	EB A3	3793+	MVC	STOSAV(1,@BR),STOENC(,@BR)	SAVE COUNT*2
	1529	5E	01	A3 EB	3794+	ALC	STOENC(##LNEF,@BR),STOSAV(,@BR)	*4
	152D	5E	01	A3 EB	3795+	ALC	STOENC(##LNEF,@BR),STOSAV(,@BR)	*6
	1531	5E	01	A3 A7	3796+	ALC	STOENC(STORE2,@BR),STORHL(,@BR)	ADD HDR LENGTH
	1535	4E	01	A3 123F	3797+	ALC	STOENC(@CADDR,@BR),SMNDBA	ADD START BUFFER
	153A	5F	01	A3 9F	3798+	SLC	STOENC(@CADDR,@BR),STORC1(,@BR)	BACK TO RIGHT END
	153E	5C	01	B2 A3	3799+	MVC	STOR53(@CADDR,@BR),STOENC(,@BR)	FROM ADDR
	1542	5E	01	A3 98	3800+	ALC	STOENC(@CADDR,@BR),STOREL(,@BR)	BUMP TO RIGHT NEXT ENT
	1546	5C	01	B0 A3	3801+	MVC	STOR52(@CADDR,@BR),STOENC(,@BR)	TO ADOR
	154A	5C	01	A1 9C	3802+	MVC	STORAM(@CADDR,@BR),STORMN(,@BR)	NEGATIVE MODIFIER
	154E	C0	87	14D5	3803+	B	STOR50	BRANCH TO MOVER ROUTINE
					3804+*			
					3805+*		MOVE THE NEW ENTRY INTO THE VACATED CURRENT ENTRY LOCATION	
					3806+*			
	1552	9C	05	05 94	3807+	MVC	##DNER(##LNE,@XR),STORWE+##LNEZ(,@BR)	MOVE THE ENTRY IN
	1556	D0	87	70	3808+	B	STO048(,@BR)	GO RETURN
					3809+***		END OF STORIN	***
					3810 *			
					3811 *	\$FIND		

## SFINDF - FILE SEARCH CONTROL MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 53
		3813+		*****	
		3814+*	5703-XM1	COPYRIGHT IBM CORP. 1970	*
		3815+*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		3816+*			*
		3817+		*****	
		3818+*		STATUS	*
		3819+*		VERSION 1 MODIFICATION 0	*
		3820+*			*
		3821+*		FUNCTION	*
		3822+*	*	SFINDF IS A CONTROL MODULE USED TO LOCATE A SPECIFIED PASSWORD	*
		3823+*		AND/OR FILENAME.	*
		3824+*	*	IF THE FILENAME, PASSWORD, AND VOLUME-ID ARE ALL EXPLICITLY	*
		3825+*		SPECIFIED. A CALL IS ISSUED TO SVOLID, SGETDB AND SRCHFN TO	*
		3826+*		SEARCH FOR THE REQUIRED FILE IN THE FILE LIBRARY SPECIFIED.	*
		3827+*		IF THE PASSWORD OR VOLUME-ID IS NOT EXPLICITLY DEFINED, SFINDF	*
		3828+*		WILL DEFAULT TO THE CURRENT USER SPECIFICATIONS, IF THEY EXIST,	*
		3829+*		FOR THE MISSING PARAMETERS AND THEN ISSUE THE REQUIRED CALLS	*
		3830+*		TO SGETDS AND/OR SRCHFN TO LOCATE THE FILE.	*
		3831+*	*	IF A ONE OR TWO-STAR FILENAME IS SPECIFIED, THE SPECIFIED DISK,	*
		3832+*		OR ALL DISKS ON THE SYSTEM WILL BE SEARCHED IN AN ATTEMPT TO	*
		3833+*		LOCATE THE FILE. THE CALLER MAY SET AN INDICATOR TO TERMINATE	*
		3834+*		THE SEARCH AFTER A GIVEN NUMBER OF DISKS HAVE BEEN SEARCHED.	*
		3835+*			*
		3836+*		ENTRY POINTS	*
		3837+*		THE ENTRY POINT IS SFINDF.	*
		3838+*		THE CALLING SEQUENCE IS AS FOLLOWS:	*
		3839+*	B	SFINDF	*
		3840+*			*
		3841+*		INPUT	*
		3842+*	*	THE FOLLOWING INFORMATION MUST BE SET UP IN TSMLES BEFORE	*
		3843+*		CALLING SFINDF.	*
		3844+*	*	SMPSWD MUST CONTAIN SPECIFIED PASSWORD	*
		3845+*	*	SMVOID MUST CONTAIN SPECIFIED VOLUME	*
		3846+*	*	SMFNAM MUST CONTAIN SPECIFIED FILENAME	*
		3847+*	*	THE FOLLOWING SWITCHES ARE PROVIDED TO HANDLE ONE OR TWO-STAR	*
		3848+*		FILES:	*
		3849+*	*	SFIVOL - IF @NOP IS SET SVOLID WILL NOT BE CALLED. SVOLID	*
		3850+*		IS NOT REUSABLE AND THIS SWITCH MUST BE SET BEFORE	*
		3851+*		SFINDF IS CALLED A SECOND TIME.	*
		3852+*	*	SFISTR - IF @NOP IS SET ONLY 1 DISK WILL BE SEARCHED	*
		3853+*	*	SFIFND - IF @NOP SET WITH SFIVOL ONLY THE NUMBER OF DISKS	*
		3854+*		SPECIFIED IN SFINTR WILL BE SEARCHED.	*
		3855+*			*
		3856+*		OUTPUT	*
		3857+*	*	THE OUTPUT FROM SFINDF IS SET IN TSMLES, THE POINTERS AND USER	*
		3858+*		DIRECTORIES REQUIRED ARE INITIALIZED.	*
		3859+*			*
		3860+*		EXTERNAL REFERENCES	*
		3861+*		TSMLES - (SMALES) DATA MANAGEMENT SAVE AREAS AND BUFFERS.	*
		3862+*		\$VOLID - CORE RESIDENT VOLID TABLE.	*
		3863+*		\$USRDR - DISPLACEMENT TO CURRENT USER DIRECTORY.	*
		3864+*		\$FILIB - CURRENT USER FILE LIBRARY DISK ADDRESS.	*
		3865+*		DL2ICS - TWO TRACK LOGICAL IOCS.	*
		3866+*		SRCHFN - SEARCH USER DIRCTY BLOCK.	*
		3867+*		SGETDB - SEARCH PASSWORD DIRCTY.	*
		3868+*		SVOLID - SEARCH VOL-ID TABLE.	*



## SFINDF - FILE SEARCH CONTROL MODULE

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 54
				3869+	*	\$CAERR - SAVE AREA FOR SYSTEM ERROR MESSAGT CODE.	*
				3870+	*		*
				3871+	*	EXITS, NORMAL	*
				3872+	*	* NORMAL RETURN IS TO THE CALLER FOLLOWING THE BRANCH TO SFINDF.	*
				3873+	*		*
				3874+	*	EXITS, ERROR	*
				3875+	*	* THE ERROR RETURN IS TO SFIERR WHICH MUST BE DEFINED BY THE	*
				3876+	*	CALLER.	*
				3877+	*		*
				3878+	*	TABLES/WORKAREAS	*
				3879+	*	* N/A	*
				3880+	*		*
				3881+	*	ATTRIBUTES	*
				3882+	*	* RELOCATABLE	*
				3883+	*	* RE-USABLE	*
				3884+	*		*
				3885+	*	CHARACTER CODE DEPENDENCY	*
				3886+	*	* THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
				3887+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.	*
				3888+	*		*
				3889+	*	NOTES	*
				3890+	*	ERROR PROCEDURES	*
				3891+	*	IF A FILE-SPEC WAS NOT ENTERED AND A CURRENT USER IS NOT IN	*
				3892+	*	AFFECT. THE ERROR EXIT TO SFIERR IS TAKEN.	*
				3893+	*		*
				3894+	*	REGISTER USAGE	*
				3895+	*	@BR AND @XR ARE SAVED AND RESTORED. DURING EXECUTION @BR IS	*
				3896+	*	USED AS A BASE REGISTER AND @XR IS USED TO POINT TO \$NUCBS.	*
				3897+	*		*
				3898+	*	SAVED/RESTORED AREAS	*
				3899+	*	NONE	*
				3900+	*		*
				3901+	*	MODIFICATION CONSIDERATIONS	*
				3902+	*	NONE	*
				3903+	*		*
				3904+	*	REQUIRED MODULES	*
				3905+	*	@SYSEQ - SYSTEM SOFTWARE EQUATES.	*
				3906+	*	@FXDEQ - SYSTEM NUCLEUS ADDRESSES AND INDICATOR VALUES.	*
				3907+	*	TSMLES - DATA MANAGEMENT SAVE AREAS AND BUFFERS.	*
				3908+	*	\$VOLID - SEARCH VOLUME-ID SUBROUTINE.	*
				3909+	*	SRCHFN - SEARCH FOR FILENAME SUBROUTINES.	*
				3910+	*	SGETDB - SEARCH PASSWORD DIRECTORY SUBROUTINE.	*
				3911+	*	DL2ICS - TWO TRACK DISK LOGICAL IOCS.	*
				3912+	*		*
				3913+	*	OTHER	*
				3914+	*	NONE	*
				3915+	*	*****	*
				3917+	*		*
				3918+	*	EQUATES USED IN THIS SUBROUTINE	*
				3919+	*		*
			1559	3920+	SFINDF	EQU *	START OF MODULE
1559	34	01	1666	3921+	ST	SFISBR,@BR	SAVE @BR
155D	C2	01	1597	3922+	LA	SFIBSE,@BR	SET LOCAL BASE
			1597	3923+	USING	SFIBSE,@BR	*

## SFINDF - FILE SEARCH CONTROL MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 55
1561	74	08	D3		3924+	ST	SFEXT(, @BR), @ARR	SAVE RETURN ADDR
1564	74	02	CB		3925+	ST	SFISXR(, @BR), @XR	SAVE @XR
1567	C2	02	03C0		3926+	LA	\$NUCBS, @XR	SET NUCLEUS BASE
				03C0	3927+	USING	\$NUCBS, @XR	*
156B	3D	40	0C95		3928+	CLI	SMPSWD-##LPEN+@B1, @BLANK	WAS A PASSWD SPECIFIED ?
156F	F2	81	98		3929+	JE	SFI500	NO, GO CHECK LOGON STATUS
1572	3D	40	089F		3930+	CLI	SMVOID-\$VOLID+@B1, @BLANK	WAS A VOL-ID SPECIFIED ?
1576	F2	81	07		3931+	JE	SFI100	NO, GO CHECK LOGON STATUS
1579	C0	87	1946		3932+SFI050	B	SVOLID	RESOLVE SPECIFIED VOL-ID
				157A	3933+SFI050	EQU	SFI050+@Q	SET TO A NOP FOR SUCCESSIVE USE
157D	F2	87	75		3934+	J	SFI350	GO TO GET DIRECTORY
					3935+*			
					3936+*			
					3937+*			PASSWORD WAS SPECIFIED, BUT VOL-ID WAS NOT
1580	3D	5C	0C95		3938+SFI100	CLI	SMPSWD-##LPEN+@B1, SFI100	IS PASSWORD AN '*' ?
1584	F2	01	63		3939+	JNE	SFI320	NO, GO CHK FOR FILE LIBR DADDR
1587	7C	00	D4		3940+	MVI	SFICTR(, @BR), @ZERO	YES, INITLZ LOOP CTR TO ZERO
158A	7C	00	DB		3941+	MVI	SFITTC(, @BR), @ZERO	INITLZ THIS TIME COUNTER
158D	BD	00	19		3942+	CLI	\$FILIB-@B1(, @XR), @ZERO	CURRENT USER IN FORCE ?
1590	F2	01	5D		3943+	JNE	SFI340	YES, GO TRY THAT FIRST
1593	3A	08	0CA5		3944+	SBN	SMIND1, SM1PNF	SET PASSWORD NOT FOUND INDR.
					3945+*			
					3946+*			THE FOLLOWING ROUTINE WILL SEARCH ALL DISKS ON THE
					3947+*			SYSTEM FOR THE SPECIFIED ONE OR TWO STAR FILE
					3948+*			
1597	7D	01	D4		3949+SFI200	CLI	SFICTR(, @BR), @B1	CHECK THE DISK POINTER
159A	F2	82	1A		3950+	JL	SFI220	GO CHECK F1
159D	F2	81	28		3951+	JE	SFI230	GO CHECK F2
15A0	7D	03	D4		3952+	CLI	SFICTR(, @BR), SFIE03	
15A3	F2	82	33		3953+	JL	SFI240	GO CHECK R1
					3954+*			
15A6	BD	00	4C		3955+SFI210	CLI	\$VOLR2+SFIE06(, @XR), @ZERO	DOES R2 CONTAIN A FILE LIBR
15A9	F2	81	AC		3956+	JE	SFI545	NO, NO MORE TO CHK, GO RETURN
15AC	2C	01	0CA9	4D	3957+	MVC	SMBFDA(@DADDR), \$VOLR2+SFIE07(, @XR)	SET LIBR DADDR FOR
15B1	7C	FE	D4		3958+	MVI	SFICTR(, @BR), SFIEFE	* SEARCH AND INCR DISK POINTER
15B4	F2	87	3E		3959+	J	SFI350	GO TO SEARCH
					3960+*			
15B7	BD	00	44		3961+SFI220	CLI	\$VOLF1+SFIE06(, @XR), @ZERO	DOES F1 CONTAIN A FILE LIBR
15BA	F2	81	0B		3962+	JE	SFI230	NO, GO CHECK F2
15BD	2C	01	0CA9	45	3963+	MVC	SMBFDA, \$VOLF1+SFIE07(@DADDR, @XR)	SET LIBR DADDR FOR SEWN
15C2	7C	01	D4		3964+	MVI	SFICTR(, @BR), @B1	INCR DISK POINTER
15C5	F2	87	2D		3965+	J	SFI350	SO TO SEARCH
					3966+*			
15C8	BD	00	54		3967+SFI230	CLI	\$VOLF2+SFIE06(, @XR), @ZERO	DOES F2 CONTAIN A FILE LIBR
15CB	F2	81	0B		3968+	JE	SFI240	NO, SO CHECK R1
15CE	2C	01	0CA9	55	3969+	MVC	SMBFDA, \$VOLF2+SFIE07(@DADDR, @XR)	SET LIBR DADDR FOR SEACH
15D3	7C	02	D4		3970+	MVI	SFICTR(, @BR), SFIE02	INCR DISK POINTER
15D6	F2	87	1C		3971+	J	SFI350	GO TO SEARCH
					3972+*			
15D9	BD	00	3C		3973+SFI240	CLI	\$VOLR1+SFIE06(, @XR), @ZERO	DOES R1 CONTAIN A FILE LIBR
15DC	D0	81	0F		3974+	BE	SFI210(, @BR)	NO, GO CHECK R2
15DF	2C	01	0CA9	3D	3975+	MVC	SMBFDA, \$VOLR1+SFIE07(@DADDR, @XR)	SET LIB DADDR FOR SEARCH
15E4	7C	03	D4		3976+	MVI	SFICTR(, @BR), SFIE03	INCR DISK POINTER
15E7	F2	87	0B		3977+	J	SFI350	GO TO SEARCH
					3978+*			
					3979+*			PASSWORD SPECIFIED, BUT VOLUME ID WAS NOT.



## SFINDF - FILE SEARCH CONTROL MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 56
				3980+*			CHECK FOR CURRENT USER	
				3981+*				
15EA	BD	00	19	3982+SF1320	CLI	\$FILIB-@B1(,@XR),@ZERO	CURRENT USER SPEC IN FORCE	
15ED	F2	81	20	3983+	JE	SFI505	NO, GO TO ERR ROUTINE	
15F0	2C	01	0CA9 1A	3984+SF1340	MVC	SMBFDA(@DADDR),\$FILIB(,@XR)	YES, SET TO USER LIBR	
				3985+*				
				3986+*			SO SEARCH FOR SPECIFIED PASSWORD	
				3987+*				
15F5	C0	87	1675	3988+SF1350	B	SGETDB	SEARCH FOR PASSWORD	
15F9	38	08	0CA5	3989+	TBN	SMIND1,SM1PNF	WAS PASSWORD FOUND	
15FD	F2	10	3B	3990+	JT	SFI540	NO, GO TEST STAR COUNTER	
1600	38	10	0CA5	3991+	TBN	SMIND1,SM1PDS	PASSWORD DIRCTY ONLY REQ' SED	
1604	F2	10	58	3992+	JT	SFI550	YES, GO RETURN TO USER	
1607	F2	87	26	3993+	J	SFI520	NO, GO SEARCH FOR FILENAME	
				3994+*				
				3995+*			ONLY FILENAME SPECIFIED, CHECK FOR CURRENT USER	
				3996+*				
160A	BD	00	19	3997+SF1500	CLI	\$FILIB-@B1(,@XR),@ZERO	CURRENT USER SPEC IN FORCE	
160D	F2	01	07	3998+	JNE	SFI510	YES, BYPASS ERROR MESSAGE	
1610	BC	21	0D	3999+SF1505	MVI	\$CAERR(,@XR),@@E200	SET NO CURRENT USER ERROR CODE	
1613	C0	87	0469	4000+	B	SFIERR	GO TO ERROR RETURN	
				4001+*				
				4002+*			GET FIRST USER DIRECTORY BLOCK	
				4003+*				
1617	2C	01	13A1 1A	4004+SF1510	MVC	DL2RAD,\$FILIB(@DADDR,@XR)	SET DL2ICS BASE DADDR	
161C	2C	01	0CA9 1A	4005+	MVC	SMBFDA,\$FILIB(@DADDR,@XR)	SET LIBR DADDR TO COMMON AREA	
1621	6C	01	D7 1C	4006+	MVC	SFIRDA(,@BR),\$USRDR(@DADDR,@XR)	SET DL2ICS RELATIVE DADDR	
1625	C0	87	1309	4007+	B	DL2ICS	GO READ USER DIRECTORY BLOCK	
1629	166C			162A 4008+	DC	AL2(SFIDPL)	* CADDR OF DPL	
162B	2C	01	0CB9 1C	4009+	MVC	SMFUDA,\$USRDR(@DADDR,@XR)	PRESERVE 1ST BLOCK REL. DADDR	
				4010+*				
				4011+*			SEARCH USER DIRECTORY BLOCK FOR FILENAME	
				4012+*				
1630	C0	87	1701	4013+SF1520	B	SRCHFND	GO TO SEARCH ROUTINE	
1634	38	80	0CA5	4014+	TBN	SMIND1,SM1FNE	WAS NAME FOUND	
1638	F2	10	24	4015+	JT	SFI550	YES, SO RETURN	
				4016+*				
				4017+*			PASSWORD OR FILENAME NOT FOUND	
				4018+*				
163B	7D	FE	D4	4019+SF1540	CLI	SFICTR(,@BR),SFIEFE	ONE OR TWO STAR FILE WITH MORE	
163E	F2	84	1E	4020+	JH	SFI550	* DISKS TO SEARCH ? NO, GET OUT	
1641	D0	82	00	4021+SF1542	BC	SFI200(,@BR),@BL	* YES, GO SEARCH	
				1642 4022+SF1STR	EQU	SFI542+@Q	* NOP FOR 1ST * OR ** SEARCHED	
1644	F2	87	11	4023+SF1543	JC	SFI545,@UCB	BYPASS TRY CONTROL UNLESS	
				1645 4024+SF1FND	EQU	SFI543+@Q	* Q-CODE CHANGED TO A NOP	
1647	7D	06	DC	4025+	CLI	SFINTR(,@BR),SFIETD	IS TRY COUNTER AT MAX ?	
164A	F2	02	0B	4026+	JNL	SFI545	YES, SO SET ERROR CODE	
164D	5E	00	DB DD	4027+	ALC	SFITTC(,@BR),SFIONE(,@BR)	INCR THIS TRY COUNTER	
1651	5D	00	DB DC	4028+	CLC	SFITTC(,@BR),SFINTR(1,@BR)	THIS TRY = TRYS REQUIRED ?	
1655	D0	01	00	4029+	BNE	SFI200(,@BR)	NO, GO TRY THE NEXT DISK	
1658	BC	26	0D	4030+SF1545	MVI	\$CAERR(,@XR),@@E213	SET * OR ** NOT FOUND CODE	
165B	3A	80	0CA5	4031+	SBN	SMIND1,SM1FNE	SET ON FILE NOT FOUND INDR.	
				4032+*				
				4033+*			RETURN TO USER	
				4034+*				
165F	C2	02	0000	4035+SF1550	LA	*-*,@XR	RELOAD @XR	

## SFINDF - FILE SEARCH CONTROL MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 57
1663	C2 01 0000	1662	4036+	SFISXR EQU	SFI550+@OP1	*
			4037+	SFI560 LA	*-*,@BR	RELOAD @BR
1667	C0 87 0000	1666	4038+	SFISBR EQU	SFI560+@OP1	*
			4039+	SFI570 B	*-*	RETURN TO THE USER
		166A	4040+	SFIEXT EQU	SFI570+@OP1	*
			4041+	*		
			4042+	*		
			4043+	*		
166B		166B	4044+	SFICTR DS	XL1	COUNTER USED TO CONTROL THE
166B			4045+	ORG	*-1	* SEARCH FOR A STAR FILE
166B FF		166B	4046+	DC	AL1(SFIEFF)	INITLZ'D FOR NO SEARCH
166C 01		166C	4047+	SFIDPL DC	AL1(@DGET)	DPL TO READ USER DIRCTY BLOCK 1
166D		166E	4048+	SFIRDA DS	XL2	* RELATIVE DISK ADDRESS
166F 02		166F	4049+	DC	XL1'02'	* SECTOR COUNT
1670 17B2		1671	4050+	DC	AL2(SMUDB1)	* CORE BUFFER ADDRESS
1672		1672	4051+	SFITTC DS	CL1	THIS TRY COUNTER
1673		1673	4052+	SFINTR DS	CL1	NUMBER OF TRYS REQUIRED COUNTER
1673			4053+	ORG	SFINTR	INITLZ NUMBER CF TRYS REQUIRED
1673 00		1673	4054+	DC	XL1'0'	* COUNTER TO ZERO
1674 01		1674	4055+	SFIONE DC	XL1'1'	COUNTER INCREMENT
			4056+	*		
			4057+	*		
			4058+	*		
		0469	4059+	SVOERR EQU	SFIERR	SVOLID ERROR RETURN ADDRESS
		005C	4060+	SFIAST EQU	C'*'	STAR LIBR TEST CHARACTER
		0002	4061+	SFIE02 EQU	X'02'	STAR COUNTER TEST R1 CODE
		0003	4062+	SFIE03 EQU	X'03'	STAR COUNTER TEST R2 CODE
		00FE	4063+	SFIEFE EQU	X'FE'	STAR COUNTER COMPLETE CODE
		00FF	4064+	SFIEFF EQU	X'FF'	NOT A * OR ** FILE COUNTER CODE
		0006	4065+	SFIE06 EQU	X'06'	DISP TO LIBR DADDR BYTE 0
		0007	4066+	SFIE07 EQU	X'07'	DISP TO LIBR DADDR BYTE 1
		1597	4067+	SFIBSE EQU	SFI200	LOCAL BASE ADDRESS
		1674	4068+	SFIEND EQU	*-1	LAST BYTE OF SFINDF
		0006	4069+	SFIETD EQU	6	MAX TRY REQUIRED COUNTER VALUE
		0001	4070+	DROP	@BR	
		0002	4071+	DROP	@XR	
			4072+	***		
			4073	*		
			4074	*	\$GETD	
					END OF SFINDF	***

SGETDB - GET USER DIRECTORY BLOCK ROUTINE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 58
		4076+	*****		
		4077+	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		4078+	*	REFER TO INSTRUCTIONS ON COPY RIGHT NOTICE, 120-2083	*
		4079+	*		*
		4080+	*****		
		4081+	*	STATUS	*
		4082+	*	VERSION 1 MODIFICATION 0	*
		4083+	*		*
		4084+	*	FUNCTION	*
		4085+	*	* SGETDB PROVIDES TWO PRIMARY FUNCTIONS. IT WILL SEARCH THE	*
		4086+	*	PASSWORD DIRECTORY FOR A SPECIFIED PASSWORD ONLY, OR IF	*
		4087+	*	INDICATED WILL GO AND READ IN THE FIRST USER BLOCK ASSOCIATED	*
		4088+	*	WITH THAT PASSWORD.	*
		4089+	*	* IF THE PASSWORD SEARCH ONLY IS REQUESTED A SWITCH IS SET TO	*
		4090+	*	INHIBIT READING THE DIRECTORY ON SUBSEQUENT ENTRIES.	*
		4091+	*	* THE ERROR CODE FOR PASSWORD NOT FOUND IS ALWAYS SET IN \$CAERR.	*
		4092+	*	IF THE PASSWORD IS OR IS NOT FOUND THE INDICATOR IN SMIND1 IS	*
		4093+	*	SET APPROPRIATELY.	*
		4094+	*		*
		4095+	*	ENTRY POINTS	*
		4096+	*	SGETDB - ENTRY TO SEARCH PASSWORD DIRECTORY AND GET	*
		4097+	*	ASSOCIATED USER DIRECTORY. THE CALLING SEQUENCE IS	*
		4098+	*	AS FOLLOWS:	*
		4099+	*	B SGETDB	*
		4100+	*		*
		4101+	*	INPUT	*
		4102+	*	* THE BASE ADDRESS OF THE LIBRARY MUST BE IN SM1FDA IN TSMLES.	*
		4103+	*	* THE PASSWORD MUST BE IN SMPSWD.	*
		4104+	*	* IF THE PASSWORD DIRECTORY IS TO BE SEARCHED ONLY, THEN SM1PDS	*
		4105+	*	IN SMIND1 MUST BE SET TO 1. IF THE FIRST USER DIRECTORY BLOCK	*
		4106+	*	ASSOCIATED WITH THE SPECIFIED PASSWORD IS TO BE READ IN THEN	*
		4107+	*	THEN SM1PDS MUST BE SET TO 0.	*
		4108+	*		*
		4109+	*	OUTPUT	*
		4110+	*	* IF THE SPECIFIED PASSWORD IS FOUND THE ADDRESS OF THE LEFT BYTE	*
		4111+	*	OF THE ENTRY IS PLACED IN SMPEAD, SM1PNF IN SMIND1 IS SET TO 0.	*
		4112+	*	AND THE USER DIRECTORY RDADDR IS PLACED IN SMFUDA.	*
		4113+	*	* IF THE USER DIRECTORY WAS REQUESTED, THE READ OPERATION IS	*
		4114+	*	STARTED BUT NO WAIT IS PERFORMED. THE USER DIRECTORIES OVERLAY	*
		4115+	*	THE PASSWORD DIRECTORIES IN CORE.	*
		4116+	*	* IF THE SPECIFIED PASSWORD WAS NOT FOUND SM1PNF, IS SET TO 1 AND	*
		4117+	*	THE ADDRESS FOR THE NEXT AVAILABLE ENTRY IS IN SMPEAD.	*
		4118+	*		*
		4119+	*	EXTERNAL REFERENCES	*
		4120+	*	\$CAERR - LOCATION FOR SYSTEM ERROR CODE	*
		4121+	*	SMIND1 - DATA MANAGEMENT INDICATOR	*
		4122+	*	DL2RAD - LOCATION OF FILE PHYSICAL BASE ADDRESS	*
		4123+	*	SMBFDA - LOCATION OF LIBRARY BASE ADDRESS	*
		4124+	*	DL2ICS - ENTRY TO DISK I/O ROUTINE	*
		4125+	*	\$DISKN - ENTRY TO SYSTEM DISK IOCS	*
		4126+	*	\$WAITF - LOCATION OF COMMON I/O WAIT FUNCTION	*
		4127+	*	SMPSWD - LOCATION PASSWORD ARGUMENT	*
		4128+	*	SMPEAD - LOCATION OF PASSWORD ENTRY ADDRESS	*
		4129+	*	SMFUDA - LOCATION OF USER DIRECTORY RDADDR	*
		4130+	*		*
		4131+	*	EXITS, NORMAL	*

## SGETDB - GET USER DIRECTORY BLOCK ROUTINE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 59
		4132+	*	NORMAL EXIT IS TO THE FIRST INSTRUCTION FOLLOWING THE BRANCH	*
		4133+	*	TO SGETDB	*
		4134+	*		*
		4135+	*	EXITS, ERROR	*
		4136+	*	NONE	*
		4137+	*		*
		4138+	*	TABLES/WORKAREAS	*
		4139+	*	NONE	*
		4140+	*		*
		4141+	*	ATTRIBUTES	*
		4142+	*	RELOCATABLE	*
		4143+	*	REUSABLE	*
		4144+	*		*
		4145+	*	CHARACTER CODE DEPENDENCY	*
		4146+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
		4147+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.	*
		4148+	*		*
		4149+	*	NOTES	*
		4150+	*	ERROR PROCEDURES	*
		4151+	*	THE ERROR CODE FOR PASSWORD NOT FOUND IS ALWAYS SET BUT SGETDB	*
		4152+	*	DETECTS NO PARTICULAR ERROR. THE CONDITION AS TO IF THE	*
		4153+	*	PASSWORD WAS OR WAS NOT FOUND IS INDICATED HOWEVER.	*
		4154+	*		*
		4155+	*	REGISTER USAGE	*
		4156+	*	@BR AND @XR1 ARS SAVED AND RESTORED. @BR IS USED AS A BASE	*
		4157+	*	REGISTER AND @XR IS USED AS AN INDEX TO THE PASSWORD DIRCTY.	*
		4158+	*	@ARR IS USED TO PROVIDE THE RETURN ADDRESS.	*
		4159+	*		*
		4160+	*	SAVED/RESTORED AREAS	*
		4161+	*	NONE	*
		4162+	*		*
		4163+	*	MODIFICATION CONSIDERATIONS	*
		4164+	*	IN USING SGETDB THE USER MUST TAKE INTO CONSIDERATION THAT	*
		4165+	*	SGETDB DOES NOT WAIT FOR THE USER DIRECTORY BLOCK TO BE IN	*
		4166+	*	CORE BEFORE RETURNING.	*
		4167+	*		*
		4168+	*	REQUIRED MODULES	*
		4169+	*	@SYSEQ - SYSTEM SOFTWARE EQUATES	*
		4170+	*	@FXDEQ - NUCLEUS EQUATES	*
		4171+	*	@DIREQ - LIBRARY DIRECTORY EQUATES	*
		4172+	*	DL2ICS - DISK IOCS	*
		4173+	*	TSMLES - DATA MANAGEMENT COMMUNICATIONS AREA	*
		4174+	*		*
		4175+	*	OTHER	*
		4176+	*	NONE	*
		4177+	*	*****	*
		4178+	*	SGETDB ENTER BASE, SGETDB, EXIT, SGE90, @BR, @XR, @ARR	*
		1675 4179+	*	USING SGETDB, @BR	BASE ADDRESS SPECIFICATION
		1675 4180+	*	SGETDB EQU *	MODULE ENTRY POINT
1675 34 01 16ED		4181+	*	ST SGE900+@OP1, @BR	SAVE @BR
1679 C2 01 1675		4182+	*	LA SGETDB, @BR	LOAD BASE REGISTER
167D 74 02 7C		4183+	*	ST SGE901+@OP1(, @BR), @XR	SAVE @XR
1680 74 08 80		4184+	*	ST SGE902+@OP1(, @BR), @ARR	SAVE RETURN ADDRESS
		4185+	*	*** END OF EXPANSION ***	

1683 3C 23 03CD

4187+ MVI \$CAERR, @@E210

PASSWORD NOT ON DISK

SGETDB - GET USER DIRECTORY BLOCK ROUTINE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 60
1687	3B 08	OCA5		4188+	SBF	SMIND1,SM1PNF	INITIALIZE INDICATOR TO FOUND	
168B	F2 80	15		4189+SGE050	JC	SGE055,@NOP	SET SWITCH FOR 2ND ENTRY	
168E	7C 87	17		4190+	MVI	SGE050+@Q(,@BR),@UCB	TURN SWITCH ON FOR NEXT ENTRY	
1691	0C 01	13A1	OCA9	4191+	MVC	DL2RAD,SMBFDA	STUFF IN THE BASE ADDR	
1697	C0 87	1309		4192+	B	DL2ICS	CALL DISK I/O ROUTINE	
169B	16F6			169C 4193+	DC	AL2(SGEDPL)	POINTER TO PARAMETER LIST	
169D	C0 87	0025		4194+	B	\$DISKN	WAIT FOR DIRCTY TO LOAD	
16A1	057F			16A2 4195+	DC	AL2(\$WAITF)	WAIT FOR DIRCTY	
16A3	75 02	86		4197+SGE055	L	SGEDPL+@DBFR2(,@BR),@XR	PASSWORD BUFFER CADDR	
16A6	6C 00	89 00		4198+	MVC	SGECNT(1,@BR),##DPHC(,@XR)	ENTRY COUNT TO WORK	
16AA	E2 02	04		4199+	LA	##DPE1(,@XR),@XR	BUMP TO FIRST PASSWORD	
				4200+*				
16AD	2D 07	0C9C	07	4201+SGE060	CLC	SMPSWD(##LPEN),##DPEN(,@XR)	LOOK AT PSWD ENTRY	
16B2	F2 81	0E		4202+	JE	SGE070	FOUND THE PSWD	
16B5	E2 02	0C		4203+	LA	##LPE(,@XR),@XR	BUMP TO LOOK AT NEXT ENTRY	
16B8	5F 00	89 8B		4204+	SLC	SGECNT(1,@BR),SGEC01(,@BR)	DECR ENTRY COUNT	
16BC	D0 01	38		4205+	BNE	SGE060(,@BR)	BACK FOR LOOK AT ENTRY	
16BF	3A 08	OCA5		4206+	SBN	SMIND1,SM1PNF	NOT FOUND INDICATOR	
				4207+*				
				4208+*		THE PASSWORD OR THE END OF THE DIRCTY HAS BEEN FOUND,		
				4209+*		SAVE THE POINTERS.		
				4210+*				
16C3	34 02	0CB7		4211+SGE070	ST	SMPEAD,@XR	SAVE ENTRY ADDRESS	
16C7	2C 01	0CB9	09	4212+	MVC	SMFUDA(@DADDR),##DPEA(,@XR)	POSSIBLE USER DADDR OF BLK	
16CC	38 10	OCA5		4213+	TBN	SMIND1,SM1PDS	TEST SEARCH BIT ONLY ON	
16D0	F2 10	17		4214+	JT	SGE900	SEARCH ONLY SO EXIT	
16D3	7D 00	89		4215+	CLI	SGECNT(,@BR),@ZERO	TEST COUNT IF ENTRY FOUND	
16D6	F2 81	11		4216+	JE	SGE900	JUMP IF NOT FOUND	
16D9	6C 01	83 09		4217+SGE080	MVC	SGEDPL+@DSAD(@DADDR,@BR),##DPEA(,@XR)	BLK ADDR TO DPL	
16DD	C0 87	1309		4218+	B	DL2ICS	CALL TO READ USER DIRCTY	
16E1	16F6			16E2 4219+	DC	AL2(SGEDPL)	POINTER TO PARAMETER LIST	
				4220+*				
16E3	7C 80	17		4221+	MVI	SGE050+@Q(,@BR),@NOP	TURN OFF SKIP INSTR	
16E6	5C 01	83 88		4222+	MVC	SGEDPL+@DSAD(@DADDR,@BR),SGERAD(,@BR)	RESTORE DSAD PSWD	
				4223+*				
				4224+*SGE900	EXIT	@BR,@XR,,RETURN		
16EA	C2 01	0000		4225+SGE900	LA	*-*,@BR	RESTORE OBR	
16EE	C2 02	0000		4226+SGE901	LA	*-*,@XR	RESTORE OXR	
16F2	C0 87	0000		4227+SGE902	B	*-*	RETURN TO CALLING PROGRAM	
				4228+***		END OF EXPANSION ***		
				4229+*				
				4230+*		DPL TO READ IN THE PASSWORD DIRCTY		
				4231+*				
				4232+*SGEDPL \$DPL	FUNC	-@DGET,DADDR-##RP,CNT-##LP,CADDR-SMPDB1		
				16F6 4233+SGEDPL	EQU	*	DISK PARAMETER	
16F6	01			16F6 4234+	DC	AL1(@DGET)	REQUESTED FUNCTION	
16F7	0001			16F8 4235+	DC	AL2(##RP)	DISK ADDRESS	
16F9	04			16F9 4236+	DC	AL1(##LP)	SECTOR COUNT	
16FA	17B2			16FB 4237+	DC	AL2(SMPDB1)	BUFFER ADDRESS	
				4238+***		END OF EXPANSION ***		
16FC	0001			16FD 4240+SGERAD	DC	AL2(##RP)	RELATIVE DADDR OF DIRCTY	
16FE				16FE 4241+SGECNT	DS	CL1	SAVE AREA FOR ENTRY COUNT	
16FF	0001			1700 4242+SGEC01	DC	IL2'1'	CONSTANT 1 FOR ADDR MODIFCATION	





## SRCHFVN - SEARCH FOR FILE NAME IN USER DIRECTORY

ERR LOC	OBJECT CODE	ADDR STMT	SOURCE STATEMENT	VER 15, MOD 00	05/06/22	PAGE 62
4249+			*****			
4250+	*	5703-XM1	COPYRIGHT IBM CORP. 1970			*
4251+	*		REFER TO INSTRUCTIONS ON COPY RIGHT NOTICE, 120-2083			*
4252+	*					*
4253+	*		*****			*
4254+	*	STATUS				*
4255+	*	VERSION 1	MODIFICATION 0			*
4256+	*					*
4257+	*	FUNCTION				*
4258+	*		* SRCHFVN SEARCHES A USER DIRECTORY FOR A SPECIFIED FILENAME. IT			*
4259+	*		IS ASSUMED THAT THE DIRECTORY TO BE SEARCHED HAS BEEN READ INTO			*
4260+	*		CORE AT SMUDBI IN TSMLES. IF THE DIRECTORY IS LINKED TO AN			*
4261+	*		ADDITIONAL BLOCK IT IS READ IN TO THE SECONDARY BUFFER WHILE			*
4262+	*		THE PRIMARY BLOCK IS SEARCHED.			*
4263+	*		* THE ADDRESS OF THE ENTRY OR THE ADDRESS FOR A NEW ENTRY IS			*
4264+	*		PLACED IN SMUDEA. THE ADDRESS OF THE ACTIVE DIRECTORY IS PLACED			*
4265+	*		IN SMUDBA. IF THE NAME WAS NOT FOUND SMIFNE IS SET TO 1 IN			*
4266+	*		SMIND1. IF THE NAME WAS FOUND THE INDICATOR IS SET TO 0.			*
4267+	*					*
4268+	*	ENTRY POINTS				*
4269+	*	SRCHFVN -	ENTRY TO SEARCH FOR A FILENAME. THE CALLING SEQUENCE			*
4270+	*		IS AS FOLLOWS:			*
4271+	*	B	SRCHFVN			*
4272+	*					*
4273+	*	INPUT				*
4274+	*		THE USER DIRECTORY BLOCK MUST BE READ INTO SMUDB1 IN TSMLES.			*
4275+	*		THE NAME OF THE ENTRY TO SEARCH FOR MUST BE IN SMFNAM IN TSMLES			*
4276+	*					*
4277+	*	OUTPUT				*
4278+	*		* IF THE FILE NAME IS FOUND THE ADDRESS OF THE ENTRY IS SET IN			*
4279+	*		SMUDEA. THE ADDRESS OF THE BUFFER CONTAINING THE ENTRY IS IN			*
4280+	*		SMUDBA, AND THE INDICATOR BIT SMIFNE IN SMIND1 IS SET TO 0.			*
4281+	*		* IF THE FILE NAME WAS NOT FOUND SMUDEA CONTAINS THE ADDRESS OF			*
4282+	*		WHERE THE NEXT ENTRY MAY BE MADE IN THE DIRECTORY. SMUDBA			*
4283+	*		CONTAINS THE ADDRESS OF THE BUFFER CONTAINING THE LAST BLOCK,			*
4284+	*		AND SMIFNE IS SET TO 1 IN SMIND1.			*
4285+	*		* SMUDEA CONTAINS THE ADDRESS OF THE LEFTMOST BYTE OF THE FIELD,			*
4286+	*		* THE ERROR CODE FOR FILE NOT FOUND IS ALWAYS MOVED TO \$CAERR,			*
4287+	*					*
4288+	*	EXTERNAL REFERENCES				*
4289+	*	\$CAERR -	LOCATION OF ERROR CODE INDICATOR.			*
4290+	*	\$DISKN -	ENTRY TO DISK IOCS.			*
4291+	*	\$WAITF -	ADDRESS OF COMMON I/O WAIT FUNCTION.			*
4292+	*	DL2ICS -	ENTRY TO DISK LOGICAL IOCS.			*
4293+	*	SMFNAM -	ADDRESS OF FILENAME SAVE AREA			*
4294+	*	SMUDEA -	ADDRESS OF USER DIRECTORY ENTRY ADDRESS.			*
4295+	*	SMUDBA -	ADDRESS OF USER DIRECTORY BUFFER ADDRESS.			*
4296+	*	SMDAAD -	LOCATION OF RELATIVE DISK ADDRESS OF ACTIVE BUFFER.			*
4297+	*	SMIFNE -	VALUE OF NOT FOUND INDICATOR.			*
4298+	*	SMIND1 -	LOCATION INDICATOR 1.			*
4299+	*	SMUDB1 -	ADDRESS OF DIRECTORY BLOCK BUFFER.			*
4300+	*	SMUDB2 -	ADDRESS OF DIRECTORY BLOCK BUFFER.			*
4301+	*					*
4302+	*	EXITS, NORMAL				*
4303+	*		THE REGISTER @BR @XR ARE RESTORED AND THE EXIT IS TO THE			*
4304+	*		ADDRESS SAVED FROM THE @ARR REGISTER.			*

## SRCHFVN - SEARCH FOR FILE NAME IN USER DIRECTORY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	05/06/22	PAGE 63
		4305+	*				*
		4306+	*	EXITS, ERROR			*
		4307+	*	NONE.			*
		4308+	*				*
		4309+	*	TABLES/WORKAREAS			*
		4310+	*	NONE			*
		4311+	*				*
		4312+	*	ATTRIBUTES			*
		4313+	*	RELOCATABLE			*
		4314+	*				*
		4315+	*	CHARACTER CODE DEPENDENCY			*
		4316+	*	CHARACTER CODE DEPENDENCY CLASS - C			*
		4317+	*	THE OPERATION OF THIS MODULE DEPENDS UPON AN INTERNAL REPRESENTA-			*
		4318+	*	TION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT TO THE ONE			*
		4319+	*	USED AT ASSEMBLY TIME. THE CODING HAS BEEN ARRANGED SO THAT RE-			*
		4320+	*	DEFINITION OF CHARACTER CONSTANTS, BY REASSEMBLY, WILL RESULT IN			*
		4321+	*	A CORRECT MODULE FOR THE NEW DEFINITIONS.			*
		4322+	*				*
		4323+	*	NOTES			*
		4324+	*	ERROR PROCEDURES			*
		4325+	*	NONE			*
		4326+	*				*
		4327+	*	REGISTER USAGE			*
		4328+	*	@BR AND @XR ARE SAVED ON ENTRY AND RESTORED AT EXIT.			*
		4329+	*	@ARR IS USED AS THE RETURN ADDRESS.			*
		4330+	*				*
		4331+	*	SAVED/RESTORED AREAS			*
		4332+	*	NONE			*
		4333+	*				*
		4334+	*	MODIFICATION CONSIDERATIONS			*
		4335+	*	NONE			*
		4336+	*				*
		4337+	*	REQUIRED MODULES			*
		4338+	*	@SYSEQ - SYSTEM SOFTWARE EQUATES.			*
		4339+	*	@DIREQ - LIBRARY DIRECTORY EQUATES.			*
		4340+	*	@FXDEQ - SYSTEM NUCLEUS EQUATES.			*
		4341+	*	DL2ICS - LOGICAL DISK IOCS.			*
		4342+	*	TSMLES - DATA MANAGEMENT COMMUNICATIONS AREA.			*
		4343+	*				*
		4344+	*	OTHER			*
		4345+	*	NONE			*
		4346+	*	*****			*



## SRCHFN - SEARCH FOR FILE NAME IN USER DIRECTORY

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 05/06/22 PAGE 64

1701	34	01	178B	1701	4348+	SRCHFN EQU *	ENTRY TO SEARCH FILENAME
					4349+	ST SRC900+@OP1,@BR	SAVE BASE REGISTER
				1705	4350+	USING SRC010,@BR	
1705	C2	01	1705		4351+	SRC010 LA SRC010,@BR	SET BASE ADDR
1709	74	02	8A		4352+	ST SRC910+@OP1(,@BR),@XR	SAVE INDEX REG
170C	74	08	8E		4353+	ST SRC920+@OP1(,@BR),@ARR	SAVE RETURN ADDR
170F	3C	24	03CD		4354+	MVI \$CAERR,@E211	FILE NOT FOUND
1713	5C	01	9B A1		4355+	MVC SRCBF1(@CADDR,@BR),SRCBA1(,@BR)	INITIALIZE OLF POINTER
1717	5C	01	9D A3		4356+	MVC SRCBF2(@CADDR,@BR),SRCBA2(,@BR)	ALTERNATE BUFFER
171B	5C	01	9F 9B		4357+	MVC SRCACT(@CADDR,@BR),SRCBF1(,@BR)	SET ACTIVE BUFFER
171F	C0	87	0025		4359+	SRC020 B \$DISKN	WAIT FOR USER BLOCK
1723	057F			1724	4360+	DC AL2(\$WAITF)	WAIT OP DPL
					4361+*		
1725	7C	87	5E		4362+	MVI SRC055+@Q(,@BR),@UCB	RESET NOP FOR LINKED DIRCTY
1728	75	02	9F		4363+	L SRCACT(,@BR),@XR	PICKUP POINTER TO ACTIVE BUFFER
					4364+*		
					4365+*		BLOCK LINK SHOULD ALWAYS BE GREATER THAN 1 IF IT IS
					4366+*		PRESENT. IF NOT THE LINK BYTE SHOULD BE ZERO.
					4367+*		
172B	9D	01	03 A6		4368+	CLC ##DUHB(@DADDR,@XR),SRCC01(,@BR)	TEST LIVE FIELD
172F	F2	82	11		4369+	JL SRC030	JUMP NOT LINKED
1732	5C	01	AC 9D		4370+	MVC SRCBFR(@DADDR,@BR),SRCBF2(,@BR)	GET ALTERNATE BUFFER ADDR
1736	6C	01	A9 03		4371+	MVC SRCDAD(@DADDR,@BR),##DUHB(,@XR)	SET LINK TO MEXT BLOCK
173A	C0	87	1309		4372+	B DL2ICS	READ NEXT BLOCK
173E	17AC			173F	4373+	DC AL2(SRCDPL)	POINTER TO DPL
					4374+*		
1740	7C	80	5E		4375+	MVI SRC055+@Q(,@BR),@NOP	SET SWITCH FOR LINKED BLOCK
1743	6C	00	A4 04		4376+	SRC030 MVC SRCCNT(1,@BR),##DUHC(,@XR)	GET ENTRY COUNT
1747	E2	02	0C		4377+	LA ##DUEI(,@XR),@XR	BUMP TO FIRST ENTRY
174A	7D	00	A4		4378+	CLI SRCCNT(,@BR),@ZERO	IS STARTING COUNT ZERO ?
174D	D0	81	5D		4379+	BE SRC055(,@BR)	YES, RETURN NOT FOUND
1750	8D	07	07 0CA4		4380+	SRC035 CLC ##DUEN(##LUEN,@XR),SMFNAM	LOOK AT ENTRY
1755	F2	81	1C		4381+	JE SRC040	JUMP IF THE NAME IS FOUND
1758	E2	02	32		4382+	LA ##LUE(,@XR),@XR	BUMP THE POINTER FOR NEXT ENTRY
175B	5F	00	A4 A6		4383+	SLC SRCCNT(1,@BR),SRCC01(,@BR)	DECR ENTRY COUNTER
175F	D0	01	4B		4384+	BNE SRC035(,@BR)	BACK TO TEXT NEXT ENTRY
1762	F2	00	2F		4385+	SRC055 JC SRC060,*-*	LINK SWITCH
1765	5C	01	9B 9D		4386+	MVC SRCBF1(@CADDR,@BR),SRCBF2(,@BR)	SWITCH BUFFERS
1769	5C	01	9D 9F		4387+	MVC SRCBF2(@CADDR,@BR),SRCACT(,@BR) *	
176D	5C	01	9F 9B		4388+	MVC SRCACT(@CADDR,@BR),SRCBF1(,@BR)	SET ACTIVE BUFFER
1771	D0	87	1A		4389+	B SRC020(,@BR)	GO BACK TO NEXT BUFFER
					4390+*		
					4391+*		FILENAME HAS BEEN FOUND.
					4392+*		
1774	34	02	0CA7		4393+	SRC040 ST SMUDEA,@XR	SAVE ENTRY ADDR
1778	3B	80	0CA5		4394+	SBF SMIND1,SM1FNE	TURN OFF NOT FOUND INDICATOR
177C	75	02	9F		4395+	SRC050 L SRCACT(,@BR),@XR	GET CADDR OF ACTIVE BUFFER
177F	34	02	0CAB		4396+	ST SMUDBA,@XR	SAVE CADDR IN SMALES
1783	2C	01	0CB5 01		4397+	MVC SMDAAD,##DUHA(@DADDR,@XR)	SAVE RDADDR OF ACTIVE DIRCTY
1788	C2	01	0000		4398+	SRC900 LA *-*,@BR	RESTORE CALLERS BASE
178C	C2	02	0000		4399+	SRC910 LA *-*,@XR	RESTORE INDEX
1790	C0	87	0000		4400+	SRC920 B *-*	RETURN
					4402+*		
					4403+*		FILENAME WAS NOT FOUND. SAVE ADDR FOR NEXT ENTRY AND

[illegible][illegible][illegible][illegible]

SRCHFN - SEARCH FOR FILE NAME IN USER DIRECTORY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 66
			4410+*			
			4411+*		CONSTANTS AND WORK AREA	
			4412+*			
179F		17A0	4413+SRCBF1	DS	CL(@CADDR)	WORK AREA PRIMARY BUFFER ADDR
17A1		17A2	4414+SRCBF2	DS	CL(@CADDR)	WORK AREA SECONDARY BUFFER ADDR
17A3		17A4	4415+SRCACT	DS	CL(@CADDR)	SAVE AREA FOR ACTIVE BUFFER
17A5 17B2		17A6	4416+SRCBA1	DC	AL2(SMUDB1)	ADDRESS OF USED DIRCTY BLUFFER 1
17A7 19B2		17A8	4417+SRCBA2	DC	AL2(SMUDB2)	ADDRESS OF DIRCTY BUFFER 2
17A9		17A9	4418+SRCCNT	DS	CL1	WORK AREA FOR ENTRY COUNT
17AA 0001		17AB	4419+SRCC01	DC	IL2'1'	CONSTANT TO DECR ENTRY COUNT
		17AC	4420+SRCDPL	EQU	*	DEFINE LEFT END OF DPL
17AC 01		17AC	4421+SRCGET	DC	AL1(@DGET)	READ OP CODE
17AD		17AE	4422+SRCDAD	DS	CL(@DADDR)	RELATIVE ADDR OF BLOCK
17AF 02		17AF	4423+SRC SCT	DC	AL1(##LU)	SECTOR COUNT FOR BLOCK
17B0		17B1	4424+SRCBFR	DS	CL(@CADDR)	BUFFER ADDR OF BLOCK
			4425+***		END OF SRCHFN	***
			4426 *			
			4427 *		\$UFFE	

## SUFFER - FILE SPECIFICATION CHECKER

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 67
4429+				*****	
4430+	*	5703-XM1		COPYRIGHT IBM CORP. 1970	*
4431+	*			REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE 120-2083	*
4432+	*				*
4433+	*			*****	*
4434+	*			STATUS	*
4435+	*			VERSION 1 MODIFICATION 0	*
4436+	*				*
4437+	*			FUNCTION	*
4438+	*			THE FUNCTION OF SUFFER IS TO SYNTAX CHECK A FILE SPECIFICATION	*
4439+	*			AND SCAN TO THE FIRST NON-DELIMITER FOLLOWING A VALID ONE.	*
4440+	*			A SPECIFICATION CAN CONSIST OF ANY OF THE FOLLOWING:	*
4441+	*			* FILENAME / PASSWORD / VOL-D	*
4442+	*			* FILENAME / PASSWORD	*
4443+	*			* FILENAME	*
4444+	*			**FILENAME / VOL-ID	*
4445+	*			**FILENAME	*
4446+	*			*FILENAME / VOL-ID	*
4447+	*			*FILENAME	*
4448+	*				*
4449+	*			ENTRY POINTS	*
4450+	*			SUFFER - FIRST LOCATION IN PROGRAM. SUFFER EXPECTS INDEX	*
4451+	*			REGISTER 2 (@XR) TO BE ADDRESSING THE LEFTMOST CHARACTER	*
4452+	*			OF THE FILE SPECIFICATION. THE CALLING SEQUENCE IS:	*
4453+	*			B SUFFER	*
4454+	*				*
4455+	*			INPUT	*
4456+	*			INPUT TO SUFFER IS INDE, REGISTER 2 (@XR) ADDRESSING THE LEFTMOST	*
4457+	*			CHARACTER OF THE FILE-SPECIFICATION TO BE SYNTAX CHECKED.	*
4458+	*				*
4459+	*			OUTPUT	*
4460+	*			OUTPUT FROM SUFFER UPON NORMAL EXIT IS INDEX REGISTER 2 (@XR)	*
4461+	*			ADDRESSING THE FIRST NON-DELIMITER FOLLOWING THE FILE SPECIFICA-	*
4462+	*			TION. THE FILENAME WILL BE SAVED IN SMFNAM IN TSMLES. THE PASS-	*
4463+	*			WORD IF SPECIFIED WILL BE SAVED IN SMPSWD IN TSMLES, OTHERWISE IT	*
4464+	*			WILL BE BLANKS. (NOTE: ** OR * FILENAMES, WHEN SPECIFIED, WILL	*
4465+	*			CAUSE THE *'S TO BE SAVED IN SMPSWD). THE VOL-ID, IF SPECIFIED,	*
4466+	*			WILL BE SAVED IN SMVOID IN TSMLES, OTHERWISE A BLANK IS MOVED	*
4467+	*			TO SMVOID AS AN INDICATOR.	*
4468+	*			OUTPUT FROM SUFFER UPON ERROR EXIT IS INDEX REGISTER 2 (@XR)	*
4469+	*			ADDRESSING THE INVALID CHARACTER (SEE EXITS,ERROR). THE PROGRAM	*
4470+	*			STATUS REGISTER (@PSR) WILL CONTAIN A LOW CONDITION CODE.	*
4471+	*				*
4472+	*			EXTERNAL REFERENCES	*
4473+	*			SALPHR - ADDR IN SALPHA - SYNTAX CHECKED PARAMETER	*
4474+	*			SALPH6 - ENTRY TO SALPHA - SYNTAX CHECK VOL-ID	*
4475+	*			SALPH8 - ENTRY TO SALPHA - SYNTAX CHECK PASSWORD; FILENAME	*
4476+	*			SAL375 - SAVE AREA IN SALPHA - ERROR POINTER SAVE AREA	*
4477+	*			SCANIT - DELIMITER SCAN MODULE	*
4478+	*			SCAMMA - SWITCH IN SCANIT - DELIMITER SCAN TYPE INDR	*
4479+	*			SCACOF - MASK IN SCANIT TO BYPASS BLANKS ONLY	*
4480+	*			SCACOM - MASK IN SCANIT - BYPASS 1 COMMA	*
4481+	*			SCACNT - COUNTER IN SCANIT - NUMBER OF SCANNED BLANKS	*
4482+	*			TSMLES - DATA MANAGEMENT COMMUNICATIONS REGIONS	*
4483+	*			\$CAERR - ADDR IN SYSTEM NUCLEUS-ERROR CODE SAVE AREA	*
4484+	*				*

## SUFFER - FILE SPECIFICATION CHECKER

ERR LOC	OBJECT CODE	ADDR STMT SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 68
4485+	*EXITS, NORMAL		*
4486+	NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE. INDEX REGISTER		*
4487+	2 (@XR) WILL BE ADDRESSING THE FIRST NON-DELIMITER FOLLOWING		*
4488+	THE FILE SPECIFICATION. THE PROGRAM STATUS REGISTER (@PSR)		*
4489+	WILL CONTAIN A NON-LOW CONDITION CODE.		*
4490+			*
4491+	*EXITS, ERROR		*
4492+	NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE. INDEX REGISTER		*
4493+	2 (@XR) WILL BE ADDRESSING THE LEFTMOST BYTE OF AN INVALID		*
4494+	PARAMETER OR WILL BE ADDRESSING AN INVALID DELIMITER IN THE		*
4495+	FILE SPECIFICATION. THE PROGRAM STATUS REGISTER (@PSR)		*
4496+	WILL CONTAIN A LOW CONDITION CODE.		*
4497+	T		*
4498+	*TABLES/WORK AREAS		*
4499+	SUFFER DOES NOT CONTAIN ANY TABLES OR WORK AREAS.		*
4500+			*
4501+	*ATTRIBUTES		*
4502+	RELOCATABLE,REUSABLE		*
4503+			*
4504+	*CHARACTER CODE DEPENDENCY		*
4505+	CHARACTER CODE DEPENDENCY CLASS - C		*
4506+	THE OPERATION OF THIS MODULE DEPENDS UPON AN INTERNAL REPRESENTA-		*
4507+	TION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT TO THE		*
4508+	USED AT ASSEMBLY TIME. THE CODING HAS BEEN ARRANGED SO THAT RE-		*
4509+	DEFINITION OF CHARACTER CONSTANTS, BY REASSEMBLY, WILL RESULT IN		*
4510+	A CORRECT MODULE FOR THE NEW DEFINITIONS. THE FOLLOWING ARE THE		*
4511+	SPECIAL CONSIDERATIONS FOR THIS MODULE:		*
4512+	* @ASTER - PART OF @SYSEQ		*
4513+	* @SLASH - PART OF @SYSEQ		*
4514+	* @COMMA - PART OF @SYSEQ		*
4515+	* @EOS - PART OF @SYSEQ		*
4516+	* @BLANK - PART OF @SYSEQ		*
4517+	* CHARACTER LEFT PARENTHESIS - C'('		*
4518+			*
4519+	*NOTES		*
4520+	ERROR PROCEDURES		*
4521+	THE FOLLOWING ERROR CONDITIONS WILL CAUSE SUFFER TO RETURN A		*
4522+	LOW CONDITION CODE TO THE CALL ROUTINE AND INDEX REGISTER 2		*
4523+	(@XR) ADDRESSING THE ERROR:		*
4524+	* ANY ERROR RETURNED FROM SALPHA (NOTE SALPHA ERRORS).		*
4525+	* ANY ERROR RETURNED FROM SCANIT (NOTE SCANIT ERRORS).		*
4526+	* ANY INVALID DELIMITER FOLLOWING THE SPECIFICATION		*
4527+	* ANY INVALID PARAMETER WITHIN THE SPECIFICATION.		*
4528+	NOTE MODIFICATION CONSIDERATIONS.		*
4529+			*
4530+	REGISTER USAGE		*
4531+	INDEX REGISTER 1 (@BR) IS SAVED AND RESTORED FOR THE CALL		*
4532+	ROUTINE AND USED AS A BASE FOR ADDRESSING WITHIN THE MODULE.		*
4533+	INDEX REGISTER 2 (@XR) IS USED AS AN INDEX TO SCAN THE FILE		*
4534+	SPECIFICATION.		*
4535+			*
4536+	SAVED/RESTORED AREAS		*
4537+	N/A		*
4538+			*
4539+	MODIFICATION CONSIDERATIONS		*
4540+	SUFFER'S NORMAL DELIMITER SCAN UPON EXIT ALLOWS ONLY BLANKS		*

SUFFER - FILE SPECIFICATION CHECKER

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	69
		4541+*			AND 1 COMMA FOLLOWING THE FILE-SPECIFICATION. AN EXCEPTION				*
		4542+*			TO THIS USE (UTILIZED BY THE MODULE KALLOC) IS THE OPTION OF				*
		4543+*			HAVING A LEFT PARENTHESIS IE. '(' FOLLOWING THE FILE SPECI-				*
		4544+*			FICATION INSTEAD OF A COMMA. THIS USE IS EFFECTED BY				*
		4545+*			MODIFYING THE Q-CODE OF THE INSTRUCTION LABELED SUF625 WITH A				*
		4546+*			BRANCH EQUAL CONDITION CODE.				*
		4547+*							*
		4548+*		REQUIRED MODULES					*
		4549+*		SALPHA	- FILENAME, PASSWORD, VOL-ID ALPHAMERIC SYNTAX CHECKER				*
		4550+*		SCANIT	- DELIMITER SCAN ROLTIME				*
		4551+*		TSMLES	- DATA MANAGEMENT COMMUNICATION REGIONS				*
		4552+*		@DIREQ	- SYSTEM LIBRARY DIRECTORY EQUATES				*
		4553+*		@ERMEQ	- ERROR MESSAGE EQUATES				*
		4554+*		@FXDEQ	- COMMON CORE LOCATIONS WITHIN THE SYSTEM NUCLEUS				*
		4555+*		@SYSEQ	- COMMON SYSTEM SOFTWARE EQUATES				*
		4556+*							*
		4557+*		OTHER					*
		4558+*		N/A					*
		4559+		*****	*****				*

## SUFFER - FILE SPECIFICATION CHECKER

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 70
					4561+	*****	*****	
					4562+	*		
					4563+		INITIALIZATION OF MODULE	
					4564+	*		
					4565+	*****	*****	
					4566+	*		
					4567+	*SUFFER ENTER BASE-SUFBSE,EXIT-SUFND,@BR,,@ARR		
				17E5	4568+	USING SUFBSE,@BR	BASE ADDRESS SPECIFICATION	
				17B2	4569+	SUFFER EQU *	MODULE ENTRY POINT	
17B2	34	01	1876		4570+	ST SUFND0+@OP1,@BR	SAVE @BR	
17B6	C2	01	17E5		4571+	LA SUFBSE,@BR	LOAD BASE REGISTER	
17BA	74	08	95		4572+	ST SUFND2+@OP1(,@BR),@ARR	SAVE RETURN ADDRESS	
					4573+	*** END OF EXPANSION ***		
					4575+	*****	*****	
					4576+	*		
					4577+		INITIALIZE FIELDS IN TSMLES	
					4578+	*		
					4579+	*****	*****	
					4580+	*		
17BD	3C	40	0C9C		4581+	MVI SMPSWD,@BLANK	BLANK ALL OF PASSWORD FIELD	
17C1	0C	06	0C9B 0C9C		4582+	MVC SMPSWD-@B1(##LPEN-@B1),SMPSWD		
17C7	3C	40	0C8F		4583+	MVI SMVOID-@VOLID+@B1,@BLANK	BLANK FIRST BYTE OR VOL-1D	
					4585+	*****	*****	
					4586+	*		
					4587+		CHECK FOR AND PROCESS POOLED AND IBM FILENAMES	
					4588+	*		
					4589+	*****	*****	
					4590+	*		
17CB	BD	5C	00		4591+	CLI @ZERO(,@XR),@ASTER	ASTERISK IN FILENAME ?	
17CE	F2	01	14		4592+	JNE SUF100	NO, PROCESS FILENAME	
17D1	3C	5C	0C95		4593+	MVI SMPSWD-##DPEN,@ASTER	SAVE * IN SMPSWD	
17D5	E2	02	01		4594+	LA @B1(,@XR),@XR	INCREMENT XR BY ONE	
17D8	BD	5C	00		4595+	CLI @ZERO(,@XR),@ASTER	ASTERISK IN FILENAME ?	
17DB	F2	01	07		4596+	JNE SUF100	NO, PROCESS FILENAME	
17DE	3C	5C	0C96		4597+	MVI SMPSWD-##DPEN+@B1,@ASTER	SAVE * IN SMPSWD	
17E2	E2	02	01		4598+	LA @B1(,@XR),@XR	INCREMENT XR BY ONE	
					4600+	*****	*****	
					4601+	*		
					4602+		PROCESS FILENAME	
					4603+	*		
					4604+	*****	*****	
					4605+	*		
				17E5	4606+	SUFBSE EQU *	BASE ADDR IN MODULE	
17E5	3C	87	1A6E		4607+	SUF100 MVI SCAMMA,SCACOF	PRIME SCANIT	
17E9	C0	87	187B		4608+	B SALPH8	SYNTAX CHECK FILENAME	
17ED	D0	82	85		4609+	BL SUF750(,@BR)	TAKE ERROR EXIT	
17F0	0C	07	0CA4 1941		4610+	MVC SMFNAM(##LUEN),SALPHR+##DUEN	SAVE FILENAME	
17F6	BD	61	00		4611+	CLI @ZERO(,@XR),@SLASH	IS A SLASH DELIMITER PRESENT ?	
17F9	F2	01	35		4612+	JNE SUF600	NO, RETURN TO USER	
17FC	3D	5C	0C95		4613+	CLI SMPSWD-##DPEN,@ASTER	SHOULD A PASSWORD BE CHECKED?	
1800	F2	81	1A		4614+	JE SUF200	NO, CHECK VOL-ID	
					4616+	*****	*****	



## SUFFER - FILE SPECIFICATION CHECKER

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 71
				4617+	*			
				4618+	*	PROCESS	PASSWORD	
				4619+	*			
				4620+	*	*****		
				4621+	*			
1803	E2	02	01	4622+		LA @B1(,@XR),@XR	INCREMENT XR BY ONE	
1806	C0	87	1A51	4623+		B SCANIT	BYPASS BLANKS	
180A	C0	87	187B	4624+		B SALPH8	SYNTAX CHECK PASSWORD	
180E	D0	82	85	4625+		BL SUF750(,@BR)	TAKE ERROR EXIT	
1811	0C	07	0C9C 1941	4626+		MVC SMPSWD(##LPEN),SALPHR+##DPEN	SAVE PASSWORD	
1817	BD	61	00	4627+		CLI @ZERO(,@XR),@SLASH	IS SLASH DELIMITER PRESENT ?	
181A	F2	01	14	4628+		JNE SUF600	NO, RETURN TO USER	
				4630+	*	*****		
				4631+	*			
				4632+	*	PROCESS	VOL-ID	
				4633+	*			
				4634+	*	*****		
				4635+	*			
181D	E2	02	01	4636+	SUF200	LA @B1(,@XR),@XR	INCREMENT XR BY ONE	
1820	C0	87	1A51	4637+		B SCANIT	BYPASS BLANKS	
1824	C0	87	187F	4638+		B SALPH6	SYNTAX CHECK VOL-ID	
1828	D0	82	85	4639+	SUF400	BL SUF750(,@BR)	TAKE ERROR EXIT	
182B	0C	05	0C94 193F	4640+		MVC SMVOID(@VOLID),SALPHR+@VOLID-@B1	SAVE VALID	
1831	BD	4D	00	4641+	SUF600	CLI @ZERO(,@XR),C'('	IS THIS '(' ?	
1834	F2	80	39	4642+	SUF625	JC SUF800,@NOP	JUMP IF '(' VALID ADJACENT	
1837	3D	00	1A91	4643+		CLI SCACNT,@ZERO	ANY BLANKS SCANNED ?	
183B	F2	01	0C	4644+		JNE SUF650	YES, CONTINUE DELIMITER SCAN	
183E	BD	1E	00	4645+		CLI @ZERO(,@XR),@EOS	IS IT EOS ?	
1841	F2	81	2C	4646+		JE SUF800	YES, RETURN	
1844	BD	6B	00	4647+		CLI @ZERO(,@XR),@COMMA	IS IT A COMMA ?	
1847	F2	01	18	4648+		JNE SUF680	NO, ERROR EXIT	
				4649+	*			
184A	34	02	18CF	4650+	SUF650	ST SAL375+@OP1,@XR	SAVE ERROR POINTER	
184E	3C	01	1A6E	4651+		MVI SCAMMA,SCACOM	MODIFY SCANIT TO BYPASS COMMA	
1852	C0	87	1A51	4652+		B SCANIT	BYPASS DELIMITERS	
1856	F2	82	11	4653+		JL SUF750	ERROR - RETURN	
				4655+	*	*****		
				4656+	*			
				4657+	*	MODIFY	PSR FOR ERROR INDICATION	
				4658+	*			
				4659+	*	*****		
				4660+	*			
1859	BD	4D	00	4661+		CLI @ZERO(,@XR),C'('	IS IT '(' ?	
185C	F2	01	11	4662+		JNE SUF800	NO, RETURN	
185F	7C	18	7E	4663+		MVI SUF680+@Q(,@BR),@@E139	INVALID DELIMITER	
1862	3C	00	03CD	4664+	SUF680	MVI \$CAERR,*-*	ERROR CODE	
1862				4665+		ORG SUF680	INITIALIZE INSTRUCTION	
1862	3C	11	03CD	4666+		MVI \$CAERR,@@E131	INVALID PARAMETER	
				4667+	*			
1866	35	02	18CF	4668+		L SAL375+@OP1,@XR	RESTORE ERROR POINTER	
186A	75	04	44	4669+	SUF750	L SUF400+@Q(,@BR),@PSR	LOAD CONDITION LOW INTO PSR	
186D	F2	87	03	4670+	SUF780	J SUFND0	ERROR EXIT	

4672+\*\*\*\*\*



SUFFER - FILE SPECIFICATION CHECKER

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	72
			4673+*						
			4674+*		END OF MODULE PROCESSING				
			4675+*						
			4676+*****						
			4677+*						
1870	75 04 89		4678+SUF800 L	SUF780+@Q(,@BR),@PSR	LOAD CODE FOR NORMAL EXIT				
			4679+*SUFND EXIT	@BR,,RETURN					
1873	C2 01 0000		4680+SUFND0 LA	*-*,@BR	RESTORE @BR				
1877	C0 87 0000		4681+SUFND2 B	*-*	RETURN TO CALLING PROGRAM				
			4682+***	END OF EXPANSION ***					
			4683+***		END OF SUFFER				***
			4684 *						
			4685 *	\$ALPH					

## SALPHA - SYNTAX CHECKER MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 73
4687+				*****	
4688+	*	5703-XM1		COPYRIGHT IBM CORP. 1970	*
4689+	*			REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
4690+	*				*
4691+	*			*****	
4692+	*			STATUS	*
4693+	*			VERSION 1 MODIFICATION 0	*
4694+	*				*
4695+	*			FUNCTION	*
4696+	*			THE FUNCTION OF SALPHA IS TO SYNTAX CHECK AN 8 CHARACTER OR 6	*
4697+	*			CHARACTER ALPHAMERIC PARAMETER DETERMINED BY THE ENTRY POINT,	*
4698+	*			SALPH8 OR SALPH6 RESPECTIVELY. ENTRY AT SALPHA IMPLIES A REQUEST	*
4699+	*			THAT THE FIRST CHARACTER BE ALPHABETIC. A SYNTACTICALLY CORRECT	*
4700+	*			PARAMETER WILL BE SAVED AT SALPHR (LEFTMOST BYTE ADDRESS), THE	*
4701+	*			COUNT OF THE NUMBER OF VALID CMARACTERS, IF NEEDED, IS FOOD IN	*
4702+	*			SALCNT. UPON ENTRY, SALPHA REQUIRES INDEX RESISTER 2 (OM TO BE	*
4703+	*			ADDRESSING THE FIRST CHARACTER 0, THE PARAMETER TO BE SYNTAX	*
4704+	*			CHECKED. UPON NORMAL RETURN INDEX REGISTER 2 (@XR) WILL BE	*
4705+	*			ADDRESSING THE FIRST NON-DELIMITER FOLLOWING THE PARAMETER (NOTE	*
4706+	*			INPUT),	*
4707+	*				*
4708+	*			ENTRY POINTS	*
4709+	*			* SALPH8 - ENTRY POINT TO SYNTAX CHECK AN EIGHT CHARACTER	*
4710+	*			ALPHAMERIC PARAMETER WHOSE FIRST CHARACTER MUST BE	*
4711+	*			ALPHABETIC.	*
4712+	*			* SALPH6 - ENTRY POINT TO SYNTAX CHECK A SIX CHARACTER	*
4713+	*			ALPHAMERIC PARAMETER WHICH HAS NO RESTRICTIONS ON	*
4714+	*			THE TYPE OF THE FIRST CHARACTER. (NOTE MODIFICA-	*
4715+	*			TION CONSIDERATIONS)	*
4716+	*				*
4717+	*			INPUT	*
4718+	*			UPON ENTRY TO SALPHA, AT EITHER ENTRY POINT, INDEX REGISTER 2	*
4719+	*			(@XR) SHOULD BE ADDRESSING THE LEFTMOST CHARACTER OF THE PARAMETER*	*
4720+	*			TO BE SYNTAX CHECKED. ALSO, THE SWITCH 'SCAMMA' IN SCANIT SHOULD	*
4721+	*			BE SET FOR THE TYPE OF DELIMITER SCAN REQUESTED AFTER THE SYNTAX	*
4722+	*			CHECK. (IE. BLANKS ONLY OR BLANKS WITH 1 COMMA).	*
4723+	*				*
4724+	*			OUTPUT	*
4725+	*			OUTPUT FROM SALPHA INCLUDES THE SYNTAX CHECKED PARAMETER AT SALPHR*	*
4726+	*			(LEFTMOST BYTE OF SAVE AREA) AND THE COUNT OF VALID CHARACTERS	*
4727+	*			IN SALCNT, AND INDEX REGISTER 2 (@XR) WILL BE POINTING AT THE	*
4728+	*			FIRST NON-DELIMITER AFTER THE PARAMETER. THE ONLY EXCEPTION TO	*
4729+	*			THIS IS UPON DETECTION OF AN ERROR (SEE ERROR EXITS AND PROC.)	*
4730+	*				*
4731+	*			EXTERNAL REFERENCES	*
4732+	*			SCANIT - DELIMITER SCAN MODULE	*
4733+	*			\$CAERR - ADDR IN SYSTEM NUCLEUS-ERROR CODE SAVE AREA	*
4734+	*				*
4735+	*			EXITS, NORMAL	*
4736+	*			NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE WITH INDEX	*
4737+	*			REGISTER 2 (@XR) POINTING TO THE NEXT NON-DELIMITER	*
4738+	*			FOLLOWING THE PARAMETER AND WITH A NON-LOW CONDITION CODE	*
4739+	*			IN THE PROGRAM STATUS RESISTER (@PSR),	*
4740+	*				*
4741+	*			EXITS, ERROR	*
4742+	*			NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE WILH INDEX	*

## SALPHA - SYNTAX CHECKER MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 74
4743+	*			REGISTER 2 (@XR) POINTING TO THE LEFTMOST CHARACTER OF THE	*
4744+	*			INVALID PARAMETER AND WITH A LOW CONDITION CODE IN THE	*
4745+	*			PROGRAM STATUS REGISTER (@PSR),	*
4746+	*				*
4747+	*			TABLES/WORK AREAS	*
4748+	*			ALL OF THE CONSTANTS AND WORK AREAS IN SALPHA ARE LOCATED AT THE	*
4749+	*			END OF THE MODULE AND ARE ADDRESSED BY INDEX REGISTER 1 (RBR).	*
4750+	*				*
4751+	*			ATTRIBUTES	*
4752+	*			REUSABLE, RELOCATABLE	*
4753+	*				*
4754+	*			CHARACTER CODE DEPENDENCY	*
4755+	*			CHARACTER CODE DEPENDENCY CLASS - E	*
4756+	*			THE OPERATION OF THIS MODULE DEPENDS UPON THE FOLLOWING PROPERTIES	*
4757+	*			OF THE INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET:	*
4758+	*			* THE FOLLOWING SPECIAL ALPHABETIC CHARACTERS ARE PART OF	*
4759+	*			@SYSEQ AND ARE SPECIFICALLY COMPARED FOR:	*
4760+	*			* @DOLAR	*
4761+	*			* @NUMBR	*
4762+	*			* @ASIGN	*
4763+	*			* THE REMAINING-ALPHABETIC CHARACTERS ARE DEFINED TO BE	*
4764+	*			INCLUSIVELY IN THE RANGE DEFINED BY THE FOLLOWING IN @SYSEQ:	*
4765+	*			* @CHARA	*
4766+	*			* @CHARZ	*
4767+	*				*
4768+	*			THE DECIMAL NUMBERS FALL INTO THE CATEGORY OF BEING GREATER	*
4769+	*			THAN AN @CHARZ (IE. THIS IS DEFAULTED TO BY CHECKING METHOD)	*
4770+	*			THE SPECIFIC INSTRUCTIONS WHICH REQUIRE MODIFICATION IF THESE	*
4771+	*			PROPERTIES OF THE CHARACTER SET ARE CHANGED MAY BE IDENTIFIED BY:	*
4772+	*			* SAL200 - FOR THE THREE SPECIAL CHARACTERS	*
4773+	*			* SAL250 - FOR THE REMAINING ALPHABETIC RANGE	*
4774+	*			* SAL425 - BRANCHES 'TO' THIS LOCATION IMPLY DEFAULT TO NUMERIC	*
4775+	*				*
4776+	*			NOTES	*
4777+	*			ERROR PROCEDURES	*
4778+	*			THE FOLLOWING ERROR CONDITIONS WILL RESULT IN AN ERROR CODE	*
4779+	*			BEING SET IN \$CAERR AND AN ERROR EXIT BEING MADE (SEE EDITS,	*
4780+	*			ERROR):	*
4781+	*			* A NON-ALPHABETIC FIRST CHARACTER WHEN ENTRY WAS AT	*
4782+	*			SALPH8.	*
4783+	*			* A NON-ALPHAMERIC CHARACTER EMBEDDED IN A PARAMETER WHICH	*
4784+	*			SALPH8 WAS CALLED TO CHECK.	*
4785+	*			* A NON-ALPHAMERIC CHARACTER BEING FIRST OR EMBEDDED IN A	*
4786+	*			PARAMETER WHICH SALPH6 WAS CALLED TO CHECK.	*
4787+	*			* A PARAMETER OF GREATER THAN EIGHT CHARACTERS WHEN ENTRY	*
4788+	*			WAS AT SALPH8.	*
4789+	*			* A PARAMETER OF GREATER THAN SIX CHARACTERS WHEN ENTRY	*
4790+	*			WAS AT SALPH6.	*
4791+	*				*
4792+	*			REGISTER USAGE	*
4793+	*			INDEX REGISTER 1 (@BR) IS USED AS A BASE REGISTER THROUGHOUT	*
4794+	*			THE EXECUTION OF THE MODULE. IT IS SAVED FOR THE CALL PROGRAM	*
4795+	*			UPON ENTRY AND RESTORED UPON EXIT.	*
4796+	*			INDEX REGISTER 2 (@XR) IS USED AS A PARAMETER PASSING REGISTER.	*
4797+	*			UPON ENTRY IT CONTAINS THE ADDRESS OF THE LEFTMOST BYTE OF	*
4798+	*			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 05/06/22 PAGE 75
		4799+*		ADDRESS OR THE FIRST NON-DELIMITER FOLLOWING THE PARAMETEP.	*
		4800+*		(NOTE ERROR EXITS AND PROCEDURES),	*
		4801+*			*
		4802+*		SAVED/RESTORED AREAS	*
		4803+*		NONE	*
		4804+*			*
		4805+*		MODIFICATION CONSIDERATIONS	*
		4806+*		BECAUSE OF ITS CHARACTER CODE DEPENDENCY AND PARAMETER LENGTH	*
		4807+*		QUALIFICATIONS, ONE MUST TAKE SPECIAL CARE IN MODIFYING SALPHA,	*
		4808+*		ESPECIALLY THE CONSTANTS AND WORK AREAS AND THEIR RE-INITIAL,	*
		4809+*		IZATION. SALPHA IS MOST COMMONLY USED TO SYNTAX FILENAMES,	*
		4810+*		PASSWORDS, AND VOL-IDS AND IS THEREFORE USED BY THE MODULE	*
		4811+*		SUFFER (FILE SPECIFICATION SYNTAX CHECKER). THEREFORE, ANY	*
		4812+*		SIGNIFICANT CHANGE IN SALPHA WILL REQUIRE AN INVESTIGATION	*
		4813+*		into ITS USE AND IMPACT ON SUFFER.	*
		4814+*		SPECIAL NOTE: AN IRREGULAR USE OF SALPHA WHICH CAN BE	*
		4815+*		EFFECTED IS THE SYNTAY CHECK OF A PARAMETER WITH A MAXIMUM	*
		4816+*		OF 10 CHARACTERS. THIS IS DONE BY MODIFYING THE Q-CODE OF	*
		4817+*		THE INSTRUCTION AT SAL450 PRIOR TO ENTRANCE AT SALPH6, WITH	*
		4818+*		X'0A' OR ITS EQUIVALENT. (NOTE: ONE SUCH MODULE WHICH	*
		4819+*		USES THIS OPTION IS UINITL)	*
		4820+*			*
		4821+*		REQUIRED MODULES	*
		4822+*		SCANIT - DELIMITER SCAN ROUTINE	*
		4823+*		@DIREQ - SYSTEM LIBRARY DIRECTORY EQUATES	*
		4824+*		@ERMEQ - ERROR MESSAGE EQUATES	*
		4825+*		@FXDEQ - COMMON CORE LOCATIONS WITHIN THE SYSTEM NUCLEUS	*
		4826+*		@SYSEQ - COMMON SYSTEM SOFTWARE EQUATES	*
		4827+*			*
		4828+*		OTHER	*
		4829+*		N/A	*
		4830+*		*****	*
		4832+*		*****	*
		4833+*			*
		4834+*		SALPNA MODULE EQUATES	*
		4835+*			*
		4836+*		*****	*
		0008 4837+	SALCT8 EQU	##LUEN	COUNT COMPARE FIELD
		4838+*			
		0006 4839+	SALCT6 EQU	@VOLID	COUNT COMPARE FIELD
		4841+*		*****	*
		4842+*			*
		4843+*		INITIALIZATION OF MODULE	*
		4844+*			*
		4845+*		*****	*
		4847+*	SALPH8 ENTER CHECK		FILENAME OR PASSWORD
187B		4848+	SALPH8 EQU	*	MODULE ENTRY POINT
		4849+***	END OF EXPANSION	***	
187B 3A 80 1936		4851+	SBN	SALIDR,SAL008	SET ON SALPH8 INDR
		4852+*			
		4853+*	SALPH6 ENTER BASE-SALBSE,	EXIT-SALND,@BR,,@ARR	VOL-ID CHECK

## SALPHA - SYNTAX CHECKER MODULE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 05/06/22 PAGE 76

			189B	4854+	USING	SALBSE,@BR	BASE ADDRESS SPECIFICATION
			187F	4855+SALPH6	EQU	*	MODULE ENTRY POINT
187F	34	01	1931	4856+	ST	SALND0+@OP1,@BR	SAVE ABA
1883	C2	01	189B	4857+	LA	SALBSE,@BR	LOAD BASE RESISTER
1887	74	08	9A	4858+	ST	SALND2+@OP1(,@BR),@ARR	SAVE RETURN ADDRESS
				4859+***	END OF	EXPANSION ***	
188A	74	02	34	4861+	ST	SAL375+@OP1(,@BR),@XR	SAVE ERROR POINTER
				4863+	*****		
				4864+	*		*
				4865+	INITIALIZE WORK AREAS AND VARIABLE INSTRUCTIONS		*
				4866+	*		*
				4867+	*****		
188D	7C	40	A8	4868+SAL100	MVI	SALPR7(,@BR),@BLANK	BLANK OUT SALPAR FOR PROCESSING
1890	5C	08	A7 A8	4869+	MVC	SALPR6(##LPEN+@B1,@BR),SALPR7(,@BR)	
1894	7C	00	9C	4870+	MVI	SALCNT(,@BR),@ZERO	ZERO OUT COUNTER
1897	5C	01	63 AA	4871+	MVC	SAL525+@OP1(2,@BR),SALPHS(,@BR)	MODIFY MOVE OF CHARACTER
				4873+	*****		
				4874+	*		*
				4875+	CHECK EBCDIC CHARACTERS		*
				4876+	*		*
				4877+	*****		
				4878+	*		*
			189B	4879+SALBSE	EQU	*	MODULE BASE ADDR
189B	BD	5B	00	4880+SAL200	CLI	@ZERO(,@XR),@DOLAR	IS IT A '\$' ?
189E	F2	81	32	4881+	JE	SAL400	YES, PROCESS CHARACTER
18A1	BD	7B	00	4882+	CLI	@ZERO(,@XR),@NUMBR	IS IT A '#' ?
18A4	F2	81	2C	4883+	JE	SAL400	YES, PROCESS CHARACTER
18A7	BD	7C	00	4884+	CLI	@ZERO(,@XR),@ASIGN	IS IT A '@' ?
18AA	F2	81	26	4885+	JE	SAL400	YES, PROCESS CHARACTER
				4886+	*		*
18AD	BD	C1	00	4887+	CLI	@ZERO(,@XR),@CHARA	IS IT AN ALPHA (A-Z) ?
18B0	F2	82	53	4888+SAL250	JL	SAL750	NO, CHECK FOR DELIMITERS
18B3	BD	E9	00	4889+	CLI	@ZERO(,@XR),@CHARZ	IS IT AN ALPHA (A-Z) ?
18B6	F2	04	1A	4890+	JNH	SAL400	YES, PROCESS CHARACTER
18B9	78	80	9B	4891+	TBN	SALIDR(,@BR),SAL008	ENTERED AT SALPH8 ?
18BC	F2	90	17	4892+	JF	SAL425	NO, CHECK IF NUMERIC
				4893+	*		*
18BF	78	01	9B	4894+	TBN	SALIDR(,@BR),SALFST	WAS FIRST CHAR FOUND ALPHA ?
18C2	3C	00	03CD	4895+	MVI	\$CAERR,@@E100	ALPHA CHAR REQUIRED--ERROR
18C6	F2	10	0D	4896+	JT	SAL425	YES, CONTINUE
18C9	75	04	16	4897+SAL350	L	SALERR(,@BR),@PSR	LOAD ERROR CODE - LOW
18CC	C2	02	0000	4898+SAL375	LA	*-*,@XR	RESTORE ERROR POINTER
18D0	F2	87	58	4899+	J	SAL800	TAKE ERROR FAIT
				4901+	*****		
				4902+	*		*
				4903+	PROCESS ALPHAMERIC CHARACTER		*
				4904+	*		*
				4905+	*****		
18D3	7A	01	9B	4906+SAL400	SBN	SALIDR(,@BR),SALFST	SET ON ALPHA :NOR
				4907+	*		*
18D6	5E	00	9C 9E	4908+SAL425	ALC	SALCNT(1,@BR),SAL001(,@BR)	ADD 1 TO CHARACTER COUNTER
18DA	78	80	9B	4909+	TBN	SALIDR(,@BR),SAL008	WAS ENTRY AT SALPH8 ?

## SALPHA - SYNTAX CHECKER MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 77
18DD	D0	90	52	4910+	BF		SAL450(,@BR)	NO, CHECK COUNT FOR VALUE OF SIX
18E0	7D	08	9C	4911+	CLI		SALCNT(,@BR),##LPEN	HAS COUNT EXCEEDED 8 ?
18E3	3C	02	03CD	4912+	MVI		\$CAERR,@E102	PASSWORD/FILENAME LENGTH ERROR
18E7	D0	84	2E	4913+	BH		SAL350(,@BR)	YES, TAKE ERROR EXIT
18EA	F2	87	0A	4914+	J		SAL500	NO, CONTINUE PROCESSING
18ED	7D	06	9C	4915+	CLI	SAL450	SALCNT(,@BR),@VOLID	HAS COUNT EXCEEDED 6 ?
18F0	3C	03	03CD	4916+	MVI		\$CAERR,@E103	INVALID VOL-ID LENGTH
18F4	D0	84	2E	4917+	BH		SAL350(,@BR)	YES, TAKE ERROR EXIT
				4919+*				
				4920+*			MODIFY MOVE OF CHARACTER	
				4921+*				
18F7	5E	01	63 9E	4922+	ALC	SAL500	SAL525+@OP1(2,@BR),SAL001(,@BR)	
18FB	2C	00	0000 00	4923+	MVC	SAL525	*-*,@ZERO(1,@XR)	MOVE CHARACTER TO OUTPUT AREA
1900	E2	02	01	4924+	LA		@B1(,@XR),@XR	INCREMENT XR BY I
1903	D0	87	00	4925+	B		SAL200(,@BR)	CHECK NEXT CHARACTER
				4927+*****				
				4928+*				*
				4929+*			CHECK ERRORS AND BYPASS DELIMITERS	*
				4930+*				*
				4931+*****				
1906	7D	00	9C	4932+	CLI	SAL750	SALCNT(,@BR),@ZERO	ANY VALID CHARACTERS ?
1909	3C	10	03CD	4933+	MVI	SAL755	\$CAERR,@E130	REQUIRED PARAM MISSING
190D	F2	01	17	4934+	JNE		SAL775	YES, BYPASS DELIMITERS, EYIT
1910	BD	1E	00	4935+	CLI		@ZERO(,@XR),@EOS	IS IT EOS ?
1913	F2	81	0E	4936+	JE		SAL760	YES, ERROR EVIL
1916	78	80	9B	4937+	TBN		SALIDR(,@BR),SAL008	ENTERED AT SALPH8 ?
1919	3C	00	03CD	4938+	MVI		\$CAERR,@E100	ALPHABETIC CHAR REQUIRED
191D	F2	10	04	4939+	JT		SAL760	ERROR EYIT
1920	3C	01	03CD	4940+	MVI		\$CAERR,@E101	ALPHAMERIC CHAR REQUIRED
1924	D0	87	2E	4941+	B	SAL760	SAL350(,@BR)	ERROR EYIT
1927	C0	87	1A51	4942+	B	SAL775	SCANIT	BYPASS DELIMITERS
				4944+*****				
				4945+*				*
				4946+*			SET OFF INDICATORS FOR POSSIBLE SALDHA RE-ENTRY	*
				4947+*				*
				4948+*****				
192B	7C	00	9B	4949+	MVI	SAL800	SALIDR(,@BR),@ZERO	
				4951+*****				
				4952+*				*
				4953+*			END OF MODULE PROCESSING	*
				4954+*				*
				4955+*****				
				4956+*	EXIT	@BR	,RETURN	EXIT
192E	C2	01	0000	4957+	LA	SALND0	*-*,@BR	RESTORE @BR
1932	C0	87	0000	4958+	B	SALND2	*-*	RETURN TO CALLING PROGRAM
				4959+***			END OF EXPANSION ***	
				4961+*****				
				4962+*				*
				4963+*			DATA CONSTANTS, BUFFERS, AND WORK AREAS	*
				4964+*				*
				4965+*****				

SALPHA - SYNTAX CHECKER MODULE

ERR LOC		OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00		05/06/22	PAGE	78
1936			1936	4966+	SALIDR DS	CL1	1 BYTE OF FLAGS				
1936				4967+	ORG	*-1					
1936	00		1936	4968+	DC	XL1'00'	INITIALIZED TO ZERO				
			0080	4970+	SAL008 EQU	X'80'	ENTRY POINT INDICATOR				
				4971+	*		* 0 - ENTERED AT SALPH6				
				4972+	*		* 1 - ENTERED AT SALPH8				
			0001	4973+	SALFST EQU	X'01'	FIRST CHARACTER IS ALPHA / INDR				
				4974+	*		* 0 - CHARACTER IS NOT ALPHA				
				4975+	*		* 1 - CHARACTER IS ALPHA				
1937			1937	4976+	SALCNT DS	CL1	BYTE CHARACTER COUNTER				
1937				4977+	ORG	*-1					
1937	00		1937	4978+	DC	XL1'00'	INITIALIZED TO ZERO				
1938	0001		1939	4979+	SAL001 DC	XL2'0001'	COUNTER INCREMENT				
			193A	4980+	SALPHR EQU	*					
193A			1943	4981+	DS	CL(##LUEN+2*@B1)	SYNTAX SAVE UNIT				
1944	1939		1945	4982+	SALPHS DC	AL2(SALPHR-1)	ADDR FOR MODIFYING MOVE				
			1943	4983+	SALPR7 EQU	SALPHR+##DPEN+2*@B1	ADDR IN SALPHR FOR CLANKINS				
			1942	4984+	SALPR6 EQU	SALPHR+##DPEN+@B1	* OUT THE FIELD				
			18B1	4985+	SALERR EQU	SAL250+@Q	ADDR ERROR CODE FOR LOAD				
				4986+	***		END OF SALPHA				
				4987	*		***				
				4988	*	\$VOLI					



## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR LOC	OBJECT CODE	ADDR STMT	SOURCE STATEMENT	VER 15, MOD 00	05/06/22	PAGE 79
4990+			*****			*
4991+	*	5703-XM1	COPYRIGHT IBM CORP. 1970			*
4992+	*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE 120-2083			*
4993+	*					*
4994+	*		*****			*
4995+	*		STATUS			*
4996+	*		VERSION 1 MODIFICATION 0			*
4997+	*					*
4998+	*		FUNCTION			*
4999+	*		THE FUNCTION OF SVOLID IS TO SEARCH THE CORE RESIDENT TABLE OF			*
5000+	*		VOLUME ID'S ON THE SYSTEM FOR A SPECIFIED VOLUME ID. IF THE			*
5001+	*		VOLUME IS NOT FOUND, AN ERROR CODE WILL BE PUT IN \$CAERR AND AN			*
5002+	*		EXIT TO \$VOERR IN THE CALLING ROUTINE WILL BE TAKEN. IF MORE			*
5003+	*		THAN ONE VOLUME WITH THE SAME VOL-ID IS FOUND ON THE SYSTEM, THE			*
5004+	*		USER OF THE SYSTEM IS REQUESTED TO INDICATE WHICH DRIVE AND DISK			*
5005+	*		IS TO BE USED. IF THE USER IS UNABLE TO RESOLVE THE CONFLICT,			*
5006+	*		THE COMMAND IS REJECTED. IF THE INPUT SOURCE IS NOT THE KEYBOARD,			*
5007+	*		THE COMMAND IS REJECTED. OTHERWISE THE FILE LIBRARY ADDRESS OF			*
5008+	*		THE RESOLVED VOLUME IS PLACED IN SMBFDA IN THE TSMLES COMMUNICA-			*
5009+	*		TIONS REGION, AND A NORMAL RETURN IS TAKEN.			*
5010+	*					*
5011+	*		ENTRY POINTS			*
5012+	*		\$VOLID - THE FIRST EXECUTABLE INSTRUCTION. IT IS ASSUMED THAT			*
5013+	*		SMVOID IN TSMLES HAS BEEN PRIMER. ALSO, IF THE VM OPTION OF			*
5014+	*		SVOLID HAS BEEN ASSEMBLED FOR EXECUTION TIME USAGE.			*
5015+	*		THE FIELDS SVOIOF AND SVODSK SHOULD BE PRIMED WITH THE GET/PUT			*
5016+	*		GET/PUT FILENAME AND DISK FILENAME, RESPETIVELY.			*
5017+	*					*
5018+	*		INPUT			*
5019+	*		INPUT TO SVOLID IS THE SPECIFIED VOL-ID IN THE TSMLES REGION -			*
5020+	*		SMVOID.			*
5021+	*					*
5022+	*		OUTPUT			*
5023+	*		OUTPUT FROM SVOLID IS THE FILE LIBRARY ADDRESS OF THE RESOLVED			*
5024+	*		SPECIFIED VOL-ID - PLACED IN SMBFDA.			*
5025+	*					*
5026+	*		EXTERNAL REFERENCES			*
5027+	*		SVOBUF - TEMPORARY SECTOR BUFFER SAVE AREA - USER SUPPLIED			*
5028+	*		SVOERR - ERROR EXIT ADDR FROM SVOLID			*
5029+	*		TSMLES - DATA MANAGEMENT COMMUNICATIONS REGION			*
5030+	*		\$\$ILHD - FIRST BYTE OF INPUT LINE HEADER			*
5031+	*		\$\$XIND - EXECUTION INDR PASS AREA			*
5032+	*		\$\$INND - LAST CHARACTER OF INPUT LINE BUFFER			*
5033+	*		\$\$INLN - FIRST CHARACTER OF INPUT LINE BUFFER			*
5034+	*		\$\$PRES - ENTRY TO ENABLE KEYBOARD			*
5035+	*		\$VOLID - ADDR IN SYSTEM NUCLEUS - VOLUME ID TABLE			*
5036+	*		\$CAERR - ADDR IN SYSTEM NUCLEUS - ERROR CODE SAVE AREA			*
5037+	*		\$KEYCD - INDR BYTE CONTAINING KEYBOARD INDR IN SYSTEM NUCLEUS			*
5038+	*		\$CARDI - MASK IN SKEYCD - CARD INPUT MODE			*
5039+	*		\$\$SPRNT - ADDR IN SYSTEM NUCLEUS-SYSTEM PRINTER IOCR INTERFACE			*
5040+	*		\$CIMSK - ADDR IN SYSTEM NUCLEUS-IR MASK ROUTINE INDR			*
5041+	*		\$WAITF - ADDR IN SYSTEM NUCLEUS-DISK WAITS DPL			*
5042+	*		\$KYBSY - MASK IN \$KEYCD - KEYBOARD BUSY			*
5043+	*		\$TRUNK - MASK IN \$KEYCD - TRUNCATED LINE INDR			*
5044+	*		\$UNHSK - ADDR IN SYSTEM NUCLEUS-ENTRY TO UNMASK IR			*
5045+	*					*



## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR LOC	OBJECT CODE	ADDR STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 80
		5046+	*EXITS, NORMAL	*
		5047+	* NEXT SEQUENTIAL INSTRUCTION IN CALL ROUTINE.	*
		5048+	*	*
		5049+	*EXITS, ERROR	*
		5050+	* \$VOERR - ERROR EXIT ROUTINE IN CALL ROUTINE.	*
		5051+	* (NOTE: ERROR PROCEDURES).	*
		5052+	*	*
		5053+	*TABLES/WORK AREAS	*
		5054+	* CONSTANTS, PPL'S. AND WORK AREAS WHICH ARE ADDRESSED BY THE BASE	*
		5055+	* REGISTER (@BR) ARE LOCATED TO BE REFERENCED AS SUCH. THOSE	*
		5056+	* WHICH ARE NOT ADDRESSED BY A BASE REGISTER ARE LOCATED AT THE	*
		5057+	* END OF THE MODULE.	*
		5058+	*	*
		5059+	*ATTRIBUTES	*
		5060+	* RELOCATABLE, CONDITIONALLY REUSABLE (SEE OTHER).	*
		5061+	*	*
		5062+	*CHARACTER CODE DEPENDENCY	*
		5063+	* CHARACTER CODE DEPENDENCY CLASS - C	*
		5064+	* THE OPERATION OF THIS MODULE DEPENDS UPON AN INTERNAL REPRESENTA-	*
		5065+	* TION OF THE EXTERNAL CHARACTER SET WHICH IS EQUIVALENT TO THE ONE	*
		5066+	* USED AT ASSEMBLY TIME. THE CODING HAS BEEN ARRANGED SO THAT RE	*
		5067+	* DEFINITION OF CHARACTER CONSTANTS, BY REASSEMBLY, WILL RESULT IN	*
		5068+	* A CORRECT MODULE FOR THE NEW DEFINITIONS. THE FOLLOWING ARE THE	*
		5069+	* SPECIAL CONSIDERATIONS FOR THIS MODULE:	*
		5070+	* * CHARACTER CONSTANT FOR DECIMAL L(ONE) INTERNAL EQUATE	*
		5071+	* * CHARACTER CONSTANT FOR DECIMAL 2(TWO) INTERNAL EQUATE	*
		5072+	* * @BLANK - PART OF @SYSEQ - FOR SYNTAX CHECK	*
		5073+	* * @CHARR - PART OF @SYSEQ - FOR SYNTAX CHECK	*
		5074+	* * @CHARF - PART OF @SYSEQ - FOR SYNTAX CHECK	*
		5075+	* * @EOS - PART OF @SYSEQ - FOR SYNTAX CHECK	*
		5076+	*	*
		5077+	*NOTES	*
		5078+	* ERROR PROCEDURES	*
		5079+	* THE FOLLOWING CONDITIONS WILL CAUSE AN ERROR CODE TO BE PLACED	*
		5080+	* IN SCAERR AND AN EXIT BRANCH TO BE TAKEN TO SVOERR:	*
		5081+	* * THE SPECIFIED VOLUME ID IS NOT ON THE SYSTEM.	*
		5082+	* * DUPLICATE VOLUME ID'S ARE RTLADO. AND INPUT IS NOT FROM	*
		5083+	* THE KEYBOARD.	*
		5084+	* * THE SPECIFIED PHYSICAL ID FROM THE KEYBOARD DOES NOT CONTAIN	*
		5085+	* ONE OF THE MULTIPLY DEFINED VOLUME ID'S.	*
		5086+	* * THE SPECIFIEC OR RESOLVED VOLUME DOES NOT CONTAIN A LIBRARY	*
		5087+	* AREA.	*
		5088+	*	*
		5089+	* REGISTER USAGE	*
		5090+	* INDEX REGISTER 1 (@BR) IS USED PRIMARILY AS A BASE REGISTER	*
		5091+	* AND SECONDLY AS AN INDEX IN THE VOL ID TABLE.	*
		5092+	* INDEX REGISTER 2 (@XR) IS USED PRIMARILY AS AN INDEX REGISTER	*
		5093+	* IN THE VOL-ID TABLE AND SECONDLY AS AN INDEX TO SYNTAX CHECK	*
		5094+	* KEYBOARD INPUT WHEN VOLUMES ARE MULTIPLY DEFINED.	*
		5095+	*	*
		5096+	* SAVED/RESTORED AREAS	*
		5097+	* NOBE	*
		5098+	*	*
		5099+	* MODIFICATION CONSIDERATIONS	*
		5100+	* VOLID'S SEARCH OF THE VOL-ID TABLE (SVOLID) IS TOTALLY	*
		5101+	* DEPENDENT ON THE FORMAT OF THE TABLE AS IT EXISTS; ESPECIALLY	*

SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 81
		5102+*		THE NUMBER OF ENTRIES WHICH NOW EXIST (IE. FOUR).	*
		5103+*			*
		5104+*		REQUIRED MODULES	*
		5105+*		@CANEQ - COMMON CORE LOCATIONS OUTSIDE SYSTEM NUCLEUS	*
		5106+*		@DIREQ - SYSTEM LIBRARY DIRECTORY EQUATES	*
		5107+*		@ERMEQ - ERROR MESSAGE EQUATES	*
		5108+*		@FXDEQ - COMMON CORE LOCATIONS WITHIN THE SYSTEM NUCLEUS	*
		5109+*		@SYSEQ - COMMON SYSTEM SOFTWARE EQUATES	*
		5110+*		TSMLES - DATA MANAGEMENT COMMUNICATION REGIONS	*
		5111+*			*
		5112+*		OTHER	*
		5113+*		SVOLID MAY BE RE-USED IF THE CALL ROUTINE WILL PRIME 'SVOCT1'	*
		5114+*		WITH A '4', AND 'SVOCT2' WITH A '0' BEFORE EACH RE-ENTRY.	*
		5115+*		BOTH OF THESE FIELDS ARE 1 BYTE LONG AND CONTIGUOUS, RESPEC-	*
		5116+*		TIVELY. (IE. CAN BE INITIALIZED WITH 'MVC' OF X'0400').	*
		5117+*		*****	*

## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE 82
					5119+	*****				
					5120+	*				
					5121+	SVOLID MODULE EQUATES				
					5122+	*				
					5123+	*****				
					5124+	*				
				0001	5125+	SVOLN1 EQU 1	LENGTH CODE OF ONE			
				00F1	5126+	SVO001 EQU X'F1'	CONSTANT OF 1 FOR COMPARE			
				00F2	5127+	SVO002 EQU X'F2'	CONSTANT OF 2 FOR COMPARE			
				0100	5128+	SVOINP EQU \$\$XIND-\$\$ILHD+@B1	LENGTH INPUT BUFFER			
				00FF	5129+	SVOEND EQU \$\$XIND-\$\$ILHD	DISP TO END OF SVOBUF			
					5131+	*****				
					5132+	*				
					5133+	INITIALIZATION OF MODULE				
					5134+	*				
					5135+	*****				
					5136+	*				
				1946	5137+	SVOLID EQU *	ENTRY POINT			
				1958	5138+	USING SVOBSE,@BR	BASE ADDRESS			
1946	34	01	1992		5139+	ST SVO274+@OP1,@BR	SAVE BASE CONTENTS			
194A	C2	01	1958		5140+	LA SVOBSE,@BR	LOAD BASE ADDRESS			
194E	74	02	3E		5141+	ST SVO276+@OP1(,@BR),@XR	SAVE INDEX REGISTER			
1951	74	08	46		5142+	ST SVO290+@OP1(,@BR),@ARR	SAVE RETURN ADDR			
					5144+	*****				
					5145+	*				
					5146+	SEARCH VOL-ID TABLE				
					5147+	*				
					5148+	*****				
					5149+	*				
1954	C2	02	03FB		5150+	LA \$VOLID+@VOLID-@B1,@XR	LOAD XR AS POINTER INTO NUCLEUS			
				1958	5151+	SVOBSE EQU *				
1958	8D	05	00 0C94		5152+	SVO100 CLC @ZERO(@VOLID,@XR),SMVOID	IS THIS THE VOL-ID ?			
195D	D0	01	11		5153+	BNE SVO200(,@BR)	NO, CHECK NEXT ENTRY			
1960	2C	01	0CA9 02		5154+	MVC SMBFDA(@DADDR),@DADDR(,@XR)	SAVE DADDR-DUPLICATE CHECK			
1965	5E	00	48 49		5155+	ALC SVOCT2(SVOLN1,@BR),SVOONE(,@BR)	INCREMENT COUNT			
1969	E2	02	08		5156+	SVO200 LA @VOLID+@DADDR(,@XR),@XR	INCREMENT XR			
196C	5F	00	47 49		5157+	SLC SVOCT1(SVOLN1,@BR),SVOONE(,@BR)	IS THE LAST ENTRY ?			
1970	D0	01	00		5158+	BNZ SVO100(,@BR)	NO, CHECK NEXT ONE			

## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 83
		5160+	*****		
		5161+	*		
		5162+	PROCESS ENTRY IF FOUND		
		5163+	*		
		5164+	*****		
		5165+	*		
1973 7D 02 48		5166+	CLI	SVOCT2(,@BR),@D1	WAS AN ID FOUND ?
1976 3C 29 03CD		5167+	MVI	\$CAERR,@E217	ERROR - NO ID FOUND
197A D0 82 33		5168+	BL	SVO270(,@BR)	NO, ERROR EXIT
197D D0 84 4A		5169+	BH	SVO300(,@BR)	MORE THAN 1 ID
		5171+	*****		
		5172+	*		
		5173+	CHECK DISK ADDR OF LIBRARY		
		5174+	*		
		5175+	*****		
		5176+	*		
1980 3D 00 0CA8		5177+SVO260	CLI	SMBFDA-@B1,@ZERO	IS THERE A LIBRARY ?
1984 F2 01 08		5178+	JNE	SVO274	YES, RETURN
1987 3C 54 03CD		5179+	MVI	\$CAERR,@E351	ERROR - NO LIBRARY
198B 3C 87 1998		5180+SVO270	MVI	SVO280+@Q,@UCB	SET ERROR EXIT
		5182+	*****		
		5183+	*		
		5184+	END OF MODULE PROCESSING		
		5185+	*		
		5186+	*****		
		5187+	*		
198F C2 01 0000		5188+SVO274	LA	*-*,@BR	RESTORE BASE REGISTER
1993 C2 02 0000		5189+SVO276	LA	*-*,@XR	RESTORE INDEX REGISTER
		5190+	*		
1997 C0 80 0469		5191+SVO280	BC	SVOERR,@NOP	ERROR EXIT
199B C0 87 0000		5192+SVO290	B	*-*	RETURN

## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 84
			5194+	*****	*****	
			5195+	*		
			5196+		DATA CONSTANTS, BUFFERS, WORK AREAS AND SAVE AREAS	*
			5197+	*		
			5198+	*****	*****	
			5199+	*		
199F		199F	5200+	SVOCT1 DS	CL1 COUNTER - NUMBER OF DISKS - 4	
199F			5201+	ORG	SVOCT1 RESET FOR INITIALIZATION	
199F 04		199F	5202+	DC	XL1'04' INITIALIZED TO 4	
			5203+	*		
19A0		19A0	5204+	SVOCT2 DS	CL1 COUNTER - DUPLICATE DISK LABELS	
19A0			5205+	ORG	SVOCT2 RESET FOR INITIALIZATION	
19A0 00		19A0	5206+	DC	XL1'00' INITIALIZED TO 0	
19A1 01		19A1	5207+	SVOONE DC	XL1'01' INITIALIZED TO 1 FOR COUNTER	
			5209+	*****	*****	
			5210+	*		
			5211+		PROCESS MULTIPLE ENTRIES	*
			5212+	*		
			5213+	*****	*****	
			5214+	*		
19A2 38 01 03C3			5215+	SVO300 TBN	\$KEYCD,\$CARDI IS KEYBOARD INPUT MODE ?	
19A6 3C 25 03CD			5216+	SVO310 MVI	\$CAERR,@E212 KEYBOARD NOT INPUT MODE	
19AA D0 10 33			5217+	SVO315 BT	SVO270(,@BR) NO ERROR EXIT	

## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 85
					5219+	*****	*****	
					5220+	*		*
					5221+		ASK USER FOR DRIVE CLARIFICATION	*
					5222+	*		*
					5223+	*****	*****	
					5224+	*		
19AD	C0 87 0465			19AD	5225+	SVO320 EQU *	PRINT MESSAGES	
19B1	0C1B				5226+	B \$SPRNT	PRINT MESSAGE	
				19B2	5227+	DC AL2(@M300)	ERROR MESSAGE PPL	
					5228+	*		
19B3	0C 00 19D6 0476				5229+	MVC SVO335+@VQ(@B1), \$CIMSK	OBTAIN CURRENT MASK STATUS	
19B9	C0 87 0465				5230+	B \$SPRNT	WAIT FOR PRINT	
19BD	057F			19BE	5231+	DC AL2(\$WAITF)	ADDR OF PPL	
					5233+	*****	*****	
					5234+	*		*
					5235+		MODIFY INPUT BUFFER FOR ACCEPTANCE OF INPUT ANSWER	*
					5236+	*		*
					5237+	*****	*****	
					5238+	*		
				19BF	5239+	SVO330 EQU *	ENABLE INPUT ROUTINE	
					5240+	SET FOR JUMP AFTER INITIAL SAVE OF INPUT BUFFER		
19BF	F2 80 09				5241+	JC SVO333, @NOP	SAVE SWITCH	
19C2	0C FF 1B91 06FF				5242+	MVC SVOBUF+SVOEND(SVOINP), \$\$XIND	SAVE INPUT BUFFER	
19C8	7C 87 68				5243+	MVI SVO330+@Q(, @BR), @UCB	SET SWITCH TO BYPASS SAVE	
					5244+	*		
19CB	3C 40 06FA				5245+	SVO333 MVI \$\$INND, @BLANK	CLEAR INPUT BUFFER	
19CF	0C F2 06F9 06FA				5246+	MVC \$\$INND-@B1(\$\$INND-\$\$INLN), \$\$INND		
					5247+	*		
19D5	C0 01 048D				5248+	SVO335 BC \$UNMSK, @VQ	BRANCH IF UNMASKED	
19D9	C0 87 0890				5249+	B \$\$PRES	GET USER'S RESRONSE	
19DD	38 10 03C3				5250+	SVO350 TBN \$KEYCD, \$KYBSY	IS KEYBOARD BUSY ?	
19E1	C0 10 19DD				5251+	BT SVO350	YES, WAIT	
19E5	C0 87 0465				5252+	B \$SPRNT	WAIT FOR PRINTER RETURN	
19E9	057F			19EA	5253+	DC AL2(\$WAITF)	ADDR OF PPL	

## SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 86
				5255+	*****			
				5256+	*			
				5257+		VERIFY VOL-ID ON DRIVE SPECIFIED		
				5258+	*			
				5259+	*****			
				5260+	*			
19EB	C2	02	0606	5261+	LA	\$\$INLN-@B1,@XR	ADDR FIRST RESPONSE BYTE	
19EF	C2	01	03FB	5262+	LA	\$VOLID+@VOLID-@B1,@BR	REFERENCE POINT FOR THE VOLID	
				5263+	*			
19F3	E2	02	01	5264+	SVO360 LA	@B1(,@XR),@XR	INDEX BY BLANK	
19F6	BD	40	00	5265+	CLI	@ZERO(,@XR),@BLANK	IS IT A BLANK ?	
19F9	C0	81	19F3	5266+	BE	SVO360	YES, CHECK NEXT BYTE	
				5267+	*			
19FD	BD	F1	01	5268+	CLI	@B1(,@XR),SVO001	IS IT DRIVE 1 ?	
1A00	F2	81	0A	5269+	JE	SVO400	YES, CHECK DISK TYPE	
				5270+	*			
1A03	BD	F2	01	5271+	CLI	@B1(,@XR),SVO002	IS IT DRIVE 2 ?	
1A06	C0	01	19AD	5272+	BNE	SVO320	NO, ASK USER AGAIN	
1A0A	D2	01	10	5273+	LA	2*@VOLID+2*@DADDR(,@BR),@BR	SET INDEX FOR DRIVE 2	
1A0D	BD	D9	00	5274+	SVO400 CLI	@ZERO(,@XR),@CHARR	IS IT REMOVABLE ?	
1A10	F2	81	0A	5275+	JE	SVO440		
				5276+	*			
1A13	BD	C6	00	5277+	CLI	@ZERO(,@XR),@CHARF	IS IT FIXED ?	
1A16	C0	01	19AD	5278+	BNE	SVO320	ASK AGAIN	
1A1A	D2	01	08	5279+	LA	@VOLID+@DADDR(,@BR),@BR	SET INDEX FOR FIXED	
1A1D	E2	02	01	5280+	SVO440 LA	@B1(,@XR),@XR	INCREMENT TO NEXT BYTE	
1A20	E2	02	01	5281+	SVO445 LA	@B1(,@XR),@XR	INCREMENT TO NEXT BYTE	
1A23	BD	40	00	5282+	CLI	@ZERO(,@XR),@BLANK	IS IT A BLANK ?	
1A26	C0	81	1A20	5283+	BE	SVO445	YES, CHECK NEXT BYTE	
				5284+	*			
1A2A	BD	1E	00	5285+	CLI	@ZERO(,@XR),@EOS	AT EOS ?	
1A2D	C0	01	19AD	5286+	BNE	SVO320	ASK AGAIN	
				5287+	*			
1A31	0C	FF	06FF 1B91	5288+	MVC	\$\$XIND(SVOINP),SVOBUF+SVOEND	RESTORE INPUT	
1A37	4D	05	00 0C94	5289+	SVO450 CLC	@ZERO(@VOLID,@BR),SMVOID	IS IT THE VOLID ?	
1A3C	3C	28	03CD	5290+	MVI	\$CAERR,@E216	VOLUME NOT ON THAT DRIVE	
1A40	C0	01	198B	5291+	BNE	SVO270	NO, ERROR EXIT	

SVOLID - RESOLVE SPECIFIED VOLUME-ID

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22	PAGE 87
				5293+			*****		
				5294+	*				*
				5295+	*		SAVE VOL-ID LIBRARY ADDR		*
				5296+	*				*
				5297+			*****		
				5298+	*				
1A44	1C	01	0CA9	02	5299+	MVC	SMBFDA(@DADDR),@DADDR(,@BR) SAVE LIBRARY ADDR		
1A49	3B	80	03C3		5300+	SBF	\$KEYCD,\$TRUNK SET OFF RM EXCEEDED INDR		
1A4D	C0	87	1980		5301+	B	SVO260 NORMAL EXIT		
				5302+	***		END OF SVOLID		***
				5303	*				
				5304	*	\$CANI			



# SCANIT - DELIMETER SCAN MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 88
		5306+		*****	*
		5307+	5703-XM1	COPYRIGHT IBM CORP. 1970	*
		5308+		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		5309+			*
		5310+		*****	*
		5311+		*STATUS	*
		5312+		VERSION 1 MODIFICATION 0	*
		5313+			*
		5314+		*FUNCTION	*
		5315+		THE FUNCTION OF SCANIT IS TO SCAN PAST VALID DELIMITERS AND	*
		5316+		RETURN A POINTER TO THE FIRST CHARACTER THAT'S NOT A DELIMITER.	*
		5317+			*
		5318+		*ENTRY POINTS	*
		5319+		* THE ENTRY POINT IS SCANIT.	*
		5320+		* THE CALLING SEQUENCE IS AS FOLLOWS:	*
		5321+		B SCANIT	*
		5322+		WITH REGISTER 2 (@XR) POINTING TO THE FIRST CHARACTER TO BE	*
		5323+		EXAMINED.	*
		5324+			*
		5325+		*INPUT	*
		5326+		NONE	*
		5327+			*
		5328+		*OUTPUT	*
		5329+		NONE	*
		5330+			*
		5331+		*EXTERNAL REFERENCES	*
		5332+		\$CAERR - ERROR CODE SAVE AREA	*
		5333+			*
		5334+		*EXITS, NORMAL	*
		5335+		NORMAL EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO	*
		5336+		SCANIT IN THE CALLING ROUTINE. THE PSR (REGISTER 4) WILL CONTAIN	*
		5337+		A ZERO IF NO DELIMITERS WERE FOUND OR A HIGH CONDITION IF ONE OR	*
		5338+		MORE DELIMITERS WERE SCANNED.	*
		5339+			*
		5340+		*EXITS, ERROR	*
		5341+		ERROR EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO	*
		5342+		SCANIT IN THE CALLING ROUTINE. THE PSR WILL CONTAIN A LOW	*
		5343+		CONDITION.	*
		5344+			*
		5345+		*TABLES/WORKAREAS	*
		5346+		* SCACNT - AREA CONTAINING NUMBERS OF DELIMITERS SCANNED	*
		5347+		* SCAMMA - LOC WHERE SCACOM MAY BE MOVED IF ONE COMMA IS ALSO	*
		5348+		TO BE CONSIDERED A DELIMITER. MOVING SCACOF BACK INTO SCAMMA	*
		5349+		INDICATES THAT ONLY BLANKS SHOULD BE CONSIDERED DELIMITERS.	*
		5350+			*
		5351+		*ATTRIBUTES	*
		5352+		RELOCATABLE AND RE-USABLE	*
		5353+			*
		5354+		*CHARACTER CODE DEPENDENCY	*
		5355+		THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
		5356+		INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.	*
		5357+			*
		5358+		*NOTES	*
		5359+		ERROR PROCEDURES	*
		5360+		THE ONLY ERROR CONDITION DETECTED BY SCANIT IS THE CASE WHERE	*
		5361+		A CARRIAGE-RETURN CODE FOLLOWS A COMMA. UPON RETURN TO THE	*

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 89
				5362+	*		CALLING ROUTINE, @PSR WILL BE SET TO A LOW CONDITION, THE	*
				5363+	*		ERROR CODE IS SET IN \$CAERR, AND MG WILU BE POINTING TO THE	*
				5364+	*		CARRIAGE-RETURN CHARACTER.	*
				5365+	*			*
				5366+	*		REGISTER USAGE	*
				5367+	*		REGISTER 2 (@XR) IS USED AS A POINTER ACROSS THE AREA BEING	*
				5368+	*		SCANNED FOR DELIMITERS.	*
				5369+	*			*
				5370+	*		SAVED/RESTORED AREAS	*
				5371+	*		UPON ENTRY TO SCANIT, REGISTER 8 (@ARR) IS SAVED AND USED AS	*
				5372+	*		THE RETURN ADDRESS.	*
				5373+	*			*
				5374+	*		MODIFICATION CONSIDERATIONS	*
				5375+	*		NONE	*
				5376+	*			*
				5377+	*		REQUIRED MODULES	*
				5378+	*		* @SYSEQ - COMMON SYSTEM EQUATES	*
				5379+	*		* @FXDEQ - FIXED NUCLEUS ADDRESSES EQUATES	*
				5380+	*			*
				5381+	*		OTHER	*
				5382+	*		SCANIT IS INITIALIZED TO BYPASS BLANKS ONLY. IF SCACOM IS	*
				5383+	*		MOVED TO SCAMMA, ONE COMMA WILL BE SCANNED ALONG WITH BLANKS.	*
				5384+	*		THE INSTRUCTION TO DO THIS IS AS FOLLOWS:	*
				5385+	*		MVI SCAMMA,SCACOM	*
				5386+	*			*
				5387+	*		TO DROP THE COMMA FROM ITS DELIMITER STATUS, SCACOF SHOULD BE	*
				5388+	*		MOVED TO SCAMMA, USING THE FOLLOWING INSTRUCTION:	*
				5389+	*		MVI SCAMMA,SCACOF	*
				5390+	*			*
				5391+	*		*****	*
				5393+	*			
				5394+	*		EQUATES USED IN THIS SUBROUTINE	
				5395+	*			
				0001		5396+	SCAINC EQU 1	TO INCREMENT POINTER
				0001		5397+	SCACOM EQU @BNE	SWITCH TO ALLOW SCANNING COMMA
				0087		5398+	SCACOF EQU @UCB	SWITCH TO SET OFF THE INDICATON
				5399+	*			* FOR SCANNING A COMMA
				1A51		5400+	SCANIT EQU *	ENTRY POINT TO THIS SUBROUTINE
				1A51	34 08 1A8D	5401+	ST SCA500+@OP1,@ARR	SAVE RETURN ADDRESS
				1A55	34 02 1A8F	5402+	ST SCASVE,@XR	SAVE POINTER VALUE
				1A59	3C 04 03CD	5403+	MVI \$CAERR,@E110	SET ERROR CODE
				1A5D	F2 87 03	5404+	J SCA200	GO TO PROCESS
				1A60	E2 02 01	5405+	SCA100 LA SCAINC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR
				1A63	BD 40 00	5406+	SCA200 CLI 0(,@XR),@BLANK	IS THIS CHAR BLANK ?
				1A66	C0 81 1A60	5407+	BE SCA100	YES, FETCH NEXT ONE
				1A6A	BD 6B 00	5408+	CLI 0(,@XR),@COMMA	IS IT A COMMA ?
				1A6D	F2 87 10	5409+	SCA250 JC SCA400,@UCB	UCS TO RETURN -- OR NOP IF
						5410+	*	* SCAMMA IS ACTIVE AND CHAR
				1A70	E2 02 01	5411+	SCA300 LA SCAINC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR
				1A73	BD 40 00	5412+	CLI 0(,@XR),@BLANK	IS THIS CHAR A BLANK ?
				1A76	C0 81 1A70	5413+	BE SCA300	YES, FETCH NEXT ONE
				1A7A	BD 1F 00	5414+	CLI 0(,@XR),@EOS+1	IS THIS EOS ?
				1A7D	F2 82 0A	5415+	JL SCA500	IF NOT, SKIP ERROR ROUTINE
				1A80	34 02 1A91	5416+	SCA400 ST SCACNT,@XR	SAVE NEW POINTER VALUE

SCANIT - DELIMETER SCAN MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	90
	1A84	0F 01	1A91 1A8F		5417+	SLC	SCACNT(2),SCASVE				
					5418+*						
	1A8A	C0 87	0000		5419+SCA500	B	*-*				
				1A6E	5420+SCAMMA	EQU	SCA250+@Q				
					5421+*						
					5422+*		SAVE AREA				
					5423+*						
				1A8E	5424+SCASV1	EQU	*				
	1A8E			1A8F	5425+SCASVE	DS	CL2				
	1A90			1A91	5426+SCACNT	DS	CL2				
					5427+***			END OF SCANIT			***
					5428 *						
					5429 *		\$LIST				

## SLLIST - SCANS A LINE NUMBER LIST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	05/06/22	PAGE 91
5431	+			*****			
5432	+	5703-XM1		COPYRIGHT IBM CORP. 1970			*
5433	+			REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE 120-2083			*
5434	+						*
5435	+			*****			*
5436	+			STATUS			*
5437	+			VERSION 1 MODIFICATION 0			*
5438	+						*
5439	+			FUNCTION			*
5440	+			SLLIST SCANS ACROSS A LINE NUMBER LIST, CHECKING THE SYNTAX OF			*
5441	+			THE LIST AND CONVERTING THE DECIMAL LINE NUMBERS TO BINARY.			*
5442	+			THESE CONVERTED LINE NUMBERS ARE SAVED IN A BUFFER, SLLINE, WHICH			*
5443	+			CONTAINS A TWO-BYTE ENTRY FOR EACH LINE NUMBER AND A ONE-BYTE			*
5444	+			LINE NUMBER RANGE INDICATOR (THE EBCDIC CODE, FOR A DASH) BETWEEN			*
5445	+			LINE NUMBERS OF A RANGE. A CARRIAGE RETURN CODE TERMINATES			*
5446	+			SLLINE.			*
5447	+						*
5448	+			ENTRY POINTS			*
5449	+			* THE ENTRY POINT IS SLLIST. THE BASE REGISTER IS SAVED ON ENTRY			*
5450	+			AND RESTORED BEFORE EXIT TO THE CALLING ROUTINE.			*
5451	+			* THE CALLING SEQUENCE IS AS FOLLOWS:			*
5452	+			B SLLIST			*
5453	+						*
5454	+			INPUT			*
5455	+			THE INPUT TO SLLIST IS A LINE NUMBER LIST WHICH WILL BE SYNTAX			*
5456	+			CHECKED AND CONVERTED. SLLIST EXPECTS @XR TO POINT TO THE FIRST			*
5457	+			CHARACTER TO BE TESTED.			*
5458	+						*
5459	+			OUTPUT			*
5460	+			THE OUTPUT FROM SLLIST IS THE BUFFER, SLLINE, WHICH CONTAINS THE			*
5461	+			CONVERTED LINE NUMBER LIST TERMINATED BY A CARRIAGE-RETURN CODE.			*
5462	+						*
5463	+			EXTERNAL REFERENCES			*
5464	+			* \$CAERR - NUCLEUS LOCATION FOR ERROR CODE.			*
5465	+			* SCANIT - ENTRY TO DELIMITER SCAN ROUTINE.			*
5466	+			* C4BIN2 - ENTRY TO ROUTINE TO CONVERT DECIMAL TO BINARY.			*
5467	+						*
5468	+			EXITS,NORMAL			*
5469	+			NORMAL EXIT IS TO THE FIRST INSTRUCTION FOLLOWING THE BRANCH TO			*
5470	+			SLLIST. THE @PSR WILL BE SET TO THE BRANCH NOT LOW CONDITION TO			*
5471	+			INDICATE A GOOD RETURN.			*
5472	+						*
5473	+			EXITS,ERROR			*
5474	+			ERROR EXIT IS ALSO MADE TO THE FIRST INSTRUCTION FOLLOWING THE			*
5475	+			BRANCH TO SLLIST. IN THIS CASE, @PSR IS SET TO 'BRANCH LOW AND			*
5476	+			\$CAERR CONTAINS THE APPROPRIATE ERROR CODE.			*
5477	+						*
5478	+			TABLES/WORKAREAS			*
5479	+			SLLIST CREATES A BUFFER, SLLINE, WHICH HAS A MAXIMUM LENGTH OF			*
5480	+			210 BYTES, IS DEFINED BY THE USER, AND CONTAINS THE BINARY			*
5481	+			REPRESENTATION OF THE NUMBERS IN THE LINE-NUMBER LIST. SINGLE			*
5482	+			LINE NUMBERS REQUIRE A TWO-BYTE ENTRY AND LINE NUMBER RANGES			*
5483	+			EACH REQUIRE FIVE BYTES (TWO BYTES FOR THE LOW LIMIT LINE NUMBER,			*
5484	+			ONE BYTE FOR THE EBCDIC CODE FOR A DASH, AND TWO BYTES FOR THE			*
5485	+			HIGH LIMIT LINE NUMBER). AN EOS CODE TERMINATES SLLINE.			*
5486	+						*

## SLLIST - SCANS A LINE NUMBER LIST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 92
		5487+	*	ATTRIBUTES	*
		5488+	*	SLLIST IS RELOCATABLE	*
		5489+	*		*
		5490+	*	CHARACTER CODE DEPENDENCY	*
		5491+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND ON ANY PARTICULAR	*
		5492+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.	*
		5493+	*		*
		5494+	*	NOTES	*
		5495+	*	ERROR PROCEDURES	*
		5496+	*	SLLIST RETURNS TO THE CALLING RTN WITH THE PSR SET TO BRANCH	*
		5497+	*	LOW IF AN ERROR CONDITION IS ENCOUNTERED. THE APPROPRIATE	*
		5498+	*	ERROR CODE WILL BE SET IN \$CAERR.	*
		5499+	*		*
		5500+	*	REGISTER USAGE	*
		5501+	*	* UPON ENTRY TO SLLIST. REGISTER 2 (@XR) MUST BE POINTING TO	*
		5502+	*	THE FIRST LINE NUMBER TO BE CHECKED. UPON RETURN FROM SLLIST,	*
		5503+	*	@XR WILL BE POINTING TO THE INVALID CHARACTER IF AN ERROR IS	*
		5504+	*	DETECTED, TO THE CARRIAGE RETURN CHARACTER IF THE LIST IS	*
		5505+	*	GOOD, OR TO THE NEXT CHARACTER FOLLOWING A VALID LIST IF	*
		5506+	*	SLLIND IS SET TO RETURN (SLLRET MOVED TO SLLIND).	*
		5507+	*	* REGISTER 1 (@BR) IS SAVED UPON ENTRY TO SLLIST AND IS USED	*
		5508+	*	BY SLLIST TO CONTAIN THE CURRENT ADDRESS BEING REFERENCED IN	*
		5509+	*	SLLINE.	*
		5510+	*	* UPON ENTRY TO SLLIST, REGISTER 8 (@ARR) IS STORED AS THE	*
		5511+	*	RETURN ADDRESS TO THE CALLING ROUTING AFTER CHECKING IS	*
		5512+	*	COMPLETED.	*
		5513+	*		*
		5514+	*	SAVE/RESTORED AREAS	*
		5515+	*	NONE	*
		5516+	*		*
		5517+	*	MODIFICATION CONSIDERATIONS	*
		5518+	*	NONE	*
		5519+	*		*
		5520+	*	REQUIRED MODULES	*
		5521+	*	* THE FOLLOWING EQUATE MODULES ARE USED IN SLLIST:	*
		5522+	*	* @SYSEQ - COMMON SYSTEM EQUATES	*
		5523+	*	* @FXDEQ - NUCLEUS FIXED ADDRESS EQUATES	*
		5524+	*	* @ERMEQ - ERROR MESSAGE EQUATES (SELECTED ERROR CODES)	*
		5525+	*	* THE FOLLOWING SOURCE MODULES ARE ALSO USED IN SLLIST:	*
		5526+	*	* SCANIT - DELIMITER SCAN ROUTINE	*
		5527+	*	* C4BIN2 - ROUTINE TO CONVERT DECIMAL TO BINARY	*
		5528+	*		*
		5529+	*	OTHER	*
		5530+	*	IF THE CALLING ROUTINE DESIRES THAT A LINE-NUMBER LIST BE	*
		5531+	*	CONSIDERED VALID IF IT IS FOLLOWED BY ANOTHER PARAMETER,	*
		5532+	*	SLLRET SHOULD BE MOVED TO SLLRET BEFORE CALLING SLLIST.	*
		5533+	*	*****	*

## SLLIST - SCANS A LINE NUMBER LIST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 05/06/22 PAGE 93

			1A92	5535+SLLIST EQU *	ENTRY POINT TO THIS SUBROUTINE
			5536+*		
1A92	34 01 1B7A		5537+	ST SLL220+@OP1,@BR	SAVE BASE REGISTER
1A96	34 08 1B7E		5538+	ST SLL230+@OP1,@ARR	SAVE RETURN ADDRESS
1A9A	C2 01 1C07		5539+	LA SLLINE-SLLLN2,@BR	INITIALIZE SLLINE POINTER
			5540+*		
1A9E	C0 87 1B81		5541+SLL100	B C4BIN2	CONVERT LINE NO. TO BINARY
1AA2	F2 82 CA		5542+	JL SLL210	IF ERR IN C4BIN2, CALL ERR PROG
1AA5	F2 81 AC		5543+	JZ SLL180	CHECK FOR EOS IF NO NUMBER FOUND
			5544+*		
			5545+*		INTEGER WAS FOUND
			5546+*		
1AA8	4C 01 03 1BEB		5547+	MVC SLL003(,@BR),C4BVAL(SLLLN2)	MOVE INTEGER TO BFR
1AAD	F2 80 07		5548+SLL110	JC SLL115,@NOP+*-*	UCB EXCEPT FOR FIRST LINE NO.
1AB0	3C 87 1AAE		5549+	MVI SLL110+@Q,@UCB	SET OFF 'FIRST' INDR
1AB4	F2 87 11		5550+	J SLL120	GO CHECK FOR DELIMITERS
			5552+SLL115	CLC SLL001(,@BR),SLL003(SLLLN2,@BR)	THIS INTG > LAST INTG?
1AB7	5D 01 01 03		5553+	JL SLL120	YES, GO CHECK FOR DELIMITERS
1ABB	F2 82 0A		5554+	MVI SLL165+@Q,@UCB	SET SW TO TAKE ERR IF VALID INTG
1ABE	3C 87 1B4E		5555+	MVC SLL200+@OP1(SLLLN2),C4BSAV	SET PTR TO THIS NUMBER
1AC2	0C 01 1B67 1BEF		5556+SLL120	LA SLL002(,@BR),@BR	POINT BR PTR TO THIS ENTRY
1AC8	D2 01 02		5557+	B SCANIT	BYPASS BLANKS
1ACB	C0 87 1A51		5558+	CLI 0(,@XR),SLLDSH	CHAR AFTER INTG = '-' ?
1ACF	BD 60 00		5559+	JNE SLL150	NO, CHECK FOR COMMA
1AD2	F2 01 55		5560+*		
			5561+*		LINE NUMBER FOLLOWED BY A DASH
			5562+*		
1AD5	E2 02 01		5563+	LA 1(,@XR),@XR	PT XR PAST DASH
1AD8	0C 01 1AFB 1BEF		5564+	MVC SLL125+@OP1,C4BSAV(@REGL)	SAVE PTR TO FIRST NO. IN RANGE
1ADE	C0 87 1A51		5565+	B SCANIT	BYPASS BLANKS
1AE2	C0 87 1B81		5566+	B C4BIN2	CONVEFT NO. TO BINARY
1AE6	F2 82 86		5567+	JL SLL210	ERR IF MORE THAN 4 DIGITS FOUND
1AE9	F2 01 17		5568+	JNZ SLL130	JUMP IN INTG FOUND
			5569+*		
1AEC	BD 1E 00		5570+	CLI 0(,@XR),@EOS	IS THIS AN OPEN RANGE ?
1AEF	F2 81 06		5571+	JE SLL125	YES, SET OPEN RANGE ERR CODE
1AF2	BD 6B 00		5572+	CLI 0(,@XR),@COMMA	IS THIS AN OPEN RANGE ?
1AF5	F2 01 65		5573+	JNE SLL195	NO, INV CHAR IN LINE NO. ERRO
			5574+*		
1AF8	C2 02 0000		5575+SLL125	LA *-*,@XR	RESTORE XR TO FIRST NO. IN RANGE
1AFC	3C 0D 03CD		5576+	MVI \$CAERR,@E123	ERR, UNBALANCED LINE NO. SERIES
1B00	F2 87 70		5577+	J SLL215	ERROR EXIT



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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 94
				5579+*				
				5580+*			MOVE DASH AND HIGH LIMIT TO SLLINE	
				5581+*				
1B03	7C	60	02	5582+SLL130	MVI	SLL002(,@BR),SLLDSH	SET DASH IN SLLINE	
1B06	4C	01	04 1BEB	5583+	MVC	SLL003+1(,@BR),C4BVAL(SLLLN2)	MOVE IN HIGH LIMIT OF RANGE	
1B0B	5D	01	01 04	5584+	CLC	SLL001(,@BR),SLL003+1(SLLLN2,@BR)	HIGH LIMIT > LOW LIMIT	
1B0F	F2	82	11	5585+	JL	SLL140	YES, GO INCR POINTER	
1B12	3D	87	1B4E	5586+	CLI	SLL165+@Q,@UCB	OUT OF ORD PAIR FOUND ALREADY ?	
1B16	F2	81	0A	5587+	JE	SLL140	YES, DON'T SET SWITCH AGAIN	
1B19	3C	87	1B4E	5588+	MVI	SLL165+@Q,@UCB	ELSE, SET SW TO TAKE ERR EXIT	
1B1D	0C	01	1B67 1BEF	5589+	MVC	SLL200+@OP1(SLLLN2),C4BSAV	SET PTR TO SECOND NO. IN RANGE	
1B23	D2	01	03	5590+SLL140	LA	SLL003(,@BR),@BR	INCR PTR TO NEXT ENTRY	
1B26	C0	87	1A51	5591+	B	SCANIT	BYPASS BLANKS	
1B2A	BD	6B	00	5592+SLL150	CLI	0(,@XR),@COMMA	INTG FOLLOWED BY COMMA ?	
1B2D	F2	01	10	5593+	JNE	SLL160	NO, TEST FOR A BLANK	
				5594+*				
				5595+*			LINE NUMBER FOLLOWED BY COMMA	
				5596+*				
1B30	E2	02	01	5597+	LA	1(,@XR),@XR	PT XR PAST COMMA	
1B33	C0	87	1A51	5598+	B	SCANIT	BYPASS BLANKS	
1B37	BD	1E	00	5599+	CLI	0(,@XR),@EOS	COMMA FOLLOWED BY EOS ?	
1B3A	F2	81	36	5600+	JE	SLL215	YES, ERR - DANGLING COMMA	
1B3D	F2	87	0D	5601+	J	SLL165	ELSE, GO CHECK INTEGERS ASCENDIN	
1B40	3D	00	1A91	5603+SLL160	CLI	SCACNT,@ZERO	WERE ANY DELIMITERS FOUND?	
1B44	F2	01	06	5604+	JNZ	SLL165	YES, GO CHECK FOR PROPER ORDER	
1B47	BD	1E	00	5605+	CLI	0(,@XR),@EOS	ELSE, IS XR REF AN EOS	
1B4A	F2	01	10	5606+	JNE	SLL195	NO. ERR - INY CHAR IN LINE NO.	
1B4D	F2	80	14	5607+SLL165	JC	SLL200,@NOP+*-*	UCB IF THIS INTG < LAST INTG	
1B50	C0	87	1A9E	5608+	B	SLL100	CHECK NEXT INTG	
				5609+*				
				5610+*			INTEGER NOT FOUND BY C4BIN2	
				5611+*				
1B54	7C	FF	02	5612+SLL180	MVI	SLL002(,@BR),@SCTS-1	MOVE AN 'EOS' TO SLLINE	
1B57	BD	1E	00	5613+	CLI	SLL000(,@XR),@EOS	IS NEXT CHAR IN INPUT LINE EOS ?	
1B5A	F2	81	1A	5614+SLL190	JC	SLL220,@BE+*-*	IF YES OR SLLIND IS ON. RETURN	
				5615+*				
1B5D	3C	0B	03CD	5616+SLL195	MVI	\$CAERR,@@E120	SET ERR CODE FOR 'NON-NUNERIC	
				5617+*			* CHAR IN LINE NO. OR INTO'	
1B61	F2	87	0B	5618+	J	SLL210	RESTORE XR. SET PSR,AND RETURN	
				5619+*				
				5620+*			ERROR EXIT	
				5621+*				
1B64	C2	02	0000	5622+SLL200	LA	*-*,@XR	PT XR TO CORRECT LINE NUMBER	
1B68	3C	0E	03CD	5623+	MVI	\$CAERR,@@E124	SET ERROR CODE FOR PARAMS NOT	
1B6C	F2	87	04	5624+	J	SLL215	* IN ASCENDING ORDER	
1B6F	35	02	1BEF	5625+SLL210	L	C4BSAV,@XR	RETURN POINTER TO FIRST OF NO.	
1B73	35	04	1B80	5626+SLL215	L	SLLBLW,@PSR	SET PSR TO BRANCH LOW	
				5627+*				
				5628+*			RETURN TO CALLING PROGRAM	
				5629+*				
1B77	C2	01	0000	5630+SLL220	LA	*-*,@BR	RESTORE CALLERS' BASE REGISTER	
1B7B	C0	87	0000	5631+SLL230	B	*-*	RETURN TO CALLER	

SLLIST - SCANS A LINE NUMBER LIST

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	05/06/22	PAGE	95
					5633+	*					
					5634+	*	EQUATES USED IN SLLIST				
					5635+	*					
				0000	5636+	SLL000	EQU 0				DISP OF '0' FOR XR OR PTR
				0001	5637+	SLL001	EQU 1				DISP OF '1' FOR XR OR PTR
				0002	5638+	SLL002	EQU 2				DISP OF '2' FOR XR OR PTR
				0003	5639+	SLL003	EQU 3				DISP OF '3' FOR PTR TO SLLINE
				0002	5640+	SLLL2	EQU 2				BINARY LENGTH OF TWO BYTES
				0060	5641+	SLLDSH	EQU C'-'				HYPHEN SEPARATING RANGES
					5642+	*					
				1B5B	5643+	SLLIND	EQU SLL190+@Q				LOC FOR SETTING SLLRET
				0087	5644+	SLLRET	EQU X'87'				CODE FOR RETURN IF NOT EOS
					5645+	*					
					5646+	*	CONSTANTS AND SAVE AREAS				
					5647+	*					
1B7F	0082			1B80	5648+	SLLBLW	DC XL2'82'				PSR CODE TO BRANCH LOW
					5650+	*****					
					5651+	***	END OF SLLIST				***
					5652	*					
					5653	*	\$C4BD				



## C4BIN2 - CONVERT DECIMAL TO BINARY ROUTINE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 96
				5655+	*			*
				5656+		INITIALIZATION		*
				5657+	*			*
				1B81	5658+C4BIN2	EQU	*	ENTRY POINT
				1B81	5659+	USING	C4BIN2,@BR	BASE VALUE
				5660+	*			
1B81	34	01	1BE3	5661+	ST	C4B800+@OP1,@BR	SAVE CALLERS BASE REGISTER	
1B85	C2	01	1B81	5662+	LA	C4BIN2,@BR	LOAD BASE VALUE	
				5663+	*			
1B89	74	08	66	5664+	ST	C4B850+@OP1(,@BR),@ARR	SAVE RETURN ADDRESS	
				5665+	*			
1B8C	74	02	6E	5666+	ST	C4BSAV(,@BR),@XR	SAVE VALUE OF POINTER	
1B8F	3C	0C	03CD	5667+	MVI	\$CAERR,@E122	SET ERROR CODE IN CASE	
1B93	5C	01	6A 6B	5668+	MVC	C4BVAL(C4BLVL,@BR),C4BINI(,@BR)	INIT VALUE TO ZERO	
1B97	3C	04	1BF0	5669+C4B100	MVI	C4B900,4	INITLZ CHAR. COUNT	
				5670+	*			
				5671+***		DETERMINE IF CHAR NUMERIC AND DECR CHAR COUNT		
				5672+	*			
1B9B	F2	80	32	5673+C4B200	JC	C4B600,@NOP	SET TO UCB IF IMBEDDED BLANKS	
				5674+	*		* ALLOWED	
1B9E	BD	F0	00	5675+C4B300	CLI	0(,@XR),C4BLOW	THIS CHAR NUMERIC ?	
1BA1	F2	82	35	5676+	JL	C4B700	NO, GOTO RETURN	
				5677+	*			
1BA4	5F	00	6F 4E	5678+	SLC	C4B900(1,@BR),C4B590+@D1(,@BR)	DECR CHAR COUNT	
1BA8	F2	82	35	5679+	JL	C4B800	BR TO ERROR EXIT IF TOO MANY	
				5680+	*			
				5681+***		MULTIPLY PREVIOUS VALUE BY TEN		
				5682+	*			
1BAB	5E	01	6A 6A	5683+	ALC	C4BVAL(C4BLVL,@BR),C4BVAL(,@BR)	DOUBLE PREVIOUS VALUE	
1BAF	5C	01	68 6A	5684+	MVC	C4BWRK(C4BLVL,@BR),C4BVAL(,@BR)	SAVE DOUBLE VALUE	
1BB3	5E	01	6A 6A	5685+	ALC	C4BVAL(C4BLVL,@BR),C4BVAL(,@BR)	QUADRUPLE PREVIOUS VALUE	
1BB7	5E	01	6A 6A	5686+	ALC	C4BVAL(C4BLVL,@BR),C4BVAL(,@BR)	OCTUPLE PREVIOUS VALUE	
1BBB	5E	01	6A 68	5687+	ALC	C4BVAL(C4BLVL,@BR),C4BWRK(,@BR)	ADD IN SAVED DOUBLE	
				5688+	*			
				5689+***		ADD IN VALUE OF THIS CHAR AND INCR POINTER		
				5690+	*			
1BBF	68	03	6C 00	5691+	MNN	C4BCHR(,@BR),0(,@XR)	FETCH NEMERIC VALUE OF NEW CHAR	
1BC3	5E	01	6A 6C	5692+	ALC	C4BVAL(C4BLVL,@BR),C4BCHR(,@BR)	INCR VALU BY THIS CHAR	
				5693+	*			
1BC7	E2	02	01	5694+	LA	@B1(,@XR),@XR	INCR POINTER TO NEXT CHAR	
1BCA	D0	87	1A	5695+	B	C4B200(,@BR)	GOTO DO IT AGAIN	
				5696+	*			*
				5697+	*	ROUTINE TO SCAN BLANKS		*
				5698+	*			*
1BCD	E2	02	01	5699+C4B590	LA	@B1(,@XR),@XR	INCR POINTER TO NEXT CHAR	
1BD0	BD	40	00	5700+C4B600	CLI	0(,@XR),@BLANK	IS THIS CHAR A BLANK ?	
1BD3	D0	01	1D	5701+	BNE	C4B300(,@BR)	RETURN IF NOT	
1BD6	D0	87	4C	5702+	B	C4B590(,@BR)	GET NEXT CHAR IF YES	

## C4BIN2 - CONVERT DECIMAL TO BINARY ROUTINE

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 05/06/22 PAGE 97
				5704+*			
				5705+***	ENDING ROUTINE		
				5706+*			
1BD9	74 02 68			5707+C4B700	ST	C4BLEN(,@BR),@XR	PLACE VALUE OF POINTER
1BDC	5F 01 68 6E			5708+	SLC	C4BLEN(2,@BR),C4BSAV(,@BR)	SUBTRACT ENTERING VALUE
				5709+*			
1BE0	C2 01 0000			5710+C4B800	LA	*-*,@BR	RESTORE CALLERS BR
				5711+*			
1BE4	C0 87 0000			5712+C4B850	B	*-*	RETURN TO CALLING ROUTINE
				5713+*			*
				5714+*		WORK AREA AND CONSTANT	*
				5715+*			*
1BE8		1BE9		5716+C4BWRK	DS	CL2	SAVE AREA FOR DOUBLED VALUE
				5717+*			
		1BEA		5718+C4BYT1	EQU	*	FIRST BYTE OF BINARY VALUE
1BEA		1BEB		5719+C4BVAL	DS	CL2	SAVE AREA FOR BINARY VALUE
				5720+*			
1BEC	00	1BEC		5721+C4BINI	DC	XL1'00'	INITIALIZE WA TO ZERO
				5722+*			
1BED		1BED		5723+C4BCHR	DS	CL1	SAVE AREA FOR EACH NEW CHAR
1BED				5724+	ORG	*-1	INITIALIZE
1BED	00	1BED		5725+	DC	XL1'00'	* TO ZERO
				5726+*			
1BEE		1BEF		5727+C4BSAV	DS	CL2	SAVE AREA FOR XR
				5728+*			
1BF0		1BF0		5729+C4B900	DS	CL1	SAVE AREA FOR CHAR COUNTER
				5730+*			*
				5731+*		EQUATES FOR C4BIN2	*
				5732+*			*
		1BE9		5733+C4BLEN	EQU	C4BWRK	ON RETURN WILL CONTAIN COUNT
				5734+*			* @XR INCREMENTED BY
		0004		5735+C4BCHC	EQU	4	NUMBER OF CHAR TO CONVERT
				5736+*			
		00F0		5737+C4BLOW	EQU	C'0'	LOWEST NUMERIC CHARACTER
				5738+*			
		0002		5739+C4BLVL	EQU	C4BVAL-C4BWRK	LENGTH OF BINARY VALUE
				5740+*			
		1B9C		5741+C4BLNK	EQU	C4B200+@Q	LOCATION OF IMBEDDED BLANK IND
				5742+*			
		0087		5743+C4BSPC	EQU	@UCB	MOVED TO C4BLNK TO ALLOW BLANKS
				5744+*			
		1B98		5745+C4BNMC	EQU	C4B100+@Q	LOCATION OF CONVERSION COUNT
				5746+*			
		0080		5747+C4BNOP	EQU	@NOP	CHANGED IF IMBEDDED BLANK OK
		1BF1		5748+C4END	EQU	*	DEFINE END OF CODE
				5749+***		END OF C4BIN2	***
				5750 *			

## C4BIN2 - CONVERT DECIMAL TO BINARY ROUTINE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 05/06/22 PAGE 98
		5752		*****	
		5753	*	SMALES - SYSTEM DATA MANAGEMENT COMMON SAVE AREAS AND EQUATES	*
		5754	*	USED TO PROVIDE COMMUNICATION BETWEEN SUBROUTINES USED	*
		5755	*	BY THE VARIOUS KEYWORDS INVOLVED WITH FILE MANIPULATION	*
		5756		*****	
		5757	*		*
	0C8F	5758	SMALES EQU	KDE000	START OF MANAGEMENT AREA
	0C94	5759	SMVOID EQU	SMALES+5	SPECIFIED VOLUME ID SAVE AREA
	0C9C	5760	SMPSWD EQU	SMVOID+8	SPECIFIED PASSWORD SAVE AREA
	0CA4	5761	SMFNAM EQU	SMPSWD+8	SPECIFIED FILENAME SAVE AREA
	0CA5	5762	SMIND1 EQU	SMFNAM+1	INDICATOR BYTE 1
	0CA7	5763	SMUDEA EQU	SMIND1+2	FILENAME DIRCTY ENTRY ADDR
	0CA9	5764	SMBFDA EQU	SMUDEA+2	DADDR OF FILE LIBRARY
	0CAB	5765	SMUDBA EQU	SMBFDA+2	CADDR OF ACTIVE BUFFER ADDR
	0CAD	5766	SMNULT EQU	SMUDBA+2	TOTAL OF NULL SECTORS AVAILABLE
	0CAF	5767	SMNDEA EQU	SMNULT+2	NULL DIRCTY ENTRY ADDR
	0CB1	5768	SMNSCT EQU	SMNDEA+2	COUNT OF NULL SECTORS, REQUIRED
	0CB3	5769	SMNETD EQU	SMNSCT+2	CADDR NEW ENTRY TO NULL DIRCTY
	0CB5	5770	SMUPEN EQU	SMNETD+2	CADDR NEW USER DIRCTY ENTRY
	0CB5	5771	SMDAAD EQU	SMUPEN	RELATIVE DISK ADDR
	0CB7	5772	SMPEAD EQU	SMUPEN+2	CADDR PASSWORD ENTRY
	0CB9	5773	SMFUDA EQU	SMPEAD+2	REL DADOR FIRST USER DIRCTY BLK
	123F	5774	SMNDBA EQU	KDENDR	NULL DIRCTY BUFFER CORE ADDR
	0080	5775	SM1FNE EQU	X'80'	SRCHFN INDR NAME NOT FOUND
	0040	5776	SM1NPD EQU	X'40'	PACK INDR NULL DIRCTY FULL
	0020	5777	SM1STN EQU	X'20'	STORIN PACK INDICATOR BIT
	0010	5778	SM1PDS EQU	X'10'	SGETDB SEARCH ONLY FLAG
	0008	5779	SM1PNF EQU	X'08'	SGETDB PASSWORD NOT FOUND
	17B2	5780	SMPDB1 EQU	SUFFER	PASSWORD DIRCTY BUFFER
	17B2	5781	SMUDB1 EQU	SMPDB1	USER DIRCTY BLOCKI BUFFER
	19B2	5782	SMUDB2 EQU	SMUDB1+512	USER DIRTY BLK 2 BUFFER
	1BB2	5783	SMAEND EQU	SMUDB2+512	END OF SHALES AREA
		5784	*	END	*
		5785		*****	
		5786	*		*
	1C09	5787	SLLINE EQU	\$\$SLIB+9	ADDRESS OF BUFFER FOR SLLIST
		5788	*		* USED FOR LINE NR LIST DELETION
		5789	*		*
		5790		*****	
		5791	*		*
	1559	5792	KDEBUF EQU	SFINDF	NULL DIRECTORY BUFFER
	1A92	5793	SVOBUF EQU	SLLIST	SVOLID TEMPORARY BUFFER SAVE
		5794	*		*
		5795		*****	
		5796	*		*
		5797		PRINT ON	
	FFFF	5798		END	

TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY = 0

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$\$\$	001	0C00	2230	
\$\$\$\$\$1	190	1308	3297	
\$\$\$CMD	001	0020	0659	
\$\$\$DAT	001	0040	0658	
\$\$\$EPL	001	0091	0655	
\$\$\$ERN	001	0080	0709	
\$\$\$FUN	001	0010	0660	
\$\$\$NLN	001	00A0	0705	
\$\$\$STD	001	0081	0654	
\$\$\$001	020	0C8E	2281	
\$\$BNLN	001	0605	0635	0637
\$\$CDBS	001	08C0	0685	
\$\$CDND	001	0666	0644	
\$\$CDRD	001	0890	0683	0685
\$\$CKEY	001	0603	0633	
\$\$CKFF	001	0B3D	0665	
\$\$COFF	001	0B44	0664	
\$\$CSNS	001	209C	0694	
\$\$DATB	001	0BBF	0666	
\$\$EOSA	001	0AFE	0663	
\$\$ERSK	001	1C00	0704	
\$\$FITS	001	1D00	0712	
\$\$FLIB	001	06FF	0711	2215 2599*
\$\$ILEN	001	0601	0629	0631 0635
\$\$ILHD	001	0600	0627	0629 5128 5129
\$\$INLN	001	0607	0642	0644 0646 5246 5261
\$\$INND	001	06FA	0646	5245* 5246 5246 5246*
\$\$KBDT	001	09E1	0653	0657
\$\$KBSN	001	09E2	0657	0662
\$\$KLD1	001	0600	0717	
\$\$KLD2	001	0700	0719	
\$\$KLD3	001	0C00	0721	
\$\$LPOS	001	09EB	0662	
\$\$PCNT	001	07E9	0678	
\$\$PLYN	001	2004	0692	
\$\$PRES	001	0890	0651	0653 0663 0664 0665 0666 0683 5249
\$\$PRFL	001	2143	0696	
\$\$PRNT	001	0707	0672	0673 0677 0678
\$\$PRTN	001	0782	0673	
\$\$PSIO	001	07CE	0677	
\$\$PYCD	001	2200	0698	
\$\$PYMP	001	2000	0690	0692 0694 0696 0698
\$\$SLIB	001	1C00	0707	5787
\$\$TPCD	001	0606	0637	0642
\$\$UPAR	001	0602	0631	0633
\$\$WSPB	001	1E00	0710	
\$\$XIND	001	06FF	0708	0711 5128 5129 5242 5288*
\$\$ZERO	001	0000	0223	0224 0226 0227 0228 0232 0690
\$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
\$BLRTN	001	0550	0592	0593
\$BRSAV	001	03C5	0281	0282 2943* 2974

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$BSADR	001	0587	0608	0610
\$BUFPT	001	03E3	0489	0490
\$CABLD	001	04B4	0562	0563
\$CAERK	001	0469	0539	0542 2218 2332 2341 2357 2361 2366 2380 2393 2443 2447 2463
\$CAERR	001	03CD	0287	2478 2531 2739
				0289 2316* 2320* 2324* 2328* 2356* 2360* 2365* 2373* 2376* 2391* 2446*
				2462* 2521* 2530* 2737* 3999* 4030* 4187* 4354* 4664* 4666* 4895* 4912*
				4916* 4933* 4938* 4940* 5167* 5179* 5216* 5290* 5403* 5576* 5616* 5623*
				5667*
\$CAIPL	001	049D	0558	0560
\$CALLI	001	0008	0479	
\$CARDI	001	0001	0250	5215
\$CARPL	001	04A1	0560	0562 2345 2669 3177
\$CIENT	001	0483	0549	0550
\$CIEXT	001	0480	0548	0549
\$CIMSK	001	0476	0545	0548 2397* 2493* 5229
\$CISUS	001	0496	0553	0558
\$CLBFR	001	0010	0437	
\$CMDKY	001	0008	0349	
\$CMODE	001	0002	0399	
\$CONFIG	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	2489 2557 2714 2747 2837 2902 2969 2996 3022 3043 3122 3449
				4194 4359
\$DKERR	001	0008	0405	
\$DKSIZ	001	03D7	0449	0457 0498
\$DK100	001	0001	0451	
\$DK200	001	0002	0452	
\$DK400	001	0004	0453	
\$DK600	001	0008	0454	
\$DK800	001	0010	0455	
\$DPLSV	001	0449	0523	0525 2600* 2761 2777*
\$DTNMB	001	0040	0270	
\$DTRDR	001	0040	0358	
\$ENDNU	001	0600	0617	0627 0651 0672 0708 0717 0719 0721
\$ERDPL	001	046F	0542	0544
\$ERFIL	001	0040	0297	
\$ERHRD	001	0004	0429	2738
\$ERKEY	001	0080	0301	
\$ERLOG	001	0345	0231	
\$ERMAD	001	0472	0544	0545

## CROSS REFERENCE

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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	2343
\$FEARR	001	0004	0224	
\$FEMAP	001	0588	0610	0611
\$FILIB	001	03DA	0460	0461 2390 2729 3167* 3942 3982 3984 3997 4004 4005
\$FITIN	001	0010	0385	
\$FUIND	001	0020	0414	
\$GUFIO	001	0583	0607	0608
\$GUFIR	001	0008	0259	
\$HISTE	001	042E	0510	0511
\$HIST1	001	0435	0511	0512
\$HRDER	001	0020	0355	
\$INDR1	001	03D4	0371	0397 2319 2323 2327
\$INDR2	001	03D5	0397	0422 2343*
\$INDR3	001	03D6	0422	0449 2738*
\$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 5215 5250 5300*
\$KEYDT	001	0040	0391	
\$KE090	001	00DE	0227	
\$KE130	001	01D5	0228	
\$KYBSY	001	0010	0264	5250
\$LDRTN	001	0571	0602	
\$LEVEL	001	03DF	0472	0474
\$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 2289 2290 3926 3927
\$NWRKF	001	0080	0445	

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$NWRKR	001	0040	0442	
\$PASWD	001	042D	0509	0510 2730 3169* 3170 3170*
\$PAUSD	001	04BA	0563	0565
\$PAUSE	001	0002	0333	
\$PGMDT	001	0020	0388	2327
\$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	2343
\$REORD	001	0040	0476	
\$RLOAD	001	051E	0582	0584 2603
\$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 2827 2832 2878 2884 2891 2897 3150 3155 5226 5230 5252
\$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	5300
\$TRVAR	001	0020	0321	
\$UNMSK	001	048D	0550	0553 5248
\$USRDR	001	03DC	0461	0462 3168* 4006 4009
\$VMDEF	001	0080	0325	
\$VOLF1	001	03FE	0504	0505 3961 3963
\$VOLF2	001	040E	0506	3967 3969
\$VOLID	001	03F6	0502	0503 0507 3930 5150 5262
\$VOLR1	001	03F6	0503	0504 3973 3975
\$VOLR2	001	0406	0505	0506 3955 3957
\$WAITF	001	057F	0605	0607 2490 2558 2715 2748 2838 2903 2970 2997 3023 3044 3123 4195 4360 5231 5253
\$WFDEF	001	0040	0519	2315
\$WFLOK	001	0008	0382	2323
\$WFNME	001	0443	0518	0523 2315
\$WSIND	001	0004	0379	2319
\$XIND1	001	03D0	0310	0329
\$XIND2	001	03D1	0329	0338
\$XIND3	001	03D8	0457	0460
\$XPREC	001	0040	0322	
\$XRSAB	001	03C7	0282	0284 2292



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$ZTRAD	001	05A2	0611	
\$12K	001	0004	0466	
\$16CKY	001	0008	0468	
\$16K	001	0002	0465	
\$22IMP	001	0001	0463	
###BL	001	0000	1864	
###CK	001	0000	1992	
###CN	001	0000	1960	
###CO	001	0000	1752	
###CS	001	0000	1812	
###DR	001	0000	1556	
###ER	001	0000	1756	
###FS	001	0000	1852	
###IN	001	0000	1996	
###PW	001	0000	2000	
###RS	001	0000	1832	
###SA	001	0000	1820	
###SS	001	0000	1816	
###VU	001	0600	1776	
###0T	001	0700	1548	
###1T	001	0000	1552	
###BCO	001	0600	1564	
###BOV	001	0800	1836	
###DPR	001	0700	1572	
###DRE	001	0889	1588	
###DSP	001	2800	1608	
###ECM	001	0C00	1868	
###EFK	001	0C00	1888	
###ERR	001	0C00	1860	
###EXM	001	0C00	1748	
###FIL	001	0E00	1828	
###FIS	001	0E00	1824	
###FML	001	0200	1956	
###FMS	001	0200	1796	
###GRA	001	0889	1720	
###GUF	001	0C00	1856	
###INL	001	0600	1936	
###INS	001	0600	1560	
###KAL	001	0C00	1724	
###KCA	001	0C00	1940	
###KCH	001	0C00	1692	
###KCN	001	0C00	1808	
###KCT	001	0C00	1660	
###KDE	001	0C00	1656	2229 3192
###KDI	001	0D00	1736	
###KDN	001	0C00	1644	
###KDO	001	0E00	1740	
###KED	001	0C00	1580	
###KEN	001	0C00	1584	
###KEX	001	0C00	1604	
###KGO	001	0C00	1576	
###KHE	001	0C00	1760	
###KKE	001	0C00	1988	
###KLI	001	0C00	1664	
###KLL	001	0920	1964	
###KLO	001	0C00	1668	



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$KME	001	0D00	1648	
\$\$\$KMO	001	0C00	1592	
\$\$\$KNA	001	0C00	1704	
\$\$\$KOV	001	0E00	1624	
\$\$\$KPA	001	0C00	1600	
\$\$\$KPO	001	0C00	1688	
\$\$\$KPR	001	0C00	1712	
\$\$\$KRE	001	0C00	1632	
\$\$\$KRL	001	0700	1728	
\$\$\$KRM	001	0C00	1596	
\$\$\$KRN	001	0700	1616	
\$\$\$KRO	001	0D00	1620	
\$\$\$KRS	001	0C00	1944	
\$\$\$KRU	001	0C00	1640	
\$\$\$KRV	001	0800	1732	
\$\$\$KSA	001	0C00	1676	
\$\$\$KSE	001	0E00	1716	
\$\$\$KSO	001	0C20	1768	
\$\$\$KSS	001	0C00	1700	
\$\$\$KSV	001	0980	1696	
\$\$\$KSY	001	0C00	1708	
\$\$\$KWI	001	0C00	1636	
\$\$\$KWR	001	0C00	1628	
\$\$\$LOA	001	0600	1568	
\$\$\$MIP	001	0C00	1764	
\$\$\$SDS	001	0C00	1876	
\$\$\$SFF	001	0E00	1880	
\$\$\$SFL	001	0F00	1872	
\$\$\$SFO	001	1500	1844	
\$\$\$SFS	001	0C00	1840	
\$\$\$SPA	001	0C00	1680	3200
\$\$\$SPO	001	0806	1684	
\$\$\$SPS	001	0C00	1672	
\$\$\$STR	001	1600	1848	
\$\$\$TDC	001	1000	1652	
\$\$\$TSY	001	1000	1612	
\$\$\$TVK	001	0FC0	1788	
\$\$\$UAL	001	0C00	1804	
\$\$\$UAT	001	0900	1900	
\$\$\$UCD	001	0900	1908	
\$\$\$UCN	001	0C00	1892	
\$\$\$UCP	001	0700	1896	
\$\$\$UDE	001	0C00	1912	
\$\$\$UDI	001	0C00	1916	
\$\$\$UEX	001	0C00	1800	
\$\$\$UIN	001	0C00	1904	
\$\$\$UPA	001	0C00	1884	
\$\$\$UPO	001	0C00	1952	
\$\$\$UPT	001	0C00	1948	
\$\$\$VCR	001	2000	1744	
\$\$\$VLO	001	0600	1780	
\$\$\$VOD	001	0600	1784	
\$\$\$VVM	001	0000	1792	
\$\$\$VXI	001	0600	1772	
\$\$\$ZDU	001	1100	1924	
\$\$\$ZLB	001	1100	1968	

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$ZLO	001	1100	1928	
\$\$\$ZLV	001	0F00	1984	
\$\$\$ZL1	001	0F00	1972	
\$\$\$ZL2	001	0F00	1976	
\$\$\$ZL3	001	0C00	1980	
\$\$\$ZTR	001	1000	1920	
\$\$\$ZUT	001	0C00	1932	
\$\$#BLN	001	18D4	1863	
\$\$#CKT	001	2118	1991	
\$\$#CNF	001	2000	1959	
\$\$#COR	001	0800	1751	
\$\$#CSA	001	1000	1811	
\$\$#DRT	001	0000	1555	
\$\$#ERM	001	0928	1755	
\$\$#FSP	001	1880	1851	
\$\$#INV	001	212C	1995	
\$\$#PWR	001	2300	1999	
\$\$#RSP	001	1780	1831	
\$\$#SAV	001	1180	1819	
\$\$#SSA	001	1128	1815	
\$\$#VUF	001	0B08	1775	
\$\$#0TR	001	0000	1547	
\$\$#1TR	001	0080	1551	
\$\$@#BL	001	0001	1865	
\$\$@#CK	001	0004	1993	
\$\$@#CN	001	0001	1961	
\$\$@#CO	001	003A	1753	
\$\$@#CS	001	003A	1813	
\$\$@#DR	001	0008	1557	
\$\$@#ER	001	0032	1757	
\$\$@#FS	001	0030	1853	
\$\$@#IN	001	003A	1997	
\$\$@#PW	001	00C0	2001	
\$\$@#RS	001	0030	1833	
\$\$@#SA	001	0108	1821	
\$\$@#SS	001	0001	1817	
\$\$@#VU	001	0002	1777	
\$\$@#0T	001	0018	1549	
\$\$@#1T	001	0018	1553	
\$\$@BCO	001	0018	1565	
\$\$@BOV	001	0018	1837	
\$\$@DPR	001	0005	1573	
\$\$@DRE	001	0001	1589	
\$\$@DSP	001	0004	1609	
\$\$@ECM	001	0006	1869	
\$\$@EFK	001	0002	1889	
\$\$@ERR	001	0003	1861	
\$\$@EXM	001	0003	1749	
\$\$@FIL	001	0009	1829	
\$\$@FIS	001	0009	1825	
\$\$@FML	001	0052	1957	
\$\$@FMS	001	0052	1797	
\$\$@GRA	001	0003	1721	
\$\$@GUF	001	0010	1857	
\$\$@INL	001	0010	1937	
\$\$@INS	001	0010	1561	

## CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 05/06/22 PAGE 106

#\$@KAL	001	000F	1725	
#\$@KCA	001	000C	1941	
#\$@KCH	001	000C	1693	
#\$@KCN	001	0010	1809	
#\$@KCT	001	0009	1661	
#\$@KDE	001	0010	1657	3191
#\$@KDI	001	0005	1737	
#\$@KDN	001	0010	1645	
#\$@KDO	001	000C	1741	
#\$@KED	001	000E	1581	
#\$@KEN	001	0006	1585	
#\$@KEX	001	0003	1605	
#\$@KGO	001	0002	1577	
#\$@KHE	001	000C	1761	
#\$@KKE	001	0006	1989	
#\$@KLI	001	0011	1665	
#\$@KLL	001	0001	1965	
#\$@KLO	001	0008	1669	
#\$@KME	001	0003	1649	
#\$@KMO	001	0004	1593	
#\$@KNA	001	0008	1705	
#\$@KOV	001	0009	1625	
#\$@KPA	001	0005	1601	
#\$@KPO	001	000D	1689	
#\$@KPR	001	0009	1713	
#\$@KRE	001	0002	1633	
#\$@KRL	001	0004	1729	
#\$@KRM	001	0003	1597	
#\$@KRN	001	0003	1617	
#\$@KRO	001	000A	1621	
#\$@KRS	001	000A	1945	
#\$@KRU	001	0003	1641	
#\$@KRV	001	000D	1733	
#\$@KSA	001	0011	1677	
#\$@KSE	001	0004	1717	
#\$@KSO	001	0005	1769	
#\$@KSS	001	000B	1701	
#\$@KSV	001	0002	1697	
#\$@KSY	001	000F	1709	
#\$@KWI	001	0002	1637	
#\$@KWR	001	0002	1629	
#\$@LOA	001	0013	1569	
#\$@MIP	001	000D	1765	
#\$@SDS	001	0004	1877	
#\$@SFF	001	0008	1881	
#\$@SFL	001	0005	1873	
#\$@SFO	001	0003	1845	
#\$@SFS	001	0011	1841	
#\$@SPA	001	0004	1681	3199
#\$@SPO	001	0003	1685	
#\$@SPS	001	0001	1673	
#\$@STR	001	0002	1849	
#\$@TDC	001	0003	1653	
#\$@TSY	001	0003	1613	
#\$@TVK	001	0001	1789	
#\$@UAL	001	0011	1805	

## CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 05/06/22 PAGE 107

#\$@UAT	001	000C	1901	
#\$@UCD	001	000B	1909	
#\$@UCN	001	0009	1893	
#\$@UCP	001	000F	1897	
#\$@UDE	001	000E	1913	
#\$@UDI	001	0008	1917	
#\$@UEX	001	000E	1801	
#\$@UIN	001	000F	1905	
#\$@UPA	001	0004	1885	
#\$@UPO	001	0005	1953	
#\$@UPT	001	0012	1949	
#\$@VCR	001	0008	1745	
#\$@VLO	001	0002	1781	
#\$@VOD	001	0016	1785	
#\$@VVM	001	0030	1793	
#\$@VXI	001	0002	1773	
#\$@ZDU	001	0008	1925	
#\$@ZLB	001	0002	1969	
#\$@ZLO	001	000C	1929	
#\$@ZLV	001	0006	1985	
#\$@ZL1	001	0007	1973	
#\$@ZL2	001	000D	1977	
#\$@ZL3	001	000A	1981	
#\$@ZTR	001	0001	1921	
#\$@ZUT	001	0014	1933	
#\$BCOM	001	0080	1563	
#\$BOLV	001	1780	1835	
#\$DPRI	001	014C	1571	
#\$DREA	001	0200	1587	
#\$DSPL	001	0240	1607	
#\$ECMA	001	1900	1867	
#\$EFKE	001	1990	1887	
#\$ERRP	001	18C0	1859	
#\$EXMS	001	07D4	1747	
#\$FILN	001	1724	1827	
#\$FIST	001	1700	1823	
#\$FMLN	001	1E00	1955	
#\$FMST	001	0D00	1795	
#\$GRAP	001	0690	1719	
#\$GUFU	001	1880	1855	
#\$INLN	001	1C84	1935	
#\$INST	001	0020	1559	
#\$KALL	001	06A4	1723	
#\$KCAL	001	1CC4	1939	
#\$KCHA	001	053C	1691	
#\$KCND	001	0F80	1807	
#\$KCTL	001	03BC	1659	
#\$KDEL	001	035C	1655	3190
#\$KDIS	001	0744	1735	
#\$KDNT	001	0300	1643	
#\$KDOV	001	0780	1739	
#\$KEDI	001	0188	1579	
#\$KENA	001	01C4	1583	
#\$KEXT	001	0234	1603	
#\$KGOS	001	0180	1575	
#\$KHEL	001	0A30	1759	

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$KKEY	001	2100	1987	
#\$KLIS	001	0400	1663	
#\$KLLA	001	2004	1963	
#\$KLOG	001	0444	1667	
#\$KMER	001	030C	1647	
#\$KMOU	001	0204	1591	
#\$KNAM	001	05C0	1703	
#\$KOVN	001	0290	1623	
#\$KPAS	001	0220	1599	
#\$KPOO	001	0508	1687	
#\$KPRT	001	063C	1711	
#\$KREA	001	02BC	1631	
#\$KRLA	001	0700	1727	
#\$KRMO	001	0214	1595	
#\$KRNU	001	0280	1615	
#\$KROV	001	028C	1619	
#\$KRSU	001	1D24	1943	
#\$KRUN	001	02CC	1639	
#\$KRVL	001	0710	1731	
#\$KSAV	001	0488	1675	
#\$KSET	001	0680	1715	
#\$KSOV	001	0AC8	1767	
#\$KSSP	001	0594	1699	
#\$KSVL	001	058C	1695	
#\$KSYM	001	0600	1707	
#\$KWID	001	02C4	1635	
#\$KWRI	001	02B4	1627	
#\$LOAD	001	0100	1567	
#\$MIPP	001	0A80	1763	
#\$SDSY	001	192C	1875	
#\$SFFI	001	193C	1879	
#\$SFLO	001	1918	1871	
#\$SFOV	001	1844	1843	
#\$SFSY	001	1800	1839	
#\$SPAC	001	04CC	1679	3198
#\$SPOV	001	04DC	1683	
#\$SPSY	001	0484	1671	
#\$STRO	001	1850	1847	
#\$TDCK	001	0350	1651	
#\$TSYK	001	0250	1611	
#\$TVKB	001	0BAC	1787	
#\$UALL	001	0F00	1803	
#\$UATR	001	1A38	1899	
#\$UCDI	001	1AD8	1907	
#\$UCNF	001	19B8	1891	
#\$UCPL	001	19DC	1895	
#\$UDEL	001	1B24	1911	
#\$UDIS	001	1B5C	1915	
#\$UEXL	001	0EA8	1799	
#\$UINI	001	1A88	1903	
#\$UPAC	001	1980	1883	
#\$UPOV	001	1D24	1951	
#\$UPTF	001	1D5C	1947	
#\$VCRT	001	07B4	1743	
#\$VLOA	001	0B80	1779	
#\$VODK	001	0B88	1783	

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$VVMR	001	0C00	1791	
#\$VXIT	001	0B00	1771	
#\$ZDUM	001	1BA4	1923	
#\$ZLBM	001	2008	1967	
#\$ZLOA	001	1BC4	1927	
#\$ZLVR	001	20B0	1983	
#\$ZL1M	001	2010	1971	
#\$ZL2M	001	2030	1975	
#\$ZL3M	001	2088	1979	
#\$ZTRA	001	1B9C	1919	
#\$ZUTM	001	1C14	1931	
##DNEA	001	0001	0846	3602 3619 3622*
##DNEF	001	0003	0847	3578 3621* 3660 3687 3703* 3723 3762
##DNER	001	0005	0848	3597* 3667 3699* 3807*
##DNE1	001	0004	0845	3601
##DNHC	001	0000	0842	3593*
##DNHR	001	0003	0844	
##DNHY	001	0001	0843	
##DPEA	001	0009	0820	4212 4217
##DPEN	001	0007	0819	2458 2461 2527 3134 3134* 4201 4593* 4597* 4613 4626 4983 4984
##DPER	001	000B	0821	3135*
##DPE1	001	0004	0818	4199
##DPHC	001	0000	0816	3126 3136* 3582 3583 4198
##DPHR	001	0003	0817	3127
##DUEA	001	0009	0831	
##DUED	001	0012	0836	
##DUEF	001	000B	0832	
##DUEH	001	002B	0837	2871
##DUEI	001	000C	0833	4377
##DUEL	001	000F	0835	
##DUEN	001	0007	0830	2819 2820 2870 4380 4610
##DUER	001	0031	0838	2639 2639* 2685 2685* 2862 2862* 2946 2946*
##DUES	001	000D	0834	2520 2524 2801 2807
##DUE1	001	000C	0829	2784 2785 2942 2975
##DUHA	001	0001	0825	2544 2554 2564 2679 2697 2923 2925 2961 3026 3028 3083 4397
##DUHB	001	0003	0826	2547 2561 2566 2682* 2698* 2718* 2789 2923* 2984 2991 3011 3012*
##DUHC	001	0004	0827	3026* 3061* 3071* 3101* 4368 4371
##DUHR	001	000B	0828	2619* 2620 2782* 2786 2843* 2859 2908* 2944 2973* 3068 3080 4376
##LAAA	001	0002	0857	2941 2941*
##LAHC	001	0001	0856	2619 2620 2843 2908 2944 2947 3126 3130 3136 3582 3583 3665
##LN	001	0001	0885	3700 3728
##LNE	001	0006	0891	3243
##LNEF	001	0002	0889	3597 3608 3677 3698 3699 3725 3727 3747 3807
##LNEZ	001	0002	0890	3012 3061 3101 3602 3621 3654 3660 3703 3719 3720 3722 3732
##LNH	001	0004	0888	3763 3767 3792 3794 3795
##LNHY	001	0001	0886	3597 3699 3724 3807
##LNHZ	001	0002	0887	3597* 3735
##LP	001	0004	0861	
##LPE	001	000C	0866	3235 4236
##LPEN	001	0008	0863	3129 3135 4203
##LPEZ	001	0002	0864	2730 3928 3938 4201 4582 4626 4869 4911
##LPH	001	0004	0865	
##LPHZ	001	0003	0862	

CROSS REFERENCE																
SYMBOL	LEN	VALUE	DEFN	REFERENCES										VER 15, MOD 00	05/06/22	PAGE 110
##LU	001	0002	0870	3208	3220	4423										
##LUE	001	0032	0881	2634	2639	2685	2845	2862	2910	2946	2949	2950	4382			
##LUED	001	0003	0878													
##LUEF	001	0002	0874													
##LUEH	001	0019	0879	2820	2871											
##LUEI	001	0001	0875													
##LUEL	001	0002	0877													
##LUEN	001	0008	0873	2584	2819	2870	3134	4380	4610	4837	4981					
##LUES	001	0001	0876													
##LUEZ	001	0006	0880													
##LUH	001	000C	0872	2632	2685	2941										
##LUHZ	001	0007	0871													
##MNHM	001	002A	0914	3587												
##MPHM	001	0055	0899													
##MUEG	001	0020	0906													
##MUEK	001	0040	0905													
##MUEO	001	0004	0909													
##MUEP	001	0080	0904													
##MUER	001	0008	0908	2524	2801											
##MUEV	001	0002	0910													
##MUEX	001	0010	0907	2520	2807											
##MUHM	001	000A	0903	2859												
##RN	001	0000	0805	3242												
##RP	001	0001	0806	3234	4235	4240										
##R1	001	0007	0808													
##R2	001	0005	0807													
##BAD	001	0455	0749													
##IO1	001	0459	0757													
##IO2	001	045D	0758													
##TAT	001	0941	0785													
##TBA	001	09A1	0789													
##TFS	001	0941	0783													
##TSY	001	0941	0787													
##VFP	001	0700	0775													
##VLP	001	093D	0778													
##WDB	001	050C	0770													
##WFT	001	0500	0768													
##BA	001	0001	0750													
##IO	001	0001	0762													
##SC	001	0002	0759													
##TA	001	0010	0786													
##TB	001	0010	0790													
##TS	001	0005	0788													
##TW	001	0020	0784													
##VM	001	0100	0779													
##WD	001	00BD	0771													
##WF	001	0003	0769													



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
##@SFL	001	0005	0754	
##@SFO	001	0005	0764	
##@SFS	001	0011	0740	
##@VSF	001	0010	0792	
##@VSL	001	000F	0793	
##@VTR	001	0001	0777	
#@BOVL	001	0400	0737	
#@ECMA	001	0481	0751	
#@ERRP	001	0441	0745	
#@GUFU	001	0401	0741	
#@LDSV	001	044D	0747	
#@SDSY	001	04AD	0743	
#@SFFI	001	04BD	0755	
#@SFLO	001	0499	0753	
#@SFOV	001	04C4	0763	
#@SFSY	001	0480	0739	
#@VSFI	001	09A1	0791	
#@VTRL	001	0708	0776	
#@WAF1	001	0401	0736	
#@WAR1	001	0400	0735	
#KDEL	001	0C07	2233	
#KDELE	001	0000	0001	
@@E001	001	0000	1451	1453
@@E003	001	0001	1453	1455
@@E004	001	0002	1455	1457
@@E005	001	0003	1457	1459
@@E006	001	0004	1459	1461
@@E007	001	0005	1461	1463
@@E008	001	0006	1463	1465
@@E009	001	0007	1465	1467
@@E010	001	0008	1467	1469
@@E011	001	0009	1469	1471
@@E012	001	000A	1471	1473
@@E013	001	000B	1473	1475
@@E014	001	000C	1475	1477
@@E015	001	000D	1477	1479
@@E016	001	000E	1479	1481
@@E017	001	000F	1481	1483
@@E018	001	0010	1483	1485
@@E019	001	0011	1485	1487
@@E020	001	0012	1487	1489
@@E021	001	0013	1489	1491
@@E023	001	0014	1491	1493
@@E024	001	0015	1493	1495
@@E025	001	0016	1495	1497
@@E026	001	0017	1497	1499
@@E027	001	0018	1499	1501
@@E028	001	0019	1501	1503
@@E029	001	001A	1503	1505
@@E030	001	001B	1505	1507
@@E031	001	001C	1507	1509
@@E032	001	001D	1509	1511
@@E035	001	001E	1511	1513
@@E036	001	001F	1513	1515
@@E037	001	0020	1515	1517
@@E038	001	0021	1517	1519



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E039	001	0022	1519	1521
@@E040	001	0023	1521	1523
@@E041	001	0024	1523	1525
@@E042	001	0025	1525	1527
@@E043	001	0026	1527	1529
@@E044	001	0027	1529	1531
@@E045	001	0028	1531	1533
@@E046	001	0029	1533	1535
@@E060	001	002A	1535	1537
@@E080	001	002B	1537	
@@E100	001	0000	0923	0925 4895 4938
@@E101	001	0001	0925	0927 4940
@@E102	001	0002	0927	0929 4912
@@E103	001	0003	0929	0931 4916
@@E110	001	0004	0931	0933 5403
@@E112	001	0005	0933	0935
@@E113	001	0006	0935	0937
@@E114	001	0007	0937	0939
@@E115	001	0008	0939	0941
@@E116	001	0009	0941	0943
@@E117	001	000A	0943	0945
@@E120	001	000B	0945	0947 5616
@@E122	001	000C	0947	0949 5667
@@E123	001	000D	0949	0951 5576
@@E124	001	000E	0951	0953 5623
@@E129	001	000F	0953	0955
@@E130	001	0010	0955	0957 2356 4933
@@E131	001	0011	0957	0959 4666
@@E133	001	0012	0959	0961 2376 2446
@@E134	001	0013	0961	0963
@@E135	001	0014	0963	0965 2462
@@E136	001	0015	0965	0967
@@E137	001	0016	0967	0969
@@E138	001	0017	0969	0971
@@E139	001	0018	0971	0973 2360 4663
@@E142	001	0019	0973	0975
@@E143	001	001A	0975	0977 2365 2373
@@E150	001	001B	0977	0979
@@E151	001	001C	0979	0981
@@E160	001	001D	0981	0983
@@E162	001	001E	0983	0985
@@E163	001	001F	0985	0987
@@E164	001	0020	0987	0989
@@E200	001	0021	0989	0991 2391 3999
@@E205	001	0022	0991	0993
@@E210	001	0023	0993	0995 4187
@@E211	001	0024	0995	0997 4354
@@E212	001	0025	0997	0999 5216
@@E213	001	0026	0999	1001 4030
@@E215	001	0027	1001	1003 2530
@@E216	001	0028	1003	1005 5290
@@E217	001	0029	1005	1007 5167
@@E220	001	002A	1007	1009 2316
@@E221	001	002B	1009	1011 2328
@@E222	001	002C	1011	1013 2324
@@E223	001	002D	1013	1015

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E225	001	002E	1015	1017
@@E226	001	002F	1017	1019 2320
@@E227	001	0030	1019	1021
@@E228	001	0031	1021	1023
@@E229	001	0032	1023	1025
@@E230	001	0033	1025	1027
@@E232	001	0034	1027	1029
@@E234	001	0035	1029	1031
@@E237	001	0036	1031	1033
@@E240	001	0037	1033	1035
@@E241	001	0038	1035	1037
@@E242	001	0039	1037	1039
@@E248	001	003A	1039	1041
@@E249	001	003B	1041	1043
@@E250	001	003C	1043	1045
@@E251	001	003D	1045	1047
@@E252	001	003E	1047	1049
@@E253	001	003F	1049	1051
@@E254	001	0040	1051	1053
@@E255	001	0041	1053	1055
@@E256	001	0042	1055	1057
@@E300	001	0043	1057	1059
@@E301	001	0044	1059	1061
@@E302	001	0045	1061	1063
@@E303	001	0046	1063	1065
@@E304	001	0047	1065	1067
@@E305	001	0048	1067	1069
@@E308	001	0049	1069	1071
@@E310	001	004A	1071	1073 2521
@@E315	001	004B	1073	1075
@@E316	001	004C	1075	1077
@@E320	001	004D	1077	1079
@@E325	001	004E	1079	1081
@@E330	001	004F	1081	1083
@@E335	001	0050	1083	1085
@@E338	001	0051	1085	1087
@@E340	001	0052	1087	1089
@@E350	001	0053	1089	1091
@@E351	001	0054	1091	1093 5179
@@E352	001	0055	1093	1095
@@E360	001	0056	1095	1097
@@E361	001	0057	1097	1099
@@E362	001	0058	1099	1101
@@E371	001	0059	1101	1103
@@E380	001	005A	1103	1105
@@E390	001	005B	1105	1107
@@E400	001	005C	1107	1109
@@E410	001	005D	1109	1111
@@E415	001	005E	1111	1113
@@E417	001	005F	1113	1115
@@E420	001	0060	1115	1117
@@E430	001	0061	1117	1119
@@E432	001	0062	1119	1121
@@E433	001	0063	1121	1123
@@E450	001	0064	1123	1125
@@E451	001	0065	1125	1127

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E460	001	0066	1127	1129
@@E461	001	0067	1129	1131
@@E464	001	0068	1131	1133
@@E465	001	0069	1133	1135
@@E466	001	006A	1135	1137
@@E467	001	006B	1137	1139
@@E469	001	006C	1139	1141
@@E470	001	006D	1141	1143
@@E471	001	006E	1143	1145
@@E473	001	006F	1145	1147
@@E474	001	0070	1147	1149
@@E475	001	0071	1149	1151
@@E476	001	0072	1151	1153
@@E477	001	0073	1153	1155
@@E478	001	0074	1155	1157
@@E479	001	0075	1157	1159
@@E480	001	0076	1159	1161
@@E481	001	0077	1161	1163
@@E482	001	0078	1163	1165
@@E483	001	0079	1165	1167
@@E484	001	007A	1167	1169
@@E485	001	007B	1169	1171
@@E486	001	007C	1171	1173
@@E487	001	007D	1173	1175
@@E488	001	007E	1175	1177
@@E489	001	007F	1177	1179
@@E490	001	0080	1179	1181
@@E491	001	0081	1181	1183
@@E492	001	0082	1183	1185
@@E493	001	0083	1185	1187
@@E494	001	0084	1187	1189
@@E495	001	0085	1189	1191
@@E496	001	0086	1191	1193
@@E497	001	0087	1193	1195
@@E498	001	0088	1195	1197
@@E500	001	0089	1197	1199
@@E501	001	008A	1199	1201
@@E530	001	008B	1201	1203
@@E531	001	008C	1203	1205
@@E535	001	008D	1205	1207
@@E540	001	008E	1207	1209
@@E541	001	008F	1209	1211
@@E542	001	0090	1211	1213
@@E543	001	0091	1213	1215
@@E544	001	0092	1215	1217
@@E545	001	0093	1217	1219
@@E546	001	0094	1219	1221
@@E547	001	0095	1221	1223
@@E548	001	FFFF	1427	
@@E549	001	0096	1223	1225
@@E550	001	0097	1225	1227
@@E551	001	0098	1227	1229
@@E552	001	0099	1229	1231 2737
@@E553	001	009A	1231	1233
@@E554	001	009B	1233	1235
@@E555	001	009C	1235	1237

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E556	001	009D	1237	1239
@@E558	001	009E	1239	1241
@@E570	001	009F	1241	1243
@@E571	001	00A0	1243	1245
@@E572	001	00A1	1245	1247
@@E573	001	00A2	1247	1249
@@E574	001	00A3	1249	1251
@@E575	001	FFFF	1429	
@@E578	001	00A4	1251	1253
@@E579	001	FFFF	1431	
@@E580	001	FFFF	1433	
@@E585	001	00A5	1253	1255
@@E595	001	FFFF	1435	
@@E597	001	FFFF	1437	
@@E598	001	FFFF	1439	
@@E600	001	00A6	1255	1257
@@E601	001	00A7	1257	1259
@@E602	001	00A8	1259	1261
@@E603	001	00A9	1261	1263
@@E604	001	00AA	1263	1265
@@E606	001	00AB	1265	1267
@@E607	001	00AC	1267	1269
@@E608	001	00AD	1269	1271
@@E609	001	00AE	1271	1273
@@E610	001	00AF	1273	1275
@@E611	001	00B0	1275	1277
@@E612	001	00B1	1277	1279
@@E613	001	00B2	1279	1281
@@E614	001	00B3	1281	1283
@@E700	001	00B4	1283	1285
@@E701	001	00B5	1285	1287
@@E710	001	00B6	1287	1289
@@E712	001	00B7	1289	1291
@@E713	001	00B8	1291	1293
@@E714	001	00B9	1293	1295
@@E715	001	00BA	1295	1297
@@E716	001	00BB	1297	1299
@@E717	001	00BC	1299	1301
@@E718	001	00BD	1301	1303
@@E720	001	00BE	1303	1305
@@E721	001	00BF	1305	1307
@@E723	001	00C0	1307	1309
@@E724	001	00C1	1309	1311
@@E725	001	00C2	1311	1313
@@E726	001	00C3	1313	1315
@@E727	001	00C4	1315	1317
@@E728	001	00C5	1317	1319
@@E729	001	00C6	1319	1321
@@E730	001	00C7	1321	1323
@@E732	001	00C8	1323	1325
@@E752	001	00C9	1325	1327
@@E753	001	00CA	1327	1329
@@E754	001	00CB	1329	1331
@@E755	001	00CC	1331	1333
@@E756	001	00CD	1333	1335
@@E757	001	00CE	1335	1337

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E758	001	00CF	1337	1339
@@E759	001	00D0	1339	1341
@@E760	001	00D1	1341	1343
@@E761	001	00D2	1343	1345
@@E762	001	00D3	1345	1347
@@E763	001	00D4	1347	1349
@@E764	001	00D5	1349	1351
@@E765	001	00D6	1351	1353
@@E766	001	00D7	1353	1355
@@E767	001	00D8	1355	1357
@@E768	001	00D9	1357	1359
@@E769	001	00DA	1359	1361
@@E770	001	00DB	1361	1363
@@E771	001	00DC	1363	1365
@@E772	001	00DD	1365	1367
@@E773	001	00DE	1367	1369
@@E774	001	00DF	1369	1371
@@E775	001	00E0	1371	1373
@@E776	001	00E1	1373	1375
@@E777	001	00E2	1375	1377
@@E778	001	00E3	1377	1379
@@E779	001	00E4	1379	1381
@@E780	001	00E5	1381	1383
@@E781	001	00E6	1383	1385
@@E782	001	00E7	1385	1387
@@E783	001	00E8	1387	1389
@@E784	001	00E9	1389	1391
@@E785	001	00EA	1391	1393
@@E786	001	00EB	1393	1395
@@E790	001	00EC	1395	1397
@@E791	001	00ED	1397	1399
@@E792	001	00EE	1399	1401
@@E793	001	00EF	1401	1403
@@E794	001	00F0	1403	1405
@@E795	001	00F1	1405	1407
@@E796	001	00F2	1407	1409
@@E797	001	00F3	1409	1411
@@E798	001	00F4	1411	1413
@@E800	001	FFFF	1441	
@@E801	001	FFFF	1443	
@@E802	001	FFFF	1445	
@@E803	001	FFFF	1447	
@@E804	001	FFFF	1449	
@@E900	001	00F5	1413	1415
@@E901	001	00F6	1415	1417
@@E902	001	00F7	1417	1419
@@E903	001	00F8	1419	1421
@@E905	001	00F9	1421	1423
@@E906	001	00FA	1423	1425
@@E910	001	00FB	1425	
@@M080	001	0C0B	2247	2892
@@M081	001	0C0F	2251	2885
@@M082	001	0C13	2255	2833
@@M083	001	0C17	2259	2898
@@M300	001	0C1B	2263	5227
@@T080	001	0C1F	2267	2249

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## CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 05/06/22 PAGE 117

@T081	001	0C26	2269	2253												
@T082	001	0C30	2271	2257												
@T083	001	0C38	2273	2261												
@T300	001	0C44	2275	2265												
@ARR	001	0008	0016	3400*	3401	3402*	3403	3571	3745	3760	3924	4184	4353	4572	4858	
				5142	5401	5538	5664									
@ASIGN	001	007C	0071	4884												
@ASTER	001	005C	0069	2458	2461	2527	4591	4593	4595	4597	4613					
@BCRDL	001	0050	0088													
@BE	001	0081	0043	5614												
@BF	001	0090	0052													
@BH	001	0084	0041													
@BL	001	0082	0042	4021												
@BLANK	001	0040	0065	3169	3928	3930	4581	4583	4868	5245	5265	5282	5406	5412	5700	
@BM	001	0082	0054													
@BNE	001	0001	0046	5397												
@BNH	001	0004	0044													
@BNL	001	0002	0045	2766	2771											
@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	2289	2290*	2292	2315	2316	2319	2320	2323	2324	2327	2328	2332	
				2341	2343	2345	2356	2357	2360	2361	2365	2366	2373	2376	2380	
				2390	2391	2393	2443	2446	2447	2462	2463	2478	2520	2524	2541*	
				2543	2544	2547	2552	2617*	2619	2620	2632	2632*	2634	2634*	2639	
				2679	2682	2683	2685	2718	2729	2730	2737	2738	2739	2761	2777	
				2785*	2801	2807	2811	2819	2820	2845	2845*	2862	2870	2871	2943	
				2946	2950	2950*	2974*	3127*	3129	3129*	3135	3388	3397	3399*	3400	
				3401	3402	3403	3405	3406	3406	3407	3408	3408	3410	3410	3411	
				3412	3412	3416	3416	3417	3421	3421	3422	3424	3424	3425	3425	
				3426	3426	3427	3427	3428	3428	3434	3435	3436	3436	3437	3442	
				3442	3443	3443	3445	3445	3451*	3566	3567	3569*	3570	3571	3575	
				3576	3576	3578	3580	3581	3582	3583	3587	3589	3590	3597	3598	
				3600	3602	3604	3605	3605	3607	3613	3613	3614	3618	3619	3621	
				3622	3624	3624	3625	3641	3641	3642	3642	3643	3645	3647	3647	
				3648	3653	3653	3654	3665	3669	3669	3676	3678	3679	3679	3680	
				3687	3689	3694	3694	3696	3699	3700	3703	3712*	3745	3750	3750	
				3752	3752	3753	3753	3754	3760	3765	3765	3766	3767	3767	3769	
				3769	3772	3772	3773	3774	3774	3775	3790	3791	3792	3792	3793	
				3793	3794	3794	3795	3795	3796	3796	3797	3798	3798	3799	3799	
				3800	3800	3801	3801	3802	3802	3807	3808	3921	3922*	3923	3924	
				3925	3940	3941	3949	3952	3958	3964	3970	3974	3976	4006	4019	
				4021	4025	4027	4027	4028	4028	4029	4037*	4070	4179	4181	4182*	
				4183	4184	4190	4197	4198	4204	4204	4205	4215	4217	4221	4222	
				4222	4225*	4349	4350	4351*	4352	4353	4355	4355	4356	4356	4357	
				4357	4362	4363	4368	4370	4370	4371	4375	4376	4378	4379	4383	
				4383	4384	4386	4386	4387	4387	4388	4388	4389	4395	4398*	4408	
				4568	4570	4571*	4572	4609	4625	4639	4663	4669	4678	4680*	4854	
				4856	4857*	4858	4861	4868	4869	4869	4870	4871	4871	4891	4894	
				4897	4906	4908	4908	4909	4910	4911	4913	4915	4917	4922	4922	
				4925	4932	4937	4941	4949	4957*	5138	5139	5140*	5141	5142	5153	

CROSS REFERENCE															
SYMBOL	LEN	VALUE	DEFN	REFERENCES											
				VER 15, MOD 00 05/06/22 PAGE 118											
				5155	5155	5157	5157	5158	5166	5168	5169	5188*	5217	5243	5262*
				5273	5273*	5279	5279*	5289	5299	5537	5539*	5547	5552	5552	5556
				5556*	5582	5583	5584	5584	5590	5590*	5612	5630*	5659	5661	5662*
				5664	5666	5668	5668	5678	5678	5683	5683	5684	5684	5685	5685
				5686	5686	5687	5687	5691	5692	5692	5695	5701	5702	5707	5708
				5708	5710*										
@BT	001	0010	0051												
@BZ	001	0081	0055												
@B1	001	0001	0063	2363	2527	2764	2767	2772	2775	2780	2780*	2822	2841	2873	2906
				3170*	3928	3930	3938	3942	3949	3964	3982	3997	4582	4582*	4583*
				4594	4597*	4598	4622	4636	4640	4869	4924	4981	4983	4984	5128
				5150	5177	5229	5246*	5261	5262	5264	5268	5271	5280	5281	5694
				5699											
@CADDR	001	0002	0142	2249	2253	2257	2261	2265	2503	2583	2585	2682	2692	2698	2718
				2812	3010	3060	3100	3406	3576	3619	3624	3641	3642	3653	3679
				3694	3731	3752	3753	3797	3798	3799	3800	3801	3802	4355	4356
				4357	4386	4387	4388	4413	4414	4415	4424				
@CARDL	001	0060	0087	0644											
@CHARA	001	00C1	0072	4887											
@CHARF	001	00C6	0073	5277											
@CHARR	001	00D9	0074	5274											
@CHARZ	001	00E9	0075	4889											
@CLOFF	001	0010	0094												
@CLON	001	0011	0093												
@COMMA	001	006B	0066	4647	5408	5572	5592								
@CPLUS	001	004E	0079												
@DADDR	001	0002	0140	2544	2547	2554	2561	2564	2566	2599	2679	2697	2709	2729	2789
				2923	2925	2961	2984	2991	3011	3026	3028	3071	3083	3167	3168
				3405	3470	3602	3622	3647	3719	3732	3957	3963	3969	3975	3984
				4004	4005	4006	4009	4212	4217	4222	4368	4370	4371	4397	4422
				5154	5154	5156	5273	5279	5299	5299					
@DBFR1	001	0004	0129												
@DBFR2	001	0005	0130	2543*	2553*	2600	2617	2696*	2761	3274	3276	4197			
@DCALK	001	0001	0081												
@DCBCY	001	0009	0115												
@DCBT1	001	0050	0117												
@DCNT	001	0003	0128	3272											
@DCST1	001	0040	0116												
@DCTRL	001	0000	0125	2751*	3137*										
@DCYL	001	0001	0126	3410*											
@DD2	001	0003	0030												
@DGET	001	0001	0134	3189	3197	3217	3233	3241	4047	4234	4421				
@DOLAR	001	005B	0068	4880											
@DOP2	001	0004	0028	3401*	3405*	3406*	3468	3469	3642*						
@DPLNG	001	0006	0132	2600	3407	3466									
@DPOS	001	0000	0133												
@DPUT	001	0002	0135	2652	2663	2751	3137	3205							
@DSAD	001	0002	0127	2544*	2554*	2566*	2697*	2709*	2925*	2961*	2991*	3011*	3028*	3083*	3270



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
@DVRFY	001	0031	0136	
@DWAIT	001	00FF	0137	
@DWBCY	001	0005	0103	
@DWSIZ	001	00C0	0105	
@DWTB1	001	0003	0104	
@DZERO	001	00F0	0064	2304
@D1	001	0002	0026	5166 5678
@EOF	001	001C	0077	
@EOFTC	001	0075	0162	
@EOS	001	001E	0076	2355 2378 2445 4645 4935 5285 5414 5570 5599 5605 5613
@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	
@HDRLN	001	0007	0092	0672
@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	0646
@MAPEN	001	0005	0089	
@MINCR	001	2000	0083	
@MINUS	001	0060	0080	2359
@NOP	001	0080	0040	2397 2493 2550 2551 2804 2809 2823 2824 2856 2857 2874 2875 3447 3575 3589 3618 4189 4221 4375 4642 5191 5241 5548 5607 5673 5747
@NUMBR	001	007B	0070	4882
@OPD2	001	0004	0029	
@OP1	001	0003	0027	2293* 2368* 2375* 2545* 2552* 3397* 3403* 3567* 3570* 3571* 3576* 3581* 3624* 3653* 3661 3666 3682 3745* 3748 3760* 3789 4036 4038 4040 4181* 4183* 4184* 4349* 4352* 4353* 4570* 4572* 4650* 4668 4856* 4858* 4861* 4871* 4922* 5139* 5141* 5142* 5401* 5537* 5538* 5555* 5564* 5589* 5661* 5664*
@OP2	001	0005	0031	3749
@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	2255 2259 2263
@PRINT	001	0040	0152	0154 2247 2251 2420 2429
@PSR	001	0004	0015	4669* 4678* 4897* 5626*



## CROSS REFERENCE

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@PWAIT	001	00FF	0158												
@P1IAR	001	0020	0018												
@P2IAR	001	0040	0019												
@Q	001	0001	0024	2550*	2551*	2766*	2771*	2804*	2805*	2824*	2856*	2857*	2875*	2888*	2895*
				3448	3589*	3600*	3618*	3625*	3631	3696	3765*	3772*	3933	4022	4024
				4190*	4221*	4362*	4375*	4663*	4669	4678	4985	5180*	5243*	5420	5549*
				5554*	5586	5588*	5643	5741	5745						
@REGL	001	0002	0012	5564											
@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	5612											
@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	4611	4627										
@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	2615	2650	2805	2882	2888	2889	2895	3600	3607	3625	3696	4023
				4190	4362	5180	5243	5398	5409	5549	5554	5586	5588	5743	
@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	2761	4583*	4640	4640	4839	4915	5150	5152	5156	5262	5273	5279
				5289											
@VQ	001	0001	0025	5229*	5248										
@WSFIT	001	0500	0101												
@WSTBL	001	0503	0102												
@XR	001	0002	0014	2292*	2293	2304	2331	2331*	2355	2359	2363	2363*	2364	2368	2369
				2369*	2375	2378	2379*	2392	2392*	2445	2455*	2456	2458	2461	2473
				2477	2503	2506*	2509*	2511*	2545	2553	2554	2561	2564	2566	2598*
				2621*	2639	2685	2695*	2696	2697	2698	2784*	2862	2910	2910*	2942*
				2946	2949	2949*	2975*	3133*	3134	3135	3570	3577*	3578	3579*	3580
				3581	3582	3583	3593	3597	3601	3601*	3602	3604	3608	3608*	3619
				3621	3622	3660	3667	3667*	3676	3677	3677*	3678	3687	3698	3698*
				3699	3703	3713*	3807	3925	3926*	3927	3942	3955	3957	3961	3963
				3967	3969	3973	3975	3982	3984	3997	3999	4004	4005	4006	4009
				4030	4035*	4071	4183	4197*	4198	4199	4199*	4201	4203	4203*	4211

[illegible]

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
DL2LST	001	139A	3465	3408* 3410* 3412* 3416 3417* 3421* 3424* 3428 3434* 3442* 3445* 3450 3467
DL2PHY	001	139C	3467	
DL2RAD	002	13A1	3470	3421 4004* 4191*
DL2SAD	005	1321	3468	3428* 3435* 3436* 3437 3443* 3445
DL2SEC	005	132A	3469	3416* 3422 3425* 3426 3426* 3427 3427* 3436
DL2SWH	003	137F	3448	
DL2TSD	001	0083	3394	3435
DL2000	001	130D	3398	3388 3399
DL2001	005	131D	3405	3401* 3468
DL2002	005	1326	3407	3405* 3406* 3469
DL2005	004	132B	3408	3411
DL2006	004	1339	3412	3409
DL2008	004	1356	3426	3423
DL2010	003	136C	3437	
DL2100	004	137A	3445	3438
DL2110	003	137E	3447	3448
DL2900	004	1387	3451	3397* 3447
DL2910	004	138B	3452	3403*
KDE#DL	001	1248	3263	2772* 2822* 3264
KDE#SV	002	1247	3260	2767* 2873* 3261
KDEALL	003	0D3C	2408	2364
KDEBF1	001	1239	3276	2503
KDEBLK	002	0D3E	2412	2395
KDEBUF	001	1559	5792	3244
KDECNT	001	1249	3267	2620* 2623 2636* 3268
KDEDL#	001	06FB	2216	2769 2772 2776* 2841* 2937* 3030*
KDEDP1	001	1228	3204	2543* 2544* 2660 2696* 2697* 2925* 2929 2961* 2965 3028* 3034 3083* 3087
KDEDP2	001	122E	3216	2553* 2554* 2566* 2570 2617 2652* 2655 2709* 2713 2991* 2995 3011* 3021
KDEDP3	001	1234	3232	3121 3137* 3141 3276
KDEDS2	001	0002	2206	2364
KDEDS3	001	0003	2207	2369
KDEDS6	001	0006	2208	
KDEDS7	001	0007	2209	2819* 2870*
KDED09	001	0009	2210	2395*
KDED20	001	0014	2211	
KDED34	001	0022	2212	2820* 2871*
KDEECT	001	1249	3268	2944* 2947* 3126* 3130*
KDEIDR	001	124A	3282	2921* 2939* 2987 2990* 3057 3108
KDEKDE	001	121C	3188	2600 2761
KDELET	004	0C07	2236	
KDELN2	001	0002	2200	2395
KDELN3	001	0003	2201	2364
KDELN7	001	0007	2202	3170
KDELN9	001	0009	2203	
KDEL08	001	0008	2425	2430
KDEL35	001	0023	2416	2421
KDEMS2	003	0CDE	2410	2395* 2422 2431 2819* 2820* 2870* 2871* 3134*
KDENDR	001	123F	3274	5774
KDENUL	001	123A	3240	2488 2663* 2666 2743 2751* 2934 3039 3146 3174 3270 3272 3274
KDEOLD	002	1245	3258	2564* 2692 2709
KDEONE	001	123D	3272	2619 2636 2822 2841 2843 2873 2906 2908 2947 3130 3136
KDEPP2	001	0D3F	2419	2828 2879
KDEPP4	001	0D43	2428	3151

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
KDEREL	001	0080	3284	2921 2987 2990 3057
KDESAV	002	1245	3255	3256 3258
KDESPU	001	1222	3196	2604
KDESV#	001	06FD	2215	2216 2764 2767 2775* 2906*
KDEZER	001	123C	3270	2547 2561 2583 2692 2698 2718 2764 2775 2789 2984 3071 3167
KDEZR2	002	1243	3253	2682 3012 3061 3101
KDE000	001	0C8F	2288	2236 2455 2456 5758
KDE008	002	1241	3251	2812
KDE050	003	0CCB	2331	2317 2321 2325
KDE075	004	0CD1	2340	2329
KDE1BF	001	0008	3287	2939 3108
KDE1DP	002	122D	3213	3100
KDE150	003	0CDB	2345	
KDE160	003	0CDE	2355	2302 2410
KDE162	003	0D16	2378	2374
KDE165	004	0D19	2379	2368* 2375*
KDE170	003	0D23	2391	
KDE2DP	002	1233	3225	3010 3060
KDE200	004	0D47	2442	2305
KDE205	003	0D6A	2473	2459
KDE220	003	0D71	2477	
KDE230	004	0D96	2509	2504
KDE240	004	0D9A	2511	2507
KDE243	004	0DB9	2531	2522
KDE245	004	0DBD	2541	2525 2528
KDE250	005	0DCE	2547	
KDE255	001	00FF	2213	2331 2392 2779 2779*
KDE256	001	0100	2204	2779 2780
KDE260	004	0DEB	2557	2573
KDE270	006	0E0D	2583	2548 2562 2690
KDE280	004	0E28	2598	2293* 2817 3017 3066 3106
KDE300	003	0E3E	2615	2550* 2590
KDE310	005	0E45	2619	2615
KDE320	003	0E5D	2634	2637
KDE350	003	0E6E	2650	2551*
KDE360	004	0E71	2652	2719
KDE365	004	0E75	2654	
KDE370	004	0E7B	2659	2650 2680 2699
KDE400	005	0E8F	2679	2624
KDE410	004	0EBA	2695	2545* 2552*
KDE420	006	0ED0	2709	2693
KDE500	005	0EEB	2729	2398
KDE510	004	0F0D	2742	2736
KDE512	004	0F38	2769	2765
KDE516	006	0F4C	2775	2762
KDE518	004	0F52	2776	2770 2773
KDE520	004	0F6D	2785	3000 3047
KDE560	003	0F86	2801	2787 2846 2976
KDE565	003	0F94	2807	2802
KDE570	003	0F9A	2809	2805* 2857*
KDE580	004	0F9D	2811	
KDE585	003	0FC3	2823	2771* 2824*
KDE590	006	0FE2	2843	2823 2911
KDE600	004	0FF2	2856	2808
KDE610	004	0FF6	2857	2809

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
KDE620	004	0FFA	2859	
KDE625	003	1015	2874	2766* 2875*
KDE630	003	1022	2882	2804* 2888*
KDE635	003	102F	2889	2856* 2882 2895*
KDE640	004	103C	2897	2889
KDE645	006	104E	2908	2874
KDE650	003	1054	2910	
KDE670	004	105B	2921	2860
KDE680	004	1093	2946	2951
KDE690	006	10AA	2961	2948
KDE700	006	10CC	2984	2844
KDE730	004	10D5	2987	2790
KDE750	006	10F6	3010	2988
KDE800	004	1146	3057	2985
KDE830	004	1175	3080	3058
KDE840	006	117C	3083	3072
KDE860	006	118B	3100	2791 3069 3081
KDE870	004	119F	3106	
KDE880	004	11A3	3108	
KDE900	004	11AA	3120	
KDE940	003	11C0	3129	3131
KDE950	004	1212	3173	3090 3109
KDE990	004	1218	3177	
SALBSE	001	189B	4879	4854 4857
SALCNT	001	1937	4976	4870* 4908* 4911 4915 4932
SALCT6	001	0006	4839	
SALCT8	001	0008	4837	
SALERR	003	18B1	4985	4897
SALFST	001	0001	4973	4894 4906
SALIDR	001	1936	4966	4851* 4891 4894 4906* 4909 4937 4949*
SALND0	004	192E	4957	4856*
SALND2	004	1932	4958	4858*
SALPHR	001	193A	4980	4610 4626 4640 4982 4983 4984
SALPHS	002	1945	4982	4871
SALPH6	001	187F	4855	4638
SALPH8	001	187B	4848	4608 4624
SALPR6	001	1942	4984	4869*
SALPR7	001	1943	4983	4868* 4869
SAL001	002	1939	4979	4908 4922
SAL008	001	0080	4970	4851 4891 4909 4937
SAL100	003	188D	4868	
SAL200	003	189B	4880	4925
SAL250	003	18B0	4888	4985
SAL350	003	18C9	4897	4913 4917 4941
SAL375	004	18CC	4898	4650* 4668 4861*
SAL400	003	18D3	4906	4881 4883 4885 4890
SAL425	004	18D6	4908	4892 4896
SAL450	003	18ED	4915	4910
SAL500	004	18F7	4922	4914
SAL525	005	18FB	4923	4871* 4922*
SAL750	003	1906	4932	4888
SAL755	004	1909	4933	
SAL760	003	1924	4941	4936 4939
SAL775	004	1927	4942	4934
SAL800	003	192B	4949	4899
SCACNT	002	1A91	5426	4643 5416* 5417* 5603

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SCACOF	001	0087	5398	4607
SCACOM	001	0001	5397	4651
SCAINC	001	0001	5396	5405 5411
SCAMMA	003	1A6E	5420	4607* 4651*
SCANIT	001	1A51	5400	2301 2371 4623 4637 4652 4942 5557 5565 5591 5598
SCASVE	002	1A8F	5425	5402* 5417
SCASV1	001	1A8E	5424	
SCA100	003	1A60	5405	5407
SCA200	003	1A63	5406	5404
SCA250	003	1A6D	5409	5420
SCA300	003	1A70	5411	5413
SCA400	004	1A80	5416	5409
SCA500	004	1A8A	5419	5401* 5415
SFIASST	001	005C	4060	3938
SFIBSE	003	1597	4067	3922 3923
SFICTR	001	166B	4044	3940* 3949 3952 3958* 3964* 3970* 3976* 4019
SFIDPL	001	166C	4047	4008
SFIEFE	001	00FE	4063	3958 4019
SFIEFF	001	00FF	4064	4046
SFIEND	001	1674	4068	
SFIERR	001	0469	2218	4000 4059
SFIETD	001	0006	4069	4025
SFIEXT	004	166A	4040	3924*
SFIE02	001	0002	4061	3970
SFIE03	001	0003	4062	3952 3976
SFIE06	001	0006	4065	3955 3961 3967 3973
SFIE07	001	0007	4066	3957 3963 3969 3975
SFIFND	003	1645	4024	
SFINDF	001	1559	3920	2475 5792
SFINTR	001	1673	4052	4025 4028 4053
SFIONE	001	1674	4055	4027
SFIRDA	002	166E	4048	4006*
SFISBR	004	1666	4038	3921*
SFISTR	003	1642	4022	
SFISXR	004	1662	4036	3925*
SFITTC	001	1672	4051	3941* 4027* 4028
SFIVOL	004	157A	3933	
SFI050	004	1579	3932	3933
SFI100	004	1580	3938	3931
SFI200	003	1597	3949	4021 4029 4067
SFI210	003	15A6	3955	3974
SFI220	003	15B7	3961	3950
SFI230	003	15C8	3967	3951 3962
SFI240	003	15D9	3973	3953 3968
SFI320	003	15EA	3982	3939
SFI340	005	15F0	3984	3943
SFI350	004	15F5	3988	3934 3959 3965 3971 3977
SFI500	003	160A	3997	3929
SFI505	003	1610	3999	3983
SFI510	005	1617	4004	3998
SFI520	004	1630	4013	3993
SFI540	003	163B	4019	3990
SFI542	003	1641	4021	4022
SFI543	003	1644	4023	4024
SFI545	003	1658	4030	3956 4023 4026
SFI550	004	165F	4035	3992 4015 4020 4036



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SFI560	004	1663	4037	4038
SFI570	004	1667	4039	4040
SGECNT	001	16FE	4241	4198* 4204* 4215
SGEC01	002	1700	4242	4204
SGEDPL	001	16F6	4233	4193 4197 4217* 4219 4222*
SGEEND	001	1701	4244	
SGERAD	002	16FD	4240	4222
SGETDB	001	1675	4180	2733 3988 4179 4182
SGE050	003	168B	4189	4190* 4221*
SGE055	003	16A3	4197	4189
SGE060	005	16AD	4201	4205
SGE070	004	16C3	4211	4202
SGE080	004	16D9	4217	
SGE900	004	16EA	4225	4181* 4214 4216
SGE901	004	16EE	4226	4183*
SGE902	004	16F2	4227	4184*
SLLBLW	002	1B80	5648	5626
SLLDSH	001	0060	5641	5558 5582
SLLIND	003	1B5B	5643	
SLLINE	001	1C09	5787	5539
SLLIST	001	1A92	5535	2340 5793
SLLLN2	001	0002	5640	5539 5547 5552 5555 5583 5584 5589
SLLRET	001	0087	5644	
SLL000	001	0000	5636	5613
SLL001	001	0001	5637	5552 5584
SLL002	001	0002	5638	5556 5582* 5612*
SLL003	001	0003	5639	5547* 5552 5583* 5584 5590
SLL100	004	1A9E	5541	5608
SLL110	003	1AAD	5548	5549*
SLL115	004	1AB7	5552	5548
SLL120	003	1AC8	5556	5550 5553
SLL125	004	1AF8	5575	5564* 5571
SLL130	003	1B03	5582	5568
SLL140	003	1B23	5590	5585 5587
SLL150	003	1B2A	5592	5559
SLL160	004	1B40	5603	5593
SLL165	003	1B4D	5607	5554* 5586 5588* 5601 5604
SLL180	003	1B54	5612	5543
SLL190	003	1B5A	5614	5643
SLL195	004	1B5D	5616	5573 5606
SLL200	004	1B64	5622	5555* 5589* 5607
SLL210	004	1B6F	5625	5542 5567 5618
SLL215	004	1B73	5626	5577 5600 5624
SLL220	004	1B77	5630	5537* 5614
SLL230	004	1B7B	5631	5538*
SMAEND	001	1BB2	5783	2780*
SMALES	001	0C8F	5758	5759
SMBFDA	001	0CA9	5764	2599 2729* 3957* 3963* 3969* 3975* 3984* 4005* 4191 5154* 5177 5299*
				5765
SMDAAD	001	0CB5	5771	4397*
SMFNAM	001	0CA4	5761	4380 4610* 5762
SMFUDA	001	0CB9	5773	2679 4009* 4212*
SMIND1	001	0CA5	5762	2473* 2477 2589 2689 2731* 2735 2816 3016 3065 3105 3708* 3944*
				3989 3991 4014 4031* 4188* 4206* 4213 4394* 4407* 5763
SMNDBA	001	123F	5774	3579 3797
SMNDEA	001	0CAF	5767	5768

## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
SMNETD	001	0CB3	5769	2583* 2584* 2585* 2683* 2811* 2812* 3010* 3060* 3100* 3577 5770
SMNSCT	001	0CB1	5768	5769
SMNULT	001	0CAD	5766	5767
SMPDB1	001	17B2	5780	4237 5781
SMPEAD	001	0CB7	5772	3133 4211* 5773
SMPSWD	001	0C9C	5760	2458 2461 2527 2730* 3928 3938 4201 4581* 4582 4582* 4593* 4597*
				4613 4626* 5761
SMUDBA	001	0CAB	5765	2503 2541 4396* 5766
SMUDB1	001	17B2	5781	2509 2779 2779* 2782* 2784 2859 2908* 2923* 2925 2941* 2942 2961
				2973* 2975 3026* 3028 3068 3071* 3080 3083 3101* 3126 3127 3136*
				3213 3236 4050 4416 5782
SMUDB2	001	19B2	5782	2506 2780 2785 2786 2789 2843* 2923 2941 2944 2984 2991 3011
				3012* 3026 3061* 3225 4417 5783
SMUDEA	001	0CA7	5763	2511 2585 2621 4393* 4406* 5764
SMUPEN	001	0CB5	5770	5771 5772
SMVOID	001	0C94	5759	3930 4583* 4640* 5152 5289 5760
SM1FNE	001	0080	5775	2477 4014 4031 4394 4407
SM1NPD	001	0040	5776	
SM1PDS	001	0010	5778	3991 4213
SM1PNF	001	0008	5779	2477 2735 3944 3989 4188 4206
SM1STN	001	0020	5777	2589 2689 2816 3016 3065 3105 3708
SRCACT	002	17A4	4415	4357* 4363 4387 4388* 4395
SRCBA1	002	17A6	4416	4355
SRCBA2	002	17A8	4417	4356
SRCBFR	002	17B1	4424	4370*
SRCBF1	002	17A0	4413	4355* 4357 4386* 4388
SRCBF2	002	17A2	4414	4356* 4370 4386 4387*
SRC CNT	001	17A9	4418	4376* 4378 4383*
SRC C01	002	17AB	4419	4368 4383
SRC DAD	002	17AE	4422	4371*
SRC DPL	001	17AC	4420	4373
SRC GET	001	17AC	4421	
SRC HFN	001	1701	4348	4013
SRC SCT	001	17AF	4423	
SRC010	004	1705	4351	4350 4351
SRC020	004	171F	4359	4389
SRC030	004	1743	4376	4369
SRC035	005	1750	4380	4384
SRC040	004	1774	4393	4381
SRC050	003	177C	4395	4408
SRC055	003	1762	4385	4362* 4375* 4379
SRC060	004	1794	4406	4385
SRC900	004	1788	4398	4349*
SRC910	004	178C	4399	4352*
SRC920	004	1790	4400	4353*
STOCLN	002	14BF	3723	3641
STOC48	002	14C5	3726	3769 3774
STOENA	002	14D4	3736	
STOENC	002	14CE	3733	3582* 3790* 3792 3792* 3793 3794* 3795* 3796* 3797* 3798* 3799 3800*
				3801
STOENL	001	0004	3732	3578 3613 3643 3687
STORAM	002	14CC	3731	3679* 3752 3753 3802*
STORCS	006	14DB	3763	3619 3647 3694 3767* 3769* 3774*
STORCW	004	14BB	3720	3647 3694
STORC0	006	14DA	3762	3765 3766* 3775*
STORC1	002	14CA	3729	3605 3665 3669 3700 3750 3772 3798



## CROSS REFERENCE

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SYMBOL	LEN	VALUE	DEFN	REFERENCES
STORDR	002	14C1	3724	
STOREC	004	14BD	3721	3703
STOREL	002	14C3	3725	3679 3800
STORET	004	147F	3682	3624
STORE1	001	0001	3568	3593
STORE2	001	0002	3730	3769 3774 3796
STORHL	002	14D2	3735	3796
STORIN	001	13A2	3565	2587 2687 2814 3014 3063 3103
STORNM	002	14C7	3727	3802
STORPA	005	145B	3661	3604* 3641* 3642 3653
STORWA	004	14BB	3722	3622
STORWC	001	14C8	3728	3583* 3587 3590 3605* 3669* 3750*
STORWE	004	14BD	3719	3578* 3597 3602 3613 3621 3654 3699 3720 3721 3722 3736 3807
STORWK	006	14DD	3761	3613* 3643* 3687* 3762 3763 3767
STOR10	003	13EA	3600	3588
STOR14	003	13ED	3601	3591
STOR15	004	13F0	3602	3609
STOR20	004	140B	3613	3603
STOR30	003	142B	3630	3566 3569 3620 3631
STOR31	003	142C	3631	3575* 3607*
STOR35	004	142E	3636	3576* 3624* 3648
STOR38	004	1432	3641	3630
STOR39	005	143A	3643	3642*
STOR40	005	1458	3660	3649 3661
STOR45	005	1460	3666	3580*
STOR46	005	145D	3665	3666
STOR47	004	1480	3687	3606
STOR48	004	14A3	3703	3695
STOR50	003	14D5	3745	3680 3803
STOR51	006	14D8	3747	3748 3749 3754
STOR52	006	14DB	3748	3676* 3752* 3801*
STOR53	006	14DD	3749	3678* 3753* 3761 3799*
STOR55	004	14DE	3750	
STOR60	003	14F0	3760	3614 3645 3689
STOR65	004	14FE	3769	3773
STOR66	004	150C	3774	3770
STOR70	004	1517	3787	3589* 3600* 3696 3734
STOR80	004	14AA	3708	3697 3787
STOR90	004	14AE	3712	3567* 3598 3655 3670 3681 3701 3704
STOR95	004	14B2	3713	3570*
STOR99	004	14B6	3714	3571*
STOSAV	004	1516	3789	3791* 3793* 3794 3795
STO047	004	147C	3681	3682
STO048	005	149B	3700	3581* 3808
STO064	003	1510	3775	3765* 3772*
STO067	004	1513	3776	3745* 3751 3760* 3789
STO39A	003	1449	3649	3618* 3625*
STO39B	005	1450	3654	3653*
STO70A	002	14D0	3734	3576
SUFBSE	001	17E5	4606	4568 4571
SUFFER	001	17B2	4569	2442 5780
SUFND0	004	1873	4680	4570* 4670
SUFND2	004	1877	4681	4572*
SUF100	004	17E5	4607	4592 4596
SUF200	003	181D	4636	4614
SUF400	003	1828	4639	4669

## CROSS REFERENCE

SYMBOL   LEN   VALUE   DEFN   REFERENCES   VER 15, MOD 00   05/06/22   PAGE 129

SUF600	003	1831	4641	4612	4628		
SUF625	003	1834	4642				
SUF650	004	184A	4650	4644			
SUF680	004	1862	4664	4648	4663*	4665	
SUF750	003	186A	4669	4609	4625	4639	4653
SUF780	003	186D	4670	4678			
SUF800	003	1870	4678	4642	4646	4662	
SVOBSE	001	1958	5151	5138	5140		
SVOBUF	001	1A92	5793	5242*	5288		
SVOCT1	001	199F	5200	5157*	5201		
SVOCT2	001	19A0	5204	5155*	5166	5205	
SVOEND	001	00FF	5129	5242*	5288		
SVOERR	001	0469	4059	5191			
SVOINP	001	0100	5128	5242	5288		
SVOLID	001	1946	5137	3932			
SVOLN1	001	0001	5125	5155	5157		
SVOONE	001	19A1	5207	5155	5157		
SVO001	001	00F1	5126	5268			
SVO002	001	00F2	5127	5271			
SVO100	005	1958	5152	5158			
SVO200	003	1969	5156	5153			
SVO260	004	1980	5177	5301			
SVO270	004	198B	5180	5168	5217	5291	
SVO274	004	198F	5188	5139*	5178		
SVO276	004	1993	5189	5141*			
SVO280	004	1997	5191	5180*			
SVO290	004	199B	5192	5142*			
SVO300	004	19A2	5215	5169			
SVO310	004	19A6	5216				
SVO315	003	19AA	5217				
SVO320	001	19AD	5225	5272	5278	5286	
SVO330	001	19BF	5239	5243*			
SVO333	004	19CB	5245	5241			
SVO335	004	19D5	5248	5229*			
SVO350	004	19DD	5250	5251			
SVO360	003	19F3	5264	5266			
SVO400	003	1A0D	5274	5269			
SVO440	003	1A1D	5280	5275			
SVO445	003	1A20	5281	5283			
SVO450	005	1A37	5289				

TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY = 0

OL105 I THE CODE LENGTH OF #KDELE IS 7153 DECIMAL.  
OL103 I TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 23  
NAME-#KDELE,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-R,CATEGORY-000

START ADDRESS	CATEGORY	NAME AND ENTRY	CODE LENGTH HEXADECIMAL	DECIMAL
0C00	0	#KDELE	1BF1	7153
OL100	I	THE TOTAL CORE USED BY #KDELE IS 7153 DECIMAL.		
OL101	I	THE START CONTROL ADDRESS OF THIS MODULE IS 0C00.		
OL104	I	TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 28		
		NAME-#KDELE,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-O		