

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

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

0000	1	#KDNT	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	*	@DIR	EXP-N
	726	*	@ERM	EXP-N
	1348+		PRINT	ON
	1349	*	@CY0	EXP-N
	1422+		PRINT	ON
	1423	*	@WKA	EXP-N
	1493+		PRINT	ON
	1494	*	@SPF	EXP-N
	1957+		PRINT	ON

#KDNTTE - ENTER DISK SYSTEM MANAGEMENT

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 08/07/22 PAGE 3
		1959		*****	
		1960	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		1961	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		1962	*		*
		1963		*****	
		1964	*	STATUS -	*
		1965	*	VERSION 1 MODIFICATION 0	*
		1966	*		*
		1967	*	FUNCTION	*
		1968	*	KDENTER SYNTAX, CHECKS THE INPUT LINE FOLLOWING 'ENTER SCP' AS THE	*
		1969	*	ONLY VALID CHARACTERS. IF DES IS AVAILABLE ON THE SYSTEM DISK,	*
		1970	*	KDENTER WILL READ THE IPL BOOTSTRAP SECTOR TO LOW CORE, SET THE	*
		1971	*	APPROPRIATE INDICATORS, AND EXECUTE THE COMMERCIAL SYSTEM.	*
		1972	*		*
		1973	*	ENTRY POINTS	*
		1974	*	THE ONLY ENTRY POINT TO KDENTER IS THE FIRST INSTRUCTION IN THE	*
		1975	*	PROGRAM, LABELLED #KDNTTE.	*
		1976	*		*
		1977	*	INPUT	*
		1978	*	INPUT TO KDENTER IS THE COMMAND LINE IN THE INPUT BUFFER, THE	*
		1979	*	VOLUME LABEL OF THE IPL'ED DISK, AND THE DES NUCLEUS INITIALIZA-	*
		1980	*	TION PROGRAM BOOTSTRAP, IF IT IS PRESENT.	*
		1981	*		*
		1982	*	OUTPUT	*
		1983	*	OUTPUT FROM KDENTER IS AN UPDATE TO THE DISK ERROR LOGS AND ENTRY	*
		1984	*	TO THE COMMERCIAL SYSTEM.	*
		1985	*		*
		1986	*	EXTERNAL REFERENCES	*
		1987	*	* \$XRSV - INDEX REGISTER 2 (@XR) SAVE AREA.	*
		1988	*	* \$BSADR - SYSTEM PROSRP FILE BASE ADDRESS	*
		1989	*	* \$DISKN - ENTRY POINT FOR DISK IOCR.	*
		1990	*	* \$CIMSK - INQUIRY REQUEST MASK BYTE.	*
		1991	*	* \$CAERR - ERROR CODE SAVE AREA.	*
		1992	*	* \$CAERK - ENTRY POINT TO ERROR PROGRAM.	*
		1993	*	* SUPDAT - MODULE TO UPDATE THE DISK ERROR LOGS.	*
		1994	*	* SUPBUF - ONE SECTOR BUFFER FOR DISK I/O IN SUPDAT.	*
		1995	*	* SCANIT - MODULE TO SCAN DELIMITERS	*
		1996	*	* SCACNT - AREA WHICH CONTAINS %UMBER OF CHARACTERS SCANNED	*
		1997	*	ACROSS BY SCANIT.	*
		1998	*	* SCAMMM - SCANIT INDICATOR SET TO ALLOW COMMA SCANNING.	*
		1999	*		*
		2000	*	EXITS, NORMAL	*
		2001	*	NORMAL EXIT FROM KDENTER IS TO CORE LOCATION X'0000' TO IPL THE	*
		2002	*	COMMERCIAL SYSTEM.	*
		2003	*		*
		2004	*	EXIT, ERROR	*
		2005	*	ERROR EXIT FROM KDENTER IS TO \$CAERK TO LOAD THE ERROR PROGRAM,	*
		2006	*	WITH THE ERROR CODE SET IN \$CAERR.	*
		2007	*		*
		2008	*	TABLES/WORKAREAS	*
		2009	*	* ONE SECTOR BUFFER TO CONTAIN THE VOLUME LBL OF THE IPL'ED DISK.	*
		2010	*	* ONE SECTOR BUFFER TO CONTAIN THE DES N.T.P. BOOTSTRAP.	*
		2011	*	* ONE SECTOR BUFFER TO CONTAIN THE SUPDAT INFORMATION.	*
		2012	*		*
		2013	*	ATTRIBUTES	*
		2014	*	RELOCATABLE	*

#KDNTTE - ENTER DISK SYSTEM MANAGEMENT

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	08/07/22	PAGE	4
		2015	*					*
		2016	*	CHARACTER CODE DEPENDENCY				*
		2017	*	NONE				*
		2018	*					*
		2019	*	NOTES				*
		2020	*	ERROR PROCEDURES				*
		2021	*	EXIT IS MADE TO \$CAERK TO LOAD THE ERROR PROGRAM IF ANY ERROR				*
		2022	*	CONDITION IS DETECTED.				*
		2023	*					*
		2024	*	RESISTER USAGE				*
		2025	*	@XR IS USED TO POINT TO ITEMS IN THE INPUT LINE BUFFER.				*
		2026	*	@BR IS USED AS A BASE REGISTER FOR ADDRESSING.				*
		2027	*					*
		2028	*	SAVED/RESTORED AREAS				*
		2029	*	NONE				*
		2030	*					*
		2031	*	MODIFICATION CONSIDERATIONS				*
		2032	*	NONE				*
		2033	*					*
		2034	*	REQUIRED MODULES				*
		2035	*	* THE FOLLOWING SOURCE MODULES ARE NEEDED TO ASSEMBLE THE				*
		2036	*	'ENTER' PROGRAM:				*
		2037	*	* SCANIT - DELIMITER SCAN ROUTINE				*
		2038	*	* SUPDAT - UPDATE VOLUME ERROR RATE TABLES				*
		2039	*	* THE FOLLOWING EQUATE MODULES ARE ALSO REQUIRED:				*
		2040	*	* @SYSEQ - COMMON SYSTEM EQUATES				*
		2041	*	* @FXDEQ - NUCLEUS ADDRESSES AND INDICATORS				*
		2042	*	* @CANEQ - SYSTEM LOCATION EQUATES				*
		2043	*	* @CY0E0 - CYLINDER ZERO EQUATES				*
		2044	*	* @WKAEQ - SYSTEM WORKAREA DISK ADDRESS EQUATES				*
		2045	*					*
		2046	*	OTHER				*
		2047	*	NONE				*
		2048	*	*****				*

#KDNTTE - ENTER DISK SYSTEM MANAGEMENT

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 08/07/22 PAGE 5
				05FF	2050	KDNTER EQU *	BEGINNING OF KEYWORD ENTER PGM	
					2051	* HDR #KDNTTE,1	GENERATE PROGRAM HEADER	
					2052	*****		
					2053	* PROGRAM KEADER FOR DISK LOAD	*	
					2054	*****		
					2055	*#\$KDNT EQU X'0300'	DISK ADDR OF #KDNTTE	
					2056	*#\$KDN EQU X'0C00'	CORE LOAD ADDRESS OR #KDNTTE	
					2057	*#\$@KDN EQU 003	SECTOR CNT OF #KDNTTE	
0C00					2058	ORG #\$\$\$KDN	CORE LOAD ADDRESS	
				0C00	2059	\$\$\$\$\$ EQU *	FIRST LOCATION IN PROGRAM	
0C00	7BD2C4D5E3C5			0C05	2060	DC CL6 '#KDNTTE'	PROGRAM NAME	
0C06	18			0C06	2061	DC IL1 '024'	PROGRAM NUMBER OF #KDNTTE	
				0C07	2062	#KDNT EQU *	ENTRY POINT TO PROGP4M	
					2063	*** END OF EXPANSION ***		
				0C0B	2065	USING KDN100,@BR	BASE VALUE	
0C07	C2 01 0C0B				2066	LA KDN100,@BR	SET UP BASE REGISTER	
0C0B	35 02 03C7				2067	KDN100 L \$XRSAB,@XR	POINT XR TO BYTE AFTER KEYWORD	
					2068	*		
0C0F	BD 1E 00				2069	CLI KDN000(,@XR),@EOS	IS XR REF AN EOS ?	
0C12	F2 81 82				2070	JE KDN750	YES-ERROR FOR REG PARAM MISSING	
					2071	*		
0C15	BD 40 00				2072	CLI KDN000(,@XR),@BLANK	IS X REF A BLANK ?	
0C18	F2 01 83				2073	JNE KDN800	IF NOT, GIVE SYNTAX ERROR	
					2074	*		
0C1B	C0 87 0CD9				2075	B SCANIT	BYPASS BLANKS	
0C1F	3C 01 0CF6				2076	MVI SCAMMA,SCACOM	SET INDR TO FIND DANGLING COMMA	
0C23	BD 1E 00				2077	CLI KDN000(,@XR),@EOS	IS XR POINTING TO EOS ?	
0C26	F2 81 6E				2078	JE KDN750	ERROR - REQ PARAMETER MISSING	
					2079	*		
0C29	34 02 0CA8				2080	ST KDN825+@OP1,@XR	SAVE XR VALUE	
					2081	*		
0C2D	9D 02 02 B9				2082	CLC KDNLDE-1(,@XR),KDNDDES(KDNLDE,@BR)	IS PARAMETER = 'SCP' ?	
0C31	F2 01 75				2083	JNE KDN850	IF NOT, ERR- 'INVALID PARAMETER	

#KDNTTE - ENTER DISK SYSTEM MANAGEMENT

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	08/07/22	PAGE	6
					2085	*					
					2086	***	'DES' WAS SPECIFIED				
					2087	*					
	0C34	4E 00 C4	0587		2088	ALC	KDNVOL+@DSAD(KDN001,@BR), \$BSADR SET DISK & DRIVE BITS				
					2089	*					
	0C39	C0 87 0025			2090	B	\$DISKN READ THE VOLUME LABEL OF				
	0C3D	0CCD		0C3E	2091	DC	AL(@CADDR)(KDNVOL) * THE IPL'ED DISK				
					2092	*					
	0C3F	E2 02 03			2093	LA	KDNLDE(, @XR), @XR INCR XR BY '3'				
	0C42	C0 87 0CD9			2094	B	SCANIT BYPASS BLANKS				
	0C46	F2 82 75			2095	JL	KDN950 CALL ERR PROG IF DANGLING COMMA				
	0C49	BD 1E 00			2096	CLI	KDN000(, @XR), @EOS XR REF AN EOS ?				
	0C4C	F2 81 0A			2097	JE	KDN475 IF YES, SYNTAX OK				
					2098	*					
	0C4F	3D 00 0D19			2099	CLI	SCACNT, @ZERO DID SCANIT BYPASS ANY BLANKS ?				
	0C53	F2 81 4F			2100	JE	KDN825 IF NOT, RESTORE XR AND SET ERR				
					2101	*	* CODE FOR 'INV PARAM'				
	0C56	F2 87 57			2102	J	KDN875 ELSE, SET ERR CODE ONLY				
					2103	*					
	0C59	C0 87 0025			2104	KDN475 B	\$DISKN WAIT FOR READ TO				
	0C5D	057F		0C5E	2105	DC	AL(@DADDR)(\$WAITF) * BE COMPLETED				
					2106	*					
	0C5F	38 80 0F47			2107	TBN	KDNBUF+KDND47, KDNMSK IS THE SCP ON THE SYSTEM ?				
	0C63	F2 90 51			2108	JF	KDN900 IF NOT, SET ERR CODE AND E'IT				
					2109	*					
	0C66	4E 00 CA 0587			2110	ALC	KDNNIP+@DSAD(KDN001,@BR), \$BSADR SET DISK & DRIVE BITS				
	0C6B	C0 87 0025			2111	B	\$DISKN READ DES NUCLEUS INITIALIZATION				
	0C6F	0CD3		0C70	2112	DC	AL(@CADDR)(KDNNIP) * PROGRAM INTO HIGH CORE				
	0C71	C0 87 0025			2113	B	\$DISKN WAIT FOR READ TO BE				
	0C75	057F		0C76	2114	DC	AL(@CADDR)(\$WAITF) * COMPLETED				
					2115	*					
	0C77	3C 80 0476			2116	MVI	\$CIMSK, KDNMIR MASK AGAINST INTERRUPTS				
	0C7B	C0 87 0D1A			2117	B	SUPDAT UPDATE THE ERROR LOG TABLES ON				
					2118	*	* DISK				
	0C7F	C2 01 1200			2119	LA	KDNSTN, @BR PT BR TO IPL PROGRAM IN CORE				
	0C83	7C 02 FE			2120	MVI	KDNCNS(, @BR), KDNIND SET SCP AS PRIMARY IPL				
	0C86	C0 87 048D			2121	B	\$UNMSK ALLOW INTERRUPTS				
					2122	*					
	0C8A	38 02 03D2			2123	TBN	\$IOIND, \$CRTAV CRT ON SYSTEM ?				
	0C8E	F2 90 03			2124	JF	KDN500 BR IF NOT.				
	0C91	F3 90 00			2125	SIO	0, @CRTQ TURN OFF CRT				
	0C94	D0 87 1B			2126	KDN500 B	KDNDSP(, @BR) ENTER SCP				

#KDNTTE - ENTER DISK SYSTEM MANAGEMENT

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 08/07/22 PAGE 7
		2128	*			
		2129	***		SET ERROR CODES AND EXIT	
		2130	*			
0C97	3C 10 03CD	2131	KDN750	MVI	\$CAERR,@E130	SET ERROR CODE FOR 'REQUIRED
		2132	*			* PARAMETER MISSING'
0C9B	F2 87 20	2133		J	KDN950	CALL ERROR PROGRAM
		2134	*			
0C9E	3C 18 03CD	2135	KDN800	MVI	\$CAERR,@E139	SET ERROR CODE FOR 'INVALID
		2136	*			* DELIMITER'
0CA2	F2 87 19	2137		J	KDN950	CALL ERROR PROGRAM
		2138	*			
0CA5	C2 02 0000	2139	KDN825	LA	*-*,@XR	RESTORE XR VALUE
0CA9	3C 11 03CD	2140	KDN850	MVI	\$CAERR,@E131	SET ERROR CODE FOR 'INVALID
		2141	*			* PARAMETER'
0CAD	F2 87 0E	2142		J	KDN950	CALL ERROR PROGRAM
		2143	*			
0CB0	3C 12 03CD	2144	KDN875	MVI	\$CAERR,@E133	SET ERRER CODE FOR 'TOO MANY
		2145	*			* PARAMETERS'
0CB4	F2 87 07	2146		J	KDN950	CALL ERROR PROGRAM
		2147	*			
0CB7	3C 4D 03CD	2148	KDN900	MVI	\$CAERR,@E320	SET ERROR CODE FOR 'NO DES
		2149	*			* AVAILABLE ON SYSTEM DISK'
0CBB	D2 02 00	2150		LA	KDN000(,@BR),@XR	INCR XR OUT OF INPUT BUFFER
0CBE	C0 87 0469	2151	KDN950	B	\$CAERK	CALL ERROR PROGRAM
		2152	*			
		2153	***		EQUATES USED IN KDNTTE	
		2154	*			
	0000	2155	KDN000	EQU	0	ZERO DISPLACEMENT
	0001	2156	KDN001	EQU	1	LENGTH CODE OF '1'
	0003	2157	KDNLDE	EQU	3	LENGTH OF PARAMETER 'DES'
	0080	2158	KDNMIR	EQU	@NOP	MASK FOR INQUIRY RECUEST
	0100	2159	KDNSCT	EQU	256	LENGTH OF ONE SECTOR
	0002	2160	KDNBY2	EQU	2	DISP TO 2ND BYTE OF DISK ADDR
		2161	*			* OF VOLUME LABEL IN DPL
	001B	2162	KDNDSP	EQU	27	DISP BRANCHED TO IN IPL PGM 1-5
	0F00	2163	KDNBUF	EQU	X'0F00'	BUFFER FOR HOLDING VOLUME LABEL
	1200	2164	KDNSTN	EQU	X'1200'	STARTING ADDR OF DES N.I.P.
	0047	2165	KDND47	EQU	X'47'	DISP IN VOL LBL TO BYTE WHICH
		2166	*			* INDICATES AVAILABILITY OF SCP
	0080	2167	KDNMSK	EQU	X'80'	MASK ON -> SCP AVAILABLE, MAYBE
	0000	2168	KDNDAD	EQU	X'0000'	DISK ADDR OF DES N.I.P.
	0001	2169	KDN8C8	EQU	1	SECTOR COUNT OF DES N.I.P
	00FE	2170	KDNCNS	EQU	X'FE'	DISP TO IND FOR COMMERCIAL N.I.P
	0002	2171	KDNIND	EQU	X'02'	BIT INDR FOR SCP PRIMARY IPL
	0090	2172	@CRTQ	EQU	X'90'	Q BYTE CRT

#KDNTTE - ENTER DISK SYSTEM MANAGEMENT

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	08/07/22	PAGE	8
					2174	*					
					2175	***	CONSTANTS				
					2176	*					
0CC2	E2C3D7			0CC4	2177	KDNDES	DC	CL(KDNLDE)	'SCP'	CHARACTER CONSTANT - 'SCP'	
0CC5	00FF			0CC6	2178	KDNLOW	DC	XL(@CADDR)	'00FF'	ADDRESS IN LOW CORE	
0CC7	0FFF			0CC8	2179	KDNHIG	DC	XL(@CADDR)	'0FFF'	ADDRESS IN HIGH CORE	
0CC9	0700			0CCA	2180	KDNMAX	DC	XL(@CADDR)	'0700'	FOR COMPARE WITH 8 SECTORS	
0CCB	0100			0CCC	2181	KDNINC	DC	XL(@CADDR)	'0100'	INCR BY ONE SECTOR	
					2182	*					
					2183	****	DPL TO READ SYSTEM DISK VOLUME LABEL				
					2184	*					
					2185	*KDNVOL	DPL	FUNC-DGET,DADDR-#VOLR1,CNT-KDN001,CADDR-KDNBUF			
				0CCD	2186	KDNVOL	EQU	*		DISK PARAMETER LIST	
0CCD	01			0CCD	2187		DC	AL1(@DGET)		REQUESTED FUNCTION	
0CCE	0008			0CCF	2188		DC	AL2(#VOLR1)		DISK ADDRESS	
0CD0	01			0CD0	2189		DC	AL1(KDN001)		SECTOR COUNT	
0CD1	0F00			0CD2	2190		DC	AL2(KDNBUF)		BUFFER ADDRESS	
					2191	***	END OF EXPANSION	***			
					2193	*					
					2194	*	DPL TO READ DES N.I.P. FROM DISK TO CORE				
					2195	*					
					2196	*KDNNIP	DPL	FUNC-@DGET,DADDR-KDNDAD,CNT-KDNSC8,CADDR-KDNSTN			
				0CD3	2197	KDNNIP	EQU	*		DISK DARAMETER LIST	
0CD3	01			0CD3	2198		DC	AL1(@DGET)		REQUESTED FUNCTION	
0CD4	0000			0CD5	2199		DC	AL2(KDNDAD)		DISK ADDRESS	
0CD6	01			0CD6	2200		DC	AL1(KDNSC8)		SECTOR COUNT	
0CD7	1200			0CD8	2201		DC	AL2(KDNSTN)		BUFFER ADDRESS	
					2202	***	END OF EXPANSION	***			
					2204	*					
					2205	*	\$CANI				

SCANIT - DELIMETER SCAN MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	08/07/22	PAGE	9
		2207+		*****				
		2208+	*	5703-XM1	COPYRIGHT IBM CORP. 1970			*
		2209+	*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083			*
		2210+	*					*
		2211+	*	*****				*
		2212+	*	STATUS				*
		2213+	*	VERSION 1 MODIFICATION 0				*
		2214+	*					*
		2215+	*	FUNCTION				*
		2216+	*	THE FUNCTION OF SCANIT IS TO SCAN PAST VALID DELIMITERS AND				*
		2217+	*	RETURN A POINTER TO THE FIRST CHARACTER THAT'S NOT A DELIMITER.				*
		2218+	*					*
		2219+	*	ENTRY POINTS				*
		2220+	*	* THE ENTRY POINT IS SCANIT.				*
		2221+	*	* THE CALLING SEQUENCE IS AS FOLLOWS:				*
		2222+	*	B SCANIT				*
		2223+	*	WITH REGISTER 2 (@XR) POINTING TO THE FIRST CHARACTER TO BE				*
		2224+	*	EXAMINED.				*
		2225+	*					*
		2226+	*	INPUT				*
		2227+	*	NONE				*
		2228+	*					*
		2229+	*	OUTPUT				*
		2230+	*	NONE				*
		2231+	*					*
		2232+	*	EXTERNAL REFERENCES				*
		2233+	*	\$CAERR - ERROR CODE SAVE AREA				*
		2234+	*					*
		2235+	*	EXITS, NORMAL				*
		2236+	*	NORMAL EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO				*
		2237+	*	SCANIT IN THE CALLING ROUTINE. THE PSR (REGISTER 4) WILL CONTAIN				*
		2238+	*	A ZERO IF NO DELIMITERS WERE FOUND OR A HIGH CONDITION IF ONE OR				*
		2239+	*	MORE DELIMITERS WERE SCANNED.				*
		2240+	*					*
		2241+	*	EXITS, ERROR				*
		2242+	*	ERROR EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO				*
		2243+	*	SCANIT IN THE CALLING ROUTINE. THE PSR WILL CONTAIN A LOW				*
		2244+	*	CONDITION.				*
		2245+	*					*
		2246+	*	TABLES/WORKAREAS				*
		2247+	*	* SCACNT - AREA CONTAINING NUMBERS OF DELIMITERS SCANNED				*
		2248+	*	* SCAMMA - LOC WHERE SCACOM MAY BE MOVED IF ONE COMMA IS ALSO				*
		2249+	*	TO BE CONSIDERED A DELIMITER. MOVING SCACOF BACK INTO SCAMMA				*
		2250+	*	INDICATES THAT ONLY BLANKS SHOULD BE CONSIDERED DELIMITERS.				*
		2251+	*					*
		2252+	*	ATTRIBUTES				*
		2253+	*	RELOCATABLE AND RE-USABLE				*
		2254+	*					*
		2255+	*	CHARACTER CODE DEPENDENCY				*
		2256+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR				*
		2257+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.				*
		2258+	*					*
		2259+	*	NOTES				*
		2260+	*	ERROR PROCEDURES				*
		2261+	*	THE ONLY ERROR CONDITION DETECTED BY SCANIT IS THE CASE WHERE				*
		2262+	*	A CARRIAGE-RETURN CODE FOLLOWS A COMMA. UPON RETURN TO THE				*

SCANIT - DELIMETER SCAN MODULE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT VER 15, MOD 00 08/07/22 PAGE 10

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2263+*      CALLING ROUTINE, @PSR WILL BE SET TO A LOW CONDITION, THE
2264+*      ERROR CODE IS SET IN $CAERR, AND MG WILU BE POINTING TO THE
2265+*      CARRIAGE-RETURN CHARACTER.
2266+*
2267+*      REGISTER USAGE
2268+*      REGISTER 2 (@XR) IS USED AS A POINTER ACROSS THE AREA BEING
2269+*      SCANNED FOR DELIMITERS.
2270+*
2271+*      SAVED/RESTORED AREAS
2272+*      UPON ENTRY TO SCANIT, REGISTER 8 (@ARR) IS SAVED AND USED AS
2273+*      THE RETURN ADDRESS.
2274+*
2275+*      MODIFICATION CONSIDERATIONS
2276+*      NONE
2277+*
2278+*      REQUIRED MODULES
2279+*      * @SYSEQ - COMMON SYSTEM EQUATES
2280+*      * @FXDEQ - FIXED NUCLEUS ADDRESSES EQUATES
2281+*
2282+*      OTHER
2283+*      SCANIT IS INITIALIZED TO BYPASS BLANKS ONLY. IF SCACOM IS
2284+*      MOVED TO SCAMMA, ONE COMMA WILL BE SCANNED ALONG WITH BLANKS.
2285+*      THE INSTRUCTION TO DO THIS IS AS FOLLOWS:
2286+*      MVI    SCAMMA,SCACOM
2287+*
2288+*      TO DROP THE COMMA FROM ITS DELIMITER STATUS, SCACOF SHOULD BE
2289+*      MOVED TO SCAMMA, USING THE FOLLOWING INSTRUCTION:
2290+*      MVI    SCAMMA,SCACOF
2291+*
2292+*****

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2294+*

2295+* EQUATES USED IN THIS SUBROUTINE

2296+*

0001	2297+SCAINC	EQU	1	TO INCREMENT POINTER
0001	2298+SCACOM	EQU	@BNE	SWITCH TO ALLOW SCANNING COMMA
0087	2299+SCACOF	EQU	@UCB	SWITCH TO SET OFF THE INDICATON
	2300+*			* FOR SCANNING A COMMA
0CD9	2301+SCANIT	EQU	*	ENTRY POINT TO THIS SUBROUTINE
0CD9 34 08 0D15	2302+	ST	SCA500+@OP1,@ARR	SAVE RETURN ADDRESS
0CDD 34 02 0D17	2303+	ST	SCASVE,@XR	SAVE POINTER VALUE
0CE1 3C 04 03CD	2304+	MVI	\$CAERR,@E110	SET ERROR CODE
0CE5 F2 87 03	2305+	J	SCA200	GO TO PROCESS
0CE8 E2 02 01	2306+SCA100	LA	SCAINC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR
0CEB BD 40 00	2307+SCA200	CLI	0(,@XR),@BLANK	IS THIS CHAR BLANK ?
0CEE C0 81 0CE8	2308+	BE	SCA100	YES, FETCH NEXT ONE
0CF2 BD 6B 00	2309+	CLI	0(,@XR),@COMMA	IS IT A COMMA ?
0CF5 F2 87 10	2310+SCA250	JC	SCA400,@UCB	UCS TO RETURN -- OR NOP IF
	2311+*			* SCAMMA IS ACTIVE AND CHAR
0CF8 E2 02 01	2312+SCA300	LA	SCAINC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR
0CFB BD 40 00	2313+	CLI	0(,@XR),@BLANK	IS THIS CHAR A BLANK ?
0CFE C0 81 0CF8	2314+	BE	SCA300	YES, FETCH NEXT ONE
0D02 BD 1F 00	2315+	CLI	0(,@XR),@EOS+1	IS THIS EOS ?
0D05 F2 82 0A	2316+	JL	SCA500	IF NOT, SKIP ERROR ROUTINE
0D08 34 02 0D19	2317+SCA400	ST	SCACNT,@XR	SAVE NEW POINTER VALUE

SCANIT - DELIMETER SCAN MODULE

ERR LOC		OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00		08/07/22	PAGE	11
0D0C	0F	01	0D19	0D17	2318+	SLC	SCACNT(2),SCASVE		SET PSR TO EQUAL IF POINTER		
					2319+*				* NOT ADVANCED		
0D12	C0	87	0000		2320+SCA500	B	*-*		YES, RETURN		
			0CF6		2321+SCAMMA	EQU	SCA250+@Q		TO SET SCAN COMMA INDICATOR		
					2322+*						
					2323+*		SAVE AREA				
					2324+*						
			0D16		2325+SCASV1	EQU	*		FIRST BYTE OF SCASVE		
0D16			0D17		2326+SCASVE	DS	CL2		ORIGINAL POINTER VALUE SAVE		
0D18			0D19		2327+SCACNT	DS	CL2		SAVE AREA FOR TOTAL CHAR SCAN		
					2328+***		END OF SCANIT		***		
					2329 *						

SUPDAT - UPDATE VOLUME ERROR RATE TABLES

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	08/07/22	PAGE 12
		2331		*****			
		2332	*	5703-XM1	COPYRIGHT IBM CORP. 1970		*
		2333	*		REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083		*
		2334	*				*
		2335		*****			
		2336	*	STATUS -			*
		2337	*	VERSION 1 MODIFICATION 0			*
		2338	*				*
		2339	*	FUNCTION			*
		2340	*	SUPDAT UPDATES THE INDIVIDUAL AND SYSTEM ERROR RATE COUNTERS			*
		2341	*	ON EACH VOLUME MOUNTED ON THE SYSTEM, THIS IS DONE BY ADDING			*
		2342	*	THE READ/WRITE COUNTERS STORED IN THE NUCLEUS TO THE COUNTERS			*
		2343	*	MAINTAINED ON THE DISKS. THE NUCLEUS COUNTERS ARE THEN SET			*
		2344	*	TO ZERO.			*
		2345	*				*
		2346	*	ENTRY POINTS			*
		2347	*	ENTRY IS AT LOCATION SUPDAT. THE CALLING SEQUENCE IS:			*
		2348	*	B \$SUPDAT			*
		2349	*	A ONE SECTOR BUFFER MUST BE ALLOCATED FOR DISK I/O BY THE			*
		2350	*	CALLING PROGRAM AT LOCATION SUPBUF.			*
		2351	*				*
		2352	*	INPUT			*
		2353	*	N/A			*
		2354	*				*
		2355	*	OUTPUT			*
		2356	*	THE GENERAL REGISTERS ARE RESTORED TO ENTRY VALUES.			*
		2357	*				*
		2358	*	EXTERNAL REFERENCES			*
		2359	*	\$PKERT - LOCATION OF ERROR RATE COUNTERS IN THE NUCLEUS.			*
		2360	*	\$DISKN - ENTRY TO DISK IOCS, DKDISK.			*
		2361	*	\$WAITF - ADDRESS OF DISK WAIT DPL.			*
		2362	*	SUPBUF - LOCATION OF DISK I/O BUFFER.			*
		2363	*				*
		2364	*	EXITS, NORMAL			*
		2365	*	EXIT IS TO THE NEXT SEQUENTIAL INSTRUCTION IN THE CALLING PGM.			*
		2366	*				*
		2367	*	EXITS, ERROR			*
		2368	*	N/A			*
		2369	*				*
		2370	*	TABLES/WORK AREAS			*
		2371	*	N/A			*
		2372	*				*
		2373	*	ATTRIBUTES			*
		2374	*	RELOCATABLE			*
		2375	*				*
		2376	*	CHARACTER CODE DEPENDENCY			*
		2377	*	N/A			*
		2378	*				*
		2379	*	NOTES			*
		2380	*	ERROR PROCEDURES			*
		2381	*	N/A			*
		2382	*				*
		2383	*	REGISTER USAGE			*
		2384	*	REGISTER 1 IS USED FOR BASE ADDRESSING, REGISTER 2			*
		2385	*	FOR INDEXING THE ERROR RATE TABLES			*
		2386	*				*

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SUPDAT - UPDATE VOLUME ERROR RATE TABLES							
ERR LOC	OBJECT CODE	ADDR STMT	SOURCE STATEMENT	VER 15,	MOD 00	08/07/22	PAGE 13
		2387 *	SAVED RESTORED ARIAS			*	
		2388 *	N/A			*	
		2389 *				*	
		2390 *	MODFICATION CONSIDERATIONS			*	
		2391 *	N/A			*	
		2392 *				*	
		2393 *	REQUIRED MODULES			*	
		2394 *	@SYSEQ - GENERAL SYSTEM EQUATES			*	
		2395 *	@FXDEQ - NUCLEUS LOCATION EQUATES			*	
		2396 *	\$CY0EQ - CYLINDER 0 EQUATES			*	
		2397 *	*****			*	

SUPDAT - UPDATE VOLUME ERROR RATE TABLES									
ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	08/07/22	PAGE	13
			2387	*	SAVED RESTORED ARIAS				*
			2388	*	N/A				*
			2389	*					*
			2390	*	MODFICATION CONSIDERATIONS				*
			2391	*	N/A				*
			2392	*					*
			2393	*	REQUIRED MODULES				*
			2394	*	@SYSEQ - GENERAL SYSTEM EQUATES				*
			2395	*	@FXDEQ - NUCLEUS LOCATION EQUATES				*
			2396	*	\$CY0EQ - CYLINDER 0 EQUATES				*
			2397	*	*****				*

SUPDAT - UPDATE VOLUME ERROR RATE TABLES

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 08/07/22 PAGE 14
			2399	*****	
			2400	* THIS ROUTINE UPDATES THE TOTAL READ-WRITE COUNTERS ON ALL DISKS	*
			2401	* 'MOUNTED' ON THE SYSTEM, THE MASTER READ/WRITE COUNTERS ON THE	*
			2402	* FIXED DISKS WILL ALSO BE UPDATED	*
			2403	*****	
			2404	*	
			2405	*SUPDAT ENTER BASE-BUPBSE,EXIT-SUP50,@XR,@ARR	
		0D2C	2406	USING SUPBSE,@BR	BASE ADDRESS SPECIFICATION
		0D1A	2407	SUPDAT EQU *	MODULE ENTRY POINT
0D1A	34 01 0DA0		2408	ST SUP500+@OP1,@BR	SAVE @BR
0D1E	C2 01 0D2C		2409	LA SUPBSE,@BR	LOAD BASE REGISTER
0D22	74 02 78		2410	ST SUP501+@OP1(,@BR),@XR	SAVE @BR
0D25	74 08 7C		2411	ST SUP502+@OP1(,@BR),@ARR	SAVE RETURN ADDRESS
			2412	*** END OF EXPANSION **	
0D28	C2 02 0416		2413	LA \$PKERT-#PKRTD,@XR	POINT XR TO START OF COUNTERS
0D2C	9D 03 03 80		2414	SUP020 CLC #PKRTD(#PKRTL,@XR),SUPZER(,@BR)	IS THERE SOMETHING TO
			2415	*	* UPDATE ?
0D30	F2 81 2B		2416	JE SUP100	SKIP UPDATE IF NOT
0D33	6C 01 85 01		2417	MVC SUPWTC(#PKCNT,@BR),#PKWTD(,@XR)	SET WRT CNTR TO 4 BYTES
0D37	6C 01 89 03		2418	MVC SUPRDC(#PKCNT,@BR),#PKRDD(,@XR)	SET READ CNTR TO 4 BYTES
0D3B	5C 07 9E 89		2419	SUP040 MVC SUPMST+SUPDSP(2*#RDWTL,@BR),SUPRDC(,@BR)	SET MASTER ENTRY
			2420	* DISK SUPDPL WAIT	READ IN VOLUME SDP SCTR
0D3F	C0 87 0025		2421	B \$DISKN	PERFORM PHYSICAL DISK OP
0D43	0DB6	0D44	2422	DC AL2(SUPDPL)	DPL ADDRESS
0D45	C0 87 0025		2423	B \$DISKN	WAIT AND CHECK DISK ERRORS
0D49	057F	0D4A	2424	DC AL2(\$WAITF)	WAIT DPL ADDRESS
			2425	*** END OF EXPANSION ***	
0D4B	1E 03 0E07 85		2427	ALC SUPBUF+#PKVWD(#RDWTL),SUPWTC(,@BR)	ADD NEW WRITES TO SDR
0D50	1E 03 0E0B 89		2428	ALC SUPBUF+#PKVRD(#RDWTL),SUPRDC(,@BR)	ADD NEW READS TO SUR
0D55	7C 02 8A		2429	MVI SUPDPL+@DCTRL(,@BR),@DPUT	SET DPL FOR WRITE
			2430	* DISK SUPDPL	WRITE VOLUME SDP SCTR
0D58	C0 87 0025		2431	B \$DISKN	PERFORM PHYSICAL DISK OP
0D5C	0DB6	0D5D	2432	DC AL2(SUPDPL)	DPL ADDRESS
			2433	*** END OF EXPANSION ***	
0D5E	78 03 8C		2435	SUP100 TBN SUPDPL+@DSAD(,@BR),SUPEND	ARE ALL DISKS FINISHED ?
0D61	F2 10 11		2436	JT SUP200	GO UPDATE SDR TOTAL CNTRS IF YES
0D64	5E 00 8C 81		2437	ALC SUPDPL+@DSAD(1,@BR),SUPONE(,@BR)	SET NEXT DISK ADDRESS
0D68	7C 01 8A		2438	MVI SUPDPL+@DCTRL(,@BR),@DGET	SET DPL TO READ*
0D6B	E2 02 04		2439	LA #PKRTL(,@XR),@XR	POINT TO NEXT INCORE ENTRY
0D6E	5E 00 11 96		2440	ALC SUP040+@D1(1,@BR),SUPMDP(,@BR)	UPDATE MASTER TBL POINTER
0D72	D0 87 00		2441	B SUP020(,@BR)	GO UPDATE NEXT DISK
			2442	*	
			2443	*SUP200 DISK SUPDP2,WAIT	READ TOTAL RD/WT SDR SCTR
0D75	C0 87 0025		2444	SUP200 B \$DISKN	PERFORM PHYSICAL DISK OP
0D79	0DBC	0D7A	2445	DC AL2(SUPDP2)	DPL ADDRESS
0D7B	C0 87 0025		2446	B \$DISKN	WAIT AND CHECK DISK ERRORS
0D7F	057F	0D80	2447	DC AL2(\$WAITF)	WAIT DPL ADDRESS
			2448	*** END OF EXPANSION ***	
0D81	0E 1F 0E2B 0DE2		2450	ALC SUPBUF+#PKMRW(8*#RDWTL),SUPMST+8*#RDWTL-1	ADD NEW RD/WT
0D87	7C 02 90		2451	MVI SUPDP2+@DCTRL(,@BR),@DPUT	SET WRITE FUNC CODE
			2452	* DISK SUPDP2,WAIT	WRITE MASTER RD/WT CNTR SCTR
0D8A	C0 87 0025		2453	B \$DISKN	PERFORM PHYSICAL DISK OP
0D8E	0DBC	0D8F	2454	DC AL2(SUPDP2)	DPL ADDRESS

SUPDAT - UPDATE VOLUME ERROR RATE TABLES

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 08/07/22 PAGE 15
0D90	C0 87 0025		2455	B	\$DISKN	WAIT AND CHECK DISK ERRORS
0D94	057F	0D95	2456	DC	AL2(\$WAITF)	WAIT DPL ADDRESS
			2457	***	END OF EXPANSION ***	
0D96	BC 00 03		2459	MVI	#PKRTD(,@XR),@ZERO	PREPARE CLEAR OF PK ERR/RATE TBL
0D99	AC 0E 02 03		2460	MVC	#PKRTD-1(4*#PKRTL-1,@XR),#PKRTD(,@XR)	ZERO OUT TABLE
			2461	*SUP500	EXIT @BR,@XR,RETURN	
0D9D	C2 01 0000		2462	SUP500	LA *-*,@BR	RESTORE @BR
0DA1	C2 02 0000		2463	SUP501	LA *-*,@XR	RESTORE @XR
0DA5	C0 87 0000		2464	SUP502	B *-*	RETURN TO CALLING PROGRAM
			2465	***	END OF EXPANSION ***	
			2467	*****	*****	
			2468	*	CONSTANTS HNO WORK AREAS	
			2469	*****	*****	
0DA9	00000000	0DAC	2470	SUPZER	DC XL(#RDWTL)'00'	ZERO
0DAD	01	0DAD	2471	SUPONE	DC IL1'1'	ONE
0DAE	00000000	0DB1	2472	SUPWTC	DC 2AL2(*-*)	VOLUME WRITE CNTR
0DB2	00000000	0DB5	2473	SUPRDC	DC 2AL2(*-*)	VOLUME READ CNTR
			2474	*SUPDPL	DPL FUNC-@DGET,DADDR-#VLSDR,CNT-#@MVSD,CADDR-SUPBUF	
		0DB6	2475	SUPDPL	EQU *	DISK PARAMETER LIST
0DB6	01	0DB6	2476		DC AL1(@DGET)	REQUESTED FUNCTION
0DB7	000C	0DB8	2477		DC AL2(#VLSDR)	DISK ADDRESS
0DB9	01	0DB9	2478		DC AL1(#@VLSD)	SECTOR COUNT
0DBA	0E00	0DBB	2479		DC AL2(SUPBUF)	BUFFER ADDRESS
			2480	***	END OF EXPANSION ***	
			2482	*SUPDP2	DPL FUNC-@DGET,DADDR=#MVSDR,CNT-#@MVSD,CADDR=SUPBUF	
		0DBC	2483	SUPDP2	EQU *	DISK PARAMETER LIST
0DBC	01	0DBC	2484		DC AL1(@DGET)	REQUESTED FUNCTION
0DBD	000D	0DBE	2485		DC AL2(#MVSDR)	DISK ADDRESS
0DBF	01	0DBF	2486		DC AL1(#@MVSD)	SECTOR COUNT
0DC0	0E00	0DC1	2487		DC AL2(SUPBUF)	BUFFER ADDRESS
			2488	***	END OF EXPANSION ***	
0DC2	08	0DC2	2490	SUPMDP	DC AL1(2*#RDWTL)	MASTER TABLE POINTER INCREMENT
		0DC3	2491	SUPMST	EQU *	START OF MASTER UPDATE AREA
0DC3	000000000000000000	0DE2	2492		DC 32AL1(*-*)	MASTER UPDATE AREA
		0003	2493	SUPEND	EQU X'03'	F2 SCTR ADDR BITS
		0D2C	2494	SUPBSE	EQU SUP020	BASE VALUE
		0007	2495	SUPDSP	EQU 2*#RDWTL-1	DISP TO R1 RD/WT MASTER COUNTER
			2496	*****	*****	

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SUPDAT - UPDATE VOLUME ERROR RATE TABLES						
ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 08/07/22 PAGE 16	
			2498 *	PATCH		
			2499	*****		
			2500 *	PATCH AREA 1	*	
			2501	*****		
			2502 *			
			2503 *	CALCULATE AREA LEFT IN THIS SECTOR		
			2504 *			
0E00		0DE3	2505 \$\$\$L1 EQU *	START OF PATCH AREA 1		
			2506 ORG *,256,0	SET LOC CNTR TO NEXT SECTOR		
		0E00	2507 \$\$\$T1 EQU *	DEFINE ADDR OF SETR DNDRY		
0DE3			2508 ORG \$\$\$L1	SET LOC CNTR TO START OF		
			2509 *	* PATCH AREA		
0DE3		0DFF	2510 \$\$\$\$1 DS CL(\$\$\$T1-\$\$\$\$L1)	PATCH AREA		
			2511 *****			
			2512 *** END OF EXPANSION ***			
		0E00	2514 SUPBUF EQU *			
			2515 PRINT ON			
		FFFF	2516 END			
TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY =				0		

[illegible]

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 17

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$\$\$	001	0C00	2059	
\$\$\$\$\$1	029	0DFF	2510	
\$\$\$\$L1	001	0DE3	2505	2508 2510
\$\$\$\$T1	001	0E00	2507	2510
\$\$\$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	
\$\$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	
\$\$ILEN	001	0601	0629	0631 0635
\$\$ILHD	001	0600	0627	0629
\$\$INLN	001	0607	0642	0644 0646
\$\$INND	001	06FA	0646	
\$\$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
\$\$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	
\$\$TPCD	001	0606	0637	0642
\$\$UPAR	001	0602	0631	0633
\$\$WSPB	001	1E00	0710	
\$\$XIND	001	06FF	0708	0711
\$\$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

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 18

[illegible]

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 19

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$ERSTK	001	0030	0294	
\$ER050	001	0363	0232	
\$ER1N2	001	0050	0299	
\$EXADR	001	0517	0577	0579
\$EXCMD	001	0001	0331	
\$EXFTR	001	043B	0513	0518
\$FCIND	001	0010	0409	
\$FDIND	001	0040	0416	
\$FEARR	001	0004	0224	
\$FEMAP	001	0588	0610	0611
\$FILIB	001	03DA	0460	0461
\$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
\$INDR2	001	03D5	0397	0422
\$INDR3	001	03D6	0422	0449
\$INLNO	001	03CF	0289	0291 0303 0310
\$INRPT	001	0020	0267	
\$IOIND	001	03D2	0338	0364 2123
\$IOPGS	001	0010	0478	
\$IOYES	001	0002	0253	
\$IPLDV	001	05FF	0614	0617
\$IRKEY	001	0020	0477	
\$KEYBD	001	03E1	0483	0488
\$KEYCD	001	03C3	0247	0281
\$KEYDT	001	0040	0391	
\$KE090	001	00DE	0227	
\$KE130	001	01D5	0228	
\$KYBSY	001	0010	0264	
\$LDRTN	001	0571	0602	
\$LEVEL	001	03DF	0472	0474
\$LIST	001	0002	0426	
\$LMRGN	001	03C1	0242	0244
\$LNPTR	001	0080	0361	
\$LOADB	001	054A	0586	
\$LOADR	001	051A	0579	0582
\$LPRIO	001	03EA	0496	
\$LPROS	001	03E5	0491	0493
\$LPRP3	001	03E4	0490	0491
\$MOUNT	001	0020	0440	
\$MPDWN	001	0001	0340	
\$NEXTB	001	03E6	0493	0494
\$NEXTL	001	03E7	0494	0495
\$NOENB	001	0008	0432	
\$NOLST	001	0004	0256	
\$NUCBS	001	03C0	0239	0240
\$NWRKF	001	0080	0445	
\$NWRKR	001	0040	0442	
\$PASWD	001	042D	0509	0510
\$PAUSD	001	04BA	0563	0565
\$PAUSE	001	0002	0333	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 20

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$PGMDT	001	0020	0388	
\$PGMST	001	0010	0352	
\$PKERT	001	0419	0507	0509 2413
\$PLST1	001	0454	0528	0529
\$PLST2	001	045B	0529	0530
\$PLST3	001	0462	0530	0531
\$PRDEV	001	044B	0525	0527
\$PRESN	001	0002	0376	
\$PROCI	001	0001	0373	
\$PRPOS	001	03C2	0244	0247
\$PSDBR	001	04FA	0568	
\$PSDXR	001	04F2	0567	0568
\$PSTEP	001	0004	0334	
\$PSTMT	001	0008	0335	
\$PTCH1	001	03F5	0498	0502
\$READY	001	0080	0418	
\$REORD	001	0040	0476	
\$RLOAD	001	051E	0582	0584
\$RMGRN	001	03C0	0240	0242
\$RSTR	001	04D6	0565	0567 0569 0574
\$RUNIT	001	0001	0312	
\$SFAID	001	050D	0570	
\$SPRNT	001	0465	0537	0539
\$SRTRN	001	04FE	0569	0570
\$STEPT	001	0002	0313	
\$SWPCR	001	0511	0575	0577
\$TABLN	001	03CB	0284	0287
\$TFLOW	001	0008	0319	
\$TRACE	001	0004	0314	
\$TRALL	001	0010	0320	
\$TROVR	001	054E	0589	0592
\$TRUNK	001	0080	0272	
\$TRVAR	001	0020	0321	
\$UNMSK	001	048D	0550	0553 2121
\$USRDR	001	03DC	0461	0462
\$VMDEF	001	0080	0325	
\$VOLF1	001	03FE	0504	0505
\$VOLF2	001	040E	0506	
\$VOLID	001	03F6	0502	0503 0507
\$VOLR1	001	03F6	0503	0504
\$VOLR2	001	0406	0505	0506
\$WAITF	001	057F	0605	0607 2105 2114 2424 2447 2456
\$WFDEF	001	0040	0519	
\$WFLOK	001	0008	0382	
\$WFNME	001	0443	0518	0523
\$WSIND	001	0004	0379	
\$XIND1	001	03D0	0310	0329
\$XIND2	001	03D1	0329	0338
\$XIND3	001	03D8	0457	0460
\$XPREC	001	0040	0322	
\$XRSAB	001	03C7	0282	0284 2067
\$ZTRAD	001	05A2	0611	
\$12K	001	0004	0466	
\$16CKY	001	0008	0468	
\$16K	001	0002	0465	
\$22IMP	001	0001	0463	

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 08/07/22 PAGE 21

###BL 001 0000 1818
###CK 001 0000 1946
###CN 001 0000 1914
###CO 001 0000 1706
###CS 001 0000 1766
###DR 001 0000 1510
###ER 001 0000 1710
###FS 001 0000 1806
###IN 001 0000 1950
###PW 001 0000 1954
###RS 001 0000 1786
###SA 001 0000 1774
###SS 001 0000 1770
###VU 001 0600 1730
###0T 001 0700 1502
###1T 001 0000 1506
###BCO 001 0600 1518
###BOV 001 0800 1790
###DPR 001 0700 1526
###DRE 001 0889 1542
###DSP 001 2800 1562
###ECM 001 0C00 1822
###EFK 001 0C00 1842
###ERR 001 0C00 1814
###EXM 001 0C00 1702
###FIL 001 0E00 1782
###FIS 001 0E00 1778
###FML 001 0200 1910
###FMS 001 0200 1750
###GRA 001 0889 1674
###GUF 001 0C00 1810
###INL 001 0600 1890
###INS 001 0600 1514
###KAL 001 0C00 1678
###KCA 001 0C00 1894
###KCH 001 0C00 1646
###KCN 001 0C00 1762
###KCT 001 0C00 1614
###KDE 001 0C00 1610
###KDI 001 0D00 1690
###KDN 001 0C00 1598
###KDO 001 0E00 1694
###KED 001 0C00 1534
###KEN 001 0C00 1538
###KEX 001 0C00 1558
###KGO 001 0C00 1530
###KHE 001 0C00 1714
###KKE 001 0C00 1942
###KLI 001 0C00 1618
###KLL 001 0920 1918
###KLO 001 0C00 1622
###KME 001 0D00 1602
###KMO 001 0C00 1546
###KNA 001 0C00 1658
###KOV 001 0E00 1578
###KPA 001 0C00 1554

2058

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 22

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$KPO	001	0C00	1642	
\$\$\$KPR	001	0C00	1666	
\$\$\$KRE	001	0C00	1586	
\$\$\$KRL	001	0700	1682	
\$\$\$KRM	001	0C00	1550	
\$\$\$KRN	001	0700	1570	
\$\$\$KRO	001	0D00	1574	
\$\$\$KRS	001	0C00	1898	
\$\$\$KRU	001	0C00	1594	
\$\$\$KRV	001	0800	1686	
\$\$\$KSA	001	0C00	1630	
\$\$\$KSE	001	0E00	1670	
\$\$\$KSO	001	0C20	1722	
\$\$\$KSS	001	0C00	1654	
\$\$\$KSV	001	0980	1650	
\$\$\$KSY	001	0C00	1662	
\$\$\$KWI	001	0C00	1590	
\$\$\$KWR	001	0C00	1582	
\$\$\$LOA	001	0600	1522	
\$\$\$MIP	001	0C00	1718	
\$\$\$SDS	001	0C00	1830	
\$\$\$SFF	001	0E00	1834	
\$\$\$SFL	001	0F00	1826	
\$\$\$SFO	001	1500	1798	
\$\$\$SFS	001	0C00	1794	
\$\$\$SPA	001	0C00	1634	
\$\$\$SPO	001	0806	1638	
\$\$\$SPS	001	0C00	1626	
\$\$\$STR	001	1600	1802	
\$\$\$TDC	001	1000	1606	
\$\$\$TSY	001	1000	1566	
\$\$\$TVK	001	0FC0	1742	
\$\$\$UAL	001	0C00	1758	
\$\$\$UAT	001	0900	1854	
\$\$\$UCD	001	0900	1862	
\$\$\$UCN	001	0C00	1846	
\$\$\$UCP	001	0700	1850	
\$\$\$UDE	001	0C00	1866	
\$\$\$UDI	001	0C00	1870	
\$\$\$UEX	001	0C00	1754	
\$\$\$UIN	001	0C00	1858	
\$\$\$UPA	001	0C00	1838	
\$\$\$UPO	001	0C00	1906	
\$\$\$UPT	001	0C00	1902	
\$\$\$VCR	001	2000	1698	
\$\$\$VLO	001	0600	1734	
\$\$\$VOD	001	0600	1738	
\$\$\$VVM	001	0000	1746	
\$\$\$VXI	001	0600	1726	
\$\$\$ZDU	001	1100	1878	
\$\$\$ZLB	001	1100	1922	
\$\$\$ZLO	001	1100	1882	
\$\$\$ZLV	001	0F00	1938	
\$\$\$ZL1	001	0F00	1926	
\$\$\$ZL2	001	0F00	1930	
\$\$\$ZL3	001	0C00	1934	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 23

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$ZTR	001	1000	1874	
\$\$\$ZUT	001	0C00	1886	
\$\$#BLN	001	18D4	1817	
\$\$#CKT	001	2118	1945	
\$\$#CNF	001	2000	1913	
\$\$#COR	001	0800	1705	
\$\$#CSA	001	1000	1765	
\$\$#DRT	001	0000	1509	
\$\$#ERM	001	0928	1709	
\$\$#FSP	001	1880	1805	
\$\$#INV	001	212C	1949	
\$\$#PWR	001	2300	1953	
\$\$#RSP	001	1780	1785	
\$\$#SAV	001	1180	1773	
\$\$#SSA	001	1128	1769	
\$\$#VUF	001	0B08	1729	
\$\$#0TR	001	0000	1501	
\$\$#1TR	001	0080	1505	
\$\$@#BL	001	0001	1819	
\$\$@#CK	001	0004	1947	
\$\$@#CN	001	0001	1915	
\$\$@#CO	001	003A	1707	
\$\$@#CS	001	003A	1767	
\$\$@#DR	001	0008	1511	
\$\$@#ER	001	0032	1711	
\$\$@#FS	001	0030	1807	
\$\$@#IN	001	003A	1951	
\$\$@#PW	001	00C0	1955	
\$\$@#RS	001	0030	1787	
\$\$@#SA	001	0108	1775	
\$\$@#SS	001	0001	1771	
\$\$@#VU	001	0002	1731	
\$\$@#0T	001	0018	1503	
\$\$@#1T	001	0018	1507	
\$\$@BCO	001	0018	1519	
\$\$@BOV	001	0018	1791	
\$\$@DPR	001	0005	1527	
\$\$@DRE	001	0001	1543	
\$\$@DSP	001	0004	1563	
\$\$@ECM	001	0006	1823	
\$\$@EFK	001	0002	1843	
\$\$@ERR	001	0003	1815	
\$\$@EXM	001	0003	1703	
\$\$@FIL	001	0009	1783	
\$\$@FIS	001	0009	1779	
\$\$@FML	001	0052	1911	
\$\$@FMS	001	0052	1751	
\$\$@GRA	001	0003	1675	
\$\$@GUF	001	0010	1811	
\$\$@INL	001	0010	1891	
\$\$@INS	001	0010	1515	
\$\$@KAL	001	000F	1679	
\$\$@KCA	001	000C	1895	
\$\$@KCH	001	000C	1647	
\$\$@KCN	001	0010	1763	
\$\$@KCT	001	0009	1615	

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 08/07/22 PAGE 24

#\$@KDE	001	0010	1611	
#\$@KDI	001	0005	1691	
#\$@KDN	001	0010	1599	
#\$@KDO	001	000C	1695	
#\$@KED	001	000E	1535	
#\$@KEN	001	0006	1539	
#\$@KEX	001	0003	1559	
#\$@KGO	001	0002	1531	
#\$@KHE	001	000C	1715	
#\$@KKE	001	0006	1943	
#\$@KLI	001	0011	1619	
#\$@KLL	001	0001	1919	
#\$@KLO	001	0008	1623	
#\$@KME	001	0003	1603	
#\$@KMO	001	0004	1547	
#\$@KNA	001	0008	1659	
#\$@KOV	001	0009	1579	
#\$@KPA	001	0005	1555	
#\$@KPO	001	000D	1643	
#\$@KPR	001	0009	1667	
#\$@KRE	001	0002	1587	
#\$@KRL	001	0004	1683	
#\$@KRM	001	0003	1551	
#\$@KRN	001	0003	1571	
#\$@KRO	001	000A	1575	
#\$@KRS	001	000A	1899	
#\$@KRU	001	0003	1595	
#\$@KRV	001	000D	1687	
#\$@KSA	001	0011	1631	
#\$@KSE	001	0004	1671	
#\$@KSO	001	0005	1723	
#\$@KSS	001	000B	1655	
#\$@KSV	001	0002	1651	
#\$@KSY	001	000F	1663	
#\$@KWI	001	0002	1591	
#\$@KWR	001	0002	1583	
#\$@LOA	001	0013	1523	
#\$@MIP	001	000D	1719	
#\$@SDS	001	0004	1831	
#\$@SFF	001	0008	1835	
#\$@SFL	001	0005	1827	
#\$@SFO	001	0003	1799	
#\$@SFS	001	0011	1795	
#\$@SPA	001	0004	1635	
#\$@SPO	001	0003	1639	
#\$@SPS	001	0001	1627	
#\$@STR	001	0002	1803	
#\$@TDC	001	0003	1607	
#\$@TSY	001	0003	1567	
#\$@TVK	001	0001	1743	
#\$@UAL	001	0011	1759	
#\$@UAT	001	000C	1855	
#\$@UCD	001	000B	1863	
#\$@UCN	001	0009	1847	
#\$@UCP	001	000F	1851	
#\$@UDE	001	000E	1867	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 25

SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$@UDI	001	0008	1871	
#\$@UEX	001	000E	1755	
#\$@UIN	001	000F	1859	
#\$@UPA	001	0004	1839	
#\$@UPO	001	0005	1907	
#\$@UPT	001	0012	1903	
#\$@VCR	001	0008	1699	
#\$@VLO	001	0002	1735	
#\$@VOD	001	0016	1739	
#\$@VVM	001	0030	1747	
#\$@VXI	001	0002	1727	
#\$@ZDU	001	0008	1879	
#\$@ZLB	001	0002	1923	
#\$@ZLO	001	000C	1883	
#\$@ZLV	001	0006	1939	
#\$@ZL1	001	0007	1927	
#\$@ZL2	001	000D	1931	
#\$@ZL3	001	000A	1935	
#\$@ZTR	001	0001	1875	
#\$@ZUT	001	0014	1887	
#\$BCOM	001	0080	1517	
#\$BOLV	001	1780	1789	
#\$DPRI	001	014C	1525	
#\$DREA	001	0200	1541	
#\$DSPL	001	0240	1561	
#\$ECMA	001	1900	1821	
#\$EFKE	001	1990	1841	
#\$ERRP	001	18C0	1813	
#\$EXMS	001	07D4	1701	
#\$FILN	001	1724	1781	
#\$FIST	001	1700	1777	
#\$FMLN	001	1E00	1909	
#\$FMST	001	0D00	1749	
#\$GRAP	001	0690	1673	
#\$GUFU	001	1880	1809	
#\$INLN	001	1C84	1889	
#\$INST	001	0020	1513	
#\$KALL	001	06A4	1677	
#\$KCAL	001	1CC4	1893	
#\$KCHA	001	053C	1645	
#\$KCND	001	0F80	1761	
#\$KCTL	001	03BC	1613	
#\$KDEL	001	035C	1609	
#\$KDIS	001	0744	1689	
#\$KDNT	001	0300	1597	
#\$KDOV	001	0780	1693	
#\$KEDI	001	0188	1533	
#\$KENA	001	01C4	1537	
#\$KEXT	001	0234	1557	
#\$KGOS	001	0180	1529	
#\$KHEL	001	0A30	1713	
#\$KKEY	001	2100	1941	
#\$KLIS	001	0400	1617	
#\$KLLA	001	2004	1917	
#\$KLOG	001	0444	1621	
#\$KMER	001	030C	1601	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 26

SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$KMOU	001	0204	1545	
#\$KNAM	001	05C0	1657	
#\$KOVN	001	0290	1577	
#\$KPAS	001	0220	1553	
#\$KPOO	001	0508	1641	
#\$KPRT	001	063C	1665	
#\$KREA	001	02BC	1585	
#\$KRLA	001	0700	1681	
#\$KRMO	001	0214	1549	
#\$KRNU	001	0280	1569	
#\$KROV	001	028C	1573	
#\$KRSU	001	1D24	1897	
#\$KRUN	001	02CC	1593	
#\$KRVL	001	0710	1685	
#\$KSAV	001	0488	1629	
#\$KSET	001	0680	1669	
#\$KSOV	001	0AC8	1721	
#\$KSSP	001	0594	1653	
#\$KSVL	001	058C	1649	
#\$KSYM	001	0600	1661	
#\$KWID	001	02C4	1589	
#\$KWRI	001	02B4	1581	
#\$LOAD	001	0100	1521	
#\$MIPP	001	0A80	1717	
#\$SDSY	001	192C	1829	
#\$SFFI	001	193C	1833	
#\$SFLO	001	1918	1825	
#\$SFOV	001	1844	1797	
#\$SFSY	001	1800	1793	
#\$SPAC	001	04CC	1633	
#\$SPOV	001	04DC	1637	
#\$SPSY	001	0484	1625	
#\$STRO	001	1850	1801	
#\$TDCK	001	0350	1605	
#\$TSYK	001	0250	1565	
#\$TVKB	001	0BAC	1741	
#\$UALL	001	0F00	1757	
#\$UATR	001	1A38	1853	
#\$UCDI	001	1AD8	1861	
#\$UCNF	001	19B8	1845	
#\$UCPL	001	19DC	1849	
#\$UDEL	001	1B24	1865	
#\$UDIS	001	1B5C	1869	
#\$UEXL	001	0EA8	1753	
#\$UINI	001	1A88	1857	
#\$UPAC	001	1980	1837	
#\$UPOV	001	1D24	1905	
#\$UPTF	001	1D5C	1901	
#\$VCRT	001	07B4	1697	
#\$VLOA	001	0B80	1733	
#\$VODK	001	0B88	1737	
#\$VVMR	001	0C00	1745	
#\$VXIT	001	0B00	1725	
#\$ZDUM	001	1BA4	1877	
#\$ZLBM	001	2008	1921	
#\$ZLOA	001	1BC4	1881	

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 08/07/22 PAGE 27

#\$ZLVR 001 20B0 1937
#\$ZL1M 001 2010 1925
#\$ZL2M 001 2030 1929
#\$ZL3M 001 2088 1933
#\$ZTRA 001 1B9C 1873
#\$ZUTM 001 1C14 1885
#@#BAD 001 0455 1447
#@#IO1 001 0459 1455
#@#IO2 001 045D 1456
#@#TAT 001 0941 1483
#@#TBA 001 09A1 1487
#@#TFS 001 0941 1481
#@#TSY 001 0941 1485
#@#VFP 001 0700 1473
#@#VLP 001 093D 1476
#@#WDB 001 050C 1468
#@#WFT 001 0500 1466
#@#BA 001 0001 1448
#@#IO 001 0001 1460
#@#SC 001 0002 1457
#@#TA 001 0010 1484
#@#TB 001 0010 1488
#@#TS 001 0005 1486
#@#TW 001 0020 1482
#@#VM 001 0100 1477
#@#WD 001 00BD 1469
#@#WF 001 0003 1467
#@#04 001 0004 1459
#@#08 001 0008 1458
#@#BOV 001 0018 1436
#@#ECM 001 0006 1450
#@#ERR 001 0003 1444
#@#GUF 001 0010 1440
#@#LDS 001 0002 1446
#@#SDS 001 0004 1442
#@#SFF 001 0008 1454
#@#SFL 001 0005 1452
#@#SFO 001 0005 1462
#@#SFS 001 0011 1438
#@#VSF 001 0010 1490
#@#VSL 001 000F 1491
#@#VTR 001 0001 1475
#@BOVL 001 0400 1435
#@CORS 001 0005 1397
#@ECMA 001 0481 1449
#@ERRP 001 0441 1443
#@GUFU 001 0401 1439
#@LDSV 001 044D 1445
#@MVSD 001 0001 1405
#@NERO 001 0003 1399
#@OBRA 001 0002 1401
#@PTFL 001 0006 1420
#@PTFS 001 0001 1419
#@SDSY 001 04AD 1441
#@SFFI 001 04BD 1453
#@SFLO 001 0499 1451

2486

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 28

SYMBOL	LEN	VALUE	DEFN	REFERENCES
#@SFOV	001	04C4	1461	
#@SFSY	001	0480	1437	
#@VCNT	001	0002	1417	
#@VLAB	001	0001	1412	
#@VLSD	001	0001	1403	2478
#@VSFI	001	09A1	1489	
#@VTRL	001	0708	1474	
#@WAF1	001	0401	1434	
#@WAR1	001	0400	1433	
#CNDIS	001	0001	1372	
#CNFIG	001	0005	1408	
#CORSV	001	0010	1396	
#DKEXT	001	0002	1379	
#FIGSC	001	0001	1409	
#HISCT	001	0006	1386	
#HISDX	001	0003	1381	
#HISLN	001	0008	1378	1379
#HISN1	001	0003	1384	
#HISN2	001	0005	1385	
#HISTC	001	0007	1388	
#HISTN	001	0009	1390	
#HISTQ	001	0000	1382	
#HISTR	001	0001	1383	
#HISTS	001	0008	1389	
#HISTV	001	000F	1391	
#HSEND	001	0007	1387	
#HSENT	001	0001	1380	
#IOSDR	001	0019	1407	
#KDNT	001	0C07	2062	
#KDNT	001	0000	0001	
#MVSDR	001	000D	1404	2485
#NEROV	001	009C	1398	
#OBRAD	001	001D	1400	
#PKCNT	001	0002	1365	2417 2418
#PKMRW	001	002B	1366	2450*
#PKRDD	001	0003	1363	2418
#PKRTD	001	0003	1362	2413 2414 2459* 2460 2460*
#PKRTL	001	0004	1369	2414 2439 2460
#PKVRD	001	000B	1367	2428*
#PKVWD	001	0007	1368	2427*
#PKWTD	001	0001	1364	2417
#PTFDA	001	00DC	1418	
#RDWTL	001	0004	1370	2419 2427 2428 2450 2450 2470 2490 2495
#SDRDK	001	0011	1406	
#VLSDR	001	000C	1402	2477
#VLTBE	001	0008	1357	
#VOLF1	001	0009	1410	
#VOLNG	001	0006	1355	1357 1379
#VOLOC	001	0005	1356	
#VOLR1	001	0008	1411	2188
#VTCF1	001	0025	1414	
#VTCF2	001	0027	1416	
#VTCR1	001	0024	1413	
#VTCR2	001	0026	1415	
@@E001	001	0000	1260	1262
@@E003	001	0001	1262	1264

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 29

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E004	001	0002	1264	1266
@@E005	001	0003	1266	1268
@@E006	001	0004	1268	1270
@@E007	001	0005	1270	1272
@@E008	001	0006	1272	1274
@@E009	001	0007	1274	1276
@@E010	001	0008	1276	1278
@@E011	001	0009	1278	1280
@@E012	001	000A	1280	1282
@@E013	001	000B	1282	1284
@@E014	001	000C	1284	1286
@@E015	001	000D	1286	1288
@@E016	001	000E	1288	1290
@@E017	001	000F	1290	1292
@@E018	001	0010	1292	1294
@@E019	001	0011	1294	1296
@@E020	001	0012	1296	1298
@@E021	001	0013	1298	1300
@@E023	001	0014	1300	1302
@@E024	001	0015	1302	1304
@@E025	001	0016	1304	1306
@@E026	001	0017	1306	1308
@@E027	001	0018	1308	1310
@@E028	001	0019	1310	1312
@@E029	001	001A	1312	1314
@@E030	001	001B	1314	1316
@@E031	001	001C	1316	1318
@@E032	001	001D	1318	1320
@@E035	001	001E	1320	1322
@@E036	001	001F	1322	1324
@@E037	001	0020	1324	1326
@@E038	001	0021	1326	1328
@@E039	001	0022	1328	1330
@@E040	001	0023	1330	1332
@@E041	001	0024	1332	1334
@@E042	001	0025	1334	1336
@@E043	001	0026	1336	1338
@@E044	001	0027	1338	1340
@@E045	001	0028	1340	1342
@@E046	001	0029	1342	1344
@@E060	001	002A	1344	1346
@@E080	001	002B	1346	
@@E100	001	0000	0732	0734
@@E101	001	0001	0734	0736
@@E102	001	0002	0736	0738
@@E103	001	0003	0738	0740
@@E110	001	0004	0740	0742 2304
@@E112	001	0005	0742	0744
@@E113	001	0006	0744	0746
@@E114	001	0007	0746	0748
@@E115	001	0008	0748	0750
@@E116	001	0009	0750	0752
@@E117	001	000A	0752	0754
@@E120	001	000B	0754	0756
@@E122	001	000C	0756	0758
@@E123	001	000D	0758	0760

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 30

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E124	001	000E	0760	0762
@@E129	001	000F	0762	0764
@@E130	001	0010	0764	0766 2131
@@E131	001	0011	0766	0768 2140
@@E133	001	0012	0768	0770 2144
@@E134	001	0013	0770	0772
@@E135	001	0014	0772	0774
@@E136	001	0015	0774	0776
@@E137	001	0016	0776	0778
@@E138	001	0017	0778	0780
@@E139	001	0018	0780	0782 2135
@@E142	001	0019	0782	0784
@@E143	001	001A	0784	0786
@@E150	001	001B	0786	0788
@@E151	001	001C	0788	0790
@@E160	001	001D	0790	0792
@@E162	001	001E	0792	0794
@@E163	001	001F	0794	0796
@@E164	001	0020	0796	0798
@@E200	001	0021	0798	0800
@@E205	001	0022	0800	0802
@@E210	001	0023	0802	0804
@@E211	001	0024	0804	0806
@@E212	001	0025	0806	0808
@@E213	001	0026	0808	0810
@@E215	001	0027	0810	0812
@@E216	001	0028	0812	0814
@@E217	001	0029	0814	0816
@@E220	001	002A	0816	0818
@@E221	001	002B	0818	0820
@@E222	001	002C	0820	0822
@@E223	001	002D	0822	0824
@@E225	001	002E	0824	0826
@@E226	001	002F	0826	0828
@@E227	001	0030	0828	0830
@@E228	001	0031	0830	0832
@@E229	001	0032	0832	0834
@@E230	001	0033	0834	0836
@@E232	001	0034	0836	0838
@@E234	001	0035	0838	0840
@@E237	001	0036	0840	0842
@@E240	001	0037	0842	0844
@@E241	001	0038	0844	0846
@@E242	001	0039	0846	0848
@@E248	001	003A	0848	0850
@@E249	001	003B	0850	0852
@@E250	001	003C	0852	0854
@@E251	001	003D	0854	0856
@@E252	001	003E	0856	0858
@@E253	001	003F	0858	0860
@@E254	001	0040	0860	0862
@@E255	001	0041	0862	0864
@@E256	001	0042	0864	0866
@@E300	001	0043	0866	0868
@@E301	001	0044	0868	0870
@@E302	001	0045	0870	0872

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 08/07/22 PAGE 31

@@E303	001	0046	0872	0874	
@@E304	001	0047	0874	0876	
@@E305	001	0048	0876	0878	
@@E308	001	0049	0878	0880	
@@E310	001	004A	0880	0882	
@@E315	001	004B	0882	0884	
@@E316	001	004C	0884	0886	
@@E320	001	004D	0886	0888	2148
@@E325	001	004E	0888	0890	
@@E330	001	004F	0890	0892	
@@E335	001	0050	0892	0894	
@@E338	001	0051	0894	0896	
@@E340	001	0052	0896	0898	
@@E350	001	0053	0898	0900	
@@E351	001	0054	0900	0902	
@@E352	001	0055	0902	0904	
@@E360	001	0056	0904	0906	
@@E361	001	0057	0906	0908	
@@E362	001	0058	0908	0910	
@@E371	001	0059	0910	0912	
@@E380	001	005A	0912	0914	
@@E390	001	005B	0914	0916	
@@E400	001	005C	0916	0918	
@@E410	001	005D	0918	0920	
@@E415	001	005E	0920	0922	
@@E417	001	005F	0922	0924	
@@E420	001	0060	0924	0926	
@@E430	001	0061	0926	0928	
@@E432	001	0062	0928	0930	
@@E433	001	0063	0930	0932	
@@E450	001	0064	0932	0934	
@@E451	001	0065	0934	0936	
@@E460	001	0066	0936	0938	
@@E461	001	0067	0938	0940	
@@E464	001	0068	0940	0942	
@@E465	001	0069	0942	0944	
@@E466	001	006A	0944	0946	
@@E467	001	006B	0946	0948	
@@E469	001	006C	0948	0950	
@@E470	001	006D	0950	0952	
@@E471	001	006E	0952	0954	
@@E473	001	006F	0954	0956	
@@E474	001	0070	0956	0958	
@@E475	001	0071	0958	0960	
@@E476	001	0072	0960	0962	
@@E477	001	0073	0962	0964	
@@E478	001	0074	0964	0966	
@@E479	001	0075	0966	0968	
@@E480	001	0076	0968	0970	
@@E481	001	0077	0970	0972	
@@E482	001	0078	0972	0974	
@@E483	001	0079	0974	0976	
@@E484	001	007A	0976	0978	
@@E485	001	007B	0978	0980	
@@E486	001	007C	0980	0982	
@@E487	001	007D	0982	0984	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 32

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E488	001	007E	0984	0986
@@E489	001	007F	0986	0988
@@E490	001	0080	0988	0990
@@E491	001	0081	0990	0992
@@E492	001	0082	0992	0994
@@E493	001	0083	0994	0996
@@E494	001	0084	0996	0998
@@E495	001	0085	0998	1000
@@E496	001	0086	1000	1002
@@E497	001	0087	1002	1004
@@E498	001	0088	1004	1006
@@E500	001	0089	1006	1008
@@E501	001	008A	1008	1010
@@E530	001	008B	1010	1012
@@E531	001	008C	1012	1014
@@E535	001	008D	1014	1016
@@E540	001	008E	1016	1018
@@E541	001	008F	1018	1020
@@E542	001	0090	1020	1022
@@E543	001	0091	1022	1024
@@E544	001	0092	1024	1026
@@E545	001	0093	1026	1028
@@E546	001	0094	1028	1030
@@E547	001	0095	1030	1032
@@E548	001	FFFF	1236	
@@E549	001	0096	1032	1034
@@E550	001	0097	1034	1036
@@E551	001	0098	1036	1038
@@E552	001	0099	1038	1040
@@E553	001	009A	1040	1042
@@E554	001	009B	1042	1044
@@E555	001	009C	1044	1046
@@E556	001	009D	1046	1048
@@E558	001	009E	1048	1050
@@E570	001	009F	1050	1052
@@E571	001	00A0	1052	1054
@@E572	001	00A1	1054	1056
@@E573	001	00A2	1056	1058
@@E574	001	00A3	1058	1060
@@E575	001	FFFF	1238	
@@E578	001	00A4	1060	1062
@@E579	001	FFFF	1240	
@@E580	001	FFFF	1242	
@@E585	001	00A5	1062	1064
@@E595	001	FFFF	1244	
@@E597	001	FFFF	1246	
@@E598	001	FFFF	1248	
@@E600	001	00A6	1064	1066
@@E601	001	00A7	1066	1068
@@E602	001	00A8	1068	1070
@@E603	001	00A9	1070	1072
@@E604	001	00AA	1072	1074
@@E606	001	00AB	1074	1076
@@E607	001	00AC	1076	1078
@@E608	001	00AD	1078	1080
@@E609	001	00AE	1080	1082

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 33

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E610	001	00AF	1082	1084
@@E611	001	00B0	1084	1086
@@E612	001	00B1	1086	1088
@@E613	001	00B2	1088	1090
@@E614	001	00B3	1090	1092
@@E700	001	00B4	1092	1094
@@E701	001	00B5	1094	1096
@@E710	001	00B6	1096	1098
@@E712	001	00B7	1098	1100
@@E713	001	00B8	1100	1102
@@E714	001	00B9	1102	1104
@@E715	001	00BA	1104	1106
@@E716	001	00BB	1106	1108
@@E717	001	00BC	1108	1110
@@E718	001	00BD	1110	1112
@@E720	001	00BE	1112	1114
@@E721	001	00BF	1114	1116
@@E723	001	00C0	1116	1118
@@E724	001	00C1	1118	1120
@@E725	001	00C2	1120	1122
@@E726	001	00C3	1122	1124
@@E727	001	00C4	1124	1126
@@E728	001	00C5	1126	1128
@@E729	001	00C6	1128	1130
@@E730	001	00C7	1130	1132
@@E732	001	00C8	1132	1134
@@E752	001	00C9	1134	1136
@@E753	001	00CA	1136	1138
@@E754	001	00CB	1138	1140
@@E755	001	00CC	1140	1142
@@E756	001	00CD	1142	1144
@@E757	001	00CE	1144	1146
@@E758	001	00CF	1146	1148
@@E759	001	00D0	1148	1150
@@E760	001	00D1	1150	1152
@@E761	001	00D2	1152	1154
@@E762	001	00D3	1154	1156
@@E763	001	00D4	1156	1158
@@E764	001	00D5	1158	1160
@@E765	001	00D6	1160	1162
@@E766	001	00D7	1162	1164
@@E767	001	00D8	1164	1166
@@E768	001	00D9	1166	1168
@@E769	001	00DA	1168	1170
@@E770	001	00DB	1170	1172
@@E771	001	00DC	1172	1174
@@E772	001	00DD	1174	1176
@@E773	001	00DE	1176	1178
@@E774	001	00DF	1178	1180
@@E775	001	00E0	1180	1182
@@E776	001	00E1	1182	1184
@@E777	001	00E2	1184	1186
@@E778	001	00E3	1186	1188
@@E779	001	00E4	1188	1190
@@E780	001	00E5	1190	1192
@@E781	001	00E6	1192	1194

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 34

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E782	001	00E7	1194	1196
@@E783	001	00E8	1196	1198
@@E784	001	00E9	1198	1200
@@E785	001	00EA	1200	1202
@@E786	001	00EB	1202	1204
@@E790	001	00EC	1204	1206
@@E791	001	00ED	1206	1208
@@E792	001	00EE	1208	1210
@@E793	001	00EF	1210	1212
@@E794	001	00F0	1212	1214
@@E795	001	00F1	1214	1216
@@E796	001	00F2	1216	1218
@@E797	001	00F3	1218	1220
@@E798	001	00F4	1220	1222
@@E800	001	FFFF	1250	
@@E801	001	FFFF	1252	
@@E802	001	FFFF	1254	
@@E803	001	FFFF	1256	
@@E804	001	FFFF	1258	
@@E900	001	00F5	1222	1224
@@E901	001	00F6	1224	1226
@@E902	001	00F7	1226	1228
@@E903	001	00F8	1228	1230
@@E905	001	00F9	1230	1232
@@E906	001	00FA	1232	1234
@@E910	001	00FB	1234	
@ARR	001	0008	0016	2302 2411
@ASIGN	001	007C	0071	
@ASTER	001	005C	0069	
@BCRDL	001	0050	0088	
@BE	001	0081	0043	
@BF	001	0090	0052	
@BH	001	0084	0041	
@BL	001	0082	0042	
@BLANK	001	0040	0065	2072 2307 2313
@BM	001	0082	0054	
@BNE	001	0001	0046	2298
@BNH	001	0004	0044	
@BNL	001	0002	0045	
@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	2065 2066* 2082 2088 2110 2119* 2120 2126 2150 2406 2408 2409* 2410 2411 2414 2417 2418 2419 2419 2427 2428 2429 2435 2437 2437 2438 2440 2440 2441 2451 2462*
@BT	001	0010	0051	
@BZ	001	0081	0055	
@B1	001	0001	0063	
@CADDR	001	0002	0142	2091 2112 2114 2178 2179 2180 2181
@CARDL	001	0060	0087	0644
@CHARA	001	00C1	0072	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 35

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@CHARF	001	00C6	0073	
@CHARR	001	00D9	0074	
@CHARZ	001	00E9	0075	
@CLOFF	001	0010	0094	
@CLON	001	0011	0093	
@COMMA	001	006B	0066	2309
@CPLUS	001	004E	0079	
@CRTQ	001	0090	2172	2125
@DADDR	001	0002	0140	2105
@DBFR1	001	0004	0129	
@DBFR2	001	0005	0130	
@DCALK	001	0001	0081	
@DCBCY	001	0009	0115	
@DCBT1	001	0050	0117	
@DCNT	001	0003	0128	
@DCST1	001	0040	0116	
@DCTRL	001	0000	0125	2429* 2438* 2451*
@DCYL	001	0001	0126	
@DD2	001	0003	0030	
@DGET	001	0001	0134	2187 2198 2438 2476 2484
@DOLAR	001	005B	0068	
@DOP2	001	0004	0028	
@DPLNG	001	0006	0132	
@DPOS	001	0000	0133	
@DPUT	001	0002	0135	2429 2451
@DSAD	001	0002	0127	2088* 2110* 2435 2437*
@DSBCY	001	0004	0106	
@DSCS1	001	0000	0107	
@DSIVF	001	0003	0138	
@DSPIN	001	0002	0131	
@DTRSZ	001	0018	0085	
@DVBCY	001	0007	0108	
@DVRFY	001	0031	0136	
@DWAIT	001	00FF	0137	
@DWBCY	001	0005	0103	
@DWSIZ	001	00C0	0105	
@DWTB1	001	0003	0104	
@DZERO	001	00F0	0064	
@D1	001	0002	0026	2440*
@EOF	001	001C	0077	
@EOFTC	001	0075	0162	
@EOS	001	001E	0076	2069 2077 2096 2315
@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	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 36

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@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	
@NOP	001	0080	0040	2158
@NUMBR	001	007B	0070	
@OPD2	001	0004	0029	
@OP1	001	0003	0027	2080* 2302* 2408* 2410* 2411*
@OP2	001	0005	0031	
@PCTRL	001	0000	0149	
@PDATA	001	0003	0151	
@PGCSZ	001	0020	0082	0083
@PPLNG	001	0004	0148	
@PRCNT	001	0001	0150	
@PRETR	001	00C0	0154	
@PRINT	001	0040	0152	0154
@PSR	001	0004	0015	
@PWAIT	001	00FF	0158	
@P1IAR	001	0020	0018	
@P2IAR	001	0040	0019	
@Q	001	0001	0024	2321
@REGL	001	0002	0012	
@RETRN	001	0080	0153	0154
@RLDWN	001	004F	0159	
@RTRNC	001	0080	0161	
@SBLN	001	0005	0170	
@SBLNL	001	0002	0184	
@SCTSZ	001	0100	0100	
@SDFLN	001	0007	0090	
@SDF0	001	0000	0166	
@SDF1	001	0001	0167	
@SDF2	001	0002	0168	
@SDF3	001	0003	0169	
@SECCY	001	0030	0086	
@SIST	001	0001	0181	
@SLASH	001	0061	0067	
@SLAST	001	0002	0183	
@SMIDL	001	0003	0182	
@SNULL	001	0080	0173	
@SONLY	001	0000	0180	
@STEXT	001	0007	0172	
@STYPE	001	0006	0171	
@TBCNT	001	0000	0160	
@TBLEF	001	0010	0155	0157
@TBLIX	001	0011	0157	
@UCB	001	0087	0039	2299 2310
@UPARW	001	005A	0078	

CROSS REFERENCE

VER 15, MOD 00 08/07/22 PAGE 37

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@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	
@VQ	001	0001	0025	
@WSFIT	001	0500	0101	
@WSTBL	001	0503	0102	
@XR	001	0002	0014	2067* 2069 2072 2077 2080 2082 2093 2093* 2096 2139* 2150* 2303 2306 2306* 2307 2309 2312 2312* 2313 2315 2317 2410 2413* 2414 2417 2418 2439 2439* 2459 2460 2460 2463*
@ZERO	001	0000	0062	2099 2459
KDNBUF	001	0F00	2163	2107 2190
KDNBY2	001	0002	2160	
KDNCNS	001	00FE	2170	2120*
KDNDAD	001	0000	2168	2199
KDNDES	003	0CC4	2177	2082
KDNDSP	001	001B	2162	2126
KDND47	001	0047	2165	2107
KDNHIG	002	0CC8	2179	
KDNINC	002	0CCC	2181	
KDNIND	001	0002	2171	2120
KDNLDE	001	0003	2157	2082 2082 2093 2177
KDNLOW	002	0CC6	2178	
KDNMAX	002	0CCA	2180	
KDNMIR	001	0080	2158	2116
KDNMSK	001	0080	2167	2107
KDNNIP	001	0CD3	2197	2110* 2112
KDNSCT	001	0100	2159	
KDNSC8	001	0001	2169	2200
KDNSTN	001	1200	2164	2119 2201
KDNTER	001	05FF	2050	
KDNVOL	001	0CCD	2186	2088* 2091
KDN000	001	0000	2155	2069 2072 2077 2096 2150
KDN001	001	0001	2156	2088 2110 2189
KDN100	004	0C0B	2067	2065 2066
KDN475	004	0C59	2104	2097
KDN500	003	0C94	2126	2124
KDN750	004	0C97	2131	2070 2078
KDN800	004	0C9E	2135	2073
KDN825	004	0CA5	2139	2080* 2100
KDN850	004	0CA9	2140	2083
KDN875	004	0CB0	2144	2102
KDN900	004	0CB7	2148	2108
KDN950	004	0CBE	2151	2095 2133 2137 2142 2146
SCACNT	002	0D19	2327	2099 2317* 2318*
SCACOF	001	0087	2299	
SCACOM	001	0001	2298	2076
SCAINC	001	0001	2297	2306 2312
SCAMMA	003	0CF6	2321	2076*
SCANIT	001	0CD9	2301	2075 2094
SCASVE	002	0D17	2326	2303* 2318
SCASV1	001	0D16	2325	

VER 15, MOD 00 08/07/22 PAGE 38

SCA100	003	0CE8	2306	2308						
SCA200	003	0CEB	2307	2305						
SCA250	003	0CF5	2310	2321						
SCA300	003	0CF8	2312	2314						
SCA400	004	0D08	2317	2310						
SCA500	004	0D12	2320	2302*	2316					
SUPBSE	004	0D2C	2494	2406	2409					
SUPBUF	001	0E00	2514	2427*	2428*	2450*	2479	2487		
SUPDAT	001	0D1A	2407	2117						
SUPDPL	001	0DB6	2475	2422	2429*	2432	2435	2437*	2438*	
SUPDP2	001	0DBC	2483	2445	2451*	2454				
SUPDSP	001	0007	2495	2419*						
SUPEND	001	0003	2493	2435						
SUPMDP	001	0DC2	2490	2440						
SUPMST	001	0DC3	2491	2419*	2450					
SUPONE	001	0DAD	2471	2437						
SUPRDC	002	0DB5	2473	2418*	2419	2428				
SUPWTC	002	0DB1	2472	2417*	2427					
SUPZER	004	0DAC	2470	2414						
SUP020	004	0D2C	2414	2441	2494					
SUP040	004	0D3B	2419	2440*						
SUP100	003	0D5E	2435	2416						
SUP200	004	0D75	2444	2436						
SUP500	004	0D9D	2462	2408*						
SUP501	004	0DA1	2463	2410*						
SUP502	004	0DA5	2464	2411*						

```
OL105 I THE CODE LENGTH OF #KDNT E IS 3584 DECIMAL.
OL103 I TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 3
NAME-#KDNT E,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-R,CATEGORY-000
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START ADDRESS	CATEGORY	NAME AND ENTRY	CODE LENGTH HEXADECIMAL	DECIMAL
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0C00	0	#KDNT	0E00	3584
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OL100	I	THE TOTAL CORE USED BY #KDNT IS 3584 DECIMAL.		
OL101	I	THE START CONTROL ADDRESS OF THIS MODULE IS 0C00.		
OL104	I	TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 15		
		NAME-#KDNT,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-O		