

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

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

0000	1	#KRUNUM	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	*	@CY0	EXP-N
	726	*	@WKA	EXP-N
	727	*	@DIR	EXP-N
	728	*	@SPF	EXP-N
	1191+		PRINT	ON
	1192	*	@VMD	EXP-N
	1193	*	@ERM	EXP-N
	1815+		PRINT	ON

#KRUNUM -- RENUMBER COMMAND PROCESSOR - PHASE 1

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 06/03/22 PAGE 3
		1817		*****	
		1818	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		1819	*	REFER TO INSTRUCTIONS ON COPY RIGHT NOTICE, 120-2083	*
		1820	*		*
		1821		*****	
		1822	*	STATUS	*
		1823	*	VERSION 1 MODIFICATION 0	*
		1824	*		*
		1825	*	FUNCTION	*
		1826	*	KRUNUMB PERFORMS THE SYNTAX-CHECKING OF THE RENUMBER AND SAVES	*
		1827	*	THE PARAMETERS FOR THE RENUMBER OVERLAY PROGRAM, #KROVL. KRUNUMB	*
		1828	*	ALSO WRITES THE WORKFILE FROM THE WORKAREA TO VIRTUAL MEMORY.	*
		1829	*		*
		1830	*	ENTRY POINTS	*
		1831	*	THE ONLY ENTRY POINT TO KRUNUMB IS AT #KRUNUM, THE FIRST BYTE	*
		1832	*	FOLLOWING THE PROGRAM HEADER.	*
		1833	*		*
		1834	*	INPUT	*
		1835	*	INPUT TO KRUNUMB IS THE COMMAND INPUT LINE AND THE CONTENTS OF THE	*
		1836	*	WORKFILE.	*
		1837	*		*
		1838	*	OUTPUT	*
		1839	*	OUTPUT FROM KRUNUMB IS THE SAVED PARAMETER FIELD IN \$DPLSV (FOR	*
		1840	*	THE STARTING LINE NUMBER, INCREMENT, AND THE LINE NUMBER ON WHICH	*
		1841	*	TO BEGIN RENUMBERING) AND THE SAVED WORKFILE IN VIRTUAL MEMORY.	*
		1842	*		*
		1843	*	EXTERNAL REFERENCES	*
		1844	*	* \$CAERR - ERROR CODE SAVE AREA	*
		1845	*	* \$CAERK - EXIT TO LOAD \$ERRPG, THE ERROR PROGRAM	*
		1846	*	* \$DPLSV - IN CORE AREA USED TO SAVE THE THREE RENUMBER PARAMS	*
		1847	*	OR DEFAULTED VALUES FOR USE IN #KROVL	*
		1848	*	* \$XRSV - REGISTER 2 (@XR) SAVE AREA	*
		1849	*	* \$RLOAD - EXIT TO LOAD ?KROVL, THE RENUMBER OVERLAY PROGRAM	*
		1850	*	* \$\$FITS - ADDRESS OF FIT IN CORE	*
		1851	*	* #\$KROV - DISK ADDRESS OF #KROVL OVERLAY PROGRAM	*
		1852	*	* DL4ICS - ENTRY TO 4-TRACK LOGICAL DISK IOCS MODULE	*
		1853	*	* SCANIT - ENTRY TO DELIMITER SCAN MODULE	*
		1854	*	* SCAMMA - SCANIT INDICATOR SET TO ALLOW A COMMA	*
		1855	*	* C4BIN2 - ENTRY TO MODULE TO CONVERT DECIMAL TO BINARY	*
		1856	*	* C4BVAL - AREA WHERE C4BIN2 PLACES THE CONVERTED VALUE	*
		1857	*		*
		1858	*	EXITS, NORMAL	*
		1859	*	EXIT TO \$RLOAD TO CAUSE THE LOADING AND EXECUTION OF #KROVL, THE	*
		1860	*	RENUMBER OVERLAY PROGRAM.	*
		1861	*		*
		1862	*	EXITS, ERROR	*
		1863	*	EXIT TO \$CAERK TO LOAD \$ERRPG, THE ERROR PROGRAM.	*
		1864	*		*
		1865	*	TABLES/WORKAREAS	*
		1866	*	SIX-BYTE PARAMETER TABLE SAVED IN \$DPLSV.	*
		1867	*		*
		1868	*	ATTRIBUTES	*
		1869	*	RELOCATABLE	*
		1870	*		*
		1871	*	CHARACTER CODE DEPENDENCY	*
		1872	*	THE OPERATION OF THIS MODUE DOES NOT DEPEND ON ANY PARTICULAR	*

#KRUNUM -- RENUMBER COMMAND PROCESSOR - PHASE 1

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 06/03/22	PAGE 4
		1873	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.		*
		1874	*			*
		1875	*	NOTES		*
		1876	*	ERROR PROCEDURES		*
		1877	*	KRUNUMB EXITS TO \$CAERK TO LOAD #ERRPG ON ANY SYNTAX-ERROR		*
		1878	*	CONDITION DETECTED IN C4BIN2 OR SCANIT. KRUNUMB ALSO GIVES AN		*
		1879	*	ERROR ON AN INVALID DELIMITER, ON TOO MANY PARAMETERS, AND ON		*
		1880	*	A ZERO INCREMENT SPECIFICATION. FOR ANY ERROR, \$CAERR IS SET		*
		1881	*	TO CONTAIN THE APPROPRIATE ERROR CODE.		*
		1882	*			*
		1883	*	REGISTER USAGE		*
		1884	*	* REGISTER 1 (@BR) IS USED AS A BASE REGISTER FOR ADDRESSING.		*
		1885	*	* REGISTER 2 (@XR) IS USED INITIALLY TO POINT TO THE INPUT		*
		1886	*	LINE BUFFER AND LATER AS A BASE REGISTER FOR ADDRESSING.		*
		1887	*			*
		1888	*	SAVED/RESTORED AREAS		*
		1889	*	\$DPLSV IS USED TO SAVE THE RENUMBER PARAMETERS OR DEFAULTS.		*
		1890	*			*
		1891	*	MODIFICATION CONSIDERATIONS		*
		1892	*	NONE		*
		1893	*			*
		1894	*	REQUIRED MODULES		*
		1895	*	* @SYSEQ - COMMON SYSTEM EQUATES		*
		1896	*	* @FXDEQ - NUCLEUS FIXED ADDRESS EQUATES		*
		1897	*	* @CANEQ - FIXED ADDRESSES OUTSIDE NUCLEUS EQUATES		*
		1898	*	* @WKAEQ - SYSTEM WORKAREA EQUATES		*
		1899	*	* @SPFEQ - SYSTEM PROGRAM FILE EQUATES FOR #KRUNUM AND #KROVL		*
		1900	*	* @ERMEQ - ERROR MESSAGE EQUATES (SELECTED ERROR CODES)		*
		1901	*	* C4BIN2 - MODULE TO CONVERT DECIMAL TO BINARY		*
		1902	*	* SCANIT - MODULE TO SCAN ACROSS DELIMITERS		*
		1903	*	* DL4ICS - MODULE TO PERFORM 4-TRACK LOGICAL DISK IOCS		*
		1904	*			*
		1905	*	OTHER		*
		1906	*	NONE		*
		1907	*	*****		*

#KRUNUM -- RENUMBER COMMAND PROCESSOR - PHASE 1

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 06/03/22 PAGE 5
			1909	*	HDR #KRUNUM	
			1910	*****		
			1911	*	PROGRAM HEADER FOR DISK LOAD	*
			1912	*****		
			1913	*#\$KRUNU EQU	X'0280'	DISK ADDR OF #KRUNUM
			1914	*#\$KRN EQU	X'0700'	CORE LOAD ADDRESS OF #KRUNUM
			1915	*#\$@KRN EQU	003	SECTOR CNT OF #KRUNUM
0700			1916	ORG	\$\$\$KRN	CORE LOAD ADDRESS
			0700 1917	\$\$\$\$\$ EQU	*	FIRST LOCATION IN PROGRAM
0700	7BD2D9D5E4D4		0705 1918	DC	CL6 '#KRUNUM'	PROGRAM NAME
0706	11		0706 1919	DC	IL1 '017'	PROGRAM NUMBER OF #KRUNUM
			0707 1920	\$KRUNUM EQU	*	ENTRY POINT TO PROGRAM
			1922	*** END OF EXPANSION ***		
0700			1923	ORG	\$\$\$KRN	OVERLAY HEADER
0700			0700 1924	KRNFSZ DS	XL1	* WITH FILE
			0701 1925	KRNOPL EQU	*	* SIZE AND
0701			0706 1926	KRNAPL DS	XL (@DPLNG)	* OVERLAY DPL
0707	C0 87 08B1		1927	B	KRN050	GOTO SYNTAX CHECKING
			0700 1929	USING	KRNXR B, @XR	XR BASE REG VALUE
			051E 1930	USING	\$RLOAD, @BR	BR BASE REG VALUE
070B	E0 87 35		1931	KRN020 B	DL4ICS(, @XR)	CALL LOGICAL DISK IOCS TO READ
070E	0729		070F 1932	DC	AL (@CADDR) (KRN RPL)	* FILE FROM WORKAREA TO CORE
0710	E0 87 35		1933	B	DL4ICS(, @XR)	CALL LOGICAL DISK IOCS TO WRITE
0713	072F		0714 1934	DC	AL (@CADDR) (KRN WPL)	* FILE TO VM
0715	AE 00 2B 2C		1935	ALC	KRN RPL+@DSAD(, @XR), KRNCSZ(1, @XR)	UPDATE READ DPL
0719	AE 00 31 2C		1936	ALC	KRN WPL+@DSAD(, @XR), KRNCSZ(1, @XR)	UPDATE WRITE DPL
071D	AF 00 00 2C		1937	SLC	KRNFSZ(1, @XR), KRNCSZ(, @XR)	DECR FILE SIZE BY CORE SIZE
0721	E0 02 0B		1938	BNM	KRN020(, @XR)	LOOP IF MORE FILE TO TRANSFER
			1939	*		
0724	D0 87 00		1940	B	\$RLOAD(, @BR)	CALL OVERLAY ROUTINE
0727	0701		0728 1941	DC	AL (@CADDR) (KRN OPL)	ADDR OF DPL
			1942	*		
			1943	***		
			1944	*		
			1945	DISK PARAMETER LISTS		
0729	01		0729 1945	KRN RPL DC	AL1 (@DGET)	READ FUNCTION
072A			072B 1946	DS	CL (@DADDR)	DISK ADDRESS
072A			1947	ORG	*-@DADDR	INITIALIZE DISK ADDRESS TO FIRST
072A	0503		072B 1948	DC	XL (@DADDR) '0503'	DATA SECTOR OF WORK AREA
072C			072C 1949	KRNCSZ DS	CL1	SECTOR COHNT
072C			1950	ORG	*-1	INITIALIZE TO 8K SYSTEM
072C	18		072C 1951	DC	IL1 '24'	EXPANSION FACTOR IS ADDED
072D	0800		072E 1952	DC	AL (@CADDR) (KRN TBF)	CORE ADDRESS OF DATA
			1953	*		
072F	02		072F 1954	KRN WPL DC	AL1 (@DPUT)	WRITE FUNCTION
0730			0731 1955	DS	CL (@DADDR)	DISK ADDRESS
0730			1956	ORG	*-@DADDR	INITIALIZE TO FIRST DATA
0730	0703		0731 1957	DC	XL (@DADDR) '0703'	* SECTOR OF VIRTUAL MEMORY
0732			0732 1958	DS	CL1	SECTOR COUNT
0732			1959	ORG	*-1	INITIALIZE SECTOR COUNT TO 8K
0732	18		0732 1960	DC	IL1 '24'	* SYSTEM EXPANSION FACTOR ADDED
0733	0800		0734 1961	DC	AL (@CADDR) (KRN TBF)	CORE ADDRESS
			1963	*	\$DL4P	

DL4ICS - FOUR TRACK LOGICAL IOCR

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	06/03/22	PAGE	6
1965+				*****				*
1966+				5703-XM1 COPYRIGHT IBM CORP. 1970				*
1967+				REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083				*
1968+								*
1969+				*****				*
1970+				STATUS				*
1971+				VERSION 1 MODIFICATION 0				*
1972+								*
1973+				FUNCTION				*
1974+				* DL4ICS WILL CONVERT A RELATIVE DISK ADDRESS TO A PHYSICAL				*
1975+				DISK ADDRESS AND CALL \$DISKN TO PERFORM THE SPECIFIED FUNCTION				*
1976+				* THE DISK ADDRESS IS A ONE BYTE CYLINDER ADDRESS AND A ONE BYTE				*
1977+				SECTOR DISPLACEMENT RELATIVE TO SECTOR 0 ON A CYLINDER				*
1978+				BOUNDARY				*
1979+				* WHEN MORE THAN 1 SECTOR IS PROCESSED, DL4ICS WILL MAKE MULTIPLE				*
1980+				CALLS TO \$DISKN TO CROSS CYLINDER BOUNDARIES IF REQUIRED.				*
1981+				* IF 1 SECTOR ONLY IS TO BE PROCESSED, THE USER MAY OVERLAY THE				*
1982+				UNUSED CODE BY ORGING HIS NEXT MODULE AT DL4SPT				*
1983+								*
1984+				ENTRY POINTS				*
1985+				DL4ICS - ENTRY TO PROCESS A 4 SURFACE FILE. THE CALLING				*
1986+				SEQUENCE IS AS FOLLOWS				*
1987+				DSKL4 DPL				*
1988+				WHERE DPL IS THE LABEL OF A SIX BYTE DISK PARAMETER				*
1989+				LIST AS DESCRIBED FOR \$DISKN EXCEPT FOR THE SECTOR				*
1990+				ADDRESS BYTE.				*
1991+								*
1992+				INPUT				*
1993+				* INPUT TO DL4ICS IS THE ADDRESS OF THE DPL TO BE PROCESSED.				*
1994+								*
1995+				OUTPUT				*
1996+				* N/A				*
1997+								*
1998+				EXTERNAL REFENECES				*
1999+				\$DISKN - ENTRY TO SYSTEM DISK ROUTINE				*
2000+								*
2001+				EXITS, NORMAL				*
2002+				* NORMAL RETURN IS TO THE 1ST INSTRUCTION FOLLOWING THE TWO BYTE				*
2003+				ADDRESS POINTING TO THE DPL.				*
2004+								*
2005+				EXITS, ERROR				*
2006+				* N/A				*
2007+								*
2008+				TABLES/WORK AREAS				*
2009+				* N/A				*
2010+								*
2011+				ATTRIBUTES				*
2012+				* RELOCATABLE				*
2013+				* REUSABLE				*
2014+								*
2015+				CHARACTER CODE DEPENDENCY				*
2016+				* THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR				*
2017+				INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.				*
2018+								*
2019+				NOTES				*
2020+				ERROR PROCEDURES				*

DL4ICS - FOUR TRACK LOGICAL IOCR

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00	06/03/22	PAGE	7
		2021+	*	N/A				*
		2022+	*					*
		2023+	*	REGISTER USAGE				*
		2024+	*	@BR IS SAVED AND RESTORED ON EXIT, @XR IS NOT USED. @ARR IS				*
		2025+	*	USED TO PROVIDE THE ADDRESS OF THE PARAMETER. THE @ARR IS				*
		2026+	*	INCREMENTED BT TWO AND SAVED AS THE RETURN ADDRESS.				*
		2027+	*					*
		2028+	*	SAVED/RESTORED AREAS				*
		2029+	*	N/A				*
		2030+	*					*
		2031+	*	MODIFICATION CONSIDERATIONS				*
		2032+	*	N/A				*
		2033+	*					*
		2034+	*	REQUIRED MODULES				*
		2035+	*	@SYSEQ - SYSTEM SOFTWARE EQUATES				*
		2036+	*	@FXDEQ - SYSTEM NUCLEUS EQUATES				*
		2037+	*					*
		2038+	*	OTHER				*
		2039+	*	NONE				*
		2040+	*	*****				*

DL4ICS - FOUR TRACK LOGICAL IOCR

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	06/03/22	PAGE	8
				0735	2042+	DL4ICS	EQU *				ENTRY TO DL4ICS
0735	34	01	07A5	0739	2043+		USING DL4010,@BR				ESTABLISH BASE REGISTER USAGE
					2044+		ST DL4900+@OP1,@BR				SAVE BASE REGISTER FOR EXIT
				0739	2045+	DL4010	EQU *				BASE ADDRESSABILITY
0739	C2	01	0739		2046+		LA DL4010,@BR				ESTABLISH BASE
073D	76	08	78		2047+		A DL4C01(,@BR),@ARR				BUMP TO HIGH END OF ADDR
0740	74	08	14		2048+		ST DL4020+@DOP2(,@BR),@ARR				SET UP MOVE INSTRUCTION
0743	76	08	78		2049+		A DL4C01(,@BR),@ARR				BUMP TO RETURN ADDR
0746	74	08	70		2050+		ST DL4920+@OP1(,@BR),@ARR				SAVE RETURN ADDR
					2051+*						
0749	4C	01	1D 0000		2052+	DL4020	MVC DL4030+@DOP2(@DADDR,@BR),*-*				MOVE DPL ADDR INTO MOVE
074E	5E	01	1D 7A		2053+		ALC DL4030+@DOP2(@CADDR,@BR),DL4C05(,@BR)				BUMP TO RIGHT END
0752	4C	05	76 0000		2054+	DL4030	MVC DL4DPL(@DPLNG,@BR),*-*				MOVE USER DPL TO WORK AREA
					2055+*						
0757	7C	00	5E		2056+	DL4035	MVI DL4100+@Q(,@BR),@ZERO				CLEAR TRACK, DISK SET INST
075A	7C	80	67		2057+		MVI DL4200+@Q(,@BR),@NOP				TURN OFF TWICE INDICATOR
					2058+*						
075D	7D	60	73		2059+	DL4040	CLI DL4SCD(,@BR),DL4E96				TEST IF DISPLACEMENT OVER 95 ?
0760	F2	82	0B		2060+		JL DL4050				JUMP IF NOT OVER 95
0763	5E	00	72 78		2061+		ALC DL4CYL(1,@BR),DL4C01(,@BR)				INCREMENT CYLINDER COUNT
0767	5F	00	73 25		2062+		SLC DL4SCD(1,@BR),DL4C96(,@BR)				DECREMENT DISP BY 96
076B	D0	87	24		2063+		B DL4040(,@BR)				GO BACK CHECK FOR NEXT CYLINDER
					2064+*						
076E	7D	30	73		2065+	DL4050	CLI DL4SCD(,@BR),DL4E48				TEST IF DISP ON NEXT DISK ?
0771	F2	82	07		2066+		JL DL4060				JUMP IF NOT OVER 48
0774	7A	01	5E		2067+		SBN DL4100+@Q(,@BR),DL4EFD				TURN ON BIT FOR FIXED DISK
0777	5F	00	73 36		2068+		SLC DL4SCD(1,@BR),DL4C48(,@BR)				DECREMENT DISP 1 DISK
077B	7D	01	74		2069+	DL4060	CLI DL4SCT(,@BR),DL4E01				IS SECTOR COUNT GREATER THEN 1 ?
077E	F2	84	33		2070+		JH DL4SPT				GO TO SPLIT CALL
0781	7D	18	73		2071+	DL4070	CLI DL4SCD(,@BR),DL4E24				DISPLACEMENT OVER 23 ?
0784	F2	82	07		2072+		JL DL4080				JUMP NOT OVER 24
0787	7A	80	5E		2073+		SBN DL4100+@Q(,@BR),DL4ETB				SET TRACK BIT ON
078A	5F	00	73 49		2074+		SLC DL4SCD(1,@BR),DL4C24(,@BR)				DECR DISP TO NEXT TRACK
078E	5E	00	73 73		2075+	DL4080	ALC DL4SCD(1,@BR),DL4SCD(,@BR)				SHIFT LEFT 1 PLACE
0792	5E	00	73 73		2076+		ALC DL4SCD(1,@BR),DL4SCD(,@BR)				SHIFT LEFT 1 PLACE
0796	7A	00	73		2077+	DL4100	SBN DL4SCD(,@BR),*-*				SET TRACK, DISK BIT
					2078+*						
0799	C0	87	0025		2079+		B \$DISKN				GO PERFORM DISK I/O
079D	07AA			079E	2080+		DC AL2(DL4LST)				ADDR OF DISK PARAM LIST
					2081+*						
079F	F2	00	3C		2082+	DL4200	JC DL4600,*-*				BRANCH OR NOP IF TWICE SET
					2083+*						
07A2	C2	01	0000		2084+	DL4900	LA *-*,@BR				RESTORE OLD BASE TO RETURN
07A6	C0	87	0000		2085+	DL4920	B *-*				RETURN TO CALLER
07AA				07AA	2087+	DL4LST	EQU *				LEFT END OF DPL
				07AF	2088+	DL4DPL	DS CL(@DPLNG)				DPL SAVE AREA
				07AB	2089+	DL4CYL	EQU DL4LST+@DCYL				CYLINDER COUNT BYTE
				07AC	2090+	DL4SCD	EQU DL4LST+@DSAD				DISPLACEMENT SECTOR COUNT
				0060	2091+	DL4E96	EQU 96				TWO DISK SECTOR COUNT PER CYL
				0030	2092+	DL4E48	EQU 48				ONE DISK SECTOR COUNT PER CYL
				0018	2093+	DL4E24	EQU 24				TRACK SECTOR COUNT
				0001	2094+	DL4E01	EQU 01				VALUE TO TEST SECTOR COUNT
				0001	2095+	DL4EFD	EQU 01				VALUE TO SET FIXED DISK BIT
				0080	2096+	DL4ETB	EQU X'80'				VALUE TO SET TRACK BIT
07B0	0001			07B1	2097+	DL4C01	DC IL2'1'				VALUE TO INCR TO CYLINDER

DL4ICS - FOUR TRACK LOGICAL IOCR

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	06/03/22	PAGE	9
07B2	0005			07B3	2098+DL4C05	DC	IL2'5'				
				075E	2099+DL4C96	EQU	DL4040+@Q				DISP TO RIGHT END OF DPL
				0782	2100+DL4C24	EQU	DL4070+@Q				VALUE TO DECR DISPLACEMENT
				07AD	2101+DL4SCT	EQU	DL4LST+@DCNT				VALUE OF 1 TRACK
				076F	2102+DL4C48	EQU	DL4050+@Q				POINTER TO DPL SECTOR COUNT
											VALUE TO DECR DISP BY 1 DISK
07B4	5C	00	14	74	2104+DL4500	MVC	DL4WRK(1,@BR),DL4SCT(,@BR)				PICKUP SECTOR COUNT
				07B4	2105+DL4SPT	EQU	DL4500				POSSIBLE OVERLAY REFERENCE
07B8	5E	00	14	73	2106+	ALC	DL4WRK(1,@BR),DL4SCD(,@BR)				BUMP BY DISPLACEMENT
07BC	7D	30	14		2107+	CLI	DL4WRK(,@BR),DL4E48				TEST FOR CYLINDER OVERLAP
07BF	D0	04	48		2108+	BNH	DL4070(,@BR)				BRANCH BACK IF NO OVERLAY
07C2	5F	00	14	36	2109+	SLC	DL4WRK(1,@BR),DL4C48(,@BR)				DECREMENT WORK BY 48
07C6	5F	00	74	14	2110+	SLC	DL4SCT(1,@BR),DL4WRK(,@BR)				SUBTRACT WORK FROM COUNT
07CA	7C	87	67		2111+	MVI	DL4200+@Q(,@BR),@UCB				SET TWICE SWITCH
07CD	5C	00	13	73	2112+	MVC	DL4SAV(1,@BR),DL4SCD(,@BR)				SAVE SECTOR DISP IN WORK AREA
07D1	78	01	5E		2113+	TBN	DL4100+@Q(,@BR),DL4EFD				DISK BIT ON IN Q CODE ?
07D4	D0	90	48		2114+	BF	DL4070(,@BR)				BRANCH NOT ON
07D7	5E	00	13	36	2115+	ALC	DL4SAV(1,@BR),DL4C48(,@BR)				BUMP TO NEXT DISK
07DB	D0	87	48		2116+	B	DL4070(,@BR)				RETURN TO CALL I/O
					2117+*						
07DE	5C	00	73	13	2118+DL4600	MVC	DL4SCD(1,@BR),DL4SAV(,@BR)				PICKUP NEXT HALF OF I/O
07E2	5E	00	75	74	2119+	ALC	DL4LST+@DBFR1(1,@BR),DL4SCT(,@BR)				BUMP CORE ADDRESS
07E6	5E	00	73	74	2120+	ALC	DL4SCD(1,@BR),DL4SCT(,@BR)				
07EA	5C	00	74	14	2121+	MVC	DL4SCT(1,@BR),DL4WRK(,@BR)				MOVE IN NEW SECTOR COUNT
07EE	D0	87	1E		2122+	B	DL4035(,@BR)				RETURN FOR SECOND PASS
					2123+*						
				074D	2124+DL4WRK	EQU	DL4020+@DOP2				1 BYTE WORK AREA FOR SPLIT CALL
				074C	2125+DL4SAV	EQU	DL4020+@DOP2-1				1 BYTE WORK AREA FOR SPLIT CALL
				07F1	2126+DL4END	EQU	*				DEFINE END OF CODE
					2127+***						***
							END OF DL4ICS				

DL4ICS - FOUR TRACK LOGICAL IOCR

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	06/03/22	PAGE 10
					2129	*	PATCH 1			
					2130	*****				
					2131	*	PATCH AREA 1			*
					2132	*****				
					2133	*				
					2134	*	CALCULATE AREA LEFT IN THIS SECTOR			
					2135	*				
0800				07F1	2136	\$\$\$\$L1	EQU *			START OF PATCH AREA 1
					2137		ORG *,256,0			SET LOC CNTR TO NEXT SECTOR
				0800	2138	\$\$\$\$T1	EQU *			DEFINE ADDR OF SCTR BNDRY
07F1					2139		ORG \$\$\$\$L1			SET LOC CNTR TO START OF
07F1				07FF	2140	\$\$\$\$\$1	DS CL(\$\$\$\$T1-\$\$\$\$L1)			PATCH AREA
					2141	*****				
					2142	***	END OF EXPANSION ***			
				0800	2144	KRNTBF	EQU *			TRANSFER WORKAREA TO VM BUFFER
					2145	*	\$C4BD			

C4BIN2 - CONVERT DECIMAL TO BINARY ROUTINE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 06/03/22 PAGE 11
				2147+	*			*
				2148+		INITIALIZATION		*
				2149+				*
				0800	2150+	C4BIN2 EQU *	ENTRY POINT	
				0800	2151+	USING C4BIN2,@BR	BASE VALUE	
				2152+	*			
0800	34	01	0862	2153+	ST	C4B800+@OP1,@BR	SAVE CALLERS BASE REGISTER	
0804	C2	01	0800	2154+	LA	C4BIN2,@BR	LOAD BASE VALUE	
				2155+	*			
0808	74	08	66	2156+	ST	C4B850+@OP1(,@BR),@ARR	SAVE RETURN ADDRESS	
				2157+	*			
080B	74	02	6E	2158+	ST	C4BSAV(,@BR),@XR	SAVE VALUE OF POINTER	
080E	3C	0C	03CD	2159+	MVI	\$CAERR,@E122	SET ERROR CODE IN CASE	
0812	5C	01	6A 6B	2160+	MVC	C4BVAL(C4BLVL,@BR),C4BINI(,@BR)	INIT VALUE TO ZERO	
0816	3C	04	086F	2161+	MVI	C4B900,4	INITLZ CHAR. COUNT	
				2162+	*			
				2163+	***	DETERMINE IF CHAR NUMERIC AND DECR CHAR COUNT		
				2164+	*			
081A	F2	80	32	2165+	C4B200 JC	C4B600,@NOP	SET TO UCB IF IMBEDDED BLANKS	
				2166+	*		* ALLOWED	
081D	BD	F0	00	2167+	C4B300 CLI	0(,@XR),C4BLOW	THIS CHAR NUMERIC ?	
0820	F2	82	35	2168+	JL	C4B700	NO, GOTO RETURN	
				2169+	*			
0823	5F	00	6F 4E	2170+	SLC	C4B900(1,@BR),C4B590+@D1(,@BR)	DECR CHAR COUNT	
0827	F2	82	35	2171+	JL	C4B800	BR TO ERROR EXIT IF TOO MANY	
				2172+	*			
				2173+	***	MULTIPLY PREVIOUS VALUE BY TEN		
				2174+	*			
082A	5E	01	6A 6A	2175+	ALC	C4BVAL(C4BLVL,@BR),C4BVAL(,@BR)	DOUBLE PREVIOUS VALUE	
082E	5C	01	68 6A	2176+	MVC	C4BWRK(C4BLVL,@BR),C4BVAL(,@BR)	SAVE DOUBLE VALUE	
0832	5E	01	6A 6A	2177+	ALC	C4BVAL(C4BLVL,@BR),C4BVAL(,@BR)	QUADRUPLE PREVIOUS VALUE	
0836	5E	01	6A 6A	2178+	ALC	C4BVAL(C4BLVL,@BR),C4BVAL(,@BR)	OCTUPLE PREVIOUS VALUE	
083A	5E	01	6A 68	2179+	ALC	C4BVAL(C4BLVL,@BR),C4BWRK(,@BR)	ADD IN SAVED DOUBLE	
				2180+	*			
				2181+	***	ADD IN VALUE OF THIS CHAR AND INCR POINTER		
				2182+	*			
083E	68	03	6C 00	2183+	MNN	C4BCHR(,@BR),0(,@XR)	FETCH NEMERIC VALUE OF NEW CHAR	
0842	5E	01	6A 6C	2184+	ALC	C4BVAL(C4BLVL,@BR),C4BCHR(,@BR)	INCR VALU BY THIS CHAR	
				2185+	*			
0846	E2	02	01	2186+	LA	@B1(,@XR),@XR	INCR POINTER TO NEXT CHAR	
0849	D0	87	1A	2187+	B	C4B200(,@BR)	GOTO DO IT AGAIN	
				2188+	*			*
				2189+	*	ROUTINE TO SCAN BLANKS		*
				2190+	*			*
084C	E2	02	01	2191+	C4B590 LA	@B1(,@XR),@XR	INCR POINTER TO NEXT CHAR	
084F	BD	40	00	2192+	C4B600 CLI	0(,@XR),@BLANK	IS THIS CHAR A BLANK ?	
0852	D0	01	1D	2193+	BNE	C4B300(,@BR)	RETURN IF NOT	
0855	D0	87	4C	2194+	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 06/03/22 PAGE 12
					2196+*			
					2197+***	ENDING ROUTINE		
					2198+*			
0858	74	02	68		2199+C4B700	ST	C4BLEN(,@BR),@XR	PLACE VALUE OF POINTER
085B	5F	01	68 6E		2200+	SLC	C4BLEN(2,@BR),C4BSAV(,@BR)	SUBTRACT ENTERING VALUE
					2201+*			
085F	C2	01	0000		2202+C4B800	LA	*-*,@BR	RESTORE CALLERS BR
					2203+*			
0863	C0	87	0000		2204+C4B850	B	*-*	RETURN TO CALLING ROUTINE
					2205+*			*
					2206+*		WORK AREA AND CONSTANT	*
					2207+*			*
0867				0868	2208+C4BWRK	DS	CL2	SAVE AREA FOR DOUBLED VALUE
					2209+*			
				0869	2210+C4BYT1	EQU	*	FIRST BYTE OF BINARY VALUE
0869				086A	2211+C4BVAL	DS	CL2	SAVE AREA FOR BINARY VALUE
					2212+*			
086B	00			086B	2213+C4BINI	DC	XL1'00'	INITIALIZE WA TO ZERO
					2214+*			
086C				086C	2215+C4BCHR	DS	CL1	SAVE AREA FOR EACH NEW CHAR
086C					2216+	ORG	*-1	INITIALIZE
086C	00			086C	2217+	DC	XL1'00'	* TO ZERO
					2218+*			
086D				086E	2219+C4BSAV	DS	CL2	SAVE AREA FOR XR
					2220+*			
086F				086F	2221+C4B900	DS	CL1	SAVE AREA FOR CHAR COUNTER
					2222+*			*
					2223+*		EQUATES FOR C4BIN2	*
					2224+*			*
				0868	2225+C4BLEN	EQU	C4BWRK	ON RETURN WILL CONTAIN COUNT
					2226+*			* @XR INCREMENTED BY
				0004	2227+C4BCHC	EQU	4	NUMBER OF CHAR TO CONVERT
					2228+*			
				00F0	2229+C4BLOW	EQU	C'0'	LOWEST NUMERIC CHARACTER
					2230+*			
				0002	2231+C4BLVL	EQU	C4BVAL-C4BWRK	LENGTH OF BINARY VALUE
					2232+*			
				081B	2233+C4BLNK	EQU	C4B200+@Q	LOCATION OF IMBEDDED BLANK IND
					2234+*			
				0087	2235+C4BSPC	EQU	@UCB	MOVED TO C4BLNK TO ALLOW BLANKS
					2236+*			
				0817	2237+C4BNMC	EQU	C4B100+@Q	LOCATION OF CONVERSION COUNT
					2238+*			
				0080	2239+C4BNOP	EQU	@NOP	CHANGED IF IMBEDDED BLANK OK
				0870	2240+C4END	EQU	*	DEFINE END OF CODE
					2241+***		END OF C4BIN2	***
					2242 *		\$CANI	

SCANIT - DELIMETER SCAN MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 06/03/22 PAGE 13
		2244+		*****	*
		2245+	*	5703-XM1 COPYRIGHT IBM CORP. 1970	*
		2246+	*	REFER TO INSTRUCTIONS ON COPYRIGHT NOTICE, 120-2083	*
		2247+	*		*
		2248+		*****	*
		2249+	*	STATUS	*
		2250+	*	VERSION 1 MODIFICATION 0	*
		2251+	*		*
		2252+	*	FUNCTION	*
		2253+	*	THE FUNCTION OF SCANIT IS TO SCAN PAST VALID DELIMITERS AND	*
		2254+	*	RETURN A POINTER TO THE FIRST CHARACTER THAT'S NOT A DELIMITER.	*
		2255+	*		*
		2256+	*	ENTRY POINTS	*
		2257+	*	* THE ENTRY POINT IS SCANIT.	*
		2258+	*	* THE CALLING SEQUENCE IS AS FOLLOWS:	*
		2259+	*	B SCANIT	*
		2260+	*	WITH REGISTER 2 (@XR) POINTING TO THE FIRST CHARACTER TO BE	*
		2261+	*	EXAMINED.	*
		2262+	*		*
		2263+	*	INPUT	*
		2264+	*	NONE	*
		2265+	*		*
		2266+	*	OUTPUT	*
		2267+	*	NONE	*
		2268+	*		*
		2269+	*	EXTERNAL REFERENCES	*
		2270+	*	\$CAERR - ERROR CODE SAVE AREA	*
		2271+	*		*
		2272+	*	EXITS, NORMAL	*
		2273+	*	NORMAL EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO	*
		2274+	*	SCANIT IN THE CALLING ROUTINE. THE PSR (REGISTER 4) WILL CONTAIN	*
		2275+	*	A ZERO IF NO DELIMITERS WERE FOUND OR A HIGH CONDITION IF ONE OR	*
		2276+	*	MORE DELIMITERS WERE SCANNED.	*
		2277+	*		*
		2278+	*	EXITS, ERROR	*
		2279+	*	ERROR EXIT FROM SCANIT IS TO THE BYTE FOLLOWING THE BRANCH TO	*
		2280+	*	SCANIT IN THE CALLING ROUTINE. THE PSR WILL CONTAIN A LOW	*
		2281+	*	CONDITION.	*
		2282+	*		*
		2283+	*	TABLES/WORKAREAS	*
		2284+	*	* SCACNT - AREA CONTAINING NUMBERS OF DELIMITERS SCANNED	*
		2285+	*	* SCAMMA - LOC WHERE SCACOM MAY BE MOVED IF ONE COMMA IS ALSO	*
		2286+	*	TO BE CONSIDERED A DELIMITER. MOVING SCACOF BACK INTO SCAMMA	*
		2287+	*	INDICATES THAT ONLY BLANKS SHOULD BE CONSIDERED DELIMITERS.	*
		2288+	*		*
		2289+	*	ATTRIBUTES	*
		2290+	*	RELOCATABLE AND RE-USABLE	*
		2291+	*		*
		2292+	*	CHARACTER CODE DEPENDENCY	*
		2293+	*	THE OPERATION OF THIS MODULE DOES NOT DEPEND UPON A PARTICULAR	*
		2294+	*	INTERNAL REPRESENTATION OF THE EXTERNAL CHARACTER SET.	*
		2295+	*		*
		2296+	*	NOTES	*
		2297+	*	ERROR PROCEDURES	*
		2298+	*	THE ONLY ERROR CONDITION DETECTED BY SCANIT IS THE CASE WHERE	*
		2299+	*	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 06/03/22 PAGE 14
				2300+	*		CALLING ROUTINE, @PSR WILL BE SET TO A LOW CONDITION, THE	*
				2301+	*		ERROR CODE IS SET IN \$CAERR, AND MG WILU BE POINTING TO THE	*
				2302+	*		CARRIAGE-RETURN CHARACTER.	*
				2303+	*			*
				2304+	*		REGISTER USAGE	*
				2305+	*		REGISTER 2 (@XR) IS USED AS A POINTER ACROSS THE AREA BEING	*
				2306+	*		SCANNED FOR DELIMITERS.	*
				2307+	*			*
				2308+	*		SAVED/RESTORED AREAS	*
				2309+	*		UPON ENTRY TO SCANIT, REGISTER 8 (@ARR) IS SAVED AND USED AS	*
				2310+	*		THE RETURN ADDRESS.	*
				2311+	*			*
				2312+	*		MODIFICATION CONSIDERATIONS	*
				2313+	*		NONE	*
				2314+	*			*
				2315+	*		REQUIRED MODULES	*
				2316+	*		* @SYSEQ - COMMON SYSTEM EQUATES	*
				2317+	*		* @FXDEQ - FIXED NUCLEUS ADDRESSES EQUATES	*
				2318+	*			*
				2319+	*		OTHER	*
				2320+	*		SCANIT IS INITIALIZED TO BYPASS BLANKS ONLY. IF SCACOM IS	*
				2321+	*		MOVED TO SCAMMA, ONE COMMA WILL BE SCANNED ALONG WITH BLANKS.	*
				2322+	*		THE INSTRUCTION TO DO THIS IS AS FOLLOWS:	*
				2323+	*		MVI SCAMMA,SCACOM	*
				2324+	*			*
				2325+	*		TO DROP THE COMMA FROM ITS DELIMITER STATUS, SCACOF SHOULD BE	*
				2326+	*		MOVED TO SCAMMA, USING THE FOLLOWING INSTRUCTION:	*
				2327+	*		MVI SCAMMA,SCACOF	*
				2328+	*			*
				2329+	*		*****	*
				2331+	*			
				2332+	*		EQUATES USED IN THIS SUBROUTINE	
				2333+	*			
				0001	2334+	SCA INC EQU 1	TO INCREMENT POINTER	
				0001	2335+	SCA COM EQU @BNE	SWITCH TO ALLOW SCANNING COMMA	
				0087	2336+	SCA COF EQU @UCB	SWITCH TO SET OFF THE INDICATON	
				2337+	*		* FOR SCANNING A COMMA	
				0870	2338+	SCANIT EQU *	ENTRY POINT TO THIS SUBROUTINE	
0870	34	08	08AC	2339+	ST	SCA500+@OP1,@ARR	SAVE RETURN ADDRESS	
0874	34	02	08AE	2340+	ST	SCASVE,@XR	SAVE POINTER VALUE	
0878	3C	04	03CD	2341+	MVI	\$CAERR,@E110	SET ERROR CODE	
087C	F2	87	03	2342+	J	SCA200	GO TO PROCESS	
087F	E2	02	01	2343+	SCA100 LA	SCA INC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR	
0882	BD	40	00	2344+	SCA200 CLI	0(,@XR),@BLANK	IS THIS CHAR BLANK ?	
0885	C0	81	087F	2345+	BE	SCA100	YES, FETCH NEXT ONE	
0889	BD	6B	00	2346+	CLI	0(,@XR),@COMMA	IS IT A COMMA ?	
088C	F2	87	10	2347+	SCA250 JC	SCA400,@UCB	UCS TO RETURN -- OR NOP IF	
				2348+	*		* SCAMMA IS ACTIVE AND CHAR	
088F	E2	02	01	2349+	SCA300 LA	SCA INC(,@XR),@XR	INCREMENT POINTER TO NEXT CHAR	
0892	BD	40	00	2350+	CLI	0(,@XR),@BLANK	IS THIS CHAR A BLANK ?	
0895	C0	81	088F	2351+	BE	SCA300	YES, FETCH NEXT ONE	
0899	BD	1F	00	2352+	CLI	0(,@XR),@EOS+1	IS THIS EOS ?	
089C	F2	82	0A	2353+	JL	SCA500	IF NOT, SKIP ERROR ROUTINE	
089F	34	02	08B0	2354+	SCA400 ST	SCA CNT,@XR	SAVE NEW POINTER VALUE	

SCANIT - DELIMETER SCAN MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	06/03/22	PAGE 15
08A3	0F	01	08B0	08AE	2355+	SLC	SCACNT(2),SCASVE			SET PSR TO EQUAL IF POINTER
					2356+*					* NOT ADVANCED
08A9	C0	87	0000		2357+SCA500	B	*-*			YES, RETURN
				088D	2358+SCAMMA	EQU	SCA250+@Q			TO SET SCAN COMMA INDICATOR
					2359+*					
					2360+*		SAVE AREA			
					2361+*					
				08AD	2362+SCASV1	EQU	*			FIRST BYTE OF SCASVE
08AD				08AE	2363+SCASVE	DS	CL2			ORIGINAL POINTER VALUE SAVE
08AF				08B0	2364+SCACNT	DS	CL2			SAVE AREA FOR TOTAL CHAR SCAN
					2365+***			END OF SCANIT		***

SCANIT - DELIMETER SCAN MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00 06/03/22 PAGE 16
					2367	*		
					2368	***	INITIALIZATION	
					2369	*		
				0846	2370		USING KRNBRB,@BR	BR BASE REG VALVE
08B1	C2	01	0846		2371	KRN050	LA KRNBRB,@BR	SET BR BASE REG VALUE
08B5	35	02	03C7		2372		L \$XRSAB,@XR	FETCH KEYWORD DELIMITER POINTER
					2373	*		
					2374	***	CONVERT PARAMETERS TO BINARY	
					2375	*		
08B9	D0	87	2A		2376	KRN100	B SCANIT(,@BR)	RETURN POINTER TO NEXT PARAMETER
08BC	F2	81	24		2377		JZ KRN120	PSR ? POINTER NOT ADVANCED
08BF	F2	82	0A		2378		JL KRN105	GO TO ERROR ROUTINE
					2379	*		
08C2	7C	01	47		2380		MVI SCAMMA(,@BR),SCACOM	ALLOW ONE COMMA INDICATOR ON
					2381	*		
08C5	C0	87	0800		2382		B C4BIN2	CONVERT TO BINARY
08C9	F2	81	17		2383		JZ KRN120	PSR = NON-NUMERIC FIRST CHAR
08CC	C0	82	0469		2384	KRN105	BL \$CAERK	GO TO ERROR PROGRAM
					2385	*		
08D0	5C	01	F9 24		2386	KRN110	MVC KRNPR1+*-*(@SBLNL,@BR),C4BVAL(,@BR)	SAVE BINARY VALUE
08D4	5E	00	8C EF		2387		ALC KRN110+@D1(1,@BR),KRNPRP(,@BR)	INCR DISP TO NEXT PARM.
08D8	D0	20	73		2388		BNOL KRN100(,@BR)	GET NEXT PARM UNLESS TOO MANY
					2389	*		
08DB	3C	12	03CD		2390		MVI \$CAERR,@E133	SET TOO MANY PARMS ERROR CODE
08DF	C0	87	0469		2391	KRN115	B \$CAERK	CALL ERROR ROUTINE
					2392	*		
08E3	3C	11	03CD		2393	KRN120	MVI \$CAERR,@E131	SET IMPROPER PARM ERROR CODE
08E7	BD	1E	00		2394		CLI 0(,@XR),@EOS	IS THIS END OF STATEMENT
08EA	D0	01	99		2395		BNE KRN115(,@BR)	NO, GOTO ERROR PROGRAM
08ED	3C	63	03CD		2396		MVI \$CAERR,@E433	SET ZERO INCR ERROR CODE
08F1	5D	01	FD F1		2397		CLC KRNPR3(@SBLNL,@BR),KRNZRO(,@BR)	TAKE BRANCH IF ZERO
08F5	D0	81	99		2398		BE KRN115(,@BR)	* INCREMENT WAS SPECIFIED
				0700	2399		USING KRNXRB,@XR	XR BASE REG VALUE
08F8	C2	02	0700		2400		LA KRNXRB,@XR	LOAD SECOND BASE REGISTER
08FC	8E	00	2C 043B		2401		ALC KRNCSZ(1,@XR),\$EXFTR	ADD EXPANSION FACTOR TO CORE
0901	AC	00	32 2C		2402		MVC KRNWPL+@DCNT(1,@XR),KRNCSZ(,@XR)	* SIZE FOR READ + WRITE
					2403	*		
0905	1C	05	0449 FD		2404		MVC \$DPLSV,KRNPRS(KRNPRF-KRNPRP,@BR)	SAVE PARMS FOR OVERLAY
090A	9C	05	06 F7		2405		MVC KRNAPL(@DPLNG,@XR),KRNBP(,@BR)	MOVE DPL BEFORE OVERLAY
090E	C2	01	1D0C		2406		LA \$\$FITS+@FDE1+@FDSD,@BR	INIT FIT POINTER
0912	9C	00	00 00		2407		MVC KRNFSZ(,@XR),@FDSD(@FLSD,@BR)	INIT FILE SIZE
0916	D2	01	04		2408	KRN130	LA @FLENT(,@BR),@BR	INCR POINTER TO NEXT FIT ENTRY
0919	6D	00	00 00		2409		CLC @FDSD(@FLSD,@BR),KRNFSZ(,@XR)	BRANCH IF THIS ENTRY
091D	F2	04	04		2410		JNH KRN140	* NOT CT PREVIOUS HIGH
0920	9C	00	00 00		2411		MVC KRNFSZ(@FLSD,@XR),@FDSD(,@BR)	SET NEW FILE SIZE
0924	0F	00	1D00 0464		2412	KRN140	SLC \$\$FITS+@FDDBC(@FLDBC),\$C0001	DECR LOOP CONTROL
092A	C0	01	0916		2413		BNZ KRN130	BRANCH UNLESS FINISHED
092E	C2	01	051E		2414		LA \$RLOAD,@BR	SWITCH BASE REGISTER VALUE
0932	E0	87	0B		2415		B KRN020(,@XR)	GO TO READ-WRITE OPERATION
					2416	*		
					2417	***	CONSTANT	
					2418	*		
0935	02			0935	2419	KRNPRP	DC AL1(KRNPR2-KRNPR1)	LENGTH OF PARAMETER
					2420	*		
0936	0000			0937	2421	KRNZRO	DC IL(@SBLNL)'0'	COMPARE AGAINST ZERO INCREMENT
0938	01			0938	2422		DC AL1(@DGET)	DPL TO READ

SCANIT - DELIMETER SCAN MODULE

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	VER 15, MOD 00	06/03/22	PAGE	17
	0939	028C		093A	2423	DC	AL(@DADDR)(\$KROV)			*	OVERLAY
	093B	0A		093B	2424	DC	AL1(\$@KRO)			*	PROGRAM
	093C	0D00		093D	2425	KRNBPL DC	AL(@CADDR)(\$\$KRO)			*	TO CORE
					2426	*					
					2427	*	PARAMETER SAVE AREA				
					2428	*					
				093E	2429	KRNPRA EQU	*				START OF PARAMETER SAVE AREA
093E				0943	2430	KRNPRS DS	3CL(@SBLNL)				PARAMETER SAVE AREA
093E					2431	ORG	*-@SBLNL*3				INITIALIZE PARAMETERS TO DEFAULT
093E	0064			093F	2432	KRNPR1 DC	IL(@SBLNL)'100'				DEFAULT START VALUE
0940	0000			0941	2433	KRNPR2 DC	IL(@SBLNL)'0'				DEFAULT BEGINING LINE NUMBER
0942	000A			0943	2434	KRNPR3 DC	IL(@SBLNL)'10'				DEFAULT INCREMENT
				0944	2435	KRNPRF EQU	*				END OF PARAMETER SAVE AREA
					2436	*					
					2437	***	BASE REGISTER VALUE EQUATES				
					2438	*					
				0700	2439	KRNXRB EQU	KRNFSZ				LOWEST ADDRESSED VALUE
					2440	*					
				0846	2441	KRNBRB EQU	KRNPR3-253				ALLOW PARAM DISP TO OVERFLOW

SCANIT - DELIMETER SCAN MODULE

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	VER 15, MOD 00 06/03/22 PAGE 18
			2443	* INIT AND SYNTAX CHECKING PATCH AREA	
			2444	* PATCH 5	
			2445	*****	
			2446	* PATCH AREA 5	*
			2447	*****	
			2448	*	
			2449	* CALCULATE AREA LEFT IN THIS SECTOR	
			2450	*	
		0944	2451	\$\$\$\$L5 EQU *	START OF PATCH AREA 5
0A00			2452	ORG *,256,0	SET LOC CNTR TO NEXT SECTOR
		0A00	2453	\$\$\$\$T5 EQU *	DEFINE ADDR OF SCTR BNDRY
0944			2454	ORG \$\$\$\$L5	SET LOC CNTR TO START OF
			2455	*	* PATCH AREA
0944		09FF	2456	\$\$\$\$\$5 DS CL(\$\$\$\$T5-\$\$\$\$L5)	PATCH AREA
			2457	*****	
			2458	*** END OF EXPANSION ***	
		FFFF	2460	END	

TOTAL STATEMENTS IN ERROR IN THIS ASSEMBLY = 0

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 19

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$\$\$\$\$	001	0700	1917	
\$\$\$\$\$1	015	07FF	2140	
\$\$\$\$\$5	188	09FF	2456	
\$\$\$\$L1	001	07F1	2136	2139 2140
\$\$\$\$L5	001	0944	2451	2454 2456
\$\$\$\$T1	001	0800	2138	2140
\$\$\$\$T5	001	0A00	2453	2456
\$\$\$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	2406 2412*
\$\$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

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 20

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$BLNOE	001	0569	0593	
\$BLOAD	001	0522	0584	0586 0589 0602 0603
\$BLRTN	001	0550	0592	0593
\$BRSAV	001	03C5	0281	0282
\$BSADR	001	0587	0608	0610
\$BUFPT	001	03E3	0489	0490
\$CABLD	001	04B4	0562	0563
\$CAERK	001	0469	0539	0542 2384 2391
\$CAERR	001	03CD	0287	0289 2159* 2341* 2390* 2393* 2396*
\$CAIPL	001	049D	0558	0560
\$CALLI	001	0008	0479	
\$CARDI	001	0001	0250	
\$CARPL	001	04A1	0560	0562
\$CIENT	001	0483	0549	0550
\$CIEXT	001	0480	0548	0549
\$CIMSK	001	0476	0545	0548
\$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 2412
\$DATE	001	043A	0512	0513
\$DBGUF	001	03E0	0474	0483
\$DBLOK	001	0001	0424	
\$DFDET	001	03E8	0495	0496
\$DISKN	001	0025	0226	2079
\$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 2404*
\$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	
\$ERKEY	001	0080	0301	
\$ERLOG	001	0345	0231	
\$ERMAD	001	0472	0544	0545
\$ERPND	001	0004	0402	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 21

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$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 2401
\$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
\$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	
\$KRNUM	001	0707	1920	
\$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	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 22

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$NWRKR	001	0040	0442	
\$PASWD	001	042D	0509	0510
\$PAUSD	001	04BA	0563	0565
\$PAUSE	001	0002	0333	
\$PGMDT	001	0020	0388	
\$PGMST	001	0010	0352	
\$PKERT	001	0419	0507	0509
\$PLST1	001	0454	0528	0529
\$PLST2	001	045B	0529	0530
\$PLST3	001	0462	0530	0531
\$PRDEV	001	044B	0525	0527
\$PRESN	001	0002	0376	
\$PROCI	001	0001	0373	
\$PRPOS	001	03C2	0244	0247
\$PSDBR	001	04FA	0568	
\$PSDXR	001	04F2	0567	0568
\$PSTEP	001	0004	0334	
\$PSTMT	001	0008	0335	
\$PTCH1	001	03F5	0498	0502
\$READY	001	0080	0418	
\$REORD	001	0040	0476	
\$RLOAD	001	051E	0582	0584 1930 1940 2414
\$RMGRN	001	03C0	0240	0242
\$RSTR	001	04D6	0565	0567 0569 0574
\$RUNIT	001	0001	0312	
\$SFAID	001	050D	0570	
\$SPRNT	001	0465	0537	0539
\$SRTRN	001	04FE	0569	0570
\$STEPT	001	0002	0313	
\$SWPCR	001	0511	0575	0577
\$TABLN	001	03CB	0284	0287
\$TFLOW	001	0008	0319	
\$TRACE	001	0004	0314	
\$TRALL	001	0010	0320	
\$TROVR	001	054E	0589	0592
\$TRUNK	001	0080	0272	
\$TRVAR	001	0020	0321	
\$UNMSK	001	048D	0550	0553
\$USRDR	001	03DC	0461	0462
\$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
\$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 2372
\$ZTRAD	001	05A2	0611	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 23

SYMBOL	LEN	VALUE	DEFN	REFERENCES
\$12K	001	0004	0466	
\$16CKY	001	0008	0468	
\$16K	001	0002	0465	
\$22IMP	001	0001	0463	
###BL	001	0000	1052	
###CK	001	0000	1180	
###CN	001	0000	1148	
###CO	001	0000	0940	
###CS	001	0000	1000	
###DR	001	0000	0744	
###ER	001	0000	0944	
###FS	001	0000	1040	
###IN	001	0000	1184	
###PW	001	0000	1188	
###RS	001	0000	1020	
###SA	001	0000	1008	
###SS	001	0000	1004	
###VU	001	0600	0964	
###0T	001	0700	0736	
###1T	001	0000	0740	
###BCO	001	0600	0752	
###BOV	001	0800	1024	
###DPR	001	0700	0760	
###DRE	001	0889	0776	
###DSP	001	2800	0796	
###ECM	001	0C00	1056	
###EFK	001	0C00	1076	
###ERR	001	0C00	1048	
###EXM	001	0C00	0936	
###FIL	001	0E00	1016	
###FIS	001	0E00	1012	
###FML	001	0200	1144	
###FMS	001	0200	0984	
###GRA	001	0889	0908	
###GUF	001	0C00	1044	
###INL	001	0600	1124	
###INS	001	0600	0748	
###KAL	001	0C00	0912	
###KCA	001	0C00	1128	
###KCH	001	0C00	0880	
###KCN	001	0C00	0996	
###KCT	001	0C00	0848	
###KDE	001	0C00	0844	
###KDI	001	0D00	0924	
###KDN	001	0C00	0832	
###KDO	001	0E00	0928	
###KED	001	0C00	0768	
###KEN	001	0C00	0772	
###KEX	001	0C00	0792	
###KGO	001	0C00	0764	
###KHE	001	0C00	0948	
###KKE	001	0C00	1176	
###KLI	001	0C00	0852	
###KLL	001	0920	1152	
###KLO	001	0C00	0856	
###KME	001	0D00	0836	

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 06/03/22 PAGE 24

###KMO 001 0C00 0780
###KNA 001 0C00 0892
###KOV 001 0E00 0812
###KPA 001 0C00 0788
###KPO 001 0C00 0876
###KPR 001 0C00 0900
###KRE 001 0C00 0820
###KRL 001 0700 0916
###KRM 001 0C00 0784
###KRN 001 0700 0804
###KRO 001 0D00 0808
###KRS 001 0C00 1132
###KRU 001 0C00 0828
###KRV 001 0800 0920
###KSA 001 0C00 0864
###KSE 001 0E00 0904
###KSO 001 0C20 0956
###KSS 001 0C00 0888
###KSV 001 0980 0884
###KSY 001 0C00 0896
###KWI 001 0C00 0824
###KWR 001 0C00 0816
###LOA 001 0600 0756
###MIP 001 0C00 0952
###SDS 001 0C00 1064
###SFF 001 0E00 1068
###SFL 001 0F00 1060
###SFO 001 1500 1032
###SFS 001 0C00 1028
###SPA 001 0C00 0868
###SPO 001 0806 0872
###SPS 001 0C00 0860
###STR 001 1600 1036
###TDC 001 1000 0840
###TSY 001 1000 0800
###TVK 001 0FC0 0976
###UAL 001 0C00 0992
###UAT 001 0900 1088
###UCD 001 0900 1096
###UCN 001 0C00 1080
###UCP 001 0700 1084
###UDE 001 0C00 1100
###UDI 001 0C00 1104
###UEX 001 0C00 0988
###UIN 001 0C00 1092
###UPA 001 0C00 1072
###UPO 001 0C00 1140
###UPT 001 0C00 1136
###VCR 001 2000 0932
###VLO 001 0600 0968
###VOD 001 0600 0972
###VVM 001 0000 0980
###VXI 001 0600 0960
###ZDU 001 1100 1112
###ZLB 001 1100 1156
###ZLO 001 1100 1116

1916 1923
2425

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 06/03/22 PAGE 25

###ZLV	001	0F00	1172	
###ZL1	001	0F00	1160	
###ZL2	001	0F00	1164	
###ZL3	001	0C00	1168	
###ZTR	001	1000	1108	
###ZUT	001	0C00	1120	
##BLN	001	18D4	1051	
##CKT	001	2118	1179	
##CNF	001	2000	1147	
##COR	001	0800	0939	
##CSA	001	1000	0999	
##DRT	001	0000	0743	
##ERM	001	0928	0943	
##FSP	001	1880	1039	
##INV	001	212C	1183	
##PWR	001	2300	1187	
##RSP	001	1780	1019	
##SAV	001	1180	1007	
##SSA	001	1128	1003	
##VUF	001	0B08	0963	
##0TR	001	0000	0735	
##1TR	001	0080	0739	
##@BL	001	0001	1053	
##@CK	001	0004	1181	
##@CN	001	0001	1149	
##@CO	001	003A	0941	
##@CS	001	003A	1001	
##@DR	001	0008	0745	
##@ER	001	0032	0945	
##@FS	001	0030	1041	
##@IN	001	003A	1185	
##@PW	001	00C0	1189	
##@RS	001	0030	1021	
##@SA	001	0108	1009	
##@SS	001	0001	1005	
##@VU	001	0002	0965	
##@0T	001	0018	0737	
##@1T	001	0018	0741	
##@BCO	001	0018	0753	
##@BOV	001	0018	1025	
##@DPR	001	0005	0761	
##@DRE	001	0001	0777	
##@DSP	001	0004	0797	
##@ECM	001	0006	1057	
##@EFK	001	0002	1077	
##@ERR	001	0003	1049	
##@EXM	001	0003	0937	
##@FIL	001	0009	1017	
##@FIS	001	0009	1013	
##@FML	001	0052	1145	
##@FMS	001	0052	0985	
##@GRA	001	0003	0909	
##@GUF	001	0010	1045	
##@INL	001	0010	1125	
##@INS	001	0010	0749	
##@KAL	001	000F	0913	

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 06/03/22 PAGE 26

#\$@KCA	001	000C	1129	
#\$@KCH	001	000C	0881	
#\$@KCN	001	0010	0997	
#\$@KCT	001	0009	0849	
#\$@KDE	001	0010	0845	
#\$@KDI	001	0005	0925	
#\$@KDN	001	0010	0833	
#\$@KDO	001	000C	0929	
#\$@KED	001	000E	0769	
#\$@KEN	001	0006	0773	
#\$@KEX	001	0003	0793	
#\$@KGO	001	0002	0765	
#\$@KHE	001	000C	0949	
#\$@KKE	001	0006	1177	
#\$@KLI	001	0011	0853	
#\$@KLL	001	0001	1153	
#\$@KLO	001	0008	0857	
#\$@KME	001	0003	0837	
#\$@KMO	001	0004	0781	
#\$@KNA	001	0008	0893	
#\$@KOV	001	0009	0813	
#\$@KPA	001	0005	0789	
#\$@KPO	001	000D	0877	
#\$@KPR	001	0009	0901	
#\$@KRE	001	0002	0821	
#\$@KRL	001	0004	0917	
#\$@KRM	001	0003	0785	
#\$@KRN	001	0003	0805	
#\$@KRO	001	000A	0809	2424
#\$@KRS	001	000A	1133	
#\$@KRU	001	0003	0829	
#\$@KRV	001	000D	0921	
#\$@KSA	001	0011	0865	
#\$@KSE	001	0004	0905	
#\$@KSO	001	0005	0957	
#\$@KSS	001	000B	0889	
#\$@KSV	001	0002	0885	
#\$@KSY	001	000F	0897	
#\$@KWI	001	0002	0825	
#\$@KWR	001	0002	0817	
#\$@LOA	001	0013	0757	
#\$@MIP	001	000D	0953	
#\$@SDS	001	0004	1065	
#\$@SFF	001	0008	1069	
#\$@SFL	001	0005	1061	
#\$@SFO	001	0003	1033	
#\$@SFS	001	0011	1029	
#\$@SPA	001	0004	0869	
#\$@SPO	001	0003	0873	
#\$@SPS	001	0001	0861	
#\$@STR	001	0002	1037	
#\$@TDC	001	0003	0841	
#\$@TSY	001	0003	0801	
#\$@TVK	001	0001	0977	
#\$@UAL	001	0011	0993	
#\$@UAT	001	000C	1089	

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 06/03/22 PAGE 27

#\$@UCD	001	000B	1097
#\$@UCN	001	0009	1081
#\$@UCP	001	000F	1085
#\$@UDE	001	000E	1101
#\$@UDI	001	0008	1105
#\$@UEX	001	000E	0989
#\$@UIN	001	000F	1093
#\$@UPA	001	0004	1073
#\$@UPO	001	0005	1141
#\$@UPT	001	0012	1137
#\$@VCR	001	0008	0933
#\$@VLO	001	0002	0969
#\$@VOD	001	0016	0973
#\$@VVM	001	0030	0981
#\$@VXI	001	0002	0961
#\$@ZDU	001	0008	1113
#\$@ZLB	001	0002	1157
#\$@ZLO	001	000C	1117
#\$@ZLV	001	0006	1173
#\$@ZL1	001	0007	1161
#\$@ZL2	001	000D	1165
#\$@ZL3	001	000A	1169
#\$@ZTR	001	0001	1109
#\$@ZUT	001	0014	1121
#\$BCOM	001	0080	0751
#\$BOLV	001	1780	1023
#\$DPRI	001	014C	0759
#\$DREA	001	0200	0775
#\$DSPL	001	0240	0795
#\$ECMA	001	1900	1055
#\$EFKE	001	1990	1075
#\$ERRP	001	18C0	1047
#\$EXMS	001	07D4	0935
#\$FILN	001	1724	1015
#\$FIST	001	1700	1011
#\$FMLN	001	1E00	1143
#\$FMST	001	0D00	0983
#\$GRAP	001	0690	0907
#\$GUFU	001	1880	1043
#\$INLN	001	1C84	1123
#\$INST	001	0020	0747
#\$KALL	001	06A4	0911
#\$KCAL	001	1CC4	1127
#\$KCHA	001	053C	0879
#\$KCND	001	0F80	0995
#\$KCTL	001	03BC	0847
#\$KDEL	001	035C	0843
#\$KDIS	001	0744	0923
#\$KDNT	001	0300	0831
#\$KDOV	001	0780	0927
#\$KEDI	001	0188	0767
#\$KENA	001	01C4	0771
#\$KEXT	001	0234	0791
#\$KGOS	001	0180	0763
#\$KHEL	001	0A30	0947
#\$KKEY	001	2100	1175

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 28

SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$KLIS	001	0400	0851	
#\$KLLA	001	2004	1151	
#\$KLOG	001	0444	0855	
#\$KMER	001	030C	0835	
#\$KMOU	001	0204	0779	
#\$KNAM	001	05C0	0891	
#\$KOVN	001	0290	0811	
#\$KPAS	001	0220	0787	
#\$KPOO	001	0508	0875	
#\$KPRT	001	063C	0899	
#\$KREA	001	02BC	0819	
#\$KRLA	001	0700	0915	
#\$KRMO	001	0214	0783	
#\$KRNU	001	0280	0803	
#\$KROV	001	028C	0807	2423
#\$KRSU	001	1D24	1131	
#\$KRUN	001	02CC	0827	
#\$KRVL	001	0710	0919	
#\$KSAV	001	0488	0863	
#\$KSET	001	0680	0903	
#\$KSOV	001	0AC8	0955	
#\$KSSP	001	0594	0887	
#\$KSVL	001	058C	0883	
#\$KSYM	001	0600	0895	
#\$KWID	001	02C4	0823	
#\$KWRI	001	02B4	0815	
#\$LOAD	001	0100	0755	
#\$MIPP	001	0A80	0951	
#\$SDSY	001	192C	1063	
#\$SFFI	001	193C	1067	
#\$SFLO	001	1918	1059	
#\$SFOV	001	1844	1031	
#\$SFSY	001	1800	1027	
#\$SPAC	001	04CC	0867	
#\$SPOV	001	04DC	0871	
#\$SPSY	001	0484	0859	
#\$STRO	001	1850	1035	
#\$TDCK	001	0350	0839	
#\$TSYK	001	0250	0799	
#\$TVKB	001	0BAC	0975	
#\$UALL	001	0F00	0991	
#\$UATR	001	1A38	1087	
#\$UCDI	001	1AD8	1095	
#\$UCNF	001	19B8	1079	
#\$UCPL	001	19DC	1083	
#\$UDEL	001	1B24	1099	
#\$UDIS	001	1B5C	1103	
#\$UEXL	001	0EA8	0987	
#\$UINI	001	1A88	1091	
#\$UPAC	001	1980	1071	
#\$UPOV	001	1D24	1139	
#\$UPTF	001	1D5C	1135	
#\$VCRT	001	07B4	0931	
#\$VLOA	001	0B80	0967	
#\$VODK	001	0B88	0971	
#\$VVMR	001	0C00	0979	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 29

SYMBOL	LEN	VALUE	DEFN	REFERENCES
#\$VXIT	001	0B00	0959	
#\$ZDUM	001	1BA4	1111	
#\$ZLBM	001	2008	1155	
#\$ZLOA	001	1BC4	1115	
#\$ZLVR	001	20B0	1171	
#\$ZL1M	001	2010	1159	
#\$ZL2M	001	2030	1163	
#\$ZL3M	001	2088	1167	
#\$ZTRA	001	1B9C	1107	
#\$ZUTM	001	1C14	1119	
#KRNUM	001	0000	0001	
@@E001	001	0000	1727	1729
@@E003	001	0001	1729	1731
@@E004	001	0002	1731	1733
@@E005	001	0003	1733	1735
@@E006	001	0004	1735	1737
@@E007	001	0005	1737	1739
@@E008	001	0006	1739	1741
@@E009	001	0007	1741	1743
@@E010	001	0008	1743	1745
@@E011	001	0009	1745	1747
@@E012	001	000A	1747	1749
@@E013	001	000B	1749	1751
@@E014	001	000C	1751	1753
@@E015	001	000D	1753	1755
@@E016	001	000E	1755	1757
@@E017	001	000F	1757	1759
@@E018	001	0010	1759	1761
@@E019	001	0011	1761	1763
@@E020	001	0012	1763	1765
@@E021	001	0013	1765	1767
@@E023	001	0014	1767	1769
@@E024	001	0015	1769	1771
@@E025	001	0016	1771	1773
@@E026	001	0017	1773	1775
@@E027	001	0018	1775	1777
@@E028	001	0019	1777	1779
@@E029	001	001A	1779	1781
@@E030	001	001B	1781	1783
@@E031	001	001C	1783	1785
@@E032	001	001D	1785	1787
@@E035	001	001E	1787	1789
@@E036	001	001F	1789	1791
@@E037	001	0020	1791	1793
@@E038	001	0021	1793	1795
@@E039	001	0022	1795	1797
@@E040	001	0023	1797	1799
@@E041	001	0024	1799	1801
@@E042	001	0025	1801	1803
@@E043	001	0026	1803	1805
@@E044	001	0027	1805	1807
@@E045	001	0028	1807	1809
@@E046	001	0029	1809	1811
@@E060	001	002A	1811	1813
@@E080	001	002B	1813	
@@E100	001	0000	1199	1201

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 06/03/22 PAGE 30

@@E101	001	0001	1201	1203	
@@E102	001	0002	1203	1205	
@@E103	001	0003	1205	1207	
@@E110	001	0004	1207	1209	2341
@@E112	001	0005	1209	1211	
@@E113	001	0006	1211	1213	
@@E114	001	0007	1213	1215	
@@E115	001	0008	1215	1217	
@@E116	001	0009	1217	1219	
@@E117	001	000A	1219	1221	
@@E120	001	000B	1221	1223	
@@E122	001	000C	1223	1225	2159
@@E123	001	000D	1225	1227	
@@E124	001	000E	1227	1229	
@@E129	001	000F	1229	1231	
@@E130	001	0010	1231	1233	
@@E131	001	0011	1233	1235	2393
@@E133	001	0012	1235	1237	2390
@@E134	001	0013	1237	1239	
@@E135	001	0014	1239	1241	
@@E136	001	0015	1241	1243	
@@E137	001	0016	1243	1245	
@@E138	001	0017	1245	1247	
@@E139	001	0018	1247	1249	
@@E142	001	0019	1249	1251	
@@E143	001	001A	1251	1253	
@@E150	001	001B	1253	1255	
@@E151	001	001C	1255	1257	
@@E160	001	001D	1257	1259	
@@E162	001	001E	1259	1261	
@@E163	001	001F	1261	1263	
@@E164	001	0020	1263	1265	
@@E200	001	0021	1265	1267	
@@E205	001	0022	1267	1269	
@@E210	001	0023	1269	1271	
@@E211	001	0024	1271	1273	
@@E212	001	0025	1273	1275	
@@E213	001	0026	1275	1277	
@@E215	001	0027	1277	1279	
@@E216	001	0028	1279	1281	
@@E217	001	0029	1281	1283	
@@E220	001	002A	1283	1285	
@@E221	001	002B	1285	1287	
@@E222	001	002C	1287	1289	
@@E223	001	002D	1289	1291	
@@E225	001	002E	1291	1293	
@@E226	001	002F	1293	1295	
@@E227	001	0030	1295	1297	
@@E228	001	0031	1297	1299	
@@E229	001	0032	1299	1301	
@@E230	001	0033	1301	1303	
@@E232	001	0034	1303	1305	
@@E234	001	0035	1305	1307	
@@E237	001	0036	1307	1309	
@@E240	001	0037	1309	1311	
@@E241	001	0038	1311	1313	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 31

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E242	001	0039	1313	1315
@@E248	001	003A	1315	1317
@@E249	001	003B	1317	1319
@@E250	001	003C	1319	1321
@@E251	001	003D	1321	1323
@@E252	001	003E	1323	1325
@@E253	001	003F	1325	1327
@@E254	001	0040	1327	1329
@@E255	001	0041	1329	1331
@@E256	001	0042	1331	1333
@@E300	001	0043	1333	1335
@@E301	001	0044	1335	1337
@@E302	001	0045	1337	1339
@@E303	001	0046	1339	1341
@@E304	001	0047	1341	1343
@@E305	001	0048	1343	1345
@@E308	001	0049	1345	1347
@@E310	001	004A	1347	1349
@@E315	001	004B	1349	1351
@@E316	001	004C	1351	1353
@@E320	001	004D	1353	1355
@@E325	001	004E	1355	1357
@@E330	001	004F	1357	1359
@@E335	001	0050	1359	1361
@@E338	001	0051	1361	1363
@@E340	001	0052	1363	1365
@@E350	001	0053	1365	1367
@@E351	001	0054	1367	1369
@@E352	001	0055	1369	1371
@@E360	001	0056	1371	1373
@@E361	001	0057	1373	1375
@@E362	001	0058	1375	1377
@@E371	001	0059	1377	1379
@@E380	001	005A	1379	1381
@@E390	001	005B	1381	1383
@@E400	001	005C	1383	1385
@@E410	001	005D	1385	1387
@@E415	001	005E	1387	1389
@@E417	001	005F	1389	1391
@@E420	001	0060	1391	1393
@@E430	001	0061	1393	1395
@@E432	001	0062	1395	1397
@@E433	001	0063	1397	1399 2396
@@E450	001	0064	1399	1401
@@E451	001	0065	1401	1403
@@E460	001	0066	1403	1405
@@E461	001	0067	1405	1407
@@E464	001	0068	1407	1409
@@E465	001	0069	1409	1411
@@E466	001	006A	1411	1413
@@E467	001	006B	1413	1415
@@E469	001	006C	1415	1417
@@E470	001	006D	1417	1419
@@E471	001	006E	1419	1421
@@E473	001	006F	1421	1423
@@E474	001	0070	1423	1425

CROSS REFERENCE

SYMBOL LEN VALUE DEFN REFERENCES VER 15, MOD 00 06/03/22 PAGE 32

@@E475	001	0071	1425	1427
@@E476	001	0072	1427	1429
@@E477	001	0073	1429	1431
@@E478	001	0074	1431	1433
@@E479	001	0075	1433	1435
@@E480	001	0076	1435	1437
@@E481	001	0077	1437	1439
@@E482	001	0078	1439	1441
@@E483	001	0079	1441	1443
@@E484	001	007A	1443	1445
@@E485	001	007B	1445	1447
@@E486	001	007C	1447	1449
@@E487	001	007D	1449	1451
@@E488	001	007E	1451	1453
@@E489	001	007F	1453	1455
@@E490	001	0080	1455	1457
@@E491	001	0081	1457	1459
@@E492	001	0082	1459	1461
@@E493	001	0083	1461	1463
@@E494	001	0084	1463	1465
@@E495	001	0085	1465	1467
@@E496	001	0086	1467	1469
@@E497	001	0087	1469	1471
@@E498	001	0088	1471	1473
@@E500	001	0089	1473	1475
@@E501	001	008A	1475	1477
@@E530	001	008B	1477	1479
@@E531	001	008C	1479	1481
@@E535	001	008D	1481	1483
@@E540	001	008E	1483	1485
@@E541	001	008F	1485	1487
@@E542	001	0090	1487	1489
@@E543	001	0091	1489	1491
@@E544	001	0092	1491	1493
@@E545	001	0093	1493	1495
@@E546	001	0094	1495	1497
@@E547	001	0095	1497	1499
@@E548	001	FFFF	1703	
@@E549	001	0096	1499	1501
@@E550	001	0097	1501	1503
@@E551	001	0098	1503	1505
@@E552	001	0099	1505	1507
@@E553	001	009A	1507	1509
@@E554	001	009B	1509	1511
@@E555	001	009C	1511	1513
@@E556	001	009D	1513	1515
@@E558	001	009E	1515	1517
@@E570	001	009F	1517	1519
@@E571	001	00A0	1519	1521
@@E572	001	00A1	1521	1523
@@E573	001	00A2	1523	1525
@@E574	001	00A3	1525	1527
@@E575	001	FFFF	1705	
@@E578	001	00A4	1527	1529
@@E579	001	FFFF	1707	
@@E580	001	FFFF	1709	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 33

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E585	001	00A5	1529	1531
@@E595	001	FFFF	1711	
@@E597	001	FFFF	1713	
@@E598	001	FFFF	1715	
@@E600	001	00A6	1531	1533
@@E601	001	00A7	1533	1535
@@E602	001	00A8	1535	1537
@@E603	001	00A9	1537	1539
@@E604	001	00AA	1539	1541
@@E606	001	00AB	1541	1543
@@E607	001	00AC	1543	1545
@@E608	001	00AD	1545	1547
@@E609	001	00AE	1547	1549
@@E610	001	00AF	1549	1551
@@E611	001	00B0	1551	1553
@@E612	001	00B1	1553	1555
@@E613	001	00B2	1555	1557
@@E614	001	00B3	1557	1559
@@E700	001	00B4	1559	1561
@@E701	001	00B5	1561	1563
@@E710	001	00B6	1563	1565
@@E712	001	00B7	1565	1567
@@E713	001	00B8	1567	1569
@@E714	001	00B9	1569	1571
@@E715	001	00BA	1571	1573
@@E716	001	00BB	1573	1575
@@E717	001	00BC	1575	1577
@@E718	001	00BD	1577	1579
@@E720	001	00BE	1579	1581
@@E721	001	00BF	1581	1583
@@E723	001	00C0	1583	1585
@@E724	001	00C1	1585	1587
@@E725	001	00C2	1587	1589
@@E726	001	00C3	1589	1591
@@E727	001	00C4	1591	1593
@@E728	001	00C5	1593	1595
@@E729	001	00C6	1595	1597
@@E730	001	00C7	1597	1599
@@E732	001	00C8	1599	1601
@@E752	001	00C9	1601	1603
@@E753	001	00CA	1603	1605
@@E754	001	00CB	1605	1607
@@E755	001	00CC	1607	1609
@@E756	001	00CD	1609	1611
@@E757	001	00CE	1611	1613
@@E758	001	00CF	1613	1615
@@E759	001	00D0	1615	1617
@@E760	001	00D1	1617	1619
@@E761	001	00D2	1619	1621
@@E762	001	00D3	1621	1623
@@E763	001	00D4	1623	1625
@@E764	001	00D5	1625	1627
@@E765	001	00D6	1627	1629
@@E766	001	00D7	1629	1631
@@E767	001	00D8	1631	1633
@@E768	001	00D9	1633	1635

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 34

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@@E769	001	00DA	1635	1637
@@E770	001	00DB	1637	1639
@@E771	001	00DC	1639	1641
@@E772	001	00DD	1641	1643
@@E773	001	00DE	1643	1645
@@E774	001	00DF	1645	1647
@@E775	001	00E0	1647	1649
@@E776	001	00E1	1649	1651
@@E777	001	00E2	1651	1653
@@E778	001	00E3	1653	1655
@@E779	001	00E4	1655	1657
@@E780	001	00E5	1657	1659
@@E781	001	00E6	1659	1661
@@E782	001	00E7	1661	1663
@@E783	001	00E8	1663	1665
@@E784	001	00E9	1665	1667
@@E785	001	00EA	1667	1669
@@E786	001	00EB	1669	1671
@@E790	001	00EC	1671	1673
@@E791	001	00ED	1673	1675
@@E792	001	00EE	1675	1677
@@E793	001	00EF	1677	1679
@@E794	001	00F0	1679	1681
@@E795	001	00F1	1681	1683
@@E796	001	00F2	1683	1685
@@E797	001	00F3	1685	1687
@@E798	001	00F4	1687	1689
@@E800	001	FFFF	1717	
@@E801	001	FFFF	1719	
@@E802	001	FFFF	1721	
@@E803	001	FFFF	1723	
@@E804	001	FFFF	1725	
@@E900	001	00F5	1689	1691
@@E901	001	00F6	1691	1693
@@E902	001	00F7	1693	1695
@@E903	001	00F8	1695	1697
@@E905	001	00F9	1697	1699
@@E906	001	00FA	1699	1701
@@E910	001	00FB	1701	
@ARR	001	0008	0016	2047* 2048 2049* 2050 2156 2339
@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	2192 2344 2350
@BM	001	0082	0054	
@BNE	001	0001	0046	2335
@BNH	001	0004	0044	
@BNL	001	0002	0045	
@BNM	001	0002	0057	
@BNOL	001	0020	0050	
@BNOZ	001	0008	0049	
@BNP	001	0004	0056	

CROSS REFERENCE																				
SYMBOL	LEN	VALUE	DEFN	REFERENCES												VER 15, MOD 00	06/03/22	PAGE	35	
@BNZ	001	0001	0058																	
@BOL	001	00A0	0048																	
@BOZ	001	0088	0047																	
@BP	001	0084	0053																	
@BR	001	0001	0013	1930	1940	2043	2044	2046*	2047	2048	2049	2050	2052	2053	2053					
				2054	2056	2057	2059	2061	2061	2062	2062	2063	2065	2067	2068					
				2068	2069	2071	2073	2074	2074	2075	2075	2076	2076	2077	2084*					
				2104	2104	2106	2106	2107	2108	2109	2109	2110	2110	2111	2112					
				2112	2113	2114	2115	2115	2116	2118	2118	2119	2119	2120	2120					
				2121	2121	2122	2151	2153	2154*	2156	2158	2160	2160	2170	2170					
				2175	2175	2176	2176	2177	2177	2178	2178	2179	2179	2183	2184					
				2184	2187	2193	2194	2199	2200	2200	2202*	2370	2371*	2376	2380					
				2386	2386	2387	2387	2388	2395	2397	2397	2398	2404	2405	2406*					
				2407	2408	2408*	2409	2411	2414*											
@BT	001	0010	0051																	
@BZ	001	0081	0055																	
@B1	001	0001	0063	2186	2191															
@CADDR	001	0002	0142	1932	1934	1941	1952	1961	2053	2425										
@CARDL	001	0060	0087	0644																
@CHARA	001	00C1	0072																	
@CHARF	001	00C6	0073																	
@CHARR	001	00D9	0074																	
@CHARZ	001	00E9	0075																	
@CLOFF	001	0010	0094																	
@CLON	001	0011	0093																	
@COMMA	001	006B	0066	2346																
@CPLUS	001	004E	0079																	
@DADDR	001	0002	0140	1946	1947	1948	1955	1956	1957	2052	2423									
@DBFR1	001	0004	0129	2119*																
@DBFR2	001	0005	0130																	
@DCALK	001	0001	0081																	
@DCBCY	001	0009	0115																	
@DCBT1	001	0050	0117																	
@DCNT	001	0003	0128	2101	2402*															
@DCST1	001	0040	0116																	
@DCTRL	001	0000	0125																	
@DCYL	001	0001	0126	2089																
@DD2	001	0003	0030																	
@DGET	001	0001	0134	1945	2422															
@DOLAR	001	005B	0068																	
@DOP2	001	0004	0028	2048*	2052*	2053*	2124	2125												
@DPLNG	001	0006	0132	1926	2054	2088	2405													
@DPOS	001	0000	0133																	
@DPUT	001	0002	0135	1954																
@DSAD	001	0002	0127	1935*	1936*	2090														
@DSBCY	001	0004	0106																	
@DSCS1	001	0000	0107																	
@DSIVF	001	0003	0138																	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 36

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@DZERO	001	00F0	0064	
@D1	001	0002	0026	2170 2387*
@EOF	001	001C	0077	
@EOFTC	001	0075	0162	
@EOS	001	001E	0076	2352 2394
@FDDBC	001	0000	0195	2412*
@FDE1	001	000C	0200	2406
@FDFNA	001	000B	0198	
@FDHLN	001	0002	0208	
@FDLNC	001	0002	0193	
@FDNSC	001	0003	0210	
@FDSD	001	0000	0206	2406 2407 2409 2411
@FLACE	001	0009	0197	
@FLDBC	001	0001	0196	2412
@FLENT	001	0004	0201	2408
@FLFNA	001	0002	0199	
@FLHLN	001	0002	0209	
@FLLNC	001	0002	0194	
@FLNSC	001	0001	0211	
@FLSD	001	0001	0207	2407 2409 2411
@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	2057 2165 2239
@NUMBR	001	007B	0070	
@OPD2	001	0004	0029	
@OP1	001	0003	0027	2044* 2050* 2153* 2156* 2339*
@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	2056* 2057* 2067* 2073* 2099 2100 2102 2111* 2113 2233 2237 2358
@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	2386 2397 2421 2430 2431 2432 2433 2434
@SCTS	001	0100	0100	

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 37

SYMBOL	LEN	VALUE	DEFN	REFERENCES
@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	2111 2235 2336 2347
@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	
@VQ	001	0001	0025	
@WSFIT	001	0500	0101	
@WSTBL	001	0503	0102	
@XR	001	0002	0014	1929 1931 1933 1935 1935 1936 1936 1937 1937 1938 2158 2167 2183 2186 2186* 2191 2191* 2192 2199 2340 2343 2343* 2344 2346 2349 2349* 2350 2352 2354 2372* 2394 2399 2400* 2401 2402 2402 2405 2407 2409 2411 2415
@ZERO	001	0000	0062	2056
C4BCHC	001	0004	2227	
C4BCHR	001	086C	2215	2183* 2184
C4BINI	001	086B	2213	2160
C4BIN2	001	0800	2150	2151 2154 2382
C4BLEN	002	0868	2225	2199* 2200*
C4BLNK	003	081B	2233	
C4BLOW	001	00F0	2229	2167
C4BLVL	002	0002	2231	2160 2175 2176 2177 2178 2179 2184
C4BNMC	004	0817	2237	
C4BNOP	001	0080	2239	
C4BSAV	002	086E	2219	2158* 2200
C4BSPC	001	0087	2235	
C4BVAL	002	086A	2211	2160* 2175 2175* 2176 2177 2177* 2178 2178* 2179* 2184* 2231 2386
C4BWRK	002	0868	2208	2176* 2179 2225 2231
C4BYT1	001	0869	2210	
C4B100	004	0816	2161	2237
C4B200	003	081A	2165	2187 2233
C4B300	003	081D	2167	2193
C4B590	003	084C	2191	2170 2194
C4B600	003	084F	2192	2165
C4B700	003	0858	2199	2168

CROSS REFERENCE

VER 15, MOD 00 06/03/22 PAGE 38

SYMBOL	LEN	VALUE	DEFN	REFERENCES
C4B800	004	085F	2202	2153* 2171
C4B850	004	0863	2204	2156*
C4B900	001	086F	2221	2161* 2170*
C4END	001	0870	2240	
DL4CYL	001	07AB	2089	2061*
DL4C01	002	07B1	2097	2047 2049 2061
DL4C05	002	07B3	2098	2053
DL4C24	003	0782	2100	2074
DL4C48	003	076F	2102	2068 2109 2115
DL4C96	003	075E	2099	2062
DL4DPL	006	07AF	2088	2054*
DL4EFD	001	0001	2095	2067 2113
DL4END	001	07F1	2126	
DL4ETB	001	0080	2096	2073
DL4E01	001	0001	2094	2069
DL4E24	001	0018	2093	2071
DL4E48	001	0030	2092	2065 2107
DL4E96	001	0060	2091	2059
DL4ICS	001	0735	2042	1931 1933
DL4LST	001	07AA	2087	2080 2089 2090 2101 2119*
DL4SAV	005	074C	2125	2112* 2115* 2118
DL4SCD	001	07AC	2090	2059 2062* 2065 2068* 2071 2074* 2075 2075* 2076 2076* 2077* 2106
				2112 2118* 2120*
DL4SCT	001	07AD	2101	2069 2104 2110* 2119 2120 2121*
DL4SPT	004	07B4	2105	2070
DL4WRK	005	074D	2124	2104* 2106* 2107 2109* 2110 2121
DL4010	001	0739	2045	2043 2046
DL4020	005	0749	2052	2048* 2124 2125
DL4030	005	0752	2054	2052* 2053*
DL4035	003	0757	2056	2122
DL4040	003	075D	2059	2063 2099
DL4050	003	076E	2065	2060 2102
DL4060	003	077B	2069	2066
DL4070	003	0781	2071	2100 2108 2114 2116
DL4080	004	078E	2075	2072
DL4100	003	0796	2077	2056* 2067* 2073* 2113
DL4200	003	079F	2082	2057* 2111*
DL4500	004	07B4	2104	2105
DL4600	004	07DE	2118	2082
DL4900	004	07A2	2084	2044*
DL4920	004	07A6	2085	2050*
KRNAPL	006	0706	1926	2405*
KRNBPL	002	093D	2425	2405
KRNBRB	002	0846	2441	2370 2371
KRNC SZ	001	072C	1949	1935 1936 1937 2401* 2402
KRNFSZ	001	0700	1924	1937* 2407* 2409 2411* 2439
KRNOPL	001	0701	1925	1941
KRNPR A	001	093E	2429	2404
KRNPRF	001	0944	2435	2404
KRNPRP	001	0935	2419	2387
KRNPRS	002	0943	2430	2404
KRNPR1	002	093F	2432	2386* 2419
KRNPR2	002	0941	2433	2419
KRNPR3	002	0943	2434	2397 2441
KRNRPL	001	0729	1945	1932 1935*
KRNTBF	001	0800	2144	1952 1961

[illegible]

START ADDRESS	CATEGORY	NAME AND ENTRY	CODE LENGTH HEXADECIMAL	DECIMAL
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0700	0	#KRNUM	0A00	2560
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OL100	I	THE TOTAL CORE USED BY #KRNUM IS 2560 DECIMAL.		
OL101	I	THE START CONTROL ADDRESS OF THIS MODULE IS 0700.		
OL104	I	TOTAL NUMBER OF LIBRARY SECTORS REQUIRED IS 11		
		NAME-#KRNUM,PACK-R1R1R1,UNIT-R1,RETAIN-P,LIBRARY-O		