

FFP5 DIAGNOSTIC CONTROL PROGRAM

PRG	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
				2	DECK	4
				3	SEQ	6
				4	COM	THIS PREVENTS GENERATION OF OBJECT DECK
0000				5	PAP	START X'0'
				6	*****	
				7	*	BOOTSTRAP - FIRST CARD
				8	*****	
				9	*****	
				10	*	*
				11	*	THIS ONE CARD PROGRAM IS CONTAINED IN THE FIRST CARD OF THE
				12	*	DIAGNOSTIC CONTROL PROGRAM. IT IS READ INTO LOCATIONS 0-95 BY
				13	*	INITIAL PROGRAM LOAD. WHEN GIVEN CONTROL, THE BOOTSTRAP ROUTINE
				14	*	READS THE SECOND CARD OF THE DCP OBJECT DECK INTO 512-607 AND
				15	*	BRANCHES TO IT.
				16	*	*
				17	*	NOTE - THE SECOND TIER OF THIS CARD CONTAINS THE PART NUMBER AND
				18	*	EC LEVEL OF DCP.
				19	*	*
				20	*****	
			0000	21	USING	BOOT1, XR1
0000	C2	01	0000	22	BOOT1	LA 0, XR1 LOAD BASE REGISTER
0004	D1	F0	17	23	TIO	BOOT1E(, XR1), X'F0' GO HALT IF MFCU ERROR OR NOT READY
0007	F1	F5	1E	24	LIO	BOOT11(, XR1), X'F5' LOAD READ ADDRESS REGISTER
000A	F3	F1	40	25	SIO	IPL, READ READ A CARD INTO LOCATIONS 512-607
000D	F1	F1	0D	26	BOOT1A	TIO BOOT1A(, XR1), X'F1' LOOP UNTIL DONE
0010	D1	F0	17	27	TIO	BOOT1E(, XR1), X'F0' GO HALT IF ERROR
0013	C0	87	0200	28	B	BOOT2 GO TO BOOTSTRAP ROUTINE
				29		
0017	F0	3B	5D	30	BOOT1E	HPL H5, HH *MFCU NOT READY OR ERROR
001A	D0	87	00	31	B	BOOT1(, XR1) GO TRY AGAIN
				32		
001D	0200		001E	33	BOOT11	DC AL2(512)
				34		
001F	40D7D540F2F5F8F9		003B	35	DC	CL29' PN 2589900 EC XXXXXX L'
0027	F9F0F04040C5C340			35		
002F	E7E7E7E7E7E740			35		
0037	40404040D3			35		
				36		
				36		
				36		
				37	*****	
				38	*	BOOTSTRAP - SECOND CARD
				39	*****	
				40	*	*
				41	*	THIS ONE CARD PROGRAM IS CONTAINED IN THE SECOND CARD OF THE
				42	*	DIAGNOSTIC CONTROL PROGRAM. IT IS READ INTO LOCATIONS 512-565
				43	*	BY THE IPL CARD. THIS ROUTINE READS THREE IPL FORMAT CARDS INTO
				44	*	LOW CORE TO BUILD ENOUGH OF THE DIAGNOSTIC LOADER TO HANDLE TEXT
				45	*	CARDS. THEN THE BOOTSTRAP ROUTINE BRANCHES TO THIS PORTION OF
				46	*	THE DIAGNOSTIC LOADER, WHICH LOADS THE REMAINDER OF THE LOADER
				47	*	AND DCP.
				48	*	*
				49	*****	
0200				50	ORG	512
			0200	51	USING	BOOT2, XR1
			0200	52	USING	BOOT2, XR2
0200	C2	02	0200	53	BOOT2	LA BOOT2, XR2 LOAD BASE REGISTERS
0204	D2	01	60	54	BT2	LA 96(, XR1), XR1
0207	F2	87	03	55	J	BOOT2A
020A	F0	3B	5D	56	BOOT2E	HPL H5, HH *MFCU NOT READY OR ERROR
020D	E1	F0	0A	57	BOOT2A	TIO BOOT2E(, XR2), X'F0' GO HALT IF MFCU NOT READY OR ERROR
0210	B1	F5	3B	58	LIO	BOOT23(, XR2), X'F5' LOAD READ LSR FOR ADDR 0000
0213	F3	F1	40	59	SIO	IPL, READ READ A CARD
0216	E1	F1	16	60	BOOT2B	TIO BOOT2B(, XR2), X'F1' LOOP UNTIL DONE
0219	E1	F0	0A	61	TIO	BOOT2E(, XR2), X'F0' GO HALT IF ERROR
021C	4C	3B	3B 003B	62	MVC	59(60, XR1), 59 MOVE DATA TO CORR
0221	D2	01	3C	63	LA	60(, XR1), XR1 INCREMENT POINTER FOR NEXT CARD

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
0224	AF	00	39 05	64	SLC	BOOT22(1, XR2), BOOT21(, XR2)	CONTINUE UNTIL 4 CARDS HANDLED
0228	EO	01	0D	65	BTZ	BOOT2A(, XR2)	
022B	3C	40	08FF	66	MVI	X'8FF', C'	CLEAR PRINT FIELD
022F	0C	FE	08FE 08FF	67	MVC	X'8FE'(255), X'8FF'	
0235	CO	87	008B	68	B	NEXTB	GO TO DIAGNOSTIC LOADER
				69			
				0205	70	BOOT21 EQU	BT2+1
0239	03			0239	71	BOOT22 DC	IL1'3'
023A	0000			023B	72	BOOT23 DC	AL2(0)
				73			
				73			
				73			
				73			
				73			
				73			
0060				74	ORG	X'60'	
				75	*****		
				76	*	DIAGNOSTIC LOADER	*
				77	*****		
				78	*****		
				79	*		*
				80	*	A ONE CARD BOOTSTRAP FEEDS THIS LOADER INTO CORE AND BRANCHES TO	*
				81	*	IT. THE DIAGNOSTIC LOADER THEN LOADS THE CONTROL PROGRAM,	*
				82	*	INCLUDING ITS SECTION REFERENCE TABLE. AFTER DCP IS LOADED, THIS	*
				83	*	MODULE THEN TRANSFORMS ITSELF INTO A SECTION LOADER BY ALTERING A	*
				84	*	BRANCH ADDRESS. OBJECT CARDS RECOGNIZED BY BOTH PHASES INCLUDE	*
				85	*		*
				86	*	TEXT	*
				87	*	REPLACE	*
				88	*	COMMENT	*
				89	*	SENSE SWITCH	*
				90	*	END	*
				91	*		*
				92	*	THE DCP LOADER PORTION ALSO RECOGNIZES THE FOLLOWING CARDS--	*
				93	*	SRT	*
				94	*	UDT	*
				95	*	CHAIN IMAGE CONTROL AND IMAGE CARDS	*
				96	*		*
				97	*	OTHER CARDS ARE IGNORED.	*
				98	*		*
				99	*		*
				100	*****		
				101			
				102	*		
				103	**	SUBROUTINE TO READ ONE CARD.	
				104	*		
				005C	105	USING CDREAD-4, XR2	
0060	C2	02	005C	106	CDREAD	LA CDREAD-4, XR2	LOAD BASE ADDRESS
0064	C2	01	0880	107	LA	INPUT, XR1	SET
				0057	108	AINPUT EQU	*-1
0068	B4	08	24	109	ST	CDEXIT+3(, XR2), ARR	SET UP RETURN ADDRESS
006B	E1	F0	25	110	TIO	ERR(, XR2), X'F0'	GO HALT IF MFCU NOT READY OR ERROR
006E	B1	F5	0B	111	DOLIO	LIO AINPUT(, XR2), X'F5'	LOAD ISR TO START LOADING AT 0000
0071	F3	F1	00	112	SIO	NORM, READ	READ A CARD - NORMAL MODE
0074	E1	F1	18	113	BUSY	TIO BUSY(, XR2), X'F1'	LOOP UNTIL READ DONE
0077	B0	F3	03	114	SNS	STATUS(, XR2), X'F3'	GO HALT IF FEED OR READ CHECK
007A	B9	86	03	115	TBF	STATUS(, XR2), X'86'	
007D	C0	10	0000	116	CDEXIT	BT	EXIT SUBROUTINE IF NO ERRORS
0081	F0	3B	5D	117	ERR	HPL H5, HH	*MFCU NOT READY OR ERROR
0084	E0	87	12	118	B	DOLIO(, XR2)	GO TRY START I/O
				119			
0087	FFFF			0088	120	NEG3 DC	XL2'FFFF'
0089	FFFC			008A	121	NEG4 DC	XL2'FFFC'
				122			
				123			
008B	C0	87	0060	124	NEXTB	B CDREAD	GO READ A CARD
008F	7D	F3	00	125	CLI	0(, XR1), C1'	BRANCH IF THIS IS TEXT CARD
0092	F2	81	06	126	JE	LOOP	

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	
0095	7D	C5	00	127		CLI	0(,XR1),C'E'	BRANCH IF NOT END CARD
0098	F2	01	71	128		JNE	CKREP	
0098	7D	D0	01	129	LOOP	CLI	1(,XR1),X'D0'	REPLACE ALL HEX 'D0' BYTES WITH '2A'
009E	F2	01	03	130		JNE	*+6	
00A1	7C	2A	01	131		MVI	1(,XR1),X'2A'	
00A4	D2	01	01	132		LA	1(,XP1),XR1	
00A7	B4	01	01	133		ST	LDWORK(,XR2),XP1	
00AA	BD	D8	01	134		CLI	LDWORK(,XR2),X'D8'	
00AD	E0	82	3F	135		BL	LOOP(,XR2)	
				136				
00B0	C2	03	08D7	137		LA	INPUT+87,X'03'	INITIALIZE POINTERS
00B4	3C	00	00BF	138	LENGTH	MVI	S1+1,0	INITIALIZE LENGTH OF ADD FIELD
00B8	0C	00	00C3 00BF	139	CMLOOP	MVC	S2+1(1),S1+1	
00BE	AE	00	01 01	140	S1	ALC	1(*-*,XP2),1(,XP2)	SHIFT OFF HIGH-ORDER 2 BITS
00C2	AE	00	01 01	141	S2	ALC	1(*-*,XP2),1(,XP2)	
00C6	0E	00	00BF 00FD	142		ALC	S1+1(1),N1	PREPARE TO OPERATE ON NEXT BYTE
00CC	3D	04	00BF	143		CLI	S1+1,4	CONTINUE UNTIL 4 BYTES COMPRESSED
00D0	C0	01	00P8	144		SNE	CMLOOP	
				145				
00D4	6C	02	01 00	146		MVC	1(3,XR1),0(,XP2)	MOVE 3 COMPRESSED BYTES TO TEMPORARY
				147	*			FIELD
00D8	36	01	0088	148		A	NEG3,XR1	PREPARE FOR NEXT 4 BYTES
00DC	36	02	008A	149		A	NEG4,XP2	
00E0	34	01	005D	150		ST	LDWORK,XP1	
00E4	3D	97	005D	151		CLI	LDWORK,X'97'	
00F8	C0	34	00B4	152		BH	LENGT'	CONTINUE UNTIL CARD DONE
				153				
00EC	C2	01	0880	154		LA	INPUT,XR1	POINT XR1 AT READ-IN FIELD
00F0	7D	C5	00	155		CLI	0(,XR1),C'E'	IF THIS IS END CARD, GO ON
00F3	F2	81	16	156		JE	CKREP	
				157				
00F6	1C	02	0106 19	158		MVC	MOVE+4(3),25(,XR1)	SET UP TO MOVE TEXT DATA TO CORE
00FB	1C	00	0107 17	159	LPTONE	MVC	MOVE+4(1),23(,XR1)	
0100	D2	01	1A	160		LA	26(,XR1),XP1	
0103	1C	00	0000 00	161	MOVE	MVC	*-*(*) , *-*(,XR1)	INSTRUCTION TO MOVE TEXT DATA
				162				
				162				
0108	C0	37	008B	163		B	NEXTR	
010C	35	01	0882	164		L	INPUT+2,XR1	(NOTE -- ADDRESS OF THIS INSTRUCTION
011C	D0	87	00	165		R	0(,XR1)	IS THE SAME AS THAT OF CKREP)
				166				
				167	*			THE ABOVE 3 INSTRUCTIONS ARE OVERLAYED DURING NORMAL DCP LOADING.
				168	*			FIRST THE CLEAR CORE ROUTINE OVERLAYS THEM. THEN THE REST OF THE
				169	*			LOADER OVERLAYS THAT ROUTINE.
				170	*			IF THESE FIRST 5 CARDS ARE USED AS A GENERAL LOADER, THESE LAST TWO
				171	*			INSTRUCTIONS CAUSE A BRANCH TO THE END CARD ADDRESS, WHEN END CARD
				172	*			IS READ
				173				
				174				
				175	**			ALL ABOVE INSTRUCTIONS ARE CONTAINED IN IPL FORMAT BOOTSTRAP
				176	**			CARDS AT THE BEGINNING OF THE DCP OBJECT DECK. THE CODE IS CAPABLE
				177	**			OF HANDLING TEXT AND END CARDS AND IS USED TO GET THE REMAINDER OF
				178	**			THE DCP LOADER INTO CORE.
				179				
				180				
				181		ECOM		BEGIN GENERATING TEXT CARDS
0108				182		ORG	*-11	
				183				
				184	*			THE FOLLOWING IS A ROUTINE TO CLEAR CORE FROM 8K DOWN TO ITSELF.
				185	*			IT IS CONTAINED IN THE FIRST TEXT CARD OF DCP, AND IS EXECUTED
				186	*			AS LONG AS IT IS MOVED TO CORE.
				187				
0108	3C	40	1FFF	188	CLRCOR	MVI	X'1FFF',C' '	CLEAR UPPER 256 BYTES OF
010C	0C	FE	1FFE 1FFF	189		MVC	X'1FFF'(255),X'1FFF'	FIRST 8K WITH BLANKS
0112	0C	FF	1EPP 1EPP	190	ZRO	MVC	X'1EPP'(256),X'1EPP'	CLEAR NEXT 256 BYTE SEGMENT
0118	0F	01	0115 0131	191		SLC	ZRO+3(2),NUM256	POINT TO NEXT 256 BYTE SEGMENT DOWN
011E	3D	01	0114	192		CLI	ZRO+2,X'01'	CONTINUE UNTIL READY FOR 100-1PF
0122	C0	84	0112	193		BH	ZRO	

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
0126	0C	CD	01FF 1FFF	194		MVC	X'1FF'(X200-ENDCLR),X'1FFF' CLEAR REST OF THIS SEGMENT
012C	C0	87	008B	195		B	NEXTR RE-ENTER LOADER
0130	0100			0131	196	NUM256 DC	XL2'0100'
				0132	197	ENDCLR EQU	*
0200				198		ORG	X'200'
				0200	199	X200 EQU	*
				200			
				200			
				200			
0108				201		ORG	CLRCOR
0108	C0	87	008B	202		B	NEXTR CONTINUE LOADING, GET NEXT RECORD
010C	7D	D9	00	203		CKREP CLI	0(,XR1),C'R' BRANCH IF NOT REPLACE CARD
010F	C0	01	0A0D	204		CKCOM1 BNE	CKCOMA
				205		**	NOTE - BRANCH ADDRESS OF PREVIOUS BRANCH IS ALTERED AFTER DCP
				206		**	LOADING COMPLETE. THIS OVERLAY PREPARES THE LOADER FOR
				207		**	HANDLING SECTIONS.
0113	C0	87	0226	208		B	PACK GO PACK ADDRESS
0117	04			0117	209	DC	IL1'4'
0118	0885			0119	210	DC	AL2(INPUT+5)
011A	0136			011B	211	DC	AL2(DEST)
011C	7D	C5	01	212		CLI	1(,XR1),C'E' BRANCH IF NOT PATCH EXECUTE CARD
011F	F2	01	06	213		JNE	AJDEST
0122	B5	01	DA	214		L	DEST(,XR2),XR1 BRANCH TO CARD ADDRESS IF IT IS
0125	D0	87	00	215		B	0(,XR1)
0128	D2	01	08	216		AJDEST LA	8(,XR1),XR1 POINT AT FIRST BYTE
012B	B4	01	08	217		NEXT ST	SRCE(,XR2),XR1 SET UP SOURCE ADDRESS
012E	C0	87	0226	218		B	PACK GO PACK THIS BYTE
0132	02			0132	219	DC	IL1'2'
0133	0000			0134	220	SPCE DC	AL2(*-*)
0135	0000			0136	221	DEST DC	AL2(*-*)
0137	AE	01	DA A1	222		ALC	DEST(2,XR2),N1(,XR2) INCREMENT DESTINATION ADDRESS
013B	7D	40	01	223		CKBIK CLI	1(,XR1),C' ' GO READ NEXT CARD IF BLANK FOUND
013E	E0	81	2F	224		BE	NEXTR(,XR2)
0141	D2	01	01	225		LA	1(,XR1),XR1 INCREMENT TO NEXT COLUMN
0144	7D	6B	00	226		CLI	0(,XR1),C', ' JUMP OVER ANY COMMAS
0147	E0	81	DF	227		BE	CKBLK(,XR2)
014A	D2	01	01	228		LA	1(,XR1),XR1 POINT AT 2ND DIGIT
014D	E0	87	CF	229		B	NEXT(,XR2) GO PACK THIS BYTE
				230			
				231			
				232		**	THE FOLLOWING CODING COMPLETES THE SECTION LOADER. IT IS
				233		**	BYPASSED DURING DCP LOADING. ONCE THE CONTROL PROGRAM IS LOADED,
				234		**	LINKAGES ARE SET UP SO THAT THIS ROUTINE WILL BE SUBSTITU-
				235		**	TUTEI FOR THE DCP LOADER ROUTINE RESIDING AT HEX -A00-.
0150	7D	5C	00	236		CKCOM CLI	0(,XR1),C' ' BRANCH IF THIS IS NOT A COMMENT
0153	F2	01	0F	237		BNE	CHKSSW CARD
0156	38	01	0208	238		TBN	SBYTE0,SSW07 BYPASS PRINTING IF SSW07 IS ON
015A	E0	10	2F	239		BT	NEXTR(,XR2)
015D	C0	87	021A	240		B	PRINT PRINT CONTENTS OF THIS CARD
0161	21			0161	241	DC	XL1'21'
0162	E0	87	2F	242		B	NEXTR(,XR2) GO READ NEXT CARD
				243			
0165	4D	02	02 05D2	244		CHKSSW CLC	2(3,XR1),SSW BRANCH IF NOT SENSE SWITCH CARD
015A	C0	01	0196	245		BNE	CHKEND
0162	0F	03	020D 020D	246		SLC	SBYTE5(4),SBYTE5 CLEAR SECTION SENSE SWITCHES
0174	D2	01	05	247		IGSS1 LA	5(,XR1),XR1 POINT XR1 AT FIRST SSW NUM
0177	24	01	0181	248		CHKSSW ST	SADDR,XR1 SET UP POINTER TO THIS NUMBER
017B	CG	87	0226	249		B	PACK GO PACK THIS NUMBER
017F	02			017F	250	DC	IL1'2'
0180	0000			0181	251	SADDF DC	AL2(*-*)
0182	03F8			0182	252	DC	AL2(DATSSWS)
0184	C0	87	03F9	253		B	SETSSW
0188	7D	6B	01	254		CLI	1(,XR1),C', ' CHECK FOR MORE ENTRIES

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ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
013B	D2	01	03	255	LA		3(,XR1),XR1 POINT TO NEXT NUMBER
018E	C0	81	0177	256	BE		CHKSS0 CONTINUE UNTIL CARD DONE
0192	C0	87	008B	257	B		NEXTR WHEN DONE, GO READ NEXT CARD
0196	7D	C5	00	258	CHKEND	CLI	0(,XR1),C'0'
0199	E0	01	2F	259	BNE		NEXTR(,XP2) GO READ NEXT CARD IF NOT END
019C	38	04	01FD	260	TBN		FLAG,BIT5
01A0	D0	90	81	261	BF		129(,XR1) BRANCH TO X'001'
01A3	C0	87	0000	262	LDX	B	*-*
				01A6	263	LDX@	EQU *-1
01A7	34	08	01A6	264	LDPT2	ST	LDX@,ARR
01AB	C0	87	0060	265	B		CDREAD
01AF	39	AC	01FD	266	TBF		FLAG,BIT0+BIT2+BIT4+BIT5
01B3	E0	10	33	267	BT		NEXTR+4(,XR2)
01B6	C0	87	021E	268	B		UNPACK
01BA	02			01BA	269	DC	XL1'2'
01BB	01FF			01BC	270	DC	AL2(DTABLE+1)
01BD	005F			01BE	271	DC	AL2(STATUS)
01BF	1D	02	005F 5A	272	CLC		STATUS(3),90(,XR1) CHECK ID
01C4	F2	01	10	273	JNE		HLTHD
01C7	1D	03	01F4 5F	274	CLC		DEC0(4),95(,XR1) CHECK FOR CARD 0
01CC	F2	81	13	275	JE		OK
01CF	1D	03	01F5 5F	276	CLC		DEC1(4),95(,XR1) CHECK FOR CARD 1
01D4	F2	81	0B	277	JE		OK
01D7	35	08	01FF	278	HLTHD	L	DTABLE+1,ARR
01DB	F0	3B	73	279	HPL		HD,HH
01DE	C0	87	01AB	280	B		LDPT2+4
01E2	38	20	01FD	281	OK	TRN	FLAG,BIT2
01E6	C0	10	01A3	282	BT		LDX
01EA	E0	87	33	283	B		NEXTR(,XR2)
01ED	00000000			01F0	284	DC	XL4'0'
01F0	F0F0F0F0			01F4	285	DECO	DC DL4'0'
01F5	F1			01F5	286	DEC1	DC DL1'1'
01F6	000000000000			01FB	287	DC	XL06'0'
01FC	0060			01FD	288	DC	AL2(CDREAD)
01FE	01A7			01FF	289	DC	AL2(LDPT2)
				290			
0A00				291	ORG		X'AC0'
				292	*		THESE INSTRUCTIONS AND CONSTANTS ARE USED ONLY BY THE DCP LOADER. *
				293	*		THE UNIQUE SECTIONS OF THE SECTION LOADER ARE LOADED INTO THE *
				294	*		LOADER AREA, X'000' - X'1FF'. *
				295			
				296			
0A00	F0F4F8			0A02	297	D048	DC DL3'048'
0A03	F1F2F0			0A05	298	D120	DC DL3'120'
0A06	18			0A06	299	524	DC IL1'24'
0A07	C3C8C1C9D5			0A0B	300	CHAIN	DC CL5'CHAIN'
0A0C	00			0A0C	301	CHCTR	DC XL1'0'
				302			
0A0D	7D	E0	00	303	CKCOMA	CLI	0(,XR1),C'0'
0A10	F2	C1	13	304	JNE		CKCPB BRANCH IF NOT COMMENT CARD
0A13	C0	E7	1084	305	B		FIXMOB
0A17	38	01	0208	306	TBN		SBYTE0,SSW07 SKIP PRINTING IF SSW07 IS ON
0A1B	E0	10	2F	307	BT		NEXTR(,XR2)
0A1E	C0	87	021A	308	B		PRINT PRINT CONTENTS OF THIS CARD
0A22	21			0A22	309	DC	XL1'21'
0A23	E0	87	2F	310	B		NEXTR(,XR2) GO READ NEXT CARD
				311			
0A26	7D	C3	00	312	CKCPB	CLI	0(,XR1),C'0'
0A29	F2	01	34	313	JNE		CKHDT BRANCH IF NOT CPU DEFINITION CARD
0A2C	1C	00	0200 04	314	MVC		SMOD(1),4(,XR1) PUT SYSTEM MODEL INTO SPT
0A31	C0	87	1084	315	B		FIXMOB ---GO DO CIC OVERLAY ETC.
0A35	C0	87	0226	316	B		PACK PACK CORE SIZE INTO SPT
0A39	04			0A39	317	DC	IL1'4'
0A3A	0889			0A3B	318	DC	AL2(INPUT+9)
0A3C	0203			0A3D	319	DC	AL2(SIZ@)
0A3E	3B	80	0204	320	SBF		C00,X'80'
0A42	7D	F1	0B	321	CLT		11(,XR1),C'1'
0A45	F2	01	04	322	JNE		*+7 SET DUAL PGM FEATURE FLAG IF COLUMN 12 CONTAINS '1'

FFP5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
0A48	3A	80	0204		323	SEN	CPU,X'80'
0A4C	7D	C2	04		324	CLI	4(,XR1),C'8'
0A4F	F2	82	06		325	JL	CDERR0
0A52	7D	C4	04		326	CLI	4(,XR1),C'D'
0A55	E0	04	2F		327	BNH	NEXTR(,XR2)
0A58	F0	3B	6F		328	CDERR0	HPL
0A5B	E0	87	2F		329	B	NEXTR(,XR2)
					330		
0A5E	09			0A5E	331	N9	DC
0A5F	00			0A5F	332	DEV	DC
0A60	7D	E4	00		333	CKUDT	CLI
0A63	F2	01	AA		334	JNB	CKDCPS
0A65	7D	40	03		335	CLI	3(,XR1),C' '
0A69	F2	01	0A		336	JNE	PTFDC
0A6C	3C	00	025F		337	MVI	UTAB+45,X'0'
0A70	0C	2C	025E 025F		338	MVC	UTAB+44(45),UTAB+45
0A76	D2	01	05		339	PTFDC	LA
0A79	34	01	0A83		340	ULP1	ST
0A7D	C0	87	0226		341	B	PACK
0A81	02			0A81	342	DC	'L1'2'
0A82	0000			0A83	343	UPTR	DC
0A84	0A5F			0A85	344	DC	AL2(DEV)
0A86	C2	02	022F		345	LA	UTAB-3,XR2
0A8A	E2	02	03		346	ULP2	LA
0A8D	B8	10	01		347	TBN	1(,XR2),BIT3
0A90	F2	90	07		348	JF	UDTA
0A93	F0	3B	6F		349	HPL	'0,HH
0A96	C0	87	008B		350	B	NEXTR
0A9A	8D	00	00 0A5F		351	UDTA	CLC
0A9F	F2	81	07		352	JE	LDUDT
0AA2	BD	00	00		353	CLI	0(,XR2),X'0'
0AA5	C0	01	0A8A		354	JNE	ULP2
0AA9	8C	00	00 0A5F		355	LDUDT	MVC
0AAE	BB	0F	01		356	SBF	1(,XR2),X'0F'
0AB1	BC	00	02		357	MVI	2(,XR2),X'0'
0AB4	D2	01	01		358	LA	1(,XR1),XR1
0AB7	7D	60	00		359	CLI	0(,XR1),C'-'
0ABA	F2	01	03		360	JNE	**+6
0ABD	D2	01	01		361	ULP4	LA
0AC0	7D	40	00		362	CLI	0(,XR1),C' '
0AC3	C0	81	008B		363	BE	NEXTR
0AC7	7D	6B	00		364	CLI	0(,XR1),C' '
0ACA	F2	01	07		365	JNE	UDTB
0ACD	D2	01	02		366	LA	2(,XR1),XR1
0AD0	C0	87	0A79		367	B	ULP1
0AD4	7D	F0	00		368	UDTB	CLI
0AD7	F2	02	05		369	JNL	UDTC
0ADA	4E	00	00 0A5E		370	ALC	0(1,XR1),N9
0ADF	7B	F0	00		371	UDTC	SBF
0AE2	0C	01	0F73 00FD		372	MVC	MASK(2),N1
0AE8	4F	00	00 00FD		373	ULP3	SLC
0AED	F2	82	0A		374	JL	UDTD
0AF0	0E	01	0F73 0F73		375	ALC	MASK(2),MASK
0AF6	C0	87	0AEP		376	B	ULP3
0AFA	0C	00	0B07 0F72		377	UDTD	MVC
0B00	0C	00	0B0A 0F73		378	MVC	USET2+1(1),MASK
0B06	BA	00	01		379	USET1	SRN
0B09	BA	00	02		380	USET2	SRN
0B0C	C0	87	0ABD		381	B	ULP4
					382		
0B10	4D	02	02 0BA5		383	CKDCPS	CLC
0B15	F2	01	0C		384	JNE	CKCHN
0B18	3C	00	0208		385	MVI	SRV70,X'0'
0B1C	3C	00	0209		386	MVI	SRVTE1,X'0'
0B20	C0	87	C'74		387	B	ISSSW
					388		
0B24	4D	04	06 0A0B		389	CKCHN	CLC
0B29	F2	81	08		390	JE	ISCHN

YES, GO READ NEXT CARD  
\*NO, CARD SET UP IMPROPERLY  
GO READ NEXT CARD AFTER HALT RESET

BRANCH IF NOT UDT CARD

USE THIS CARD AS A CONTINUATION IF  
COLUMN 4 IS NOT BLANK  
IF BLANK - CLEAR UDT TABLE FOR ALL  
NEW ENTRIES  
POINT AT FIRST DEVICE CODE  
SET UP DEVICE CODE POINTER  
PACK DEVICE CODE

POINT AT DCP UNIT TABLE  
INCREMENT UNIT TABLE POINTER  
BRANCH IF NOT LAST DCP ENTRY

\*RAN OUT ROOM IN UDT TABLE  
GO READ NEXT CARD  
BRANCH TO OVERLAY IF THIS IS SAME AS  
PREVIOUS ENTRY  
IS THIS AN UNUSED ENTRY  
IF NOT UNUSED, GO CHECK NEXT  
SET UP THIS UDT ENTRY DEVICE CODE  
CLEAR OPTION BITS

POINT AT FIRST OPTION NUMBER, ALLOW  
FOR DASH

POINT AT NEXT OPTION NUMBER  
IF BLANK ENCOUNTERED, CARD IS DONE

IF COMMA ENCOUNTERED, GO TO NEXT  
DEVICE CODE

CHANGE EBCDIC 0-9 TO BINARY

LOAD MASK INTO SET BITS ON  
INSTRUCTIONS  
TURN ON PROPER OPTION BIT

GO LOOK AT NEXT OPTION NUMBER

BRANCH IF NOT SSW CARD

CLEAR COMMON SENSE SWITCHES

GO SET PROPER SENSE SWITCHES

BRANCH IF NOT CHAIN IMAGE CONTROL  
CARD WITH '//CHAIN' OR '// CHAIN'



PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			454	*	
			455	**	SRT DATA
			456	*	
0200	00	0200	457	SMOD DC	XL1'0'
0201	00	0201	458		DC XL1'0'
0202	0000	0203	459	SIZE DC	XL2'0'
0204	00	0204	460	CPU DC	XL1'0'
0205	00	0205	461		DC XL1'0'
0206	0000	0207	462		DC XL2'0'
		0208	463	LBASE EQU	*
0208	00	0208	464	SBYTE0 DC	XL1'0'
0209	00	0209	465	SBYTE1 DC	XL1'0'
020A	00	020A	466	SBYTE2 DC	XL1'0'
020B	00	020B	467	SBYTE3 DC	XL1'0'
020C	00	020C	468	SBYTE4 DC	XL1'0'
020D	00	020D	469	SBYTE5 DC	XL1'0'
020E	00000000	0211	470	PPFX DC	XL4'0'
			471		
			472	*	
			473	**	ASSEMBLED TRANSFER TABLE
			474	*	
0212	35 10 0537		475	TEST L	TR1,IAP
0216	35 10 09FD		476	LINK L	TR2,IAP
021A	35 10 02C4		477	PRINT L	TR3,IAP
021E	35 10 0680		478	UNPACK L	TR4,IAP
0222	35 10 09FF		479	HALT L	TR5,IAP
0226	35 10 0231		480	PACK L	TR6,IAP
022A	35 10 055C		481	LOAD L	TR7,IAP
022E	05B5	022F	482	MSG0 DC	AL2(LMSG)
0230	03AB	0231	483	TR6 DC	AL2(RPACK)
			484	*	
			485	**	UNIT DEFINITION TABLE
			486	*	
		0232	487	UTAB EQU	*
0232	0000000000000000	0261	488		DC XL48'1000'
023A	0000000000000000		488		
0242	0000000000000000		488		
024A	0000000000000000		488		
0252	0000000000000000		488		
025A	0000000000001000		488		



FFP5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
				490		*****	*****
				491	*	LOAD	***** LOAD *
				492		*****	*****
				493	*		*
				494	*	SUBROUTINE TO LOAD PROGRAMS OR DATA RECORDS FROM THE LOADING	*
				495	*	DEVICE. ENTRY TO THIS SUBROUTINE IS MADE AS FOLLOWS--	*
				496	*		*
				497	*	B LOAD WHERE LOAD IS EQUATED TO X'22A'	*
				498	*	*DC XL1'FLAGS'	*
				499	*	**DC XL2'DXXX'	XXX - PROGRAM ID
				500	*		*
				501	*	FLAG BIT ON	*
				502	*	NONE - NORMAL TERMINATION	*
				503	*	0 - HE HALT, LOAD XXX, HA HALT AND GIVE XXX	*
				504	*	CONTROL	*
				505	*	1 - ABNORMAL TERMINATION	*
				506	*	2 - READ FIRST RECORD OF XXX INTO X'890' AND	*
				507	*	RETURN CONTROL	*
				508	*	3 - READ NEXT SEQUENTIAL RECORD INTO X'880'	*
				509	*	AND RETURN CONTROL	*
				510	*	4 - LOAD XXX AND GIVE XXX CONTROL	*
				511	*	5 - LOAD XXX AND RETURN CONTROL	*
				512	*	6 - SEEK TO VTOC AND RETURN CONTROL	*
				513	*	**NOTE FLAG BYTE, NOT MORE THAN ONE BIT CAN BE SET ON	*
				514	*	A CALL TO THE LOAD ROUTINE IN DCP	*
				515	*	**NOTE PROGRAM ID IS ONLY INCLUDED IF BIT 0,2,4, OR 5	*
				516	*	IS ON	*
				517	*		*
				518		*****	*****
				0208	519	USING	LBASE, XR2
				00FD	520	F0	EQU X'FD'
				00FA	521	F1	EQU X'FA'
				00F1	522	F4	EQU X'F1'
0262	34	02	0291	523	RLOAD	ST	LODEM+7, XR2 SAVE XR2
0266	C2	02	0208	524		LA	LBASE, XR2
026A	B4	08	8D	525		ST	RLDA+3(, XR2), ARR SET UP RETURN ADDRESS
026D	B4	01	85	526		ST	LODEM+3(, XR2), XR1 SAVE XR1
0270	E0	87	0A	527		B	TEST(, XR2)
0273	B5	01	8D	528		L	RLDA+3(, XR2), XP1 POINT AT FLAGS
0276	8E	01	8D 0390	529		ALC	RLDA+3(2, XR2), ONE ADJUST RETURN @
				0277	530	LONE	EQU *-4
027B	1C	02	01FF 02	531		MVC	DTABLE+1(3), 2(, XR1) MOVE FLAG, DXXX
0280	78	10	00	532		TBN	0(, XR1), BIT3 TEST FLAG BYTE
0283	F2	90	10	533		JF	LD1
02P6	C0	87	0000	534		B	*-*
				0289	535	ENTRY1	EQU *-1
028A	C2	01	0000	536	LODEM	LA	*-*, XR1 RESTORE REGISTERS
028E	C2	02	0000	537		LA	*-*, XR2
0292	C0	87	0000	538	RLDA	B	*-*
				0296	539	LD1	EQU *
0296	78	02	00	540		TBN	0(, XR1), BIT6
0299	F2	10	89	541		JT	LE2 SEEK TO VTOC
029C	8E	01	8D 0332	542	RLD1	ALC	RLDA+3(2, XR2), TWO ADJUST RETURN @
02A1	79	2C	00	543		TBF	0(, XR1), BIT2+BIT4+BIT5 FLAG BIT 2,4, OR 5 ON?
02A4	F2	90	7E	544		JF	LE2 YES
				545			
02A7	BA	80	BD	546		SBN	RLFLGS(, XR2), BIT0 SET ERROR BIT IF ABNORMAL
02AA	78	40	00	547		TBN	0(, XR1), BIT1 TERMINATION
02AD	F2	10	11	548		JT	PTMSG
02B0	BB	80	BD	549		SBF	RLFLGS(, XR2), BIT0 OTHERWISE, TURN IT OFF
02B3	B8	70	00	550		TBN	SBYTE0(, XR2), SSW01 LOOP ON ROUTINE IF SSW 01 IS ON
02B6	C0	10	053P	551		BT	LNK1A
02BA	B8	80	00	552		TBN	SBYTE0(, XR2), SSW00 LOOP ON SECTION IF SSW00 SET
02BD	C0	10	0000	553	PTZERO	BT	0
02C1	C0	87	05D8	554	PTMSG	B	RPRINT PRINT SECTION TERMINATE MSG
				02C4	555	ITR3	EQU *-1
02C5	C7			556	RLFLGS	DC	XL1'C7'
02C6	12			557		DC	IL1'18'

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
	02C7	05A7	02C8	558	DC	AL2(TMSG)
	02C9	FF00	02CA	559	DC	XL2'FF00'
	02CB	B8 01 00		560	TBN	SBYTE0(,XR2),SSW07 BYPASS HALT IF SSW07 ON
	02CE	F2 10 06		561	JT	PLD2
	02D1	F0 3B 7C		562	HPL	HE,HH HALT TO INDICATE SECTION COMPLETED
	02D4	E0 77 0A		563	B	TEST(,XR2) GO CHECK DATA SWITCHES
	02D7	B8 40 01		564	RLD2 TBN	SBYTE1(,XR2),SSW09 IF SSW09 IS ON,
	02DA	F2 10 04		565	JT	LE1 THEN DON'T CLR SECT. SWITCHES
	02DD	AF 03 05 05		566	SLC	SBYTE5(4,XR2),SBYTE5(,XR2) CLEAR SECTION SSW
			02DE	567	THREE EQU	*-3
	02E1	78 80 00		568	LE1 TBN	0(,XR1),BIT0 FLAG BIT 0 ON
	02E4	F2 10 3E		569	JT	LE2 IF ON
	02E7	C2 02 0208		570	XREF1 LA	LBASE,XR2
	02EB	C2 01 01FD		571	LX1 LA	DTABLE-1,XR1
			02EE	572	PTR EQU	*-1
	02EF	78 01 00		573	TBN	0(,XR1),BIT7 FOR CARD SYS (J LE2)
	02F2	F2 90 0D		574	LX2 JF	CHKP4
	02F5	6E 00 02 6F		575	ALC	2(1,XR1),LONP(,XR2)
	02F9	78 0F 02		576	TRN	2(,XR1),X'OF'
	02FC	F2 90 16		577	JF	MOVID
	02FF	7B 0F 02		578	SBF	2(,XR1),X'OF'
	0302	BD F1 E6		579	CHKP4 CLI	PTR(,XR2),P4
	0305	F2 01 09		580	JNE	STEP
	0308	F0 3B 6C		581	HLTC1 HPL	HC,HH
	030B	E0 87 0A		582	B	TEST(,XR2)
	030E	BC FD E6		583	MVI	PTR(,XR2),P0
	0311	AF 00 E6 D6		584	STEP SLC	PTR(1,XR2),THREE(,XR2)
	0315	B5 01 E6		585	MOVID L	PTR(,XR2),X 1
	0318	6D 01 02 B8		586	CLC	2(2,XR1),PTZERO+3(,XR2)
	031C	C0 81 0308		587	BE	HLTC1
	0320	1C 02 01FF 02		588	MVC	DTABLE+1(3),2(,XR1)
	0325	C0 87 0000		589	LE2 B	*-*
			0328	590	ENTRY2 EQU	*-1
	0329	C0 87 028A		591	B	LODEM

FFFF DIAGNOSTIC CONTROL PROGRAM

ERR LOC OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
	0000	593	MZZ	EQU 00
	0001	594	MZN	EQU 01
	0002	595	MNZ	EQU 02
	0003	596	MNN	EQU 03
032D 00	032D	597	CTR	DC XL1'0'
032E FFFF	032F	598	NEG1	DC XL2'FFFF'
0330 00	0330	599	DC	DC XL1'00'
0331 0002	0332	600	TWO	DC IL2'2'
		601	*	
0333 34 08 0359		602	CMPK	ST CMPKX@,ARR
0337 C0 87 0397		603	B	SAVREG
033B 35 02 03FE		604	L	ARRSAV, XR2
033F C2 01 032D		605	LA	CTR, XR1
	032D	606	USING	CTR, XR1
0343 5E 01 C1 B2		607	ALC	ARRSAV(2, XR1), FIVE(, XR1)
0347 6C 00 00 00		608	MVC	CTR(1, XR1), 00(, XR2)
034B 6C 01 4C 04		609	MVC	DEST1(2, XR1), 4(, XR2)
034F 6C 01 9A 04		610	MVC	DEST2(2, XR1), 4(, XR2)
0353 B5 02 02		611	L	2(, XR2), XR2
0356 C0 87 0000		612	B	*-*
	0359	613	CMPKX@	EQU *-1
	0359	614	TEMP	EQU *-1
		615	*	
		616	*****	*****
		617	* UNPACK *****	***** UNPACK *
		618	*****	*****
		619	*	*
		620	*	SUBROUTINE TO CONVERT PACKED HEXADFCIMAL DATA TO PRINTABLE
		621	*	EBCDIC. TWO PRINT CHARACTERS, 0-F, RESULT FROM EACH SOURCE BYTE.
		622	*	LINKAGE TO THIS SUBROUTINE IS AS FOLLOWS--
		623	*	*
		624	*	B UNPACK WHERE UNPACK IS EQUATED TO X'21E'
		625	*	DC XL1'LENGTH OF HEX FIELD IN BYTES'
		626	*	DC AL2(FROM ADDRESS -RIGHTMOST BYTE-)
		627	*	DC AL2(TO ADDRESS -RIGHTMOST BYTE-)
		628	*	*
		629	*****	*****
035A 34 08 03FE		630	PUNPK	ST ARPSAV, ARR
035E C0 87 0333		631	B	CMPK
0362 7C 03 39		632	UNPK1	MVI MVX1(, XR1), MNN
0365 63 00 4A 00		633	UNPK2	MVX TEMP1(0, XR1), 0(, XR2)
	0366	634	MVX1	EQU *-3
0369 7A F0 4A		635	SBN	TEMP1(, XR1), X'F0'
036C 7D FA 4A		636	CLI	TEMP1(, XR1), X'FA'
036F F2 82 04		637	JL	UNPK3
0372 5F 00 4A 53		638	SLC	TEMP1(1, XR1), X39(, XR1)
0376 3C 00 0000		639	UNPK3	MVI *-*, 0
	0377	640	TEMP1	EQU *-3
	0379	641	DEST1	EQU *-1
037A 5E 01 4C 02		642	EQU	DEST1(2, XR1), NEG1(, XR1)
037E 7D 02 39		643	CLI	MVX1(, XR1), MNZ
	0380	644	X39	EQU *-1
0381 F2 81 06		645	JE	UNPK4
0384 7C 02 39		646	MVI	MVX1(, XR1), MNZ
0387 D0 87 38		647	B	UNPK2(, XR1)
038A 76 02 02		648	UNPK4	A NEG1(, XR1), XR2
038D 5E 00 00 01		649	ALC	CTR(1, XR1), NEG1-1(, XR1)
	0390	650	ONE	EQU *-1
0391 D0 01 35		651	BNZ	UNPK1(, XR1)
0394 D0 87 B6		652	B	LDREG(, XR1)
		653	*	
0397 34 08 03AA		654	SAVREG	ST SR1+3, ARR
039B 34 01 03F6		655	ST	LDREG+3, XR1
039F 34 02 03EA		656	ST	SR2+3, XR2
03A3 C0 87 042A		657	B	RTEST
03A7 C0 87 00C0		658	SR1	B *-*
		659		

SPARE BYTE NOT USED, MUST BE LOCATED HERE TO GENERATE THE CONSTANT FIVE

SAVE REGISTERS  
PICK UP RETURN @  
LOAD BASE @

AJUST RETURN @  
MOVE LENGTH BYTE  
MOVE TO @  
MOVE TO @  
PICK UP FROM @

WHERE UNPACK IS EQUATED TO X'21E'  
XL1'LENGTH OF HEX FIELD IN BYTES'  
AL2(FROM ADDRESS -RIGHTMOST BYTE-)  
AL2(TO ADDRESS -RIGHTMOST BYTE-)

DO NUMERIC  
SET FOR 0-9  
CHECK FOR A-F  
SUBSTRACT X'39' IF A-F

DECREMENT TO ADDRESS  
CHECK FOR ZONE DONE

DO ZONE  
DECREMENT FROM @  
DECREMENT LENGTH & CHECK FOR 0

NO  
YES

SAVE RETURN @  
SAVE XR1  
XR2  
CHECK DATA SWITCHES

FFP5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
				660	*****		*****
				661	* PACK	*****	***** PACK *
				662	*****		*****
				663	*		*
				664	*	SUBROUTINE TO CONVERT EBCDIC DIGITS 0-F TO PACKED HEXADECIMAL	*
				665	*	DATA. LINKAGE TO THIS SUBROUTINE IS AS FOLLOWS--	*
				666	*		*
				667	*	B PACK	*
				668	*	DC XL1'LENGTH'	*
				669	*	DC AL2(FROM ADDRESS -RIGHTMOST BYTE-)	*
				670	*	DC AL2(TO ADDRESS -RIGHTMOST BYTE-)	*
				671	*****		*****
03AB	34	08	03EE	672	RPACK	ST	ARRSAV,ARR
03AF	C0	87	0333	673		B	CMPL
03B3	7C	03	98	674	PK1	MVI	MOVX2(,XR1),MNN DO NUMERIC
03B6	6C	00	2C 00	675	PK2	MVC	TEMP(,XR1),0(1,XR2) PACK BYTE INTO HIGH HALF BYTE
03BA	7D	F0	2C	676		CLI	TEMP(,XR1),X'F0' CHECK FOR 0-9
03BD	F2	02	04	677		JNL	PK3 JUMP IF 0-9
03C0	5E	00	2C DA	678		ALC	TEMP(1,XR1),NINE(,XR1) AJUST FOR A-F
03C4	18	00	0000 2C	679	PK3	MOVX	** (0),TEMP(,XR1) MOVE HALF BYTE TO 2
				03C5	680	MOVX2	EQU *-4
				03C7	681	DELT2	EQU *-2
03C9	76	02	02	682		A	NEG1(,XR1),XR2 DECREMENT FROM 2
03CC	7D	01	98	683		CLI	MOVX2(,XR1),MZN CHECK FOR ZONE DONE
03CF	F2	81	06	684		JE	PK4 JUMP IF DONE
03D2	7C	01	98	685		MVI	MOVX2(,XR1),MZN DO ZONE
03D5	D0	87	89	686		B	PK2(,XR1)
03D8	5E	01	9A 02	687	PK4	ALC	DELT2(2,XR1),NEG1(,XR1) DECPGMENT TO 2
03DC	5F	00	00 05	688		SLC	CTR(1,XR1),TWO(,XR1) CHECK FOR END
				03DF	689	FIVE	EQU *-1
03E0	D0	84	86	690		BP	PK1(,XR1) IF NOT DO NEXT BYTE
03E3	C2	01	0000	691	LDREG	LA	** ,XR1 RESTORE XR1
03E7	C2	02	0000	692	SR2	LA	** ,XR2
03EB	C0	87	0000	693		B	**
				03EE	694	ARRSAV	EQU *-1 RETURN TO SECTION

FFF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
			696	*****	*****
			697	* TEST	***** TEST *
			698	*****	*****
			699	*	*
			700	*	SUBROUTINE USED TO READ CONSOLE SWITCHES AND TEST FOR VALIDITY
			701	*	POSITIONS. ONCE ONE OF THE FOLLOWING VALIDITY CONDITIONS IS
			702	*	ENCOUNTERED, ENTRIES ARE ACCEPTED UNTIL THE VALIDITY SWITCH IS
			703	*	CHANGED.
			704	*	*
			705	*	FOXX - TURN OFF SSW YX.
			706	*	F1XX - TURN ON SSW XX.
			707	*	F2XX - GO TO ROUTINE YX.
			708	*	EEXX - TERMINATE SECTION.
			709	*	DXX0 EXECUTE ALL PROGRAMS FOR DEVICE XX -DISK-.
			710	*	DXXX - EXECUTE SECTION XXX
			711	*	*
			712	*****	*****
		03EF	713	TRASE	EQU *
		03EF	714	SET0	DC XL1'80'
		03F0	402010080402	03F5	715 DC XL6'402010080402'
		03F6	01	03F6	716 DC XL1'01'
		03F7	0000	03F8	717 DATSW DC XL2'0' READIN AREA FOR DATA SWITCHES
			03EF	718	USING SET0, XR1
			03FA	719	TONE EQU **1
			03F8	720	XREP5 EQU DATSW
			03F9	721	XREP4 EQU *
			03F9	722	SETSSW ST VXR1+3, XR1
			03FD	723	C2 01 03FF LA SET0, XR1
			0401	724	74 08 3A ST SETSX0(, XR1), ARR
			0404	725	58 03 1F 09 MNN CHKSS1+3(, XR1), DATSW(, XR1) FORM CORRECT BIT PATTERN
			0408	726	7B F8 1F 0407 NINF EQU *-1
			0408	727	7B F8 1F SBF CHKSS1+3(, XR1), X'F8' TO SET A BIT ON IN
			0408	728	5C 00 2D 00 CHKSS2+1(1, XR1), *-*(, XR1) SBYTE0 THRU SBYTES
			040F	729	5E 01 09 09 ALC DATSW(, XR1), DATSW(, XR1)
			0413	730	58 02 2E 09 MNZ CHKSS2+2(, XR1), DATSW(, XR1)
			0417	731	C2 01 0208 LA SBYTE0, XR1
			041B	732	7A 00 00 041B MODIFY EQU *
			041E	733	3B 01 041B CHKSS2 SRN *-*(, XR1), *-*
			0422	734	C2 01 0000 0422 SBF MODIFY, X'01'
			0426	735	C0 87 0000 0426 VXR1 LA *-*, XR1
				736	B *-*
			0429	737	SETSXB EQU *-1
			0001	738	DMOP XR1
			03F7	739	USING DATSW-1, XR2
			042A	740	34 02 044E 042A PTEST ST TEXIT1+3, XR2 SAVE INDEX REGS AND SET UP BASE
			042E	741	C2 02 03F7 042E LA DATSW-1, XR2
			0432	742	B4 01 53 0432 ST TEXIT+3(, XR2), XR1
			0435	743	B4 08 5B 0435 ST TESTE+3(, XR2), ARR LOAD RETURN BRANCH
			0438	744	F2 87 0C 0438 TSTOVL J TEXIT (SNS DATSW(, XR2), 0) READ SWITCH
			043F	745	BD ED 00 043F CLI DATSW-1(, XR2), X'ED'
			043E	746	F2 84 13 043E JH TEST1
			0441	747	B8 D0 00 0441 TBN DATSW -1(, XR2), X'D0'
			0444	748	F2 10 0D 0444 JT TEST: FOR CARD SYS ( JT 0 )
			0446	749	TSTDSK EQU *-1
			0447	750	C2 01 0000 0447 TEXIT LA *-*, XR1 RESTORE INDEX REGS AND EXIT
			0448	751	C2 02 0000 0448 TEXIT1 LA *-*, XR2 SUBROUTINE
			044F	752	C0 87 0000 044F TESTE B *-*
			0453	753	40 0453 DC XL1'40' ABNORMAL TERMINATION
			0454	754	BC 00 86 0454 TEST1 MVI DJMP(, XR2), C
			0457	755	BC 3C 77 0457 HLTA MVI THLT+2(, XR2), HP HALT TO NOTE VALID SW ENTRY
			045A	756	F2 87 0F 045A J THLT AND FORCE 1ST ONE TO HP
			045D	757	BD 3E 77 045D TEST2 CLI THLT+2(, XR2), HP FORCE ALTERNATING HALT CODES OF
			0460	758	F2 81 06 0460 JE TEST3 -HP- AND -HU-
			0463	759	BC 3E 77 0463 HLTB MVI THLT+2(, XR2), HP
			0466	760	F2 87 03 0466 J THLT
			0468	761	T3 EQU *-1
			0469	762	BC 6B 77 0469 TEST3 MVI THLT+2(, XR2), HU
			046C	763	F0 3B 00 046C THLT HPL *-*, HH HALT -HP- OR -HU- FOR SWITCH ENTRY

FFF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
046F	B0	00	01	764		SNS	DATSW (,XR2),X'0'
				765		EQU	**2
0472	B8	D0	00	766	TSTCRD	TBN	DATSW-1(,XR2),X'D0'
0475	B9	20	00	767		TBF	DATSW-1(,XR2),X'20'
0478	F2	90	39	768		JF	TEST7
047B	F2	87	00	769		J	0
				047D	770	DJMP	EQU *-1
047E	C2	01	01FA	771		LA	FLAG-3,XR1
0482	3C	FD	02FE	772		MVI	PTR,P0
0486	5F	0B	02 02	773		SLC	02(12,XR1),02(,XR1)
048A	B4	01	9C	774		ST	DADDR(,XR2),XP1
048D	BC	12	86	775		MVI	DJMP(,XR2),TEST5A-DJMP-1
0490	C2	01	0000	776	TEST5A	LA	*-*,XR1
				0493	777	DADDR	EQU *-1
0494	BD	EE	9C	778		CLI	DADDR(,XR2),F4-3
0497	F2	01	06	779		JNE	TEST6
049A	F0	3B	76	780	HLTC	HPL	H2,HH
049D	E0	87	5D	781		B	TEST1(,XR2)
04A0	6C	02	J2 01	782	TEST6	MVC	2(3,XP1),DATSW(,XR2)
04A4	79	0F	J2	783		TBF	2(,XR1),X'0F'
04A7	F2	10	03	784		JT	TEST6A
04AA	7B	01	00	785		SBF	0(,XR1),X'01'
				04AD	786	TEST6A	EQU *
04AD	AF	00	9C 71	787		SLC	DADDR(1,XR2),T3(,XR2)
04B1	E0	87	66	788		B	TEST2(,XR2)
04B4	BD	EE	00	789	TEST7	CLI	DATSW-1(,XR2),X'EE'
04B7	F2	01	C8	790		INE	TEST7A
04BA	8C	01	5B 055C	791		MVC	TESTE+3(2,XP2),ITR7
04BF	E0	87	66	792		B	TEST2(,XR2)
				04C2	793	TEST7A	EQU *
04C2	BD	F1	00	794		CLI	DATSW-1(,XP2),X'F1'
04C5	F2	81	09	795		JE	TEST8
04C8	BD	F0	00	796		CLI	DATSW-1(,XR2),X'F0'
04CB	F2	01	15	797		JNE	TEST11
04CE	BA	01	24	798		SBN	MODIFY(,XP2),X'01'
04D1	BD	30	01	799	TEST8	CLI	DATSW(,XR2),X'30'
04D4	F2	82	06	800		JL	TEST9
04D7	F0	3B	76	801	HLTD	HPL	H2,HH
04DA	E0	87	66	802		B	TEST2(,XP2)
				04DD	803	TEST9	EQU *
04DD	E0	87	02	804		B	SETSSW(,XR2)
04E0	E0	87	66	805		B	TEST2(,XR2)
04E3	BD	F2	00	806	TEST11	CLI	DATSW-1(,XR2),X'F2'
04E6	E0	01	50	807		PNE	EXIT(,XP2)
04E9	35	01	0A07	808		L	RTN,XR1
04ED	1C	00	0A03 00	809		MVC	RNUM(1),0(,XR1)
04F2	1D	00	0A03 00	810	TEST12	CIC	RNUM(1),0(,XR1)
04F7	F2	81	06	811		JE	TEST14
04FA	F0	3B	57	812	TEST13	HPL	H2,HH
04FD	E0	87	66	813		B	TEST2(,XR2)
0500	9D	00	01 00	814	TEST14	CIC	DATSW(1,XR2),0(,XR1)
0504	F1	81	17	815		JE	TEST16
0507	7D	FF	02	816		CLI	2(,XR1),X'FF'
050A	F2	81	0B	817		JF	TEST15
050D	2F	00	0A03 03	818		ALC	RNUM(1),TONE(,XR2)
0512	75	01	03	819		L	3(,XR1),XR1
0515	E0	87	FB	820		B	TEST12(,XR2)
0518	F0	3B	76	821	TEST15	HPL	H2,HH
051B	E0	87	66	822		B	TEST2(,XR2)
051E	1C	03	0211 03	823	TEST16	MVC	RPF(4),3(,XR1)
0522	D2	01	04	824		LA	4(,XR1),XP1
0526	B4	01	5B	825		ST	TESTE+3(,XR2),XR1
0529	34	01	0595	826		ST	LNK6+3,XR1
052D	E0	87	66	827		B	TEST2(,XR2)
				0002	828	DROP	XR2

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
				830	*****		*****
				831	* LINK	*****	***** LINK *
				832	*****		*****
				833	*		*
				834	*	SUBROUTINE TO PROVIDE ROUTINE TO ROUTINE AND SECTION TO SECTION	*
				835	*	LINKAGE. THE CONTROL PROGRAM USES THE ROUTINE PREFIX AS AN	*
				836	*	INTERFACE BETWEEN DIAGNOSTIC SECTION AND CONTROL PROGRAM.	*
				837	*		*
				838	*****	*****	*****
				839			
0530	34	01	0541	840	RLINK ST	LNK5+3, XR1	SAVE XR1
				841			
0534	C0	87	042A	842	LNK1 B	RTEST	GO CHECK DATA SWITCHES
				0537	843	ITR1 EQU	*-1
0538	38	40	0208	844	TBN	SBYTE0,SSW01	PROVIDE LOOP ON ROUTINE IF SSW01 ON
053C	F2	90	0B	845	JF	LNK2	
053F	3D	01	0AC3	846	LNK1A	CLI RNUM,X'01'	IF FIRST RTN BEING RUN, GO TO
0543	C0	81	030C	847	BE	0	PROGRAM RESTART
0547	F2	87	44	848	J	LNK5	
				849			
054A	3D	FF	0210	850	LNK2	CLI RPPX-1,X'FF'	IS THIS LAST ROUTINE
054E	F2	01	0D	851	JNE	LNK3	NO, GO ON TO CHECK FURTHER
				852			
0551	38	80	0208	853	TBN	SBYTE0,SSW00	TEST FOR LOOP ON SECTION
0555	C0	10	0000	854	BT	0	YES, GO RESTART PROGRAM
0559	C0	87	0262	855	B	RLOAD	NO, GO LOAD NEXT SECTION
				055C	856	ITR7 EQU	*-1
055D	00			055D	857	DC	XL1'0'
				858			
055E	35	01	0211	859	LNK3	L RPPX,XP1	SET UP TO GO TO NEXT ROUTINE
0562	0E	00	0A03 0390	860	ALC	RNUM(1),ONE	INCREMENT ROUTINE NUMBER AND
0568	1D	00	0A03 00	861	CLC	RNUM(1),0(,XR1)	CHECK AGAINST RTN PREFIX
056D	F2	81	07	862	JE	LNK4	
0570	F0	3B	57	863	HLTE	H3,HH	*RTN NUM IN RTN PREFIX OUT OF ORDER
0573	C0	87	0534	864	B	LNK1	GO CHECK FOR DATA SWITCH VERIFICA-
				865	*		TION
				866			
0577	1C	03	0211 03	867	LNK4	MVC RPPX(4),3(,XP1)	SET UP CURRENT ROUTINE PREFIX
057C	38	20	0208	868	TBN	SBYTE0,SSW02	CHECK FOR BYPASS MANUAL INTERV RTNS
0580	78	80	01	869	TBN	1(,XR1),BIT0	CHK RTN PREFIX MANUAL INTERV FLAG
0583	C0	10	054A	870	BT	LNK2	SKIP ROUTINE IF BOTH CONDITIONS TRUE
				871			
0587	D2	01	04	872	LA	4(,XR1),XR1	
058A	34	01	0595	873	ST	LNK6+3, XR1	LOAD ROUTINE STARTING ADDR
058E	C2	01	0000	874	LNK5	LA *-*,XR1	RESTORE INDEX REGS
0592	C0	87	0000	875	LNK6	B *-*	EXIT SUBROUTINE
				876			

FFF5 DIAGNOSTIC CONTROL PROGRAM

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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878 *****
879 * PRINT ***** PRINT *
880 *****
881 * LINKAGE TO PRINT IS AS FOLLOWS-- *
882 * *
883 * R PRINT WHERE PRINT IS EQUATED TO 1304 *
884 * DC XL1'FLAGS' *
885 * 1*DC IL1'LENGTH -MAXIMUM OF 91-' *
886 * 1*DC AL2(ADDRESS OF LAST CHARACTER OF PRINT FIELD) *
887 * 2,1*DC XL2'MESSAGE IDENTIFICATION' *
888 * FLAGS *
889 * BIT 0 - DEFINES THIS AS AN ERROR PRINTOUT *
890 * 1 - FIRST LINE OF MESSAGE -HEADING PRINTED- *
891 * 2 - PRINT FROM DCP PRINT AREA. *
892 * 3 - SPACE ONLY *
893 * 4 - RESERVED *
894 * 5 - BITS 5-7 MUST CONTAIN THE NUMBER OF *
895 * 6 - SPACES DESIRED. FOR A PRINT, -001- *
896 * 7 - MUST BE ENTERED TO PRINT AND SPACE TO *
897 * THE NEXT LINE. -000- MAY BE ENTERED *
898 * TO PROVIDE FOR MULTIPLE OPERATIONS ON *
899 * THE SAME LINE. *
900 * *
901 * 1*NOTE - THESE PARAMETERS MUST BE ABSENT FOR SPACE *
902 * ONLY OPERATIONS. *
903 * *
904 * 2*NOTE - THE MESSAGE IDENTIFICATION IS INCLUDED *
905 * ONLY FOR A FIRST LINE PRINTOUT. THE FOUR *
906 * DIGIT IDENTIFICATION REFERS TO A TABLE OF *
907 * ERROR DESCRIPTIONS OR PRINTOUT DEFINITION. *
908 * *
909 * OPTIONS-- SSW03 - BYPASS ERROR PRINT. *
910 * SSW04 - BYPASS NON-ERROR PRINT. *
911 * SSW05 - USE ALTERNATE PRINTER *
912 * *
913 *****
05B7 914 USING PR3,XR2
0596 E2C5C3E3C9D6D540 05A7 915 TMSG DC CL18'SECTION TERMINATED'
059E E3C5D9D4C9D5C1E3 915
05A6 C5C4 915
05A8 E2C5C3E3C9D6D540 05B5 916 LMSG DC CL14'SECTION LOADED'
05B0 D3D6C1C4C5C4 916
05B6 0880 05B7 917 PR3 DC AL2(PLINE)
05B8 918 HDG1 EQU *
05B8 40C9C440E7E7E7E7 05D3 919 HDG DC CL28' ID XXXX. PROG UXXX-RR. SSW5'
05C0 4B40D7D9D6C740E4 919
05C8 E4E7E760D9D94846 919
05D0 E2E2E6E2 919
05D2 920 SSW EQU *-2
05D4 00 05D4 921 NSPACE DC XL1'0' SPACE COUNTER
05D5 0000 05D6 922 SNUM DC XL2'0'
05D7 00 05D7 923 PTAGS DC XL1'0'
05D8 34 02 070F 924 RPRINT ST PRTE2+3,XR2 SAVE INDEX REGS AND SET UP BASE
05DC C2 02 05B7 925 LA PR3,XR2
05E0 34 01 070B 926 RPONE ST PRTE1+3,XR1
05E4 34 08 0713 927 ST PRINTE+3,ARR LOAD RETURN ADDRESS
05E8 35 01 0713 928 L PRINTE+3,XR1 POINT AT PARAMETER LIST WITH XR1
05EC 3C 40 0900 929 MVI LPDATA+132,C' SET BLANK CHAR
05F0 9C 00 20 00 930 MVC PTAGS(1,XR2),0(,XR1)
05F4 BC 40 01 931 MVI HDG1(,XR2),C' PUT NON-ERR PRINT INDICATION IN HDNG
05F7 78 80 00 932 TBN 0(,XR1),BIT0 BRANCH IF THIS IS NON-ERROR PRINT
05FA F2 90 0A 933 JF PRT2
05FD BC 5C 01 934 MVI HDG1(,XR2),C'* PUT ERROR * IN PRINT LINE
0600 39 10 C208 935 TBF SBYTE0,SSW03
0604 F2 87 04 936 J PRT2A
0607 39 08 0208 937 PRT2 TBF SBYTE0,SSW04 EXIT IF SENSE SW TO BYPASS THIS TYPE
060B F2 90 07 938 PRT2A JF PREXIT PRINTOUT IS ON
060E 9C 00 1D 00 939 MVC NSPACE(1,XR2),0(,XR1) LOAD SPACE COUNTER

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FPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
0612	BB	F8	1D		940	SRF	NSPACE(,XR2),X'F8' LIMIT TO SEVEN
0615	3C	60	06C9		941	MVI	PRT6+1,96 SET UP COUNT FOR CONSOLE I/O
					942		
0619	78	10	00		943	TBN	0(,XR1),BIT3 BRANCH IF THIS IS SPACE ONLY OP
061C	F2	10	B5		944	JT	PRT7
061F	78	20	00		945	TBN	0(,XR1),BIT2 SKIP SETUP IF DATA FIELD READY
0622	F2	10	A9		946	JT	PRT6A
0625	C0	87	0714		947	B	PRTN DUMMY COMMAND TO MAKE SURE NO BUSY
0629	E000			062A	948	DUMCOM	DC XL2'E000'
062B	0C	83	08FF 0900		949	MVC	LPDATA+131(132),LPDATA+132 BLANK PRINT BUF
0631	78	40	00		950	TBN	0(,XR1),BIT1 SKIP HDG PRINT IF NOT CALLED FOR
0634	F2	90	74		951	JF	PRT5
0637	D2	01	05		952	LA	5(,XR1),XR1 SET UP TO UNPACK MESSAGE IDENTIFIER
063A	B4	01	8C		953	ST	IDADDR(,XR2),XR1
063D	C0	87	021E		954	B	UNPACK UNPACK IT FOR PRINTING
0641	02			0641	955	DC	IL1'2'
0642	0000			0643	956	IDADDR	DC XL2'0'
0644	05BF			0645	957	DC	AL2(HDG1+7)
0646	C0	87	021E		958	B	UNPACK PUT PROG IDENT IN PRINTOUT
064A	02			064A	959	DC	IL1'2'
064B	0A01			064C	960	DC	AL2(PROGID)
064D	05CA			064E	961	DC	AL2(HDG1+18)
064F	C0	87	021E		962	B	UNPACK PUT ROUTINE NUM IN HEADING LINE
0653	01			0653	963	DC	IL1'3'
0654	0A03			0655	964	DC	AL2(RNUM)
0656	05CD			0657	965	DC	AL2(HDG1+21)
065E	C0	87	0714		966	B	PRTN SPACE BEFORE PRINTING HEADING
065C	E001			065D	967	SPBPHG	DC XL2'E001'
065E	2C	1B	089E 1C		968	MVC	PLINE+27(28),HDG(,XR2) MOVE HEADER LINE TO PRINT FIELD
					969		
					970	**	SET UP SENSE SWITCH PRINTOUT
0663	C2	01	089C		971	LA	PLINE+28,XR1 SET UP PRINT FIELD POINTER
0667	BC	00	1F		972	MVI	SNUM(,XR2),0 SET SWITCH # TO 0
066A	0E	05	020D 020D		973	CHKSWS	ALC SBYTE5(6),SBYTE5 ADD SENSE BYTES
0670	F2	20	16		974	JNOL	NEXTSS TEST FOR NO OVERFLOW
0673	3A	01	020D		975	SBN	SBYTE5,X'01'
0677	D2	01	03		976	LA	3(,XR1),XR1 SET UP PRINT FIELD @
067A	B4	01	CE		977	ST	SSDEST(,XR2),XR1
067D	C0	87	035A		978	B	RUNPK UNPACK SSW # INTO PRINT FIELD
				0680	979	ITR4	EQU *-1
0681	01			0681	980	XONE	DC IL1'1'
0682	05D6			0683	981	DC	AL2(SNUM)
0684	009A			0685	982	SSDEST	DC XL2'009A'
0686	7C	6B	01		983	MVI	1(,XR1),C' ' PLACE , INTO PRINT FIELD
0689	AE	00	1F CA		984	NEXTSS	ALC SNUM(1,XR2),XONE(,XR2) UP SWITCH #
068D	BD	30	1F		985	CLI	SNUM(,XR2),X'30' CHECK FOR LAST SSW
0690	E0	82	B3		986	BL	CHKSWS(,XR2) BRANCH IF LOW
0693	7C	40	01		987	MVI	1(,XR1),C' ' CLEAR THE LAST COMMA
0696	3C	7F	06C9		988	MVI	PRT6+1,X'7F' - PUT ACTUAL LENGTH OF LINE INTO
069A	2E	0C	06C9 CE		989	ALC	PRT6+1(1),SSDEST(,XR2) - PRT6+1 FOR THE KEYBOARD PRINTER
069F	C0	67	0714		990	B	PRTN GO PRINT THIS HEADING
06A3	E200			06A4	991	PRTHG	DC XL2'E200'
06A5	C0	87	0714		992	B	PRTN
06A9	E001			06AA	993	DC	XL2'E001'
					994		
06AB	1C	00	06C9 01		995	PRT5	MVC PRT6+1(1),1(,XR1) SET UP MOVE WHICH WILL LOAD THE
06B0	0F	00	06C9 0390		996	SLC	PRT6+1(1),ONE PRINTOUT POINTED TO BY PARAMETER
06B6	F2	92	1B		997	JL	PRT7 SKIP PRINTING IF COUNT IS ZERO
06B9	1C	01	06CD 03		998	MVC	PRT6+5(2),3(,XR1)
06BE	2C	01	06CB 00		999	MVC	PRT6+3(2),R3(,XR2)
06C3	1E	00	06CB 01		1000	ALC	PRT6+3(1),1(,XR1)
06C8	0C	00	0000 0000		1001	PRT6	MVC *-*(-*-),*-* SET UP PRINT LINE
06CE	C0	87	0714		1002	PRT6A	B PRTN PRINT THE LINE
06D2	E200			06D3	1003	DC	XL2'E200'
					1004		
06D4	AF	00	1D 2A		1005	PRT7	SLC NSPACE(1,XR2),RPONE+1(,XR2) SPACE PRINTER DESIRED
06D8	F2	82	0A		1006	JL	PREXIT NUMBER OF TIMES
06DB	C0	87	0714		1007	B	PRTN

FFF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
06DF	E001			06E0	1008	SPAPRT	DC XL2'E001'
06E1	C0 87 06D4				1009		B PRT7
					1010		
06E5	0C 84 08FF 0900				1011	PREXIT	MVC LPDATA+131(133),LPDATA+132 CLEAR PRINT BUF DOWN TO X'77B' FOR PTR SYSTEM TEST
					1012	*	
06FB	35 03 0713				1013	L	PRINTE+3,X'03' ADJUST EXIT ADDR TO MISS PARAMETER LIST
06FF	78 40 00				1014	TBN	0(,XR1),BIT1
06F2	F2 90 03				1015	JF	PRT8
06F5	E2 02 02				1016	LA	2(,XR2),XR2
06F8	79 30 00				1017	TBF	0(,XR1),X'30'
06FB	F2 90 03				1018	JF	PRT9
06FE	E2 02 03				1019	LA	3(,XR2),XR2
0701	E2 02 01				1020	PRT9	LA 1(,XR2),XR2
0704	34 02 0713				1021	ST	PRINTE+3,XR2
					1022		
0708	C2 01 0000				1023	PRT1	LA **-,XR1 RESTORE INDEX REGS AND EXIT
070C	C2 02 0000				1024	PRT2	LA **-,XR2
0710	C0 87 0000				1025	PRINTE	B **-
					1026		
					1027	**	
					1028	**	STANDARD INPUT/OUTPUT SUBROUTINE USED BY THE PRINT ROUTINE.
					1029	**	THIS SUBROUTINE SUPPORTS THE 5203 PRINTER AND THE 5424 MFCU.
					1030	**	THE LATTER IS UNDER CONTROL OF SENSE SWITCH 05. CODING FOR
					1031	**	ALTERNATE PRINTERS FOLLOWS THIS SUBROUTINE. THE LOADER SELECTS
					1032	**	THE PROPER SUBROUTINE.
					1033	**	
					1034		
				0714	1035		USING PRTN,XR2
0714	C2 02 0714				1036	PRTN	LA PRTN,XR2 SEE UP COMMAND AND LOAD BASE
0718	B4 08 72				1037	ST	PRTNE+3(,XR2),ARR
				071C	1038	ZONE	EQU **1
071B	B5 01 72				1039	L	PRTNE+3(,XR2),XR1
071E	9C 01 60 01				1040	MVC	PRCIO+2(2,XR2),1(,XR1)
0722	8E 01 72 0332				1041	ALC	PRTNE+3(2,XR2),TWO ADJUST RETURN ADDRESS
0727	C0 87 0212				1042	PRTN1	B TEST CHECK DATA SWITCHES
072B	38 80 05D7				1043	TBN	PTAGS,BIT0 GO EXIT IF SSW TO BYPASS THIS TYPE
072F	F2 90 07				1044	JF	PRTN2 OF PRINTOUT'S TURNED ON
0732	39 10 0208				1045	TBF	SBYTE0,SSW03
0736	F2 87 04				1046	J	PT90
0739	39 08 0208				1047	PRTN2	TBF SBYTE0,SSW04
073D	C0 90 06E5				1048	PT90	BF PREXIT
					1049		
0741	38 04 0208				1050	TBN	SBYTE0,SSW05 IF SSW05 ON, GO USE MFCU
0745	F2 10 45				1051	JT	SECDRY
0748	F2 87 0E				1052	J	PRIME
					1053		
074B	0000			074C	1054	MSTAT	DC XL2'0'
				00E6	1055	LPBUSY	EQU X'E6'
				00E0	1056	LPNRDY	EQU X'E0'
074D	0800			074E	1057	PR1	DC AL2(LPIMAG)
074F	087C			0750	1058	PR2	DC AL2(LPDATA)
0751	7070			0752	1059	PR4	DC XL2'7070'
					1060		
0753	F0 3B 7D				1061	LPERR2	HPL H6,HH *PRINTER NOT READY OR ERROR
0756	E0 87 13				1062	B	PRTN1(,XR2)
0759	E1 E0 3F				1063	PRIME	TIO LPERR2(,XR2),LPNRDY GO HALT IF 22LC NOT READY OR ERROR
075C	B1 E0 3E				1064	LIO	PR4(,XR2),X'E0' LOAD FORMS LENGTH
075F	B1 E4 3A				1065	LIO	PR1(,XR2),X'E4' LOAD PRINTER LSRS AND PRINT A
0762	B1 E6 3C				1066	LIO	PR2(,XR2),X'E6' LINE
0765	BB 08 5F				1067	SBF	PRCIO+1(,XR2),X'08' SET UP TO PRINT ON LEFT CARRIAGE
0768	38 80 0209				1068	TBN	SBYTE1,SSW08 IF SENSE SWITCH 08 IS ON
076C	F2 90 03				1069	JF	PRCIO CHANGE TO RIGHT CARRIAGE
076F	BA 08 5F				1070	SRN	PRCIO+1(,XR2),X'08'
0772	F3 00 00				1071	PRCIO	SIO **-,**-
0775	E1 E6 61				1072	RSYLP	TIO RSYLP(,XR2),LPBUSY WAIT FOR BUSY TO DROP
0778	E1 E0 3F				1073	TIO	LPERR2(,XR2),LPNRDY GO HALT IF ANY ERROR
077B	C2 02 05B7				1074	PRTTEXT	LA PR3,XR2 RESTORE XR2
077F	35 01 0713				1075	L	PRINTE+3,XR1 RESTORE PARAMETER POINTER

FPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
0783	C0	87	0000	1076	PRTNE	B	*--
				1077			EXIT SUBROUTINE
0787	F0	3B	5D	1078	MHLT2	HPL	H5,HH
078A	E0	87	13	1079		B	*MFCU NOT READY OR ERROR
078D	BD	E0	5F	1080	SECDRY	CLI	PRSTO+1(,XR2),X'F0'
0790	E0	81	67	1081		BE	PRTEXT(,XR2)
0793	B0	F3	38	1082		SNS	MSTAT(,XR2),X'F3'
0796	B8	10	37	1083		TBN	MSTAT-1(,XR2),X'10'
0799	F2	10	09	1084		JT	DOIT
079C	E1	F8	73	1085		TIO	MHLT2(,XR2),X'F8'
079F	F3	F8	00	1086		SIO	X'0',X'F8'
07A2	E1	F1	8E	1087	BSYLP0	TIO	BSYLP0(,XR2),X'F1'
07A5	E1	F8	73	1088	DOIT	TIO	MHLT2(,XR2),X'F8'
07A8	B1	F4	3A	1089		LIO	PR1(,XR2),X'F4'
07AB	F3	FC	A4	1090		SIO	X'A4',X'FC'
07AE	B0	F3	38	1091	BSYLP1	SNS	MSTAT(,XR2),X'F3'
07B1	E8	40	37	1092		TBN	MSTAT-1(,XR2),X'40'
07B4	E0	10	9A	1093		BT	BSYLP1(,XR2)
07B7	E1	F8	73	1094		TIO	MHLT2(,XR2),X'F8'
07BA	0C	83	08FF 0900	1095		MVC	LPDATA+131(132),LPDATA+132
07C0	E0	87	67	1096		B	PRTEXT(,XR2)
				0002	1097	DROP	2
				1098			
0800				1099		ORG	X'800'
				0800	1100	LPIMAG	EQU *
0800	F1F2F3F4F5F6			0805	1101	DC	XL6'F1F2F3F4F5F6'
0806	F7F8F9F0F1F2			080B	1102	DC	XL6'F7F8F9F0F1F2'
080C	61E2E3E4E5E6			0811	1103	DC	XL6'61E2E3E4E5E6'
0812	E7E8E9E0E1E2			0817	1104	DC	XL6'E7E8E9E0E1E2'
0818	D1D2D3D4D5D6			081D	1105	DC	XL6'D1D2D3D4D5D6'
081E	D7D8D9D0D1D2			0823	1106	DC	XL6'D7D8D9D0D1D2'
0824	C1C2C3C4C5C6			0829	1107	DC	XL6'C1C2C3C4C5C6'
082A	C7C8C9C4E4B7D			082F	1108	DC	XL6'C7C8C9C4E4B7D'
				1109			
				1110	**		
				1111	**		THE FOLLOWING INSTRUCTIONS COMPLETE THE SECTION LOADER BY
				1112	**		HANDLING END CARDS. IT IS IN AN AREA THAT IS READ INTO BY
				1113	**		THE DISK LOADER.
9000				1114		ORG	0
0900				0880	1115	X880	EQU *+X'880'
				1116		ORG	X'900'
				0880	1117		USING X880,XR1
0900	40			0900	1118		DC CL1'
0901	4C	01	D7 022P	1119	ENDRTN	MVC	LM0(2,XR1),LMSG0
0906	1C	14	0014 PC	1120		MVC	20(21),RESTR+2(,XR1)
090B	38	80	0A02	1121		TBN	SPFLGS,BIT0
090F	F2	10	3E	1122		JT	LDEND
0912	C2	02	0A0A	1123		LA	SPUDT,XR2
0916	C	01	0232	1124	UFIND1	LA	UTAB,XR1
091A	6D	00	00 00	1125	UFIND2	CLC	0(1,XR1),0(,XR2)
091E	F2	01	18	1126		JNE	UFIND4
0921	9C	00	02 02	1127		MVC	2(1,XR2),2(,XR1)
0925	98	03	01 01	1128		MNN	1(,XR2),1(,XR1)
0929	BA	20	01	1129		SBN	1(,XR2),BIT2
092C	B8	10	01	1130	UFIND3	TBN	1(,XR2),BIT3
092F	E2	02	03	1131		LA	3(,XR2),XR2
0932	C0	90	0916	1132		BF	UFIND1
0936	F2	87	17	1133		J	LDEND
0939	78	10	01	1134	UFIND4	TBN	1(,XR1),BIT3
093C	D2	01	03	1135		LA	3(,XR1),XR1
093F	C0	90	091A	1136		BF	UFIND2
0943	B9	40	01	1137		TBF	1(,XR2),BIT1
0946	F2	10	03	1138		JT	*+6
0949	F0	3B	03	1139		HPL	H1,HH
094C	C0	87	092C	1140		B	UFIND3
0950	C0	87	021A	1141	LDEND	B	PRINT
0954	47			0954	1142	DC	XL1'47'
0955	0E			0955	1143	DC	IL1'14'

FFFS DIAGNOSTIC CONTROL PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
0956	05B5	0957	1144	LMD DC	AL2(LMSG)
0958	FF00	0959	1145	DC	XL2'FF00'
			1146		
095A	39 01 0208		1147	TBF	SBYTE0,SSW07 BYPASS HALT AFTER LOADING SECTION
095E	39 0 01FD		1148	TBF	FLAG,BIT4
0962	F2 90 03		1149	JF	**06
0965	F0 3B 3F		1150	HPL	HA,HH HALT TO ALLOW DATA SWITCH ENTRY
			1151	**	
			1152	**	THE FOLLOWING FIVE INSTRUCTIONS ARE STORED AT LOCATION ZERO
			1153	**	(0000) AFTER LOADING OF EACH SECTION IS COMPLETED TO PROVIDE
			1154	**	A PROGRAM RESTART (SYSTEM RESET/START).
0968	35 03 0A07		1155	L	FRTN,X'03' SAVE FIRST ROUTINE PREFIX AND
096C	1C 00 0A03 0C		1156	MVC	RNUM(1),0(,XR1) LOAD CURRENT ROUTINE NUMBER
0971	1C 03 0211 03		1157	MVC	RPPX(4),3(,XP1)
0976	C0 87 0212		1158	B	TEST CHECK DATA SWITCHES
097A	D0 87 04		1159	PRESTRT B	4(,XP1) START FIRST ROUTINE
097D	000000	097F	1160	DC	XL3'0'
			1161	*	*****HALT MUST START AT X'980'*****
			1162	*****	*****
			1163	* HALT	***** HALT *
			1164	*****	*****
			1165	*	*
			1166	*	SUBROUTINE USED TO PROVIDE A COMMON HALT FUNCTION. ENTRY TO THIS *
			1167	*	ROUTINE IS ACCOMPLISHED BY BRANCHING-- *
			1168	*	*
			1169	B	HALT WHERE HALT IS EQUATED TO 1312 *
			1170	DC	XL2'0UXX' HEX ERROR IDENTIFIER *
			1171	*	*
			1172	*	NORMALLY, ONLY A HALT WITH CODE 'XX' WILL OCCUR. BUT WHEN THE *
			1173	*	SYSTEM TEST IS RUNNING, HALT 'UU' WILL PRECEDE HALT 'XX' TO *
			1174	*	IDENTIFY THE DEVICE IN ERROR. *
			1175	*	*
			1176	*	UU - UNIT IDENTIFICATION *
			1177	*	XX - INDEX NUMBER *
			1178	*	*
			1179	*	IF THE INDEX NUMBER IS 01-9F, THE HALT WILL OCCUR UNLESS SENSE *
			1180	*	SWITCH 06 IS ON. HALTS WITH INDICES A0-CF ARE PERFORMED ONLY *
			1181	*	WHEN NON-ERROR PRINTOUTS ARE BEING BYPASSED -SSW 04-. HALTS *
			1182	*	D0-FF ARE ALWAYS PERFORMED. *
			1183	*****	*****
		0980	1184		USING HLTTAB,XR2
		0980	1185	HLTTAB EQU	*
0980	6F0376571B5D	0985	1186	DC	XL6'6F0376571B5D' TABLE OF HALTS 0-F
0986	7D077F5F3F79	098B	1187	DC	XL6'7D077F5F3F79'
098C	6C737C3C	098F	1188	DC	XL4'6C737C3C'
			1189		
0990	34 08 03FE		1190	RHALT ST	ARRSAV,ARR SAVE RETURN ADDRESS
0994	C0 87 0397		1191	B	SAVREG GO SAVE REGISTERS
0998	C2 02 0980		1192	LA	HLTTAB,XR2 LOAD BASE
099C	35 01 03EE		1193	L	ARRSAV,XR1 POINT XR1 AT PARAMETER LIST
09A0	0E 01 03EE 0332		1194	ALC	ARRSAV(2),TWO ADJUST RETURN ADDRESS
09A6	7D A0 01		1195	CLI	1(,XR1),X'A0' BRANCH IF THIS IS ERROR HALT PAIR
09A9	F2 82 10		1196	JL	HALT2
09AC	7D CF 01		1197	CLI	1(,XR1),X'CF' DO HALT IF CODE 'D0'-'FF'
09AF	F2 84 11		1198	JH	HALT3
09B2	38 08 0208		1199	TBN	SBYTE0,SSW04 EXIT IF NOT BYPASSING NON-ERR PRINT
09B6	F2 90 3B		1200	JF	HEXIT
09B9	F2 87 07		1201	J	HALT3
09BC	38 02 0208		1202	HALT2 TBN	SBYTE0,SSW06 EXIT IF BYPASS ERROR HALT SET
09C0	F2 10 31		1203	JT	HEXIT
			1204		
09C3	98 02 61 00		1205	HALT3 MNZ	LHLT1+3(,XR2),0(,XR1) SET UP TO LOAD CODES FOR 1ST HALT
09C7	98 03 65 00		1206	MNN	LHLT1A+3(,XR2),0(,XR1)
09CB	98 02 6C 01		1207	MNZ	LHLT2+3(,XR2),1(,XR1) SET UP FOR SECOND HALT
09CF	98 03 70 01		1208	MNN	LHLT2A+3(,XR2),1(,XR1)
09D3	3D FF 0A00		1209	CLI	X'A00',X'FF' DO FIRST HALT ONLY IF RUNNING SYSTEM
09D7	39 D0 0A01		1210	TBF	X'A01',X'D0' TEST
09DB	F2 96 0B		1211	JC	LHLT2,X'96'

PF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
	09DE	AC	00 67 00	1212	LHLT1	MVC	HALTA+1(1, XR2), *-*(, XR2) LOAD FIRST HALT
	09E2	AC	00 68 00	1213	LHLT1A	MVC	HALTA+2(1, XR2), *-*(, XR2)
	09E6	FO	00 00	1214	HALTA	HPL	*-*, *-* HALT TO INDICATE DEVICE
	09E9	AC	00 72 00	1215	LHLT2	MVC	HALTB+1(1, XR2), *-*(, XR2) LOAD SECOND HALT
	09ED	AC	00 73 00	1216	LHLT2A	MVC	HALTB+2(1, XR2), *-*(, XR2)
	09F1	FO	00 00	1217	HALTR	HPL	*-*, *-* HALT TO DISPLAY INDEX NUMBER
	09F4	CO	87 042A	1218	HEXIT	F	RTEST GO CHECK FOR SWITCH ENTRY
	09F8	CO	87 03F3	1219		B	LDREG GO RESTORE REGS & EXIT SUBROUTINE
				1220	*****		
				1221	* TRANSFER TABLE CONSTANTS *****		
				1222	*****		
				0537	1223	TR1	EQU ITR1
09FC	0530			09FD	1224	TR2	DC AL2(RLINK)
				02C4	1225	TR3	EQU ITR3
				0680	1226	TR4	EQU ITR4
09FE	0990			09FF	1227	TR5	DC AL2(RHALT)
				0231	1228	TR6	EQU ITR6
				055C	1229	TR7	EQU ITR7
				1230	*****		
				1231	* XREF *****		
				1232	*****		
1FF6				1233	ORG	X'1FF6'	
1FF6	03F8			1FF7	1234	DC	AL2(XREF5) LOCATION FOR SSW VALUE
1FF8	03F9			1FF9	1235	DC	AL2(XREF4) SUBRTN TO SET SSW
1FFA	0DC6			1FFB	1236	DC	AL2(XREF3) LOADER BRANCH @ WHEN DCP IS LOADED
1FFC	1084			1FFD	1237	DC	AL2(XREF2) LOADER BRANCH @ WHEN LOADING DCP
1FFE	02E7			1FFE	1238	DC	AL2(XREF1) LOADER RETURN IF NOT IN VTOC
				1239			
0C87				1240	ORG	MHLT2+X'500'	
				1241	** PRINTER INPUT/OUTPUT ROUTINE SUPPORTING THE 5203 AS PRIMARY OUTPUT		
				1242	** DEVICE AND THE 5471 PRINTER KEYBOARD AS SECONDARY. ONCE LOADED,		
				1243	** DCP SCANS THE UDT TABLE TO SEE IF THE 5471 IS ATTACHED IF IT IS,		
				1244	** DCP REPLACES THE 5424 PORTION WITH THE 5471 OVERLAY.		
				1245	**		
				0714	1246	USING	PRTN, XR2
				0C97	1247	PRTNA	EQU *
				1248			
0C87	FO	3B	7D	1249	HPL	H6, HH	*KEYBOARD PRINTER ERROR
0C8A	E0	87	13	1250	B	PRTN1(, XR2)	
0C8D	2E	00	06C9 08	1251	PTCIO	ALC	PRT6+1(1), ZONE(, XR2) ADJUST LENGTH OF PRINT
0C92	3B	80	06C9	1252		SBP	PRT6+1, X'80' LIMIT NUMBER OF CHARACTERS TO 127
0C96	3C	81	AC	1253		MVI	CIO2+2(, XR2), X'81' SET UP TO DO PRINT
0C99	BD	E0	5F	1254		CLI	PRIO+1(, XR2), X'E0' CHANGE TO CARRIAGE RETURN IF SPACE
0C9C	F2	01	18	1255		JNE	CIO1 ONLY
0C9F	BD	00	60	1256		CLI	PRIO+2(, XR2), 0 SKIP CARR RETURN IF SPACE 0
0CA2	E0	81	67	1257		BE	PRTEXT(, XR2)
0CA5	3D	02	05D4	1258		CLI	NSPACE, 2 LIMIT NUM SPACES TO 2
0CA9	F2	82	04	1259		JL	*+7
0CAC	3C	02	05D4	1260		MVI	NSPACE, 2
0CB0	3C	00	06C9	1261		MVI	PRT6+1, 0
0CB4	BC	41	AC	1262		MVI	CIO2+2(, XR2), X'41'
0CB7	C2	01	0880	1263	CIO1	LA	X'880', XR1 POINT XR1 AT PRINT FIELD
0CBB	71	18	01	1264	CIO1B	LIO	1(, XR1), X'18' LOAD CHARACTER TO BE PRINTED
0CBE	F3	18	00	1265	CIO2X	SIO	*-*, X'18' ISSUE COMMAND TO 5471
0CC1	B0	19	38	1266		SNS	CIOSTS(, XR2), X'19' HALT IF ERROR
0CC4	B9	03	38	1267		TBP	CIOSTS(, XR2), X'03'
0CC7	E0	90	73	1268		BF	CIOHLT(, XR2)
0CCA	7C	40	00	1269		MVI	0(, XR1), C' ' CLEAR OUT THIS CHARACTER
0CCD	D2	01	01	1270		LA	1(, XR1), XR1 INCREMENT PRINT FIELD POINTER
0CD0	2F	00	06C9 08	1271		SLC	PRT6+1(1), ZONE(, XR2)
0CD5	E0	02	A7	1272		BNL	CIO1A(, XR2) CONTINUE UNTIL WHOLE LINE PRINTED
0CD8	E0	87	67	1273		B	PRTEXT(, XR2)
				1274			
				074C	1275	CIOSTS	EQU MSTAT
				0CDA	1276	LAST	EQU *-1 MUST BE LAST STATEMENT OF OVERLAY
				07BB	1277	CIO1A	EQU MHLT2+CIO1B-PRTNA
				0787	1278	CIOHLT	EQU MHLT2
				07BE	1279	CIO2	EQU MHLT2+CIO2X-PRTNA

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			1280		
			1281		*****
0CDB	F0 78 34	0CDB	1282	PRTNX EQU	*
0CDE	E0 87 13		1283	DO41X HPL	X'34',X'78'
0CE1	7D 40 00		1284	B	PRTN1(,XR2)
0CE4	E0 01 67		1285	PR41 CLI	0(,XR1),X'40'
0CE7	E1 F0 73		1286	BNE	PRTEXT(,XR2)
0CEA	B1 F0 3C		1287	TIO	DO41(,XR2),X'F0'
0CED	F3 F2 00		1288	LIO	PR2(,XR2),X'F0'
0CF0	E1 F2 88		1289	SIO	0,X'F2'
0CF3	E1 F0 73		1290	BY41X TIO	BY41(,XR2),X'F2'
0CF6	0C 83 08FF 0900		1291	TIO	DO41(,XR2),X'F0'
0CFC	E0 87 67		1292	MVC	LPDATA+131(132),LPDATA+132
			1293	B	PRTEXT(,XR2)
		0CFF	1294	ND EQU	*
		0024	1295	LNG41 EQU	ND-DO41X
		0787	1296	DO41 EQU	HLT2+DO41X-PRTNX
		079C	1297	BY41 EQU	HLT2+BY41X-PRTNX
		0002	1298	DROP	XR2

PPF5 DIAGNOSTIC CONTROL PROGRAM

RRR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	
	0D14			1300		ORG	PRTN+X'600'	
				1301				
				1302	**	PRINTER INPUT/OUTPUT ROUTINE		
				1303				
				0D14 1304		USING	PRTNM, 2	
	0D14	C2	02 0714	1305	PRTNM	LA	PRTN, XR2	
	0D18	B4	08 AB	1306		ST	PRTNM+3(, XR2), ARR	
	0D1B	B4	08 5B	1307		ST	MSTATM(, XR2), ARR	
	0D1E	B5	01 AB	1308		L	PRTNM+3(, XR2), XR1	*
	0D21	4C	00 01 06C9	1309		MVC	1(1, XR1), PRT6+1	
	0D26	8E	01 AB 0332	1310		ALC	PRTNM+3(2, XR2), TWO	ADJUST RETURN ADDRESS *
	0D2B	C0	87 0212	1311	PRTNM	B	TEST	CHECK DATA SWITCHES *
	0D2F	38	80 05D7	1312	TBN		PTAGS, BIT0	GO EXIT IF SSW TO BYPASS THIS TYPE *
	0D33	F2	90 07	1313		JF	PRTN2M	OF PRINTOUT IS TURNED ON *
	0D36	39	10 0208	1314		TBF	SBYTE0, SSW03	
	0D3A	F2	87 04	1315		J	PT90M	*
	0D3D	39	08 0208	1316	PRTN2M	TBF	SBYTE0, SSW04	*
	0D41	C0	90 06E5	1317	PT90M	BP	PRXIT	*
				1318				
	0D45	38	04 0208	1319	TBN		SBYTE0, SSW05	TEST FOR ALTERNATE OUTPUT *
	0D49	F2	10 4D	1320	JT		PRTDRC	*
	0D4C	E1	E1 3E	1321	TIO		EOFST(, XR2), X'E1'	
	0D4F	F2	87 0A	1322	J		PRNT3M	*
				1323				
	0D52	31	E2 0390	1324	EOFST	LIO	ONE, X'E2'	
	0D56	F0	78 34	1325	CPERR2	HPL	X'34', X'78'	
	0D59	E0	87 17	1326		B	PRTNM(, XR2)	*
	0D5C	E1	E4 65	1327	PRNT3M	TIO	FLINE(, XR2), X'E4'	
	0D5F	39	07 05D4	1328	TBF		NSPACE, X'07'	
	0D63	F2	90 06	1329	JF		RESTOP	
	0D66	B1	E4 B1	1330		LIO	PR3M(, XR2), X'E4'	
	0D69	F2	87 15	1331	J		FLINE+8	*
	0D6C	3D	05 0000	1332	RESTOP	CLI	*-*, X'05'	CHECK FOR SPACE
				0D6F 1333	MSTATM	EQU	*-1	
				1334	JE		FLINE	
	0D70	F2	81 06	1334				
	0D73	B1	E6 AF	1335		LIO	ASPPBH(, XR2), X'E6'	
	0D76	F3	E0 00	1336		SIO	X'0', X'E0'	
	0D79	4E	00 01 03DF	1337	FLINE	ALC	1(1, XR1), FIVE	
	0D7E	B1	E4 AD	1338		LIO	PR2M(, XR2), X'E4'	*
	0D81	B1	E6 58	1339		LIO	MSTATM(, XR2), X'E6'	
	0D84	B1	E2 75	1340		LIO	PRSIOM+2(, XR2), X'E2'	
	0D87	F3	E0 00	1341	PRSIOM	SIO	*-*, X'E0'	*
	0D8A	E1	E2 76	1342	BSYLPN	TIO	BSYLPN(, XR2), CPBUSV	*
	0D8D	E1	E0 42	1343		TIO	CPERR2(, XR2), CPNERR	*
	0D90	F2	87 1B	1344		J	PRTXN	*
				1345				
	0D93	F0	78 34	1346	DOCERN	HPL	X'34', X'78'	*
	0D96	E0	87 17	1347		B	PRTNM(, XR2)	*
	0D99	7D	40 00	1348	PRTDRC	CLI	0(, XR1), X'40'	TEST FOR SPACE ONLY *
	0D9C	F2	01 0F	1349		JNE	PRTXN	*
	0D9F	E1	F0 7F	1350		TIO	DOCERN(, XR2), X'F0'	*
	0DA2	B1	F0 AD	1351		LIO	PR2M(, XR2), X'F0'	*
	0DA5	F3	F2 00	1352		SIO	X'0', X'F2'	
	0DA8	E1	F2 94	1353	BSYDOC	TIO	BSYDOC(, XR2), X'F2'	*
	0DAB	E1	F0 7F	1354		TIO	DOCERN(, XR2), X'F0'	*
	0DAE	0C	83 08FF 0900	1355	PRTXN	MVC	LPDATA+131(132), LPDATA+132	*
	0DB4	C2	02 05B7	1356		LA	PR3, XR2	*
	0DB8	35	01 0713	1357		L	PRINTE+3, XR1	*
	0DBC	C0	87 0000	1358	PRTNM	B	*-*	EXIT SUBROUTINE *

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT		
		00E2	1360	CPBUSY	EQU	X'E2'	*
		00E0	1361	CPNERR	EQU	X'E0'	*
ODC0	087C	0DC1	1362	PR2M	DC	AL2(LPDATA)	*
ODC2	065C	0DC3	1363	ASPFBH	DC	AL2(SPBPHG-1)	
ODC4	0881	0DC5	1364	PR3M	DC	AL2(PLINE+1)	
			1365				
			1366	*****			
			1367	* EQUATES	*****		
			1368	*****			
		0010	1369	IAR	EQU	X'10'	INSTRUCTION ADDRESS REGISTER
		0008	1370	ARP	EQU	X'08'	ADDRESS RECALL REGISTER
		0004	1371	PSR	EQU	X'04'	PROGRAM STATUS REGISTER
		0001	1372	XP1	EQU	1	INDEX REGISTER 1
		0002	1373	XP2	EQU	2	INDEX REGISTER 2
		087C	1374	LPDATA	EQU	X'87C'	22LC PRINT DATA AREA
		0880	1375	PLINE	EQU	X'880'	START OF DCP PRINT LINE
		0A00	1376	SPT	EQU	X'A00'	SECTION PREPAGE TABLE
		0A01	1377	PROGID	EQU	X'A01'	SPT - 2ND BYTE OF PGM IDENTIFICATION
		0A02	1378	SPFLGS	EQU	X'A02'	SPT - FLAGS
		0A03	1379	RNUM	EQU	X'A03'	SPT - ROUTINE NUMBER -CURRENT-
		0A07	1380	PPTN	EQU	X'A07'	SPT - ADDR OF 1ST PTN PREFIX
		0A0A	1381	SPUDT	EQU	X'A0A'	SPT - UNIT DEFN TABLE
			1382				
			1383	** COMMON SENSE SWITCHES			
			1384				
		0080	1385	SSW00	EQU	X'80'	LOOP ON SECTION
		0040	1386	SSW01	EQU	X'40'	LOOP ON ROUTINE
		0020	1387	SSW02	EQU	X'20'	BYPASS MANUAL INTERV PTNS
		0010	1388	SSW03	EQU	X'10'	BYPASS ERROR PRINT
		0008	1389	SSW04	EQU	X'08'	BYPASS NON-ERROR PRINT
		0004	1390	SSW05	EQU	X'04'	USE MPCU AS PRINT DEVICE
		0002	1391	SSW06	EQU	X'02'	HALT ON ERROR
		0001	1392	SSW07	EQU	X'01'	LICKETY SPLIT
		0080	1393	SSW08	EQU	X'80'	USE 5203 RIGHT CARRIAGE
		0040	1394	SSW09	EQU	X'40'	INHIBIT SECT. SSW CLEARING
			1395				
		0080	1396	BIT0	EQU	X'80'	
		0040	1397	BIT1	EQU	X'40'	
		0020	1398	BIT2	EQU	X'20'	
		0010	1399	BIT3	EQU	X'10'	
		0008	1400	BIT4	EQU	X'08'	
		0004	1401	BIT5	EQU	X'04'	
		0002	1402	BIT6	EQU	X'02'	
		0001	1403	BIT7	EQU	X'01'	
			1404				
		006F	1405	H0	EQU	X'6F'	TABLE OF HALT CODES - 0-F 8-H
		0003	1406	H1	EQU	X'03'	
		0076	1407	H2	EQU	X'76'	
		0057	1408	H3	EQU	X'57'	
		001B	1409	H4	EQU	X'1B'	
		005D	1410	H5	EQU	X'5D'	HALT DISPLAY CODE -5-
		007D	1411	H6	EQU	X'7D'	
		0007	1412	H7	EQU	X'07'	
		007F	1413	H8	EQU	X'7F'	
		005F	1414	H9	EQU	X'5F'	
		003F	1415	HA	EQU	X'3F'	
		0079	1416	HB	EQU	X'79'	
		006C	1417	PC	EQU	X'6C'	
		0073	1418	HD	EQU	X'73'	
		007C	1419	HE	EQU	X'7C'	
		003C	1420	HF	EQU	X'3C'	
		003B	1421	HH	EQU	X'3B'	
		0C6B	1422	HU	EQU	X'6B'	HALT DISPLAY CODE -U-
		003E	1423	HP	EQU	X'3E'	HALT DISPLAY CODE -P-
			1424				
		01FD	1425	FLAG	EQU	X'1FD'	
		01FE	1426	DTABLE	EQU	X'1FE'	
			1427				



FFP5 DIAGNOSTIC CONTROL PROGRAM

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
			1428	** THE FOLLOWING INSTRUCTIONS ARE PERFORMED AFTER INITIAL DCP
			1429	** LOADING ONLY. THEY ARE OVERLAID BY THE PROGRAM SECTIONS.
		ODC6 1430	XREF3 EQU *	
		ODC6 1431	BEGIN EQU *	
ODC6 OC 10 0010 0F73		1432	MVC 16 (17),GOLOAD+16	STORE A PROGRAM RESTART AT 0000
ODCC C0 87 1084		1433	B PIXNOB	
		1434		
ODD0 C0 87 021A		1435	B PRINT	SPACE PRINTER
ODD4 11	ODD4	1436	DC XL1'11'	
ODE5 OC 00 0F9B 0200		1437	MVC LINE1-15(1),SMOD	PUT MODEL ID IN PRINTOUT
ODDB 3C 00 032D		1438	MVI CTR,X'0'	
ODDF 3D FF 0202		1439	CLI SIZE-1,X'FF'	
ODE3 F2 01 07		1440	JNE **10	
ODE6 3C 10 032D		1441	MVI CTR,16	
ODEA F2 87 06		1442	J **9	
ODED 08 02 032D 0202		1443	MNZ CTR,SIZE-1	PUT CORE SIZE IN PRINTOUT
ODF3 04 10 0FA9 0F75		1444	ZAZ LINE1-1(2),DFOUR-1(1)	
ODF9 06 01 0FA9 0F76		1445	FINDS7 AZ LINE1-1(2),DFOUR(2)	
ODFF 0F 00 032D 0390		1446	SLC CTR(1),ONE	
OE05 C0 01 0F9		1447	BNZ FINDSZ	
OE09 C0 87 021A		1448	B PRINT	PRINT OUT SYSTEM MODEL AND
OE0D 01	OE0D	1449	DC XL1'01'	CORE SIZE
OE0E 16	OE0E	1450	DC IL1'22'	
OE0F 0FAA	OE10	1451	DC AL2(LINE1)	
OE11 38 80 0204		1452	TBN CPU,X'80'	BRANCH IF NO DUAL PROGRAM FEATURE
OE15 F2 90 08		1453	JF NOTDP	
OE18 C0 87 021A		1454	B PRINT	PRINT INDICATION OF DUAL PROGRAM
OE1C 01	OE1C	1455	DC XL1'01'	FEATURE
OE1D 09	OE1D	1456	DC IL1'9'	
OE1E 0FB3	OE1E	1457	DC AL2(FEA-1)	
OE20 C0 87 021A		1458	NOTDP B PRINT	
OE24 01	OE24	1459	DC XL1'01'	
OE25 33	OE25	1460	DC IL1'51'	PRINT ---'S
OE26 1083	OE27	1461	DC AL2(DASH)	
OE28 C0 87 021A		1462	B PRINT	PRINT UNIT DEFINITION TABLE HEADING
OE2C 01	OE2C	1463	DC XL1'01'	
OE2D 33	OE2D	1464	DC IL1'51'	
OE2E 0FE6	OE2E	1465	DC AL2(LINE2)	
OE30 C0 87 021A		1466	B PRINT	
OE34 01	OE34	1467	DC XL1'01'	
OE35 33	OE35	1468	DC IL1'51'	PRINT ---'S
OE36 1083	OE37	1469	DC AL2(DASH)	
		1470		
OE38 C2 01 0232		1471	LA UTAB,XP1	LOAD UDT POINTER
OE3C 3C 01 0F77		1472	MVI FLAGS,1	INDICATE SETUP FOR FIRST ENTRY
OE40 7D 00 00	UDTLP	1473	CLI 0(,XP1),X'0'	SKIP ENTRY IF NO DEVICE CODE
OE43 F2 81 8E		1474	JE NOUNIT	
OE46 34 01 0E50		1475	ST UADDR,XP1	
OE4A C0 87 021E		1476	B UNPACK	UNPACK DEVICE IDENTIFICATION
OE4E 01	OE4E	1477	DC IL1'1'	
OE4F 0000	OE50	1478	UADDR DC AL2(*-*)	
OE51 0883	OE52	1479	DC AL2(PLINE+3)	
OE53 C2 02 0884		1480	LA PLINE+4,XP2	POINT XP2 AT PRINT LINE
OE57 BC 60 00		1481	MVI 0(,XP2),C'-'	PUT DASH AFTER DEVICE ID
OE5A OC 01 0F73 0390		1482	MVC MASK(2),ONE	INITIALIZE DATA FIELDS
OE60 3C 00 0F74		1483	MVI OPNUM,0	
OE64 OC 00 0E71 0F72	UDTLP1	1484	MVC CHK1+1(1),MASK-1	SET UP MASKS TO CHECK OPTION BIT
OE6A OC 00 0E74 0F73		1485	MVC CHK2+1(1),MASK	
OE70 79 00 01	CHK1	1486	TBF 1(,XP1),*-*	CHECK THIS BIT
OE73 79 00 02	CHK2	1487	TBF 2(,XP1),*-*	
OE76 F2 10 16		1488	JT NEXTOP	BRANCH IF OFF
OE79 8C 00 01 0F74		1489	MVC 1(1,XP2),OPNUM	PUT PRINTABLE OPTION NUMBER INTO
OE7E BA F0 01		1490	SBN 1(,XP2),X'F0'	PRINT LINE
OE81 3D FA 01		1491	CLI 1(,XP2),X'FA'	
OE84 F2 82 05		1492	JL **8	
OE87 8E 00 01 0F6B		1493	ALC 1(1,XP2),XC7	
OE8C E2 02 01		1494	LA 1(,XP2),XR2	POINT AT NEXT PRINT SLOT
OE8F 0E 01 0F73 0F73	NEXTOP	1495	ALC MASK(2),MASK	SET UP TO CHECK NEXT OPTION BIT

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT	
OE95	0E	00	0F74	0390	1496	ALC	OPNUM(1),ONE	
OE9B	3D	0C	0F74		1497	CLI	OPNUM,X'0C'	
OE9F	C0	82	0E64		1498	RL	UDTLP1	CONTINUE UNTIL ALL OPTIONS CHECKED
OEAA	3D	01	0F77		1499	CLI	FLAGS,1	BRANCH IF NOT FIRST UDT ENTRY
OEAF	F2	01	0C		1500	JNE	CKPTR	
OEAA	8C	05	09	0F8D	1501	MVC	9(6,XR2),LDR	INDICATE THAT THIS IS LOADING DEVICE
OEAF	3C	02	0F77		1502	MVI	FLAGS,2	INDICATE SECOND UDT ENTRY
OEAF	F2	87	10		1503	J	PRUDT	GO PRINT THIS ENTRY
OEAF	3D	02	0F77		1504	CKPTR CLI	FLAGS,2	BRANCH IF NOT SECOND UDT ENTRY
OEBA	F2	01	09		1505	JNE	PRUDT	
OEBA	8C	06	0A	0F94	1506	MVC	10(7,XR2),PRNTP	INDICATE THAT THIS IS PRINTER
OECA	3C	00	0F77		1507	MVI	FLAGS,0	FIRST 2 ENTRIES HAVE BEEN HANDLED
OECC	0C	19	1000	089A	1508	PRUDT MVC	LINE3(26),PLINE+26	SET UP AND PRINT LINE
OECC	C0	87	021A		1509	B	PRINT	
OED0	01			OED0	1510	DC	XL1'01'	
OED1	1A			OED1	1511	DC	IL1'26'	
OED2	1000			OED3	1512	DC	AL2(LINE3)	
OED4	78	10	01		1513	NOUNIT TBN	1(,XR1),X'10'	CHECK FOR LAST ENTRY
OED7	D2	01	03		1514	LA	3(,XR1),XR1	
					1515			
OEDA	C0	90	0E40		1516	BF	UDTLP	
					1517			
OEDE	0C	01	0F03	0203	1518	MVC	MOVIT+3(2),X'203'	* FILL CORE FROM BK ON UP
OEE4	3D	FF	0202		1519	CLI	X'202',X'FF'	*
OEE8	F2	01	08		1520	JNE	NOT64K	*
OEEB	C2	01	0000		1521	LA	0,XR1	*
OEEF	34	01	0F03		1522	ST	MOVIT+3,XR1	*
OEF3	0E	01	0F03	032F	1523	NOT64K ALC	MOVIT+3(2),NEG1	* WITH BLANKS, X'40'. THE
OEF9	3D	1F	0F02		1524	CLPLUP CLI	MOVIT+2,X'1F'	* FIRST BK HAS BEEN FILLED
OEPD	F2	04	10		1525	JNH	ALLCLP	* AT LOAD TIME. HENCE, WE
OP00	0C	FF	0000	1EFF	1526	MOVIT MVC	*-*,X'1EFF'(256)	* USE THE TOP 256 BYTES OF
OP06	0E	00	0F02	032F	1527	ALC	MOVIT+2(1),NEG1	* THE LOWER BK AS THE SOURCE
OP0C	C0	87	0EF9		1528	B	CLRLUP	*
					1529			
OP10	C0	87	021A		1530	ALLCLP B	PRINT	SPACE PRINTER
OP14	11			OP14	1531	DC	XL1'11'	
OP15	3D	A0	0232		1532	CLI	UTAB,X'A0'	IF DISK SYSTEM,
OP19	F2	81	0B		1533	JE	PRT25	THEN DO DISK PRINTOUT
OP1C	C0	87	021A		1534	B	PRINT	
OP20	07			OP20	1535	DC	XL1'07'	
OP21	2E			OP21	1536	DC	IL1'46'	
OP22	102E			OP23	1537	DC	AL2(LINE4)	
OP24	F2	87	10		1538	J	TST07	
OP27	C0	87	021A		1539	PRT25 B	PRINT	*
OP2B	01			OP2B	1540	DC	XL1'01'	*
OP2C	1C			OP2C	1541	DC	IL1'28'	*
OP2D	101C			OP2E	1542	DC	AL2(LINE4-18)	*
OP2F	C0	87	021A		1543	B	PRINT	*
OP33	07			OP33	1544	DC	XL1'07'	*
OP34	22			OP34	1545	DC	IL1'34'	*
OP35	1050			OP36	1546	DC	AL2(LINE5)	*
OP37	3D	C2	0200		1547	TST07 CLI	SMOD,C'B'	
OP3B	F2	81	1E		1548	JE	MFCU	
OP3E	C2	01	0232		1549	LA	UTAB,XR1	
OP42	7D	F0	00		1550	MAGN CLI	0(,XR1),X'F0'	CHECK FOR MFCU ABSENT
OP45	F2	81	11		1551	JE	MFCU	ON 5410
OP48	78	10	01		1552	TBN	1(,XR1),X'10'	
OP4F	D2	01	03		1553	LA	3(,XR1),XR1	
OP4E	C0	90	0F42		1554	BF	MAGN	
OP52	C0	87	022A		1555	B	LOAD	
OP56	08			OP56	1556	DC	XL1'08'	
OP57	DFF6			OP58	1557	DC	XL2'DFF6'	
OP59	38	01	0208		1558	MFCU TBN	SRYTE0,SSW07	
OP5D	F2	10	03		1559	JT	GOLOAD	
OP60	F0	3B	3F		1560	HLTG HPL	HA,HH	DCP LOADING COMPLETE
				OP63	1561	GOLOAD EQU	*	
OP63	C0	87	0212		1562	B	TEST	CHECK DATA SWITCHES
OP67	C0	87	02E7		1563	B	XREF1	

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
				0002	1564		DROP XR2
0F68	C7			0F68	1565	XC7	DC XL1'C7'
0F6C	F2 87 3F				1566	J	J TEST7-TSTCRD-1
0F6F	F2 97 33				1567	J1	J LE2-LX2
0F72	0000			0F73	1568	MASK	DC XL2'0'
0F74	00			0F74	1569	OPNUM	DC YL1'0'
0F75	F0F4			0F76	1570	DFOUP	DC DL2'4'
0F77	00			0F77	1571	PLAGS	DC XL1'0'
0F78	0008101820283038			0F7F	1572		DC XL8'0008101820283038'
0F80	4048505860687078			0F87	1573	MBTAB	DC XL8'4048505860687078'
					1574	*****	
					1575	* PRINTOUTS	*****
					1576	*****	
0F88	D3D6C1C4C5D9			0F8D	1577	LDR	DC CL6'LOADER'
0F8E	D7D9C9D5F3C5D9			0F94	1578	PPNTR	DC CL7'PRINTER'
0F95	D4D6C4C5D340E748			0FAA	1579	LINE1	DC CL22'MODEL X. CORE SIZE XXX'
0F9D	40C3D6D9C540E2C9				1579		
0FA5	E9C540E7E7D2				1579		
0FAB	40C4E4C1D340D7C7			0FB3	1580	FEAT1	DC CL09' DUAL PGM'
0FB3	D4				1580		
0FB4	E4D5C9E340C4C5C6			0FC9	1581		DC CL22'UNIT DEFINITION TABLE'
0FBC	C9D5C9E3C9D6D540				1581		
0FC4	E3C1C2D3C541				1581		
0FCA	4B4B4B4B40D4L+E2			0FE6	1582	LINE2	DC CL29'.... MUST BE CORRECT -VERIFY-'
0FD2	E340C2C540C3D6D9				1582		
0FA	D9C5C3E34060E5C5				1582		
0FE2	D9C9C6E860				1582		
0FE7	4040404040404040			1000	1583	LINE3	DC CL26' ' *
0FEF	4040404040404040				1583		
0FF7	4040404040404040				1583		
0FFP	4040				1583		
1001	C4C3D740D3D6C1C4			102E	1584	LINE4	DC CL46'DCP LOADED - SET COMMON SSWS AND/OR RESET HALT'
1009	C5C4406040E2C5E3				1584		
1011	40C3D6D4D4D6D540				1584		
1019	E2E2E6E240C1D5C4				1584		
1021	61D6D940D9C5E2C5				1584		
1029	E340C8C1D3E3				1584		
102F	C5D5E3C5D940D7D9			1050	1585	LINE5	DC CL34'ENTER PROGRAM SELECTIONS AND START'
1037	D6C7D9C1D440E2C5				1585		
103F	D3C5C3E3C9D6D5E2				1585		
1047	40C1D5C440E2E3C1				1585		
104F	D9E3				1585		
1051	4040404040404040			1066	1586		DC CL22' ' *
1059	4040404040404040				1586		
1061	40404040404040				1586		
1067	6060606060606060			1083	1587	DASH	DC 29CL1'-' *
106F	6060606060606060				1587		
1077	6060606060606060				1587		
107F	6060606060				1587		
				1084	1588	XREF2	EQU *
1084	34 08 121D				1589	FIXMOB	ST TSTINS-1,APR
1088	3D 5C 0880				1590	CLI	X'880',C'*'
108C	F2 81 08				1591	JE	TSTUDT
108F	3D C5 0880				1592	CLI	X'880',C'E'
1093	C0 01 121A				1593	BNE	LEXIT
1097	C0 07 1210				1594	TSTUDT	BC LVMOB,X'07'
109E	3C 87 1096				1595	MVI	TSTUDT+1,X'87'
109F	0C 01 0289 01FD				1596	MVC	ENTRY1(2),X'1FD'
10A5	0C 01 0328 01FF				1597	MVC	ENTRY2(2),X'1FF' MOVE ENTRIES POINTS @ INTO LOAD BTN
10AB	0F 05 01FF 01FF				1598	SLC	DTABLE+1(6),DTABLE+1 CLEAR DTABLE
10B1	3D F0 0232				1599	CLI	UTAB,X'F0'
10B5	F2 01 10				1600	JNE	DSKSYS
10B6	0C 02 02F1 0F71				1601	MVC	LX2-1(3),J1+2
10BE	3C 00 0446				1602	MVI	TSTDSK,0
10C2	0C 02 0474 0F6E				1603	MVC	TSTCRD(3),J+2
				10C8	1604	TSKSYS	EQU *
10C8	3D A0 0232				1605	CLI	UTAB,X'A0'
10CC	F2 81 0A				1606	JE	SNSMOD

PPF5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
	10CF	3D	C2	0200	1607	CLI	SMOD,C'B'
	10D3	F2	81	0E	1608	JE	MODELB
	10D6	F2	87	70	1609	J	CHGTST
	10D9	30	A3	03F8	1610	SNSMOD	SNS DATSWS,X'A3'
	10DD	38	01	03F7	1611	TBN	DATSWS-1,1 TEST FOR MODEL 6
	10E1	F2	90	61	1612	JF	MODEL
	10E4	3C	C2	0200	1613	MODELB	MVI SMOD,C'B'
	10E8	3C	7C	0458	1614	MVI	HLTA+1,X'7C'
	10EC	3C	04	045E	1615	MVI	TEST2+1,X'04'
	10F0	3C	04	0464	1616	MVI	HLTB+1,X'04'
	10F4	3C	7C	046A	1617	MVI	TEST3+1,X'7C'
	10F8	3C	78	046D	1618	MVI	THLT+1,X'78'
	10FC	3C	78	049B	1619	MVI	HLTC+1,X'78'
	1100	3C	14	049C	1620	MVI	HLTC+2,X'14'
	1104	3C	78	0309	1621	MVI	HLTC1+1,X'78'
	1108	3C	64	030A	1622	MVI	HLTC1+2,X'64'
	110C	3C	78	04D8	1623	MVI	HLTD+1,X'78'
	1110	3C	14	04D9	1624	MVI	HLTD+2,X'14'
	1114	3C	78	04FB	1625	MVI	TEST13+1,X'78'
	1118	3C	1C	04FC	1626	MVI	TEST13+2,X'1C'
	111C	3C	78	0519	1627	MVI	TEST15+1,X'78'
	1120	3C	14	051A	1628	MVI	TEST15+2,X'14'
	1124	3C	78	0571	1629	MVI	HLTE+1,X'78'
	1128	3C	1C	0572	1630	MVI	HLTE+2,X'1C'
	112C	3C	78	02D2	1631	MVI	HLTF+1,X'78'
	1130	3C	74	02D3	1632	MVI	HLTF+2,X'74'
	1134	3C	78	0F61	1633	MVI	HLTG+1,X'78'
	1138	3C	54	0F62	1634	MVI	HLTG+2,X'54'
	113C	0C	0F	098F	0F87	MVC	HLTTAB+15(16),MRTAB
	1142	F2	87	04	1636	J	CHGTST
	1145	3C	C4	0200	1637	MODEL	MVI SMOD,C'D'
	1149	30	00	03F8	1638	CHGTST	SNS
	114D	3D	E8	03F8	1639	CLI	DATSWS,X'E8'
	1151	F2	81	15	1640	JE	MOVP
	1154	3D	E0	03F8	1641	CLI	DATSWS,X'E0'
	1158	F2	81	0E	1642	JE	MOVP
	115B	3D	40	03F8	1643	CLI	DATSWS,X'40'
	115F	F2	81	07	1644	JE	MOVP
	1162	3D	E1	03F8	1645	CLI	DATSWS,X'E1'
	1166	F2	01	06	1646	JNE	CKP
	1169	0C	00	0235	03F8	MVC	X'235'(1),DATSWS
	116F	3D	E8	0235	1648	CKP	CLI X'235',X'E8'
	1173	F2	01	2D	1649	JNE	TST41
					1650		
	1176	3C	00	0629	1651	MVI	DUMCOM-1,X'0'
	117A	3C	00	065D	1652	MVI	SPBPHG,X'0'
	117E	3C	05	065C	1653	MVI	SPBPHG-1,X'05'
	1182	3C	40	06A3	1654	MVI	PRTHG-1,X'40'
	1186	3C	00	06A9	1655	MVI	PRTHG+5,X'0'
	118A	3C	00	06AA	1656	MVI	PRTHG+6,X'0'
	118E	3C	40	06D2	1657	MVI	PRT6A+4,X'40'
	1192	3C	05	06DF	1658	MVI	SPAPRT-1,X'05'
	1196	3C	00	0620	1659	MVI	SPAPRT,X'0'
	119A	0C	B1	07C5	0DC5	MVC	PRTN+PR3M-PRTNM(PR3M-PRTNM+1),PR3M
	11A0	F2	87	6D	1661	J	LVMOB
	11A3	3D	40	0235	1662	TST41	CLI X'235',X'40'
	11A7	F2	01	41	1663	JNE	CKCIO
	11AA	0C	23	07AA	0CFE	MVC	MHLT2+LNG41-1(LNG41),ND-1
	11B0	3C	40	0629	1665	MVI	DUMCOM-1,X'40'
	11B4	3C	40	06DF	1666	MVI	SPAPRT-1,X'40'
	11B8	3C	40	065C	1667	MVI	SPBPHG-1,X'40'
	11BC	3C	42	06A3	1668	MVI	PRTHG-01,X'42'
	11C0	3C	40	06A9	1669	MVI	PRTHG+05,X'40'
	11C4	3C	42	06D2	1670	MVI	PRT6A+04,X'42'
	11C8	3C	78	0754	1671	MVI	LPERR2+1,X'78'
	11CC	3C	34	0755	1672	MVI	LPERR2+2,X'34'
	11D0	3C	40	075A	1673	MVI	PRIME+01,X'40'
	11D4	3C	40	075B	1674	MVI	PRIME+04,X'40'

FFP5 DIAGNOSTIC CONTROL PROGRAM

ERR	LOC	OBJECT	CODE	ADDR	STMT	SOURCE	STATEMENT
	11D8	3C	44	0760	1675	MVI	PRIME+07,X'44'
	11DC	3C	46	0763	1676	MVI	PRIME+10,X'46'
	11E0	3C	46	0776	1677	MVI	BSYLP+1,X'46'
	11E4	3C	40	0779	1678	MVI	BSYLP+4,X'40'
	11E8	F2	87	25	1679	J	LVMOB
	11EB	34	01	120F	1680	CKCIO	ST SAVE1+3,XR1
	11EF	C2	01	0232	1681	LA	UTAB,XR1
	11F3	7D	10	00	1682	PTCHKL	CLI 0(,XR1),X'10'
	11F6	F2	81	0D	1683	JE	ISCIO
	11F9	78	10	01	1684	TBN	1(,XR1),X'10'
	11FC	D2	01	03	1685	LA	3(,XR1),XR1
	11FF	C0	90	11F3	1686	BF	PTCHKL
	1203	F2	87	06	1687	J	SAVE1
	1206	0C	53	07DA	1688	ISCIO	MHLT2+LAST-PRINA(LAST-PRINA+1),LAST
	120C	C2	01	0000	1689	SAVE1	*-*,XR1
	1210	0C	02	043A	1690	LVMOB	MVC TSTOVL+2(3),TSTINS+2
	1216	C0	87	0212	1691	B	TEST
	121A	C0	87	0000	1692	LEXIT	B *-*
					03F7	1693	USING DATSW-1,XP2
	121E	B0	00	01	1694	TSTINS	SNS DATSW(,XP2),0
					0DC6	1695	END BEGIN

SAVE XR1  
REPLACE 5203/5424 MPCU PRINT ROUTINE  
WITH 5203/5471 KEYBOARD PRINTER  
MODULE IF 5471 ATTACHED

FFF5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
AINPUT	A	001	0067	0108	0111
AJDEST	A	003	0128	0216	0213
ALLCLR	A	004	0F10	1530	1525
ARR	C	001	0008	1370	0109 0264 0278* 0525 0602 0630 0654 0672 0724 0743 0927 1037 1190 1306 1307 1589
ARPSAV	A	001	03EF	0694	0604 0607* 0630* 0672* 1190* 1193 1194*
ASPFBH	A	002	0DC3	1363	1335
BEGIN	A	001	0DC6	1431	0414 1695
BIT0	C	001	0080	1396	0266 0546 0549 0568 0869 0932 1043 1121 1312
BIT1	C	001	0040	1397	0547 0950 1014 1137
BIT2	C	001	0020	1398	0266 0281 0543 0945 1129
BIT3	C	001	0010	1399	0347 0532 0943 1130 1134
BIT4	C	001	0008	1400	0266 0543 1148
BIT5	C	001	0004	1401	0260 0266 0543
BIT6	C	001	0002	1402	0540
BIT7	C	001	0001	1403	0573
BOOT1	A	004	0000	0022	0021 0031
BOOT1A	A	003	000D	0026	0026
BOOT1E	A	003	0017	0030	0023 0027
BOOT11	A	002	001E	0033	0024
BOOT2	A	004	0200	0053	0028 0051 0052 0053
BOOT2A	A	003	020D	0057	0055 0065
BOOT2B	A	003	0216	0060	0060
BOOT2E	A	003	020A	0056	0057 0061
BOOT21	A	003	0205	0070	0064
BOOT22	A	001	0239	0071	0064*
BOOT23	A	002	023B	0072	0058
BSYDOC	A	003	0DA8	1353	1353
BSYLP	A	003	0775	1072	1072 1677* 1678*
BSYLPB	A	003	0D8A	1342	1342
BSYLP0	A	003	07A2	1087	1087
BSYLP1	A	003	07AE	1091	1093
BT2	A	003	0204	0054	0070
BUSY	A	003	0074	0113	0113
BY41	A	003	079C	1297	1290
BY41X	A	003	0CF0	1290	1297
CDERR0	A	003	0A58	0328	0325
CDEXIT	A	004	007D	0116	0109*
CDREAD	A	004	0060	0106	0105 0106 0124 0265 0289 0423 0432 0433
CHAIN	A	005	0A0B	0300	0389 0391
CHCTR	A	001	0A0C	0301	0394* 0406* 0421*
CHGTST	A	004	1149	1638	1609 1636
CHKEND	A	003	0196	0258	0245
CHKP4	A	003	0302	0579	0574
CFKSSW	A	005	0165	0244	0237
CHKSS0	A	004	0177	0248	0256
CHKSS1	A	004	040B	0728	0725* 0727*
CHKSS2	A	003	041B	0733	0728* 0730*
CHKSWS	A	006	066A	0973	0986
CHK1	A	003	0E70	1486	1484*
CHK2	A	003	0E73	1487	1485*
CIOHLT	A	003	0787	1278	1268
CIOSTS	A	002	074C	1275	1266* 1267
CIO1	A	004	0CB7	1263	1255
CIO1A	A	003	07BB	1277	1272
CIO1B	A	003	07BB	1264	1277
CIO2	A	003	07BE	1279	1253* 1262*
CIO2X	A	003	0CBE	1265	1279
CKBLK	A	003	013B	0223	0227
CKCHN	A	005	0B24	0389	0384
CKCIO	A	004	11EB	1680	1663
CKCOM	A	003	0150	0236	0412
CKCOMA	A	003	0A0D	0303	0204
CKCOM1	A	004	010F	0204	0413*
CKCPU	A	003	0A26	0312	0304
CKDCPS	A	005	0B10	0383	0334

FFF5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
CKEND	A	003	0B71	0410	0392
CKP	A	004	116F	1648	1646
CKPTR	A	004	0EB6	1504	1500
CKREP	A	003	010C	0203	0128 0156
CKUDT	A	003	0A60	0333	0313
CLRCOR	A	004	0108	0188	0201
CLRLUP	A	004	0EF9	1524	1528
CMLOOP	A	006	00B8	0139	0144
CMPK	A	004	0333	0602	0631 0673
CMPKX	A	001	0359	0613	0602*
CPBUSY	C	001	00E2	1360	1342
CPERR2	A	003	0D56	1325	1343
CPNERR	C	001	00E0	1361	1343
CPH	A	001	0204	0460	0320* 0323* 1452
CTP	A	001	032D	0597	0605 0606 0608* 0649* 0688* 1438* 1441* 1443* 1446*
DADDR	A	001	0493	0777	0774* 0778 0787*
DASH	A	001	1083	1587	1461 1469
DATSWS	A	002	03F8	0717	0252 0720 0725 0729 0729* 0730 0739 0741 0745 0747 0764* 0766 0767 0782 0789 0794 0796 0799 0806 0814 1610* 1611 1638* 1639 1641 1643 1645 1647 1693 1694*
DEC0	A	004	01F4	0285	0274
DEC1	A	001	01F5	0286	0276
DEST	A	002	0136	0221	0211 0214 0222*
DEST1	A	001	0379	0641	0609* 0642*
DEST2	A	001	03C7	0681	0610* 0687*
DEV	A	001	0A5F	0332	0344 0351 0355
DFOUR	A	002	0F76	1570	1444 1445
DJMP	A	001	047D	0770	0754* 0775 0775*
DOCERN	A	003	0D93	1346	1350 1354
DOCT	A	003	07A5	1088	1084
DOLIO	A	003	006E	0111	0118
DO41	A	003	0787	1296	1287 1291
DO41X	A	003	0CDB	1283	1295 1296
DSKSYS	A	001	10C8	1604	1600
DTABLE	C	001	01FE	1426	0270 0278 0531* 0571 0589* 1598 1598*
DUMCOM	A	002	062A	0948	1651* 1665*
DO48	A	003	0A02	0297	0400 0402
D120	A	003	0A05	0298	0396 0398
ENDCLR	A	001	0132	0197	0194
ENDRTN	A	005	0901	1119	
ENTRY1	A	001	0289	0535	1596*
ENTRY2	A	001	0328	0590	1597*
EOPST	A	004	0D52	1324	1321
ERR	A	003	0081	0117	0110
FEAT1	A	009	0FB3	1580	1457
FINDSZ	A	006	0DF9	1445	1447
FIVE	A	001	03DF	0689	0607 1337
FIXMOB	A	004	1084	1589	0305 0315 1433
FLAG	C	001	01FD	1425	0260 0266 0281 0771 1148
FLAGS	A	001	0F77	1571	1472* 1499 1502* 1504 1507*
PLINE	A	005	0D79	1337	1327 1331 1334
PRTN	C	001	0A07	1380	0808 1155
PO	C	001	00FD	0520	0583 0772
P1	C	001	00FA	0521	
P4	C	001	00F1	0522	0579 0778
GOLOAD	A	001	0F63	1561	1432 1559
HA	C	001	003F	1415	1150 1560
HALT	A	004	0222	0479	
HALTA	A	003	09E6	1214	1212* 1213*
HALTB	A	003	09F1	1217	1215* 1216*
HALT2	A	004	09BC	1202	1196
HALT3	A	004	09C3	1205	1198 1201
HB	C	001	0079	1416	
HC	C	001	006C	1417	0581
HD	C	001	0073	1418	0279
HDG	A	028	05D3	0919	0.68

FFF5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
HDG1	A	001	05B8	0918	0931* 0934* 0957 0961 0965
HE	C	001	007C	1419	0562
HEXIT	A	004	09F4	1218	1200 1203
HF	C	001	003C	1420	0755
HH	C	001	003B	1421	0030 0056 0117 0279 0328 0349 0404 0562 0581 0763 0780 0801 0812 0821 0863 1061 1078 1139 1150 1249 1560
HLTA	A	003	0457	0755	1614*
HLTB	A	003	0463	0759	1616*
HLTC	A	003	049A	0780	1619* 1620*
HLTC1	A	003	0308	0581	0587 1621* 1622*
HLTD	A	003	04D7	0801	1623* 1624*
HLTF	A	003	0570	0863	1629* 1630*
HLTF	A	003	02D1	0562	1631* 1632*
HLTG	A	003	0F60	1560	1633* 1634*
HLTHD	A	004	01D7	0278	0273
HLTTAB	A	001	0980	1185	1184 1192 1635*
HP	C	001	003E	1423	0757 0759
HU	C	001	006B	1422	0762
H0	C	001	006F	1405	0328 0349 0404
H1	C	001	0003	1406	1139
H2	C	001	0076	1407	0780 0801 0821
H3	C	001	0057	1408	0812 0863
H4	C	001	001A	1409	
H5	C	001	005D	1410	0030 0056 0117 1078
H6	C	001	007D	1411	1061 1249
H7	C	001	0007	1412	
H8	C	001	007F	1413	
H9	C	001	005F	1414	
IAR	C	001	0010	1369	0475* 0476* 0477* 0478* 0479* 0480* 0481*
IDADDR	A	002	0643	0956	0953*
IMGADR	A	002	0B8B	0419	0393* 0420*
INPUT	C	001	0880	0431	0107 0137 0154 0164 0210 0318 0418
IPL	C	001	0040	0436	0025 0059
ISCHN	A	004	0B34	0393	0390
ISCIO	A	006	1206	1688	1683
ISSSW	A	003	0174	0247	0387
IS120	A	004	0B66	0406	0397 0399
ITR1	A	001	0537	0843	1223
ITR3	A	001	02C4	0555	1225
ITR4	A	001	0680	0979	1226
ITR6	A	002	0231	0483	1228
ITR7	A	001	055C	0856	0791 1229
J	A	003	0F6C	1566	1603
J1	A	003	0F6F	1567	1601
LAST	A	001	0CDA	1276	1688 1688 1688*
LBASE	A	001	0208	0463	0519 0524 0570
LDEND	A	004	0950	1141	1122 1133
LDPT2	A	004	01A7	0264	0280 0289
LDR	A	006	0F8D	1577	1501
LDREG	A	004	03E3	0691	0652 0655* 1219
LDUDT	A	005	0AA9	0355	0352
LDWORK	A	004	005D	0433	0133* 0134 0150* 0151
LDX	A	004	01A3	0262	0282
LDX0	A	001	01A6	0263	0264*
LD1	A	001	0296	0539	0533
LENGTH	A	004	00B4	0138	0152
LEXIT	A	004	121A	1692	1593
LE1	A	003	02E1	0568	0565
LE2	A	004	0325	0589	0541 0544 0569 1567
LHLT1	A	004	09DE	1212	1205*
LHLT1A	A	004	09E2	1213	1206*
LHLT2	A	004	09E9	1215	1207* 1211
LHLT2A	A	004	09ED	1216	1208*
LINE1	A	022	0FAA	1579	1437* 1444* 1445* 1451
LINE2	A	029	0FE6	1582	1465
LINE3	A	026	1000	1583	1508* 1512



FFF5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
LINE4	A	046	102E	1584	1537 1542
LINE5	A	034	1050	1585	1546
LINK	A	004	0216	0476	
LMØ	A	002	0957	1144	1119*
LMSG	A	014	05B5	0916	0482 1144
LMSGØ	A	002	022F	0482	1119
LNG41	C	001	0024	1295	1664 1664*
LNK1	A	004	0534	0842	0864
LNK1A	A	004	053F	0846	0551
LNK2	A	004	054A	0850	0845 0870
LNK3	A	004	055E	0859	0851
LNK4	A	005	0577	0867	0862
LNK5	A	004	058E	0874	0840* 0848
LNK6	A	004	0592	0875	0826* 0873*
LOAD	A	004	022A	0481	1555
LODEM	A	004	028A	0536	0523* 0526* 0591
LONE	A	001	0277	0530	0575
LOOP	A	003	009B	0129	0126 0135
LPBUSY	C	001	00E6	1055	1072
LPDATA	C	001	087C	1374	0929* 0949 0949* 1011 1011* 1058 1095 1095* 1292 1292* 1355 1355* 1362
LPERP2	A	003	0753	1061	1063 1073 1671* 1672*
LPIMAG	A	001	0800	1100	0395* 0407* 1057
LPNRDY	C	001	00E0	1056	1063 1073
LPTONE	A	005	00FB	0159	0430
LVMOB	A	006	1210	1690	1594 1661 1679
LX1	A	004	02EB	0571	
LX2	A	003	02F2	0574	1567 1601*
MAGN	A	003	0F42	1550	1554
MASK	A	002	0F73	1568	0372* 0375 0375* 0377 0378 1482* 1484 1485 1495 1495*
MBTAB	A	008	0F87	1573	1635
MPCU	A	004	0F59	1558	1548 1551
MHLT2	A	003	0787	1078	1085 1088 1094 1240 1277 1278 1279 1296 1297 1664* 1688*
MNN	C	001	0003	0596	0632 0674
MNZ	C	001	0002	0595	0643 0646
MODELB	A	004	10E4	1613	1608
MODEL D	A	004	1145	1637	1612
MODIFY	A	001	041E	0732	0734* 0798*
MOVE	A	005	0103	0161	0158* 0159*
MOVID	A	003	0315	0585	0577
MOVIT	A	006	0F00	1526	1518* 1522* 1523* 1524 1527*
MOVP	A	006	1169	1647	1640 1642 1644
MSTAT	A	002	074C	1054	1082* 1083 1091* 1092 1275
MSTATM	A	001	0D6F	1333	1307* 1339
MVX1	A	001	0366	0634	0632* 0643 0646*
MVX2	A	001	03C5	0680	0674* 0683 0685*
MZN	C	001	0001	0594	0683 0685
MZZ	C	001	0000	0593	
ND	A	001	0CFP	1294	1295 1664
NEG1	A	002	032F	0598	0642 0648 0649 0682 0687 1523 1527
NEG3	A	002	0088	0120	0148
NEG4	A	002	008A	0121	0149
NEXT	A	003	012B	0217	0229
NEXTOP	A	006	0E8F	1495	1488
NEXTR	A	004	008B	0124	0068 0163 0195 0202 0224 0239 0242 0257 0259 0267 0283 0307 0310 0327 0329 0350 0363 0405 0411 0422
NEXTSS	A	004	0689	0984	0974
NINE	A	001	0407	0726	0678
NOCHG	A	003	0B6E	0408	0401 0403
NORM	C	001	0000	0437	0112
NOTDP	A	004	0E20	1458	1453
NOT64K	A	006	0EF3	1523	1520
NOUNIT	A	003	0ED4	1513	1474
NSPACE	A	001	05D4	0921	0939* 0940* 1005* 1258 1260* 1328
NUM256	A	002	0131	0196	0191
N1	A	005	00FD	0430	0142 0222 0372 0373

FFF5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
N24	A	001	0A06	0299	0420
N9	A	001	0A5E	0331	0370
OK	A	004	01E2	0281	0275 0277
OKCTR	A	004	0B83	0416	0424
ONE	A	001	0390	0650	0421 0529 0860 0996 1324 1446 1482 1496
OPNUM	A	001	0F74	1569	1483* 1489 1496* 1497
PACK	A	004	0226	0480	0208 0218 0249 0316 0341 0416
PAP	A	001	0000	0005	
PK1	A	003	03B3	0674	0690
PK2	A	004	03B6	0675	0686
PK3	A	005	03C4	0679	0677
PK4	A	004	03D8	0687	0684
PLIME	C	001	0880	1375	0917 0968* 0971 1364 1479 1480 1508
PREXIT	A	006	06E5	1011	0938 1006 1043 1317
PRIME	A	003	0759	1063	1052 1673* 1674* 1675* 1676*
PRINT	A	004	021A	0477	0240 0308 1141 1435 1448 1454 1458 1462 1466 1509 1530 1534 1539 1543
PRINTE	A	004	0710	1025	0927* 0928 1013 1021* 1075 1357
PRNTR	A	007	0F94	1578	1506
PRNTSM	A	003	0D5C	1327	1322
PROGID	C	001	0A01	1377	0960
PRSIO	A	003	0772	1071	1040* 1067* 1069 1070* 1080 1254 1256
PRSIOM	A	003	0D87	1341	1340
PRTDRC	A	003	0D99	1348	1320
PRTEXM	A	006	0DAE	1355	1344 1349
PRTEXT	A	004	077B	1074	1081 1096 1257 1273 1286 1293
PRTE1	A	004	0708	1023	0926*
PRTE2	A	004	070C	1024	0924*
PRTHG	A	002	06A4	0991	1654* 1655* 1656* 1668* 1669*
PRTN	A	004	0714	1036	0947 0966 0990 0992 1002 1007 1035 1036 1246 1300 1305 1660*
PRTN1	A	001	0C87	1247	1277 1279 1688 1688*
PRTNE	A	004	0783	1076	1037* 1039 1041*
PRTNEM	A	004	0DBC	1358	1306* 1308 1310*
PRTNM	A	004	0D14	1305	1304 1660 1660*
PRTNX	A	001	0CDB	1282	1296 1297
PRTN1	A	004	0727	1042	1062 1079 1250 1284
PRTN1M	A	004	0D2B	1311	1326 1347
PRTN2	A	004	0739	1047	1044
PRTN2M	A	004	0D3D	1316	1313
PRT2	A	004	0607	0937	0933
PRT2A	A	003	060B	0938	0936
PRT25	A	004	0F27	1539	1533
PRT5	A	005	06AB	0995	0951
PRT6	A	006	06C8	1001	0941* 0988* 0989* 0995* 0996* 0998* 0999* 1000* 1251* 1252* 1261* 1271* 1309
PRT6A	A	004	06CE	1002	0946 1657* 1670*
PRT7	A	004	06D4	1005	0944 0997 1009
PRT8	A	003	06F8	1017	1015
PRT9	A	003	0701	1020	1018
PRUDT	A	006	0EC6	1508	1503 1505
PR1	A	002	074E	1057	1065 1089
PR2	A	002	0750	1058	1066 1288
PR2M	A	002	0DC1	1362	1338 1351
PR3	A	002	05B7	0917	0914 0925 0999 1074 1356
PR3M	A	002	0DC5	1364	1330 1660 1660 1660*
PR4	A	002	0752	1059	1064
PR41	A	003	0CE1	1285	
PSR	C	001	0004	1371	
PTAGS	A	001	05D7	0923	0930* 1043 1312
PTCHKL	A	003	11F3	1682	1686
PTCIO	A	005	0C8D	1251	
PTFDC	A	003	0A76	0339	0336
PTMSG	A	004	02C1	0554	0548
PTR	A	001	02EE	0572	0579 0583* 0584* 0585 0772*
PTZFRO	A	004	02BD	0553	0586
PT90	A	004	073D	1048	1046

FFP5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LPN	VALUE	DEFN	REFERENCES
PT90M	A	004	0D4 1	1317	1315
RDCD	A	004	0B9B	0423	0408
READ	C	001	00F1	0438	0025 0059 0112
RESTOR	A	004	0D6C	1332	1329
RESTRT	A	003	097A	1159	1120
RHALT	A	004	0990	1190	1227
RLDA	A	004	0292	0538	0525* 0528 0529* 0542*
RLD1	A	005	029C	0542	
RLD2	A	003	02D7	0564	0561
RLFLGS	A	001	02C5	0556	0546* 0549*
RLINK	A	004	0530	0840	1224
RLOAD	A	004	0262	0523	0855
RNUM	C	001	0A03	1379	0809* 0810 0818* 0846 0860* 0861 0964 1156*
RPACK	A	004	03AB	0672	0483
RPEX	A	004	0211	0470	0823* 0850 0859 0867* 1157*
RPOVE	A	004	05E0	0926	1005
RPRINT	A	004	05D8	0924	0554
RTEST	A	004	042A	0740	0657 0842 1218
RUNPK	A	004	035A	0630	0978
SADDR	A	002	0181	0251	0248*
SAVE1	A	004	120C	1689	1680* 1687
SAVREG	A	004	0337	0654	0603 1191
SBYTE0	A	001	0208	0464	0238 0306 0385* 0550 0552 0560 0731 0844 0853 0868 0935 0937 1045 1047 1050 1147 1199 1202 1314 1316 1319 1552
SBYTE1	A	001	0209	0465	0386* 0564 1068
SBYTE2	A	001	020A	0466	
SBYTE3	A	001	020B	0467	
SBYTE4	A	001	020C	0468	
SBYTE5	A	001	020D	0469	0246 0246* 0566 0566* 0973 0973* 0975*
SECDRY	A	003	078D	1080	1051
SETS5W	A	004	03F9	0722	0253 0804
SETSXD	A	001	0429	0737	0724*
SET0	A	001	03EF	0714	0718 0723
SIZE	A	002	0203	0459	0319 1439 1443
SMOD	A	001	0200	0457	0314* 1437 1547 1607 1613* 1637*
SNSMOD	A	004	10D9	1610	1606
SNUM	A	002	05D6	0922	0972* 0981 0984* 0985
SPAPRT	A	002	06E0	1008	1658* 1659* 1666*
SPBFHG	A	002	065D	0967	1363 1652* 1653* 1667*
SPFLGS	C	001	0A02	1378	1121
SPT	C	001	0A00	1376	
SPUDT	C	001	0A0A	1381	1123
SRC	A	002	0134	0220	0217*
SR1	A	004	03A7	0658	0654*
SR2	A	004	03E7	0692	0656*
SSDEST	A	002	0685	0932	0977* 0989
SSW	A	001	05D2	0920	0244
SSWD	A	003	0BA5	0425	0383
SSW00	C	001	0080	1385	0552 0853
SSW01	C	001	0040	1386	0550 0844
SSW02	C	001	0020	1387	0868
SSW03	C	001	0010	1388	0935 1045 1314
SSW04	C	001	0008	1389	0937 1047 1199 1316
SSW05	C	001	0004	1390	1050 1319
SSW06	C	001	0002	1391	1202
SSW07	C	001	0001	1392	0238 0306 0560 1147 1558
SSW08	C	001	0080	1393	1068
SSW09	C	001	0040	1394	0564
STATUS	A	004	005F	0432	0114* 0115 0271 0272
STEP	A	004	0311	0584	0580
S1	A	004	00BE	0140	0138* 0139 0142* 0143
S2	A	004	00C2	0141	0139*
TBASE	A	001	03EF	0713	
TEMP	A	001	0359	0614	0675* 0676 0678* 0679
TEMP1	A	001	0377	0640	0633* 0635* 0636 0638*
TEST	A	004	0212	0475	0527 0563 0582 1042 1158 1311 1562 1691

PPF5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
TESTE	A	004	044F	0752	0743* 0791* 0825*
TEST1	A	003	0454	0754	0746 0748 0781
TEST11	A	003	04E3	0806	0797
TEST12	A	005	04F2	0810	0820
TEST13	A	003	04FA	0812	1625* 1626*
TEST14	A	004	0500	0814	0811
TEST15	A	003	0518	0821	0817 1627* 1628*
TEST16	A	005	051E	0823	0815
TEST2	A	003	045D	0757	0788 0792 0802 0805 0813 0822 0827 1615*
TEST3	A	003	0469	0762	0758 1617*
TEST5A	A	004	0490	0776	0775
TEST6	A	004	04A0	0782	0779
TEST6A	A	001	04AD	0786	0784
TEST7	A	003	04B4	0789	0768 1566
TEST7A	A	001	04C2	0793	0790
TEST8	A	003	04D1	0799	0795
TEST9	A	001	04DD	0803	0800
TEXT	A	004	0447	0750	0742* 0744 0807
TEXT1	A	004	044B	0751	0740*
THLT	A	003	046C	0763	0755* 0756 0757 0759* 0760 0762* 1618*
THREE	A	001	02DE	0567	0584
TMSG	A	018	05A7	0915	0558
TONE	A	001	03FA	0719	0818
TR1	A	001	0537	1223	0475
TR2	A	002	09FD	1224	0476
TR3	A	001	02C4	1225	0477
TR4	A	001	0680	1226	0478
TR5	A	002	09FP	1227	0479
TR6	A	002	0231	1228	0480
TR7	A	001	055C	1229	0481
TSTCRD	A	001	0474	0765	1566 1603*
TSTDSK	A	001	0446	0749	1602*
TSTINS	A	003	121E	1694	1589* 1690
TSTCVL	A	003	0438	0744	1690*
TSTUDT	A	004	1097	1594	1591 1595*
TST07	A	004	0F37	1547	1538
TST41	A	004	11A3	1662	1649
TWO	A	002	0332	0600	0542 0688 1041 1194 1310
T3	A	001	0468	0761	0787
UADDR	A	002	0E50	1478	1475*
UDTA	A	005	0A9A	0351	0348
UDTB	A	003	0AD4	0368	0365
UDTC	A	003	0ADF	0371	0369
UDTD	A	006	0AFA	0377	0374
UDTLP	A	003	0E40	1473	1516
UDTLP1	A	006	0E64	1484	1498
UDT1	C	001	0249	0434	
UDT2	C	001	0261	0435	
UFIND1	A	004	0916	1124	1132
UFIND2	A	004	091A	1125	1136
UFIND3	A	003	092C	1130	1140
UFIND4	A	003	0939	1134	1126
ULP1	A	004	0179	0340	0367
ULP2	A	002	0A8A	0346	0354
ULP3	A	005	0AE8	0373	0376
ULP4	A	003	0ABD	0361	0381
UNPACK	A	004	021E	0478	0258 0954 0958 0962 1476
UNPK1	A	003	0362	0632	0651
UNPK2	A	004	0365	0633	0647
UNPK3	A	004	0376	0639	0637
UNPK4	A	003	038A	0648	0645
UPTR	A	002	0A83	0343	0340*
USET1	A	003	0B06	0379	0377*
USET2	A	003	0B09	0380	0378*
UTAB	A	001	0232	0487	0337* 0338 0338* 0345 1124 1471 1532 1549 1599 1605 1691
VXR1	A	004	0422	0735	0722*

FFP5 DIAGNOSTIC CONTROL PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
XC7	A	001	0F6B	1565	1493
XONE	A	001	0681	0980	0984
XREF1	A	004	02E7	0570	1238 1563
XREF2	A	001	1084	1588	1237
XREF3	A	001	0DC6	1430	1236
XREF4	A	001	03F9	0721	1235
XREF5	A	002	03F8	0720	1234
XP1	C	001	0001	1372	0021 0022* 0023 0024 0026 0027 0031 0051 0054 0054* 0062 0063 0063* 0107* 0125 0127 0129 0131 0132 0132* 0133 0146 0148* 0150 0154* 0155 0158 0159 0160 0160* 0161 0164* 0165 0203 0212 0214* 0215 0216 0216* 0217 0223 0225 0225* 0226 0228 0228* 0236 0244 0247 0247* 0248 0254 0255 0255* 0261 0272 0274 0276 0303 0312 0314 0321 0324 0326 0333 0335 0339 0339* 0340 0358 0358* 0359 0361 0361* 0362 0364 0366 0366* 0368 0370 0371 0373 0383 0389 0391 0396 0398 0400 0402 0410 0412* 0413 0526 0528* 0531 0532 0536* 0540 0543 0547 0568 0571* 0573 0575 0576 0578 0585* 0586 0588 0605* 0606 0607 0607 0608 0609 0610 0632 0633 0635 0636 0638 0638 0642 0642 0643 0646 0647 0648 0649 0649 0651 0652 0655 0674 0675 0676 0678 0678 0679 0682 0683 0685 0686 0687 0687 0688 0688 0690 0691* 0718 0722 0723* 0724 0725 0725 0727 0728 0728 0729 0729 0730 0730 0731* 0733 0735* 0738 0742 0750* 0771* 0773 0773 0774 0776* 0782 0783 0785 0808* 0809 0810 0814 0816 0819 0819* 0823 0824 0824* 0825 0826 0840 0859* 0861 0867 0869 0872 0872* 0873 0874* 0926 0928* 0930 0932 0939 0943 0945 0950 0952 0952* 0953 0971* 0976 0976* 0977 0983 0987 0995 0998 1000 1014 1017 1023* 1039* 1040 1075* 1117 1119 1120 1124* 1125 1127 1128 1134 1135 1135* 1156 1157 1159 1193* 1195 1197 1205 1206 1207 1208 1263* 1264 1269 1270 1270* 1285 1308* 1309 1337 1348 1357* 1471* 1473 1475 1486 1487 1513 1514 1514* 1521* 1522 1549* 1550 1552 1552 1553* 1680 1681* 1682 1684 1685 1685* 1689*
XP2	C	001	0002	1373	0052 0053* 0057 0058 0060 0061 0064 0064 0065 0105 0106* 0109 0110 0111 0113 0114 0115 0118 0133 0134 0135 0140 0140 0141 0141 0146 0149* 0214 0217 0222 0222 0224 0227 0229 0239 0242 0259 0267 0283 0307 0310 0327 0329 0345* 0346 0346* 0347 0351 0353 0355 0356 0357 0379 0380 0405 0411 0422 0519 0523 0524* 0525 0526 0527 0528 0529 0537* 0542 0546 0549 0550 0552 0560 0563 0564 0566 0566 0570* 0575 0579 0582 0583 0584 0584 0585 0586 0604* 0608 0609 0610 0611 0611* 0633 0648* 0656 0675 0682* 0692* 0739 0740 0741* 0742 0743 0745 0747 0751* 0754 0755 0757 0759 0762 0764 0766 0767 0774 0775 0778 0781 0782 0787 0787 0788 0789 0791 0792 0794 0796 0798 0799 0802 0804 0805 0806 0807 0813 0814 0818 0820 0822 0825 0827 0828 0914 0924 0925* 0930 0931 0934 0939 0940 0953 0968 0972 0977 0984 0984 0985 0986 0989 0999 1005 1005 1016 1016* 1019 1019* 1020 1020* 1021 1024* 1035 1036* 1037 1039 1040 1041 1062 1063 1064 1065 1066 1067 1070 1072 1073 1074* 1079 1080 1081 1082 1083 1085 1087 1088 1089 1091 1092 1093 1094 1096 1123* 1125 1127 1128 1129 1130 1131 1131* 1137 1184 1192* 1205 1206 1207 1208 1212 1212 1213 1213 1215 1215 1216 1216 1246 1250 1251 1253 1254 1256 1257 1262 1266 1267 1268 1271 1272 1273 1284 1286 1287 1288 1290 1291 1293 1298 1305* 1306 1307 1308 1310 1321 1326 1327 1330 1335 1338 1339 1340 1342 1343 1347 1350 1351 1353 1354 1356* 1480* 1481 1489 1490 1491 1493 1494 1494* 1501 1506 1564 1693 1694 0194 0638 1117 1251 1271 0191* 0192 0193
X200	A	001	0200	0199	
X39	A	001	0380	0644	
X880	A	001	0880	1115	
ZONE	A	001	071C	1038	
ZRO	A	006	0112	0190	

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

PPF5 DIAGNOSTIC CONTROL PROGRAM

OBJECT CARD LISTING

THE CHARACTER ' ' INDICATES A BLANK COLUMN AND THE CHARACTERS D E H INDICATE NUMERIC SHIFT.

CL 1 THROUGH 16	CL 17 THROUGH 32	CL 33 THROUGH 48	CL 49 THROUGH 64	CL 65 THROUGH 80	CL 81 THROUGH 96
T H E D 1   D ' " 0 3 = G " 8	' " 0 3 " G ? @ - " 0 @ A ' J M	A < L 4 A ' J L / D K C < 4	A " 1 " " 0 H * ' S O D		0 9 8 F F F 5 0 0 0 6
T + - E 3 0 H * ' S 7 7 P <	A B - / O H W A ' S F L R	' 1 6 G 2 ' 6 E 5 ' ) , 6 / O C	K ' 6 S 4 ' ) T / O H W -	' ' B > ' ) D / - M ' A 8 H D	2 4 - D ' M B O F F F 5 0 0 0 7
T + - S ' P 5 , + B A 7 ' H	A ; B G 3 7 5 *   H A C 3 -	A ' - T - D B " / O H E H ; B	G . 4 4 B ' - P K 0 ' D A V - @	C ' - 4 P C ) H A A L 6 A ' 0 6	/ O H ' # 8 U F F F 5 0 0 0 8
T + - F 8 I - H ' ' 1 8 0 H *	C = P 5 , ) H A ' @ B A P -	/ O B . - * M ' 8 ' D 2 + ' 6	A " ) B 6 - * B G ' ' 4 B ' F	W O 1 * ' 0 C W * ' - 7 - D C	/ O H ' J I - F F F 5 0 0 0 9
T + - G 3 G - H A " 0 A - G 6 H	' P 5 , 2 ' J ' ) ' 0 G 4 P " H	A D 1 4 C ' - N - @ Y D . ( 6 -	A " " * * @ P G ' E * 8 H ' G	' 0 A ' A Y = B G < 0 ' ' C	0 @   ' ' 2 C U F F F 5 0 0 1 0
T B 0 G " @   D	' 0 ' F X				1 2 D F F F 5 0 0 1 1
T + - Y : @   L 8 @ - . 0 F <	H 0 * X N ' G 5 * '   H A D @ B	G D H 6 8 ' 6 H H 8 A ' ? 0 H *	B F S G - / 2 ' ' 0 0 C 2 ' L 6	* ' ' A < B G D H L / O H	W A ' - 6 - - F F F 5 0 0 1 2
T + - Z 5 S E H C + 8 ' B A G 7	1 8 " H A A C D ' ' - J ' 0 - L	2 - - P ' 1 ' L - A B " 0 + 6 "	- / 2 @ I ' G 7 U '   H A D X 5	' ' H A B T 0 ' ' V @ < . Y	; ' V @ " 8 * F F F 5 0 0 1 3
T + - D 0 4 - D E ( ' D H - @ B	G ' S Q B ' ' H P @ H R ' S "	S ' - + 8 D ' G 2 U ' - 0 + 6 "	/ O B . T 6 ' ' 9 V " 2 - 6 ;	' ' C ' 6 D H T ' ' B V =	# C 0 D ; 0 * F F F 5 0 0 1 4
T + - , , ? ' B 4 - D A - 0	' @ - D C 4 - D A - M ' ' 0 H D	' S 7 5 ,   H A A ' H A ' * B	G B X V ' @ ' C 2 ' - N +	' H P X ? 0 ' ' 0 A C 7 < ' " @	' " S 4 F F F 5 0 0 1 5
T + - % W " - H B B - 8 A C 7 <	* @ B G B > - < ' ' % G C 7 H	< ' ' % H C 7 + : ' ' F : ' .	' / 0 D ' L 6 H B B : P 2 ' 6 0	@ ' H H   ' ' B B * B G ' P J	( A ' 0 ' X H ' F F F 5 0 0 1 6
T + - _ / B - ? 2 - 6 / ( A *	H B " H A   L O P B 8 * @ ' - Y	<   ' ' H ; D 4 B B - Y E @ Y D	; L S H . B - P 2 - J R ( ' - Y	H ' ? H A E " 4 B B 0 Y B @ Y D	+ @ C * ' K 8 8 F F F 5 0 0 1 7
T + - > * \$ = B G . 3 0 E B - 0	@ " 0 / 8 @ Y * D - * M ' 8 ' D	? 0 - D A M C 6 A ' J . / 0 7	F 0 H * R I T ' H , 0 - ' C -	. S 0 Y F C 0 ' H C ' + 6 8 ' 6	? 0 H * ' 2 0 H F F F 5 0 0 1 8
T R > V ' P C / O > C 8 > .	W				; D U F F F 5 0 0 1 9
T + - H :	( J	E ( 3 M 6 B - 4 5 D . D ( J	F - C M 6 B - @ 5 D ' H 1 ( J	' 6 F ' 0 5 : %	' ' , < F F F 5 0 0 2 0
T + - I 5			A ( ' H B U * H	B ' - S 4 B 4 6 4 ' 0 P - / 0 D	5 ' 0 4 ' P A - F F F 5 0 0 2 1
T + - H O T - P ( ' 9 * ' - G	" ' X - 6 '   H E D < B G ' ' C	B ' 6 ' 0 - H ' < B G ' ' A	8 ' - C 2 D H W + ' 0 4 C < X U	* '   H 6 - , D ' ? P / ' '   H	6 D \$ * ' 2 1 M F F F 5 0 0 2 2
T + - . , - . 6 8 6 ' C ' D ' H	" > H ' ' 0 A ' ' < B G A ) T	G D - O Y " 0 B 8 ' 6 C 2 D ' \$	0 + 7 3 - / 0 E 8 6 ' G 2 D ' K	? ' 0 M F ; H ' ' @ / = 0 - H	B R < H ' # 6 6 F F F 5 0 0 2 3
T + - < W ' 6 G ' ; D ' @ Z	( \$ - P 6 7 -   ' ? H 6 E X *	, 7 1 9 ? H A B - ' # \$ + P	G B , 3 ' 9 D @ ' 9 _ E 5 ' ; P	_ ' 6 H 8 0 H D C R A O B ' - @	B 0 H * ' 0 / - F F F 5 0 0 2 4
T + - ( / ' C / O H H '   "	" ' ' B ( ' - C O * B G ' 9 *	5 ' -   > 0 - D C . N 8 A 0 \$ T	* ' ' \$ ' E < A F 0 A W - K	5 ' - . / 0 ' ( - C * * B	G ' 3 < ' 9 1 @ F F F 5 0 0 2 5
T + - + * - < 9 E ' A H ' G ,	O K X 7 : K ? H B A E @ ' K V <	@ ' ' P - E < ' X 4 B + - H	A A X 0 B + ) B G + G 0 B ' V 8	' ' 6 6 ' L P E / # 0 4 B ' +	D ( ' D ' * R * F F F 5 0 0 2 6

FFP5 DIAGNOSTIC CONTROL PROGRAM

OBJECT CARD LISTING

CL 1 THROUGH 16	CL 17 THROUGH 32	CL 33 THROUGH 48	CL 49 THROUGH 64	CL 65 THROUGH 80	CL 81 THROUGH 96
T+-IP=Q4-IDOH*	DH*BG 4B 1>OH*	C<70CWFO . A'@B3	2 -J; B3EP R1	6 -I' PT2-ER@ PT	8/8U PH-PPF50027
T+-EKP-PE V@ P	8/H\$B 8 0-H <B	G B 8B 8B 8B 8	( DDI*HA =4RCZ	Q 1@I; "--P E8	AB8U 14V7PP50028
T+-J(O H>B*HA -/	: * 88\$0-D <B	G 4 -J+0-HC'88	AM*EHOM HGC. 7  H	DD*TE  HEC*HA C	E - 4.<FFF50029
T+-KH <EG A ? B	F?C17@Y* ?L97@YD	F?C97@Y*C?F_7@C%	% A (>K @?	9@Y* 0-DA=T3' >9	-BOH ES@PPF50030
T+-LC ,8AX.0K/%H	A B'Z32 8\$0+7\$	-/55% -HA;8@B@/	C;0D ,0B**;BGR,7	>  HABHOA0ON*8H)	W?D PT<PPF50031
T+-L=  HAB\$70  H	AE\$YAI.40 -HBA?	#) >BGR>BG >BGR,7	2 + AMCMAB-** Y	C A4 B-< @YDF@C_	P8H* #HUPPF50032
T+-M9R74 8C2-J)	"0.2-8%> YC 7M	A =BG=" #)>BGR/O	C /DC4-DD_ ES( D	EV;BGRTEAARG /08	D+D "3MPPF50033
T+-N4 -T2U %' 8Y	C@HD  HGJC7" /C	2 848- HHOA <B	G WH (8DBD88 B-<	CUA4 B-< @YDG@C_	P0H* 6.HPPF50034
T+-O?ALE* OHJ 3-	- /-8- G D NH4-D	E ( DEV*HA C /0	8%PC8@X05MCT1) Y	M2) PAB@PD8%PC8@X	05M EDUPPF50035
T+-PD4'SA1<PDBHA	2*J 9=-X94_ 5'X	O14CU9+-XQ(XR4C	S8>\$S C8BAC"	B -07( DGB38HA1<	5 8* 308PPF50036
T+-QVD31 B8B* B	?D A;H @Z H?EO	A+J BB HGACUH -T	2U(; * A4 >")  F	F2P-8  H8_P--  H	8D* #-MPPF50037
T+-R-/0*M8 <-OT	"B8A88 C2UGLK 8O	4 03 /OH; - AS"	/OH; -YAA*, /OH	; 8YCA*7 /0*M8 D	%FO- E08PPF50038
T+-8\$W13B 8S*?	-C-MBC8H(8S 0+-D	BC) HA #8A38BG 5Y	AA) Q WX1, 88 G@D	'<A"--,(88 D@-08	I.- * ,YPPF50039
T+-80A%X+0H*GE+H	0H*GE+ AG P28D	\$I 9C2-/ %* 88	( 20AA% G- P20D	< C /0*M8-B	? A4 8SYPPF50040
T+-*JH?HBB%BGA1L	- *BGA_8</ T"BE	5 0*L, D @Z C8-H	B;L @Z C8-HC8-H	A( HGD@HA CB -	0H* 8E%PPF50041
T+-)< CB -*M_ /	2_8E2X E- Q8A*-<	20H*BDTS A) -2U *	9D HH@Y*D+8-BB<B	8A>M8A HH@/AE@Y*	+ 3*0PPF50042
T+-;GB H-GA0@C_	'@H*L8; "%; =%;8	:%;Q@>0/-+H B8-H	8 *YHP"< +GWQ;G	- @HRA8*5 8*L0H*	"   =J4PPF50043
T+-B+57-/1+'8E"	--0;0@3S8DC-2D X	/=G 3= C/@0*/=G+	1'C,3"HK0@3S88C-	-DI,/=G<<-OT"88C	-/6* N20PPF50044
T.0-?@-.3' P6' "T	9@G_@Q;.T9+PW9=T	ZMF_%4).L5(PO5'T	RQ8_*0.C1<PF1@T	ILU_	.....EJ8PPF50045
T+-U:8DCA50H?GA8	E 08- YB@/ =0-H	H8%HA TI_ @-D	OY B Z-C 8P:H P	8D GS -  U UO@Y*	P;A #KYPPF50046
T+-V5 )HA @B8BJD	98 G2D  0+0  /0U	%0H*BFO**ASP" CU	A --98 G'@Z C@C%	"(8<HA10 B-< G <	BDE< EK@PPF50047
T+-W00H*BD_BGA	" P@C) V*\$PP4G-5@	";013-C04B  >0H*	CV@HBR0 5 8 >C-D	C#-<2-8 A@YH8-+@	A@Y8 K9 PPF50048

PPF5 DIAGNOSTIC CONTROL PROGRAM

OBJECT CARD LISTING

CL 1 THROUGH 16	CL 17 THROUGH 32	CL 33 THROUGH 48	CL 49 THROUGH 64	CL 65 THROUGH 80	CL 81 THROUGH 96
T+-X,DL-H-T2UC?	2/0*8-HH@/1W I	/I-CF&BQ WOAW (	0 L7"8-94 YA@ZQ	, AX HO E CO B	*GH @I4FFF50049
TDOX" HO *OC0 C	/O&DOH*C80H@BR	.....	.....	.....	40@FFF50050
TBJ"" "-C=87FDH8	B90	.....	.....	.....	6 *FFF50051
T+-3A@C_18H*L.-	P28-#-\$I?HF?;A	-@-DQ?8A-8HEX 8H	E5 HBAC0BA) @ S	T?DF*0-DH-GDQ -<	0 . 1-DFFF50052
T+-3@PLS9 3T-UG(	@E CK ED? SIB+	BZ=BGR"AB (+8GD75	" + AP=G0**G0	2 +G2S+G0*02CB @	I + 7Z*FFF50053
T E3=/6*	.....	.....	.....	.....	,FFF50054
T+-5+0-HGE.EHD#E	HO#MAD40 E\$IT-F	, 3. /OHK+H E5"H	8A3HE -T2/O&9B H	H0I P9L-D -T2DD7	/8L8 -H*FFF50055
T+-6I@Y*H<;HCUJA	8 (+BGE=GUPLUGA) L	2U E19.G2/1M'AE	@YDF%;E?@= L-	A ' =19H619V>18XP	38 L YFFF50056
T+-7D8;I68-AB@Y*	\$@G-48H*P-M @-D	8-A"X-B_@H 8-H	M8-A"CH<H"0U 0-H	E_3MAA1  /O BG0	EP - @:4FFF50057
T+-7"-80E A  *@B	GDHL /OHED&O C9%	B CO 24"0HBB-D	G A C.-HGA--B 24	B -8&C:H ) @QAC:H	)-@ 584FFF50058
T+-8: <_ 9C 87	90H*BF-DOC:Y8- H	D@Z H0H*BF-DIC#	/OH E L<E-@BG /Y	A<0"W0H*BF-D3DH	B E H P\$QFFF50059
T+-95<TOAC7) ' C	2-Q84 E9&OH*BG-D	SC0-HH/.1- 0	AC7<CUC0 C7&< 9	1C7H< 94C7(9 E	9 H :IDFFF50060
T+-:0@/ OT AC7K	:@ "=-G2--O+ D	E=HB E8AC7< *08	C7&CUC4<C7L --9	H E0 )"HACH0EBE=	(  H PHEFFF50061
T+-#,C7-2/1 ' -'	7@-DIT 0HC9&@ ' ' 7CAUE SEOH*BF-D	ED A8D GK E  U 9	C D  0HC  -@B ?H	AB<H 8:-FFF50062	
T+-@W E ( D  08	AC0<C.34-C0.2AA	<"0 G?@+ @B 2"	/O*90H*BF/D'Y H	2@YD. 1H*BF->DR#	2/1 ) 0HFFF50063
T+- /OH*BF-D*DA3	/OH&A2H&MC7B -C	2-J?B EH2- @YD	J;A A4-DC0I  E#B	G SYH7=Q8 EHH@/	C&C% 1IHFFF50064
T+-=* PBG / . /O.	X1"HG  "HG<0 '  C	4 HDA--HC 8&D/	80FAY*GTL5%GD1) X	P6*KN8@DR5 (\$D1) (	94% 3LDFFF50065
T+-"PE< 06*N 8% X	Z1MCX9'I 1+LA44C	P1'LU5*XT&<LE1%X	N2; I5_N 8@GR4@N	K4_.K4CM9+.T&<.	8&<< E-4FFF50066
T+ / K5_XP1* T&FC	V1)XI1>/-EDA EDA	E DA EDA EDA EDA	E DA EDA EDCD0')	4'SA1<P&EPA R#P	T&<< :TQFFF50067
T+ /A (5_LH5_N 8>.	W8UCA5*J/5_V 6*P	S1; ( 2<GL8@PN8@P	P& (-R5%-R0) J R#P	L1* T2) \$N8UCA5*J	8>< *.DFFF50068
T+ /BH0) XT&DA EDA	E DA EDA EDA EDA	E DA EFA-QFA-QFA	-QFA-QFA-QFA-QFA	-QFA-QFA-QFA- ( -	KGL4 ) :QFFF50069
T+ /CCP S @YDH  *M	H-< AD/, A1HC H*	E W 0A YUA"EOA 2-	A"0@E -@A"370 T.	2 J < -.1C7D@ J	FC H 58YFFF50070



FFFF5 DIAGNOSTIC CONTROL PROGRAM

OBJECT CARD LISTING

CL 1 THROUGH 16	CL 17 THROUGH 32	CL 33 THROUGH 48	CL 49 THROUGH 64	CL 65 THROUGH 80	CL 81 THROUGH 96
T+/C=AGS ST6- T.	2-8Y'0-H' @YD+@Y)	0<H<C=C-A' "-2UPD	@0-H'  GODOCODAE8	@A' JU GODET18AF4	@; 'E')K*FFF5007H
T+/D9W30HAI0@; <	I F6CBT18A(-@E I	R G-D=30*A 0@; M	R A8EFT18APD@G' N	2 G-R4T14' _<@; ' / E8)	SYFFF50072
T+/E4C6H<COW CB-	2/0E@1' H' <' C=C7	Y' "T2-JM'8'  8@YD	+ M' C= HAA37/' "M	2' 8Q<' H5' "-': H	5@-D' 78-FFF50073
T+/F?.LO' ASU@' R	) MFPC1' AD<@' E	Z ' FDT1' A_H@A88	- ' P8' 21A@M(1-H	G\$L5' TP2' MD<H0;	DC 8' EZ8FFF50074
T+/GD D' PHL1' A_@	@E' R* DHPY31' ADU	@E-\$K G-GMC04A5M	@E' )E D' GPL1DA6'	@J-)T DQG)T1' A7X	2/2M' 2ADFFF50075
T(JH-( DKC@HA' TI	'D' C2-858D' GK' E	'UAG3@Y*PCE<G6-3	E0-D' OBACYKH<B	G' /.' /0' %' A	..... * 4FFF50076
EC*R*E7*=-DC"PH\$	=7M&F '  ' C	'F' ASC' R' A	S0' Q' .....	..... 21120317710	62571816FFF50077

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