

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include object codes 0A00 through 0B07 and their corresponding assembly instructions and comments.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include object codes 0B0D through 0C48 and their corresponding assembly instructions and comments.

A014 FILE CONTROL UNIT FLT SECTION 1

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
0C4C	31 A3	0C69	138	LIO	YORE,X'A3'
0C50	C1 A2	0C58	139	TIO	CRUSH,X'A2'
0C54	C0 87	0C64	140	B	TRYST
0C58	31 A3	1495	141	CRUSH	LIO
0C5C	31 A3	0C59	142	LIO	CORD,X'A3'
0C60	C1 A2	0C6A	143	TIO	YORE,X'A3'
0C64	C0 87	0C64	144	TRYST	BRUSH,X'A2'
0C68	8000	0C69	145	YORE	DC
0C6A	3D 07	121E	146	BRUSH	CLI
0C6E	F2 01	0B	147	JNE	FEE
0C71	C0 87	021A	148	B	PRINT
0C75	0E08	0C76	149	DC	XL2'0608'
0C77	0C97	0C78	150	DC	AL2(FRESH)
0C79	F2 87	0A	151	J	DUN
0C7C	C0 87	021A	152	FEE	B
0C80	C6	0C80	153	DC	PRINT
0C81	08	0C81	154	DC	XL1'C6'
0C82	0C97	0C83	155	DC	XL1'08'
0C84	A093	0C85	156	DC	AL2(FRESH)
0C86	C0 87	0222	157	DUN	DC
0C8A	A093	0C8B	158	DC	XL2'A093'
0C8C	C0 87	0C3D	159	B	TRUST+4
0C90	40D9C5C64B40F1P0	0C97	160	FRESH	DC
0C98	34 08	12C7	161	GNAT	ST
0C9C	31 A6	149D	162	LIO	CL8' REF. 10'
0CA0	31 A4	149B	163	LIO	GCUT+3,X'08'
0CA4	3C 87	0F1B	164	MVI	ANNE,X'A6'
0CA8	3C 07	0F5F	165	MVI	BESS,X'A4'
0CAC	3C 07	10D0	166	MVI	RINK+1,X'87'
0CB0	3C 07	0F5B	167	MVI	POES+1,X'07'
0CB4	3C 07	0DC8	168	MVI	EON+1,X'07'
0CB8	31 A3	14EB	169	LIO	ZONE+1,X'07'
0CBC	C1 A2	0CC3	170	TIO	RESET DATA FLD SW
0CC0	F2 87	12	171	J	SET DELAY SW OFF
0CC3	0C 01	12C7	172	FAULT	MVC
0CC9	3C D5	138A	173	MVI	GOUT+3(2),SAND
0CCD	C0 87	1219	174	B	VIPER-38,C'N'
0CD1	C0 87	1A1A	175	B	TURN
0CD5	F3 00	00	176	ETA	SIO
0CD8	1C 04	14DD	04	PANDA	MVC
0CDD	0C 27	13B0	13B1	MVC	X'00',X'00'
0CE3	06 11	1525	148B	AZ	PAY+4(5),4(XR1)
0CE9	38 02	14D9	179	TBN	VIPER(40),BLANK
0CED	C0 90	0DC1	181	BF	ALMS(3),TEN(2)
0CF1	38 01	14D9	182	TBN	FAY,X'02'
0CF5	F2 10	98	183	JT	AMILE
0CF8	3D 7A	14D9	184	CLI	FAY,X'01'
0CFC	F2 84	91	185	JH	PEER
0CFF	0C 01	0D0E	0D10	MVC	STAND+3(2),STALL
0D05	0E 01	0D0E	14D9	ALC	STAND+3(2),FAY
0D0B	C0 87	0D12	188	STAND	B
0D0F	0D12	0D10	189	STALL	DC
0D11	0000	0D12	190	STALE	DC
0D13	0000	0D13	191	DS	CL1
0D14	C0 87	0E5E	192	B	PROD
0D18	C0 87	0E79	193	B	BANA
0D1C	C0 87	0E98	194	B	CHERI
0D20	C0 87	0EB7	195	B	FACT
0E24	C0 87	0EC7	196	B	TACT
0D28	C0 87	0ECF	197	B	CAPE
0D2C	C0 87	0EEA	198	B	TRACT
0D30	C0 87	1011	199	B	WORK
0D34	C0 87	1019	200	B	SHARK
0D38	C0 87	1062	201	B	SALT
0D3C	C0 87	106A	202	B	SAINT
0D40	C0 87	1074	203	B	FOOD
0D44	C0 87	0D90	204	B	PEER
0D48	C0 87	0D90	205	B	PEER

A014 FILE CONTROL UNIT FLT SECTION 1

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
0D4C	C0 87	10A1	206	B	FLAT
0D50	C0 87	110A	207	B	ANTE
0D54	C0 87	1112	208	B	AMP
0D58	C0 87	1116	209	B	SHOP
0D5C	C0 87	112E	210	B	WHELK
0D60	C0 87	1138	211	B	STAT
0D64	C0 87	116B	212	B	VARY
0D68	C0 87	1177	213	B	WARY
0D6C	C0 87	1183	214	B	WINE
0D70	C0 87	118B	215	B	TINE
0D74	C0 87	1193	216	B	WIRE
0D78	C0 87	119B	217	B	WIRY
0D7C	C0 87	11A3	218	B	MINT
0D80	C0 87	11AB	219	B	SINE
0D84	C0 87	11B9	220	B	LINT
0D88	C0 87	11C5	221	B	ACRID
0D8C	C0 87	11D5	222	B	POOR
0D90	C0 87	021A	223	PEER	B
0D94	C6	0D94	224	DC	XL1'C6'
0D95	1D	0D95	225	DC	IL1'29'
0D96	0DC0	0D97	226	DC	AL2(BDPARM)
0D98	A0CF	0D99	227	DC	XL2'A0CF'
0D9A	C0 87	0222	228	B	HALT
0D9E	A0CF	0D9F	229	DC	XL2'A0CF'
0DA0	C0 87	1A25	230	B	GOOUT
0DA4	D7D9D6C7D9C1D440	0DC0	231	BDPARN	DC
0EAC	C5D9D9D6D9406040		231		
0DB4	C2C1C440D7C1D9C1		231		
0EBC	D4C1E3C5D9		231		
0DC1	0C 00	1325	14DA	232	***** SUB ROUTINE TO CONTROL BY BIT *****
0DC7	C0 87	0DFB		233	AMILE MVC ANDY(1),FAY+1
0DCB	0C 00	14EC	14D9	234	DLYSW B ERGO
0DD1	31 A3	14ED		235	FANCY MVC ELLA-1(1),FAY
0DD5	0F 00	1325	1502	236	LIO ELLA,X'A3'
0DD8	C0 01	0CD7		237	SLC ANDY(1),ONE
0DDF	C0 87	0DEF		238	BNZ DLYSW
0DE3	36 01	1502		239	B ADVZ
0DE7	36 01	1502		240	ADV5 A ONE,XR1
0DEB	36 01	1502		241	ADV4 A ONE,XR1
0DEF	36 01	1502		242	ADV3 A ONE,XR1
0DF3	36 01	1502		243	ADV2 A ONE,XR1
0DF7	C0 87	0CD8		244	ADV1 A ONE,XR1
0DFB	0C 02	14F6	14F9	245	B PANDA
0E01	0F 02	14F6	1502	246	***** SUBROUTINE FOR DELAY *****
0E07	C0 01	0E01		247	ERGO MVC BEIGE(3),TAN
0E0B	C0 87	0DCB		248	ENGO SLC BEIGE(3),ONE
0E0F	34 08	0E4D		249	BNZ ENGO
0E13	3C 00	151A		250	B FANCY
0E17	C1 A0	0E4E		251	***** SUBROUTINE TO COMP BUSY AND ERROR *****
0E1B	C1 A2	0E56		252	DANTE ST PGRT+3,X'08'
0E1F	3D 00	151A		253	MVI ANNA,X'00'
0E23	C0 81	0E4A		254	TIO AVA,X'A0'
0E27	3C D5	138C		255	CART TIO BETH,X'A2'
0E2B	3C D5	138A		256	DART CLI ANNA,X'00'
0E2F	38 01	0E20		257	BE PGRT
0E33	F2 90	04		258	MVI VIPER-36,C'N'
0E36	3C E8	138C		259	MVI VIPER-38,C'N'
0E3A	38 10	0E20		260	TBN DART+1,X'01'
0E3E	C0 90	1219		261	JF VIC
0E42	3C E8	138A		262	MVI VIPER-36,C'Y'
0E46	C0 87	1219		263	VIC TBN DART+1,X'10'
0E4A	C0 87	0E4A		264	BF TURN
0E4E	3A 01	151A		265	MVI VIPER-38,C'Y'
0E52	C0 87	0E1B		266	B TURN
0E56	3A 10	151A		267	PGRT B PGRT
				268	AVA SBN ANNA,X'01'
				269	B CART
				270	BETH SBN ANNA,X'10'

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains diagnostic error codes and assembly-level source code for the File Control Unit.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains diagnostic error codes and assembly-level source code for the File Control Unit, including comments on LIO clock and data.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for file control unit, including instructions like B FAKE, TBN KNIT, X'02', and various subroutines.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for file control unit, including instructions like SWS KNIT, X'A3', MVC EXP-1(3), FAY+3, and various subroutines.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for error codes 1221 through 1344, including source statements like 'ADD 1 TO ERROR COUNT', 'MOVE BLANK TO PRINT', and 'STORE MSG COUNTR IN PR AREA'.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for error codes 1346 through 1494, including source statements like 'OPUS DC CL49 MSG NO. B E STATUS CTRL FLD DFCD DFDR DATA', 'ROUTINES 1 SELECT HEAD 0 OR 1', and 'SUBROUTINE TO CHK SK BUSY'.

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Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic program details for the left page, including error codes like 1762 0E and 1803 06.

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Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic program details for the right page, including error codes like 1804 1EEO and 1895 12.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic code entries for A014, including instructions like DC, MVI, BT, and comments such as '1 BYTE EE', 'TEST SCAN FOUND', and 'GO TO NEXT ROUTINE'.

A014 FILE CONTROL UNIT FLT SECTION 1

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic code entries for A014, including instructions like BF, DON, MVI, BT, and comments such as 'ER. IF NOT', 'SEE IF MOD B DEFINED', and 'CL23*SEE PAGE 550 PCU MAPS-XX'.

A014 FILE CONTROL UNIT FLT SECTION 1

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1B7E OE 07 1BA5 1BA5 1342 ALC EXP(8),EXP
1B84 OE 00 1BAF 1502 1343 ALC CKCTR(1),ONE
1B8A 3D 21 1BAF 1344 CLI CKCTR,X'21'

A014 FILE CONTROL UNIT FLT SECTION 1

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1C86 34 08 1D95 1408 *
1C8A 2C 00 1D9D 00 1409 *
1C8F 2C 00 1E51 01 1410 *
*****I/O HANDLER SUBROUTINE*****
1411 IOHAN ST IRET+3,ARR SAVE RETURN ADDRESS

A014 FILE CONTROL UNIT FLT SECTION 1

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1D7C	38 10 1D97	1476	TSTBSY	TBN	BYTE01,X'10' TEST SEEK BUSY
1D80	C0 90 1D92	1477		BF	IRET
1D84	0F 01 1E53 1502	1478		SIC	SETTLE (2),ONE DECREMENT DELAY COUNTER
1D8A	C0 01 1D68	1479		BNZ	TIMOUT
1D8E	C0 87 1CB6	1480		B	OUTIT
1D92	C0 87 1D92	1481	IRET	B	IRET RETURN
		1482	*		*****EQUATES*****
		0010	1483	IAR	EQU X'10'
		0008	1484	ARR	EQU X'08'
		0004	1485	PSR	EQU X'04'
		0200	1486	SRT	EQU X'200'
		0202	1487	SMOD	EQU X'202'
		0204	1488	CPU	EQU X'204'
		0208	1489	SBYTE0	EQU X'208'
		0209	1490	SBYTE1	EQU X'209'
		0212	1491	TEST	EQU X'212'
		0232	1492	UTAB	EQU X'232'
		01F1	1493	RUNTAB	EQU X'1F1'
		00A4	1494	DFDR	EQU X'A4'
		00A6	1495	DFCR	EQU X'A6'
		00A2	1496	BUSY	EQU X'A2'
		00A0	1497	ERROR	EQU X'A0'
		1498	*****		*****
		00A2	1499	B01	EQU X'A2'
		00A3	1500	B23	EQU X'A3'
1D96	0000	1D97	1501	BYTE01	DC XL2'0000'
1D98	0000	1D99	1502	BYTE23	DC XL2'0000'
1D9A	00000000	1D9D	1503	CFLD	DC XL4'00000000'
1D9E	1D9A	1D9F	1504	CADR	DC AL2(CFLD-3)
1DA0	C8C940E2D7C5C5C4	1DB5	1505	ERRMSG	DC CL22'HI SPEED ERROR DRIVE X'
1DA8	40C5D9D9D6D940C4		1505		
1DB0	D9C9E5C540E7		1505		
1DB6	0400	1DB7	1506	MODE	DC XL2'0400'
1DB8	00000300	1DBB	1507	MATRIX	DC XL4'00000300'
1DEC	0402050207040804	1DD1	1508		DC XL22'04020502070408040A060B060D080E08190A110A130C'
1DC4	0A060B060D080E08		1508		
1DCC	100A110A130C		1508		
1DD2	140C160E170E1910	1DE7	1509		DC XL22'140C160E170E19101A101C121D121F14201422162316'
1DDA	1A101C121D121F14		1509		
1DE2	201422162316		1509		
1DE8	251826182A1C2B1C	1DFD	1510		DC XL22'251826182A1C2B1C2F2030203424352439283A283E2C'
1DF0	2F20302034243524		1510		
1DF8	39283A283E2C		1510		
1DFE	3F2C433044304834	1E13	1511		DC XL22'3F2C43304430483449344D384E38523C533C57405840'
1E06	49344D384E38523C		1511		
1E0E	533C57405840		1511		
1E14	5C445D4461486248	1E29	1512		DC XL22'5C445D4461486248664C674C6B506C50745875587D60'
1E1C	664C674C6B506C50		1512		
1E24	745875587D60		1512		
1E2A	7E60866887688F70	1E3F	1513		DC XL22'7E60866887688F70907098789978A1801280AA88AB88'
1E32	907098789978A180		1513		
1E3A	A280AA88AB88		1513		
1E40	B390B490BC98BD98	1E4D	1514		DC XL14'B390B490BC98BD98C5A0C6A0CCA6'
1E48	C5A0C6A0CCA6		1514		
1E4E	00	1E4E	1515	COUNT	DC XL1'00'
1E4F	0187	1E50	1516	TIME	DC XL2'0187' 26.15008 MS
1E51	00	1E51	1517	DROP	DC XL1'00'
1E52	0000	1E53	1518	SETTLE	DC XL2'0000'
1E54	40E2E3C1E3E4E240	1E63	1519	MSG	DC CL16' STATUS XXXXXXXX'
1E5C	E7E7E7E7E7E7E7E7		1519		
1E64	8000	1E65	1520	INDEX	DC XL2'8000'
1EE0			1521	ORG	X'1EE0'
1EE0	00	1EE0	1522	BARN	DC XL1'00' DATA FIELD
1EE1		1FE0	1523	DS	CL256
1FE1	00	1FE1	1524	ARNE	DC XL1'00' CONTROL FIELD
1FE2		1FE4	1525	DS	CL3
1FE5	0001DC01	1FE8	1526	LION	DC XL4'0001DC01'
		0222	1527	HALT	EQU X'222'

A014 FILE CONTROL UNIT FLT SECTION 1

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
		0216	1528	LINK	EQU X'216'
		FFFF	1529		END

A014 FILE CONTROL UNIT FLT SECTION 1

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Lists various symbols and their references, including RINK, ROPE, ROT, RTNAR, etc.

DATE 02MAR70 01APR70 06MAY70 01JUL70 01MAR71 EC NO. 571512 571516 571513 571524 571573

PROG ID 0A01-4 PAGE 15

A014 FILE CONTROL UNIT FLT SECTION 1

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Lists various symbols and their references, including TON, TONY, TOOT, TRACT, etc.

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

DATE 02MAR70 01APR70 06MAY70 01JUL70 01MAR71 EC NO. 571512 571516 571513 571524 571573

PROG ID 0A01-4 PAGE 15A

A014 FILE CONTROL UNIT FLT SECTION 1

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
TAOYGYAE B/ JAQA0140001
T+-ZDYD XA E \$%<HAFSM@A.2<E@ MW3FWBI4<I1+0D#D 4 JY) |H*KT2GB50 2DAM/C <NIJJS<EH K63U 70%AO140002
T+-ZUMA.EOI HOC- ED ? D ZQOH*H-00 AD%*ML OBF9-\$D30 F: M<A/>BF:P /1_ KOH*BG-<SYA+H0H* KP* E, HA0140003
T+-D:/1YEC <-9AL G: M:-OAC(*M_LH AEK*BA1IZ1|DNH@O CEKMHQ%EGCIT /00 9C DK11%~(EBO4 0 AC(* QEDAO140004
T+-SE.*< 1HVEFC /1;KC <-9ALH0H* QW<BGGCC< 1"UE. | /009 (CER000AC(* M_00CEKMH%EGCIT /00 =12R0140005
T+-XOCCCG=EM2 C AC(*MPLMAEY*0-1M VEPD /02QOH*+<E@ AD%*SG@AC(*M>LE AE2@< 1HVEG. /1 DC <L/42R0140006
T+-G=EMW*EGCIT /009C <-9AEC< D <51K*(E@P0-0CEKM M:<BGCIT /0090H* .Q@BGF/Y< 1"UEIU 2@/M 1C%AO140007
T+->VH@OCEKMHQ-0 AC(*M>LMAFI*@-AL D@H*<HCO E+, /00 9C <-9ALH0 1-703 =G*8-730JG> 2"1# 4C % 11@A0140008
T+-?/G?<; CCEKM HR-OAC(*MPLMAP.T /02QOH*+<E0CG=8 MUGOCEKMH% OAC(* MOLMAPKG /02QOH* <+E@ Q9 A0140009
T+-0* 1"UEID< 1M VEGH< E3PE<<5 JV KOH*<W<BGGCCU< 1" UEID< 1HVEG-< E3 PEH45 JW_OH*<W<B GCCU #HUA0140010
T+-1PC <-9AJFC D <51K*(E@R5@BGCIT /0090H*EFT6HCF- AY-1H<E<M:"+/ LF TEIM1Y0120EH<O<B GCFE 1Q-A0140011
T+-2K<E<EVLPTCFX AY-1D@H*<RH |E* KG?HAB@BG /YFB 2 P@Y*H@H*BF%QHCI; -U@BG SH-U@BGGC5 6*M; -EA0140012
T+-3(1U_ @- 4BA. G<EQMXLFEI%@/0@ \$| *|P30GD (@A0 \$| * (2CFTE+?AY-3 C@Y*KC DK11JN|(M LSX 33QA0140013
T+-4H/1HROH*EF?< AODE (4DCB*LA+ 1A/DNIJK. + HM6*B EC*D8 JLR@/BQ|PY H6-HDU@OAC@8 (D 8 ACE8 R.OA0140014
TB@4KE(X /04KCJH #Y%AO140015
T+-5+0H*+P%BGCYX /0:QOH*+_@BGC%~ /0#|OH*+:%BGDAG /1 ROH*EQ%BGDF, /1A4OH*(U<BGCRC /1 828A0140016
T+-6IY*BGDE, /1D KOH*JEXBGDK# /1D 80H*JE@BGDP- /1F COH*JS@BGDR| /1F \$OH*JY@BGDE? /1F 90H* NH@A0140017
T+-7DD*P /1GN0H* BF%Q)C*B-3@BG SH -3@BGFSP6) \$G6*G M<@PR6) \$REFA 0%G DE (-A6*GM0; |E6@0 D2M #S@A0140018
T+-7"E (, /07#C H#ALR<E<M#E@ D2M N % AC*~ /07? (-D N TQAE@H6 JMB (-D N TQAE@. /03QC H H'/E EAUA0140019
T+-8:=E@BEIQN % AC-G /07. (-+LLO EJ,AY 9+0EH+NT4 EJ, -E9H|(MLTC3 ND8Y8 E8-@Z D|+- LTC- 0K@A0140020
T+-95D 8-0I KFL3 YD8, /1HROH*+KTY AEJ, /08\$+/ NFXB GC/@(1"UE(7 -E7 TOH*BG-EM7J+-0H* KP* 62%AO140021

A014 FILE CONTROL UNIT FLT SECTION 1

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+-:0/07T<HEND04 AEJ<M@BAC;? /OH ; /LSD:3 /1HROH* (:3B+EJE(JENE(? -E7,0H*EG-HM61+ WOH* 02QA0140022
T+-@,D/X /07, (-D NCT@AEJU5 JLS@H* <6CHAEJX /03QC@ ;8ALE@HD(@@BG /@ AE(YLX<BGD/X /07 ?C 1TUA0140023
T+-@WD2HM600 E(H M6T1UE@4@JAM-C H H4JHC+ -M4|H@BC% DEJ4@AAH-+ DM3*H EG%BGCC-@| A<V%G. E@ KR-A0140024
T+-'/@C2GC1X@A0' -| *|0@BGC;%+ 1L KE(H8 JLG@I |LTY HEJ"/O*K+@-EG3F TEJ81Y1H-0H*|5*B GC"U -SHA0140025
T+-==0H*|ACS C", 2DAH8HALS@/ L+B H@MH@C<BGD(| /0= G@H*E43@EC+@6 J@ BATDE-JK.<H<K7L@ -F9U JT*A0140026
T+-"PG \$Z@. /1_ K@E \$YJ.) 0'D|0C0 GC17 /0@|0H*|>@ GC6H4B "H@H*BG-L SYJ+00H*KT*EGC'D 8BA@ 9S-A0140027
T+/'K4< EC=G /0' S<E@H@30JG>C /0' 10H*|QTC@C? /0= 10H*E@L-H@ (C'D = G@H*|Q@BGC@ /0' S|< ;@H@0140028
T+/'A(E+? /1) |D H@T@TD_4@ />V|14 \$H*BGFS@G /.) 0A' (@3FTE+@0Y1.) ; B S2L3'F9X /1_K' H K7* K*E@0140029
T+/'BND 730H*BG-D \$YJ+00H*KT*EGC< 1ZAK\$0H*(@00 CS H6%BGC;@0Y1.) C * S2JLE|;@SW*BGFSH (AH 1H@A0140030
T+/'CC7J>/0HD (@@B G /@AF:DLV%BGD/X /07?C H:JLEC H:ALEC H91LSC H9/LSC @E@JHD|BE H:TO NI@A0140031
T+/'C=AAL%+ DM8* EDE. /0'W+H M9ZH GBTS E+T2D ?2/00 :DALD@H*E6TYHE+0 1Y1L,<E<H@E@IE+U H:* @-A0140032
T+/'D9/1B" | *E4<B GC;%@ A"UOH*(@@B GF/Y< AH@E(Y1Y1L +CODNF1H@C DJG<B GC;@< JD7E(? /1D 4<H@ :@A0140033
T+/'E4D_X0Y1.) C H \$ZAL*C H\$WA>YOH* \$M-4BD_0SY<BAC;| /0H; 1>-D9L /1H ROH*(83Z C?*:E @ OH* E, A0140034
T+/'F?C-<#E #7+4 +=@BGC-<@/0":0H* (@30GC", /073+2 +*@BGC-<:H #7CH* (@32GC5" /0@DC U H:J@ 7A@A0140035
T+/'GD,32GD(C /1B "H*|03CAEE. /0# D<E@H@3FUEIM12AK LOH*(@30AD;.AZAG /+0DJ8T4 E(, -E7 ?CAD 0JHA0140036
T+/'HVD# L03-AE(, UAHRC DLYA+/0H* KF*BGC; 5MCN@D @:A.=@Y;+|+-L |H GS3@HD%| /1<H@-D K@1@ 0QUA0140037
T+/'I-S31 D?<@EA. 1| K:-0ND>UK:-0 D_QLIL@AD_M< 1. SG=EOY/.S<H<K7LB HD>H@ZA.YC K:/* -OH* 4K*A0140038
T+/'H\$ /9QD>YLI<B GD%< 1.:EKE<AJ< BD-Y@EA.6C DLE/H HC DLGAHHC DLE/H HC DLCAHHD K' C1 D?H 4Y0A0140039
T(J.JOEHK@F-D/. /0H@-LULI<BG /Y A+J+0| *.P<HA /Y 4 JY) 0 *E <BGD%& <AJ.@EHC /1I2 0H@A0140040
T A.O 0 8A0140041
TBA.3@<PR6) \$R@JA =3@A0140042
T+/'(- CEHD3%@A1H ;0H*BF%D: D7E- *B GD3/ 1) X@5_V 5) B .@ (LS14CN5U_ 0UC E@DA 8>|A@=LS@DA 0=< 6.HA0140043

A014 FILE CONTROL UNIT FLT SECTION 1

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
TBA+H6) (1_1DEDC	D1%|REDCD1%LR6<L	A8@E &<PX5@PC8@P	D&DA &DA &D	.....	..... @#UA0140044
T+/1, &(PO6<.RK4C	05MCS0@GN6<TI83E	HD=Y< 1"UED, /1|	* (-L:-OCG=EMJTF	WEI73Y C /1|,OH*	L93E KJDA0140045
T+/&WEAJBC M'AM	B<HHK63BTD_4</>	QF:8@ A>VC QSZA>	VOH*\$M%RG /8CF:	LV @BE|QN % AEB3	/1H -I-A0140046
T+/J/F+BGf/Y8DA.	\$0A L'L-AD_2U L	/1HROH*H|0	.....	HD F/Z*P<PN1E1	*F/YNO ..... )"0@-C 0@| OEU0140047
T+/K*@|0@|C0@|1	0@|C0@|LC@|C0@|P	0@|C0@|C0@|C0@|C	0@|C0@|C0@|G0Y0	.....	E&C"..... H ;8A@ "C@A0140048
T+/LP8) XE1UC1	.....	FATBO-C	"A F/ ED Y&H/ :H	Y-FT E<B	..... & ..... EM LD-A0140049
T JLR	.....	.....	.....	.....	..... 7Z*A0140050
T<AM+	.....	AO	.....	.....	..... =I4A0140051
T+/N<	.....	A- D	NHD BMV9WH/ SF-	.....	..... +%HQF-8AF?@AF- EH/DE 8B"0 CD BFAY @H&A0140052
T+/OG H: &/-E H	:0A-E H:0/ E H	:0--E H:8/-E H	:4/-E H:2/-E H	:1S-E H:01-E H	:0Z- MA A0140053
T+/PBF- B+%IQF-	B+%H8F- B+%H*F-	B+%HEF- B+%HRF-	B+%HQH/ EC-DE <	E"0<E YD AY MY	H, JH "\$4A0140054
T+/P'1D BMV9WH/	SF- .+%HQF-8AH/D	E"ODE R+R- AY	CT, BFAY+ JY J,	" JYD JY J, # J,	6 KY J/%A0140055
T+/Q8DAY C/Y+ J,	"|15"FP>@AA/@-I/Y	0AS?I/, " J, ? JY	JY E+ &F- H+%H	QF-8AJA E Y:0/-	EC-D 9.4A0140056
T+/R3P- AF?@AFS-	AF- AF_*AF?HAF-	+F-YAF-QAPY8APU8	AFS8AF/8AF-@AF-8	AF- .A/#, F-8AF-C	4F?@ HQ@A0140057
T+/E> J, 1 J, @ JY	CSY F- AK-, 7EY/	VI;RSY&H/Y B3,	BFAY+ JY 1, " 1Y	AM &F- F- Z+%H	QF-8 ; 4A0140058
T+/SZ JY 48	H/DE"O<LDJ, "AD8	U H-DE EHB1M	04M BMV9WH/ SF-	.....	..... +%HQF-8AH/DE"OE + *H*A0140059
T+/*U E HE"OE	.....	AY J, 7 JY	CT, BFAY+ JY AD8	B F- CL-Y	..... E 8:0/-EC-DDDK& OL-Y 3KMA0140060
T+/1-A F- K-,	NE3A 5I;RS8A- G	AJ# CKY&F- H+%H	QF-8AJA E Y:0/0	EC-DDDJ, " JY JY	..... -Y 3LMA0140061
T+/;EG=&+F (+C-	.....	C,CFBY&F-8AH/D	E"ODE DEA D+F (	+C- C&CFBY&F-8	AF- CH/D+F <:0/-
T+/-NC-DE HEA D	DD&8Q 1Y Y AL-0	B C- 2YAF- AL-0	.....	AHB34P04 CHV9	WH/ > Q A8 M; & 4 E C- 6H@A0140063
T+/-&B/"UF- &B/"	/ / & AQE PG>	=F- F- 8A E &	D H&D L" F- CK-	SA/#-B/"UF?@AF- &	AF?Q)Q0A0140064
T+//. JY CAY+ JY	AY E Y-BJH:0/-	DDAY+ JY /ZH KY	JF?@AFD%AF?@BF-	.....	..... &F-8AF- E- K& I KPWQ ;E8A0140065

A014 FILE CONTROL UNIT FLT SECTION 1

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+/SPH/ SF- .D/Y	+ JY /ZH J, " JD	, J, @ EY-9AH&C-D	E HEO LE"ODEZOL	E" DHG=&KF- &F-8	AD/Y 4.HA0140066
T+/TA"ODFG= E"ED	E BFG> KPIT-A28	AH/ E"OP ; EG%	(F- -C/-SF- VC/-	SK/-DF.U+PD*:0/-	EC-D -H-A0140067
T+/T&F?OAF-<AFV-	AF?OAPV?AF?&AF-	H8 DDJY HC, BF 8	QH2Y&F- J& -> H	B.-A A/Y AY EC,	BFAY OC@A0140068
T+/U7C-DE HEN D	DDJ, " JD, J, @ JY	ABYAL- & E E	HBA<RH-8QJ3, BF 8	QH08Q-1YK JY "1,	..... 58 K-@A0140069
T+/V2FHR: AY A Q	;8C, BF 8QE&8Q-1Y	F JY "1, 9 &8Q/U8	.....	;-DD A, " MY	.8JVYC//G+%&QC// LC/- * HA0140070
T+/W-1YF JY "1,	9 &8Q/X Y F- DA/#	---%HQC//ZC// "F/H	AF-C" F>4AC/SFL-	.....	A: KY F?@AK-? "F&E K,QA0140071
T+/XIC//G+%HQI-8	QH08Q-1YJ JY "1,	> &8Q/X YAL-B	D A, " MY<GJXQ& H	SH/ E"O (A88A&B0	> /Y 88&AC140072
T+/YT &:0/-DDAY	+ JY 1, "AF&E?@	|F-8AI E + E"1D	D A, " Q H F J,	" MY<<*BG /YNOH*	BHD OHHA0140073
T+/Z; LBSD_XOY1.	)<.H\$HL--B-# DAD	\$| DSHL/ P2C UA,	D| <SHL-AB-3 DA,	D+ HHC|H&H30GF2D	8BAH K&@A0140074
T+/DR6@ &F?Y8 J.	*@/ -|AH\$HL7B -C	-J, DOH*\$B30EF2D	8BA. SOI E: %BGFW&	2E%/|*HB <BA?0?	/1Y)JXA0140075
T+/,H:TOIF2D8&A%	-0A E:TO&F2D9 0Y	<0I E: TOKP2D8BA.	\$0A E:TB:F2D8 &Y	|@/ &|A&SHL/ F2C	DAY H\$<A0140076
T+/X|: %BGFW&@D1%	/+D \$H<E&F>, /1Z	UOH*BG-D\$HJ_JOH*	BF%DQF3W-: %BG /Y	CFA_JOH*BHD&C<EQ	SE" 4-<A0140077
T+/_HY C /OHOF1-	.....	B3DH4& 9<L	T&<L01;I 5) \$T& (L	A8@|H&+.E5: .E8&P	E& (-A1@M '-PO&<\$ C9D "OKXA0140078
T+/>E5<GP8WCX93&	HF9D@ J?>C <\$XJ.	) +H \$V?HEB3S P9,	2U &:-A>SC-<\$WJ>	RC-<\$XJ>C-*\$ZJ>	VC- 688A0140079
T+/? F: @N T4/F: "	.....	.....	.....	.....	..... KG+?#7"=#"@ -C "HAB-04 J?->+1 *C% EJ*A0140080
T+/?#DA2*+1 *?3%	EG&@#DA5F+1) \$L%	&GOU#DA2)+ &HC<	&F=T /10R0-H)>C1	.GU# /12F (-HNA&@	GUB CA@A0140081
T+/06EE. J70@:D	A<E<; RLFTG@Q1Y19	VOH <FSGB48DA2	)OA \$B3--E-# DA1	KOH*\$B&BG /, EDJ1	JYC< J A0140082
T+/110H*BHD 3OH*	*. *|EE (LO1<N 5) \$	T&(XE8%PT+ / *X*H	AB-@4 J?->+ / *C, Y	EG. %: DA2" + /)C3Y	&GHQ 4L@A0140083
T+/2%+ /) \$LY&GOX	B -Y| ( H\$7@BGF*0	4BA6N.) X& % A9	J LFTG\$-1Z/6-@:	|&<) X*BDGH? /14	><HH 2, <A0140084
T+/3XGR*8&A6P&A	D|IH) LBSGR*0Y16	ROH*BG-@) WJ9T|.	*9T-&GI72E -@YA3	W|D) _BG /, AE/6	5 PQ M'-A0140085
T+/4SOH*BF-H|GW|	/OHSYF\$ /130<E<	)_3FTG\$-| A6) E&H	| A9JESH0Y/6POHD	)HT/ GR- DA3:0H*	*_TU :00A0140086
T+/5) &A6P0A) .%B	GG.QOY16R+ &) W|H	&A<BGG.Q1Y167<E<	)>CBSGR*8&A6P&Z	DOH** -@ GR4N T4	GR4 7THA0140087

A014 FILE CONTROL UNIT FLT SECTION 1

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

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T+/6Q0 D).-0AGV< ;MCBSGR*CY16R+D ;V0BEGP3 /126+A ;V0BEGRH; J9LE8. J5YOH**_#BGGRH ..... 20#A0140088
T+/7L ..... )WRT I8+.P1*PDS<PR6)$ R8<LR2;PE8+*D ... 0 D -MBA06HA Y FBOQ(B BHD YJB/< <E 0 9I*#A0140089
T+/8+E-2PC/UGF/ *D/4K010-EBH0H1Q VFBQQH/U,GB2-<B 4ICMU*K-:HC8%121 C<D80KQJI (D48LT/ K|E< L:2A0140090
T+/SI;E) ODA*JES DQM/SKTR<R41,MP1 8) 2/5065--WBT(EH) YT7B8*Z/8WTS/-HE DYS,S.+2_IB2W.6 Q1E 0-#A0140091
TF19V1DC<Z- A/0 DCS80GT9+I 9=- X9=-X9=; ..... 2D-A0140092
T A* ..... ;30#A0140093
T A"/ ..... ;T0A0140094
T 1"Y G* E ..... 3#UA0140095
E"01+E7+--DC"PH$ =*7R8F| | C FX ASC R A SO Q ..... 16570501700 30271".8A0140096

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----- LAST PAGE -----

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LCC OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
0A00		2	CLKSIP START 2560
		3	DECK 4
0A00 0013	0A01	4	DC XL2'B013' PROGRAM ID
0A02 00	0A02	5	DC XL1'00' FLAGS
0A03 00	0A03	6	CHUM DC XL1'00' CURRENT ECUTINE NR
0A04 0000	0A05	7	DC XL2'0000' RESERVED
0A06 0A1D	0A07	8	R11ADR DC AL2(RTN1) ADDR FIRST RTN
0A08	0A09	9	DS CL2
0A0A A04000	0A0C	10	DC XL3'A04000' UDT PRIMARY SPINDLE
0A0D B01000	0A0F	11	DC XL3'B01000' UDT SECOND SPINDLE
0A10 01	0A10	12	RTN1 DC XL1'01'
0A11 80	0A11	13	DC XL1'80'
0A12 13FC	0A13	14	DC AL2(RTN2)
0A14 3C 87 118F		15	MVI ONLY+1,X'87'
0A18 0C 03 13FB 1324		16	MVC ALMS(4),TRUCK
0A1E 31 A4 135D		17	LIO BESS,X'A4'
0A22 31 A6 135F		18	LIO ANNE,X'A6'
0A26 30 A2 1257		19	SNS KNIT-2,X'A2'
0A2A 39 50 1256		20	TBF KNIT-3,X'50'
0A2F C0 90 0A3E		21	EF FIRS
0A32 38 10 1257		22	TBN KNIT-2,X'10'
0A36 C0 10 0A3E		23	BT FIRS
0A3A C0 87 0A42		24	B ALOE
0A3E C0 87 118A		25	FIRS B TURN
0A42 C0 87 1445		26	ALOE B ACT1
0A46 0C 03 1F04 139D		27	ALCFT MVC ARNE+3(4),HOPE
0A4C 3C F0 13F7		28	MVI ALMS-4,X'F0'
0A50 0C 01 0BA8 138B		29	MVC ETTA+2(2),MAY
0A5E 35 01 1786		30	L TAX,XR1
0A5A 3C 87 11D0		31	MVI STAR+1,X'87'
0A5E 0C 06 1343 1324		32	MVC CRUX(7),TRUCK
0A64 C0 87 0B7B		33	B GNAT
0A68 35 01 1714		34	GAB L HARB,XR1
0A6C 0C 01 0BA8 138E		35	MVC ETTA+2(2),MAY
0A72 0C 06 1343 132A		36	MVC CRUX(7),TRICK
0A78 C0 87 0B7B		37	B GNAT
0A7C C0 87 12A7		38	STAGE B BASS
0A80 0C 03 1F04 1379		39	MVC ARNE+3(4),STALD
0A86 35 01 1810		40	L STYLE,XR1
0A8A 0C 01 0BA8 138D		41	MVC ETTA+2(2),NOR
0A90 0C 06 1343 1330		42	MVC CRUX(7),THICK
0A96 C0 87 0B7B		43	B GNAT
0A9A 0C 03 1F04 1375		44	STCRH MVC ARNE+3(4),STILE
0AA0 3C 00 1EFF		45	MVI BARN+255,X'00'
0AA4 0C FE 1EFF 1EFF		46	MVC BARN+254(255),BARN+255
0AA8 35 01 1958		47	L LOC,XR1
0AAE 0C 01 0BA8 1393		48	MVC ETTA+2(2),RAT
0AB4 0C 06 1343 1336		49	MVC CRUX(7),THAT
0AB8 C0 87 0B7B		50	B GNAT
0ABE 0C 03 1F04 13E2		51	HASH MVC ARNE+3(4),TONY
0AC4 0C 06 1343 133C		52	MVC CRUX(7),THEM
0ACA 0C 01 0BA8 1395		53	MVC ETTA+2(2),SET
0AD0 35 01 1603		54	L BRAD,XR1
0AD4 C0 87 0B7B		55	B GNAT
0AD8 0C 03 1F04 1316		56	ORB MVC ARNE+3(4),PASS
0ADE 0C 01 0F11 0F99		57	MVC HALL+5(2),HALL
0AE4 3C 00 1EFF		58	MVI BARN+255,X'00'
0AE8 0C FE 1EFF 1EFF		59	MVC BARN+254(255),BARN+255
0AEF 3C 11 1E00		60	MVI BARN,X'11'
0AF2 3C 07 11D0		61	MVI STAR+1,X'07'
0AF6 0C 03 13FB 1324		62	MVC ALMS(4),TRUCK
0AFC 3C F9 13F7		63	MVI ALMS-4,X'F9'
0B00 0C 01 0BA8 1393		64	MVC ETTA+2(2),RAT
0B06 35 01 153F		65	L DUE,XR1
0B0A C0 87 0B7B		66	B GNAT
0B0E 0C 03 1F04 13E2		67	RASH MVC ARNE+3(4),TONY
0B14 3C 00 1E00		68	MVI BARN,X'00'
0B18 0C 01 0BA8 1395		69	MVC ETTA+2(2),SET

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LCC OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
0B1E 35 01 1584		70	L SAT,XR1
0B22 C0 87 0B7B		71	B GNAT
0B26 C0 87 0B2E		72	VIRG B TRUST
0B2A C0 87 12EC		73	B GOOUT
		74	*****ROUTINE TO TERMINATE AN OPERATION*****
0B2E 34 08 0B5C		75	TRUST ST TRYST+3,X'08'
0B32 C1 A2 0B3D		76	TIO CRUST,X'A2'
0B36 31 A3 13C1		77	LIO ABNER,X'A3'
0B3A F3 A1 01		78	SIO I'01',X'A1'
0B3D 31 A3 1357		79	CRUST LIO CORB,X'A3'
0B41 31 A3 0B5E		80	LIO YORE,X'A3'
0E45 C1 A2 0B4D		81	TIO CRUSH,X'A2'
0B49 C0 87 0B59		82	B TRYST
0B4D 31 A3 1357		83	CRUSH LIO CORD,X'A3'
0B51 31 A3 0B5E		84	LIO YORE,X'A3'
0E55 C1 A2 0B5F		85	TIO BRUSH,X'A2'
0B59 C0 87 0B59		86	TRYST B TRYST
0B5D 8000	CB5E	87	YORE DC XL2'8000'
0B5F C0 87 021A		88	BRUSH B PRINT
0B63 C6	0B63	89	DC XL1'C6'
0B64 08	0B64	90	DC XL1'08'
0B65 0B7A	0B66	91	DC AL2(FRESH)
0B67 A003	0B68	92	LC XL2'A003'
0B69 C0 87 0222		93	BROKE B HALT
0B6D A003	0B6E	94	DC XL2'A003'
0B6F C0 87 0B32		95	B TRUST+4
0B73 40D9C5C64B40F1F0	0B7A	96	FRESH DC CL8' REP. 10'
0B7E 31 A6 135F		97	GNAT LIO ANNE,X'A6'
0B7F 31 A4 135D		98	LIO BESS,X'A4'
0B83 3C 87 0DA3		99	MVI RNK+1,X'87'
0B87 3C 07 0DE7		100	MVI FOES+1,X'07'
0B8F 3C 07 106A		101	MVI EON+1,X'07'
0B8F 3C 07 0DE3		102	MVI ZONE+1,X'07'
0B93 3C 07 0C93		103	MVI DLYSH+1,X'07'
0B97 31 A3 13C1		104	LIO ABNER,X'A3'
0B9B C1 A2 0BA2		105	TIO FAULT,X'A2'
0B9F F2 87 04		106	J ETTA
0FA2 C0 87 118A		107	FAULT B TURN
0BA6 F3 00 00		108	ETTA SIO I'00',X'00'
0BA9 1C 04 13B3 04		109	PANDA MVC FAY+4(5),4(XR1)
0BAE 06 11 13FB 134D		110	AZ ALMS(3),TEN(2)
0BB4 38 02 13A7		111	TBN FAY,X'02'
0BB8 C0 90 0C8C		112	BF AMLE
0BBC 38 01 13AF		113	TBN FAY,X'01'
0BC0 F2 10 98		114	JT PEER
0BC3 3D 7A 13AF		115	CLI FAY,X'7A'
0BC7 F2 84 91		116	JH PEER
0BCA 0C 01 0BD9 0BDE		117	MVC STAND+3(2),STALL
0BD0 0E 01 0BD9 13AF		118	ALC STAND+3(2),FAY
0BD6 C0 87 0BDD		119	STAND B STALE
0BD8 0BDD	0BDB	120	STALL DC AL2(STALE)
0BDC 0000	0BDD	121	STALE DC XL2'0000'
	0BDE	122	DS CL1
0BDE C0 87 0D0A		123	B PROD
0BE3 C0 87 0D1C		124	B BANA
0BE7 C0 87 0D32		125	E CHERI
0BE8 C0 87 0D48		126	B FACT
0BEF C0 87 0D58		127	B TACT
0BF3 C0 87 0D60		128	B CAPE
0BF7 C0 87 0D72		129	B TRACT
0EFE C0 87 0E9E		130	B WORK
0BF8 C0 87 0EA6		131	B SHARK
0C03 C0 87 0ECE		132	B SALT
0C07 C0 87 0ED6		133	E SAINT
0C0B C0 87 0EE0		134	B FOOD
0C0F C0 87 0EFA		135	B STOOP
0C13 C0 87 0FD3		136	B SEEP
0C17 C0 87 103B		137	B FLAT

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OC1E CO 87 10A4 138 B ANTE SET N TO 0
OC1F CO 87 0C6E 139 B LIMP
OC23 CO 87 10AC 140 B SHOP 256 WR OSC TIMES CNT
OC27 CO 87 10C4 141 B WHELK BR TO NEW ROUTINE
OC2B CO 87 10CE 142 E STAT STATUS ROUTINE
OC2E CO 87 10F0 143 B VARY SET WR OSC BIT ON SER DATA ROUTINE
OC33 CO 87 10FC 144 B VARY SET WR OSC HIT OFF SER DATA ROUTINE
OC37 CO 87 1108 145 B WINE SET SENSE BY BIT
OC3B CO 87 1110 146 E TIME SET SENSE BY BYTE
OC3F CO 87 1118 147 B WIRE SET SEP CLK OFF SER DATA ROUTINE
OC43 CO 87 1120 148 B WIRY SET SEP CLK ON SER DATA ROUTINE
OC47 CO 87 1128 149 B HINT SERIALIZE DATA CHAR WITH SENSE
OC4B CO 87 1130 150 E SINE SERIALIZE DATA CHAR SENSE AND COMP
OC4F CO 87 113E 151 B LINT GO TO SCAN FND TOUTINE
OC53 CO 87 114A 152 E ACRID
OC57 CO 87 115A 153 B FOOR
OC5B CO 87 021A 154 PEER E PRINT
OC5F C6 0C5F 155 DC XL1'C6'
OC60 1D 0C60 156 DC IL1'29'
OC61 0C8B 0C62 157 DC AL2(BDPARM)
OC63 AOCF 0C64 158 DC XL2'AOCF'
OC65 CO 87 0222 159 B HALT
OC69 AOCF 0C6A 160 DC XL2'AOCF'
OC6B CO 87 12EC 161 LIMP B GOOUT
OC6F D7E9D6C7D9C1D440 0C8B 162 BDPARM DC CL29'PROGRAM ERROR - BAD PARAMATER'
OC77 C5E9D9D6D9406040 162
OC7F C2C1C440I7C1D9C1 162
OC87 E4C1E3C5D9 162
OC8C OC 00 1298 13B0 163 ***** SUB ROUTINE TO CONTROL BY BIT *****
OC92 CO 87 0CC6 164 AHLE HVC ANDY(1),FAY+1 SET PARA CNT IN PARA CNTB
OC96 OC 00 13C2 13AF 165 DLYSW B ERGO DELAY SWITCH
OC9C 31 A3 13C3 166 FANCY HVC ELLA-1(1),FAY MOVE PARA CHAR TO CE LIO
OCA0 OF 00 1298 13D8 167 LIO CE LIO
OCA6 CO 01 0C92 168 SLC ANDY(1),ONE SUBT ONE FROM PARA CNT
OCA8 CO 01 0C92 169 ENZ DLYSW CONTINUE UNTIL 0
OCA8 CO 01 0C92 170 B ADV2
OCAE 36 01 13D8 171 ADV5 A ONE,XR1 GO GET NEXT PARA
OCB2 36 01 13D8 172 ADV4 A ONE,XR1 ***** SUBROUTINE FOR DELAY *****
OCB6 36 01 13D8 173 ADV3 A ONE,XR1 DELAY COUNTER
OCBA 36 01 13D8 174 ADV2 A ONE,XR1
OCBE 36 01 13D8 175 ADV1 A ONE,XR1
OCC2 CO 87 0B29 176 E PANDA
OCC6 OC 02 13CC 13CF 177 ***** SUBROUTINE FOR DELAY *****
OCCC OF 02 13CC 13D8 178 ERGO HVC BEIGE(3),TAN DELAY COUNTER
OCD2 CO 01 0CCC 179 ENGO SLC BEIGE(3),ONE
OCD6 CO 87 0C96 180 BNZ ENGO
181 B FANCY
182 ***** SUBROUTINE TO COMP BUSY AND ERROR *****
OCDA 34 08 0CF9 183 DANTE ST PGRT+3,X'08'
OCDE 3C 00 13F0 184 HVI ANNA,X'00'
OCE2 C1 A0 0CFA 185 TIO AVA,X'A0' COMP BUSY AND ERROR
OCE6 C1 A2 0D02 186 CAR1 TIO BETH,X'A2' TEST BUSY
OCEA 3D 00 13F0 187 DART CLI ANNA,X'00'
OCEE CO 81 0CF6 188 BE PGRT
OCF2 CO 87 118A 189 B TURN
OCF6 CO 87 0CF6 190 PGRT B PGRT
OCFA 3A 01 13F0 191 AVA SBN ANNA,X'01' SET IND FOR ERROR
OCFE CO 87 0CE6 192 B CART
OD02 3A 10 13F0 193 BETH SBN ANNA,X'10' SET IND FOR BUSY
OD06 CO 87 0CEA 194 B DART
195 ***** SUBROUTINE TO COMPARE CTL FLD *****
OD0A OD 03 1F04 13B3 196 PROD CLC ARNE+3(4),FAY+4 COMP CONTROL FIELD
OD10 CO 81 0CAE 197 EE ADV5
OD14 CO 87 118A 198 B TURN
OD18 CO 87 0CAE 199 B ADV5
200 ***** SUBROUTINE TO COMPARE DFDR *****
OD1C 30 A4 13E9 201 BANA SNS BROAD,X'A4' SENSE DFDR
OD20 OD 01 13E9 13B1 202 CLC BROAD(2),FAY+2 COMPARE TO PARA

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OD26 CO 81 0CB6 203 BE ADV3
OD2A CO 87 118A 204 B TURN
OD2E CO 87 0CB6 205 B ADV3
206 ***** SUBROUTINE TO COMP DFDR *****
OD32 30 A6 13EB 207 CHERI SNS TOAD,X'A6' CHECK DFDR
OD36 OD 01 13EB 13B1 208 CLC TOAD(2),FAY+2
OD3C CO 81 0CB6 209 BE ADV3 BRANCH TO ADD 3 TO PTR
OD40 CO 87 118A 210 B TURN
OD44 CO 87 0CB6 211 B ADV3
212 ***** SUBROUTINE TO GO TO ALT PARA *****
OD48 36 01 13E4 213 FACT A THREE,XR1
OD4C 34 01 13EF 214 ST ALTAR,XR1
OD50 35 01 13B1 215 L FAY+2,XR1
OD54 CO 87 0BA9 216 B PANDA
217 ***** SUBROUTINE TO RIN TO MAJOR PARA *****
OD58 35 01 13EF 218 TACT L ALTAR,XR1
OD5C CO 87 0BA9 219 B PANDA
220 ***** SUBROUTINE TO COMPARE DATA CHAR *****
OD60 OD 0C 1E00 13B0 221 CAPE CLC BARN(1),FAY+1 CCRP DATA CHAR
OD66 CO 81 0CBA 222 BE ADV2 BRANCH TO ADD 2 TO PTR
OD6A CO 87 118A 223 B TURN
OD6E CO 87 0CBA 224 B ADV2
225 ***** SUBROUTINE TO DATA CHAR *****
OD72 OC 00 1298 13B1 226 TRACT HVC ANDY(1),FAY+2
OD78 OC 00 13A8 13B0 227 PART HVC CAREA(1),FAY+1
OD7E 3C 64 13F3 228 ORE HVI CLK1-1,X'68' RDSER CLOCK LIO BYTE
OD82 3C 44 13F5 229 HVI FETE-1,X'44' RESET DATA LIO BYTE
OD86 OC 02 13A7 13D9 230 HVC CAREA-1(3),ONE+1
OD8C 38 08 13A6 231 STONE TBW CAREA-2,X'08' IS THIS BIT RING 1
OD90 F2 90 08 232 JF RACY
OD93 3B 04 13F3 233 SBF CLK1-1,X'04' RESET INH DATA CYCLE REQ
OD97 3F 04 13F5 234 SEF FETE-1,X'04' RESET INH DATA CYCLE REQ
OD9E 38 01 13A5 235 RACY TBW CAREA-3,X'01' IS THIS BIT RING 6
OD9F F2 90 1E 236 JF BRACT
ODA2 CO 87 0CDA 237 RINK B DANTE
ODA6 CF 00 1298 13D8 238 SLC ANDY(1),ONE
ODAC CO 01 0D78 239 BNZ PART
ODB0 3C 87 0DA3 240 HVI RINK+1,X'87'
ODB4 3C 07 0DE7 241 HVI FOES+1,X'07' RESET SNS PROBES SW
ODB8 3C 07 0DE3 242 HVI ZONE+1,X'07' RESET DATA FLD SW
ODEC CO 87 0CB6 243 B ADV3
ODCO OE 03 13A8 13A8 244 BRACT ALC CAREA(4),CAREA SHIPT BITS
ODC6 38 01 13A7 245 TBW CAREA-1,X'01'
ODCA CO 90 0DD6 246 BF BACE
ODCE 3A 08 13F5 247 SBN FETE-1,X'08'
ODD2 CO 87 0DDA 248 B TRACY
ODD6 3B 08 13F5 249 RACE SBF FETE-1,X'08'
ODDA 31 A3 13F4 250 TRACY LIO CLK1,X'A3' CE LIO CLOCK
ODDE 31 A3 13F6 251 LIO FETE,X'A3' CE LIO DATA
ODE2 CO 87 0E62 252 ZONE B BWANA DATA FLD CHAR
ODE6 CO 87 0E86 253 FCES B GALA SWITCH TO ALLOW PROBE SENSE
ODEA CO 87 0D8C 254 LACY B STONE
ODEE 38 80 0E87 255 PROG TBW GALA+1,X'80' SNS AT BIT RATE
ODF2 F2 10 12 256 JT SNAG
ODF5 38 20 13B8 257 TBW ART-7,X'20'
ODF9 F2 10 13 258 JT SHOG
ODFC 38 20 13B9 259 TBW ART-6,X'20'
OE00 F2 10 0C 260 JT SHOG
OE03 CO 87 106D 261 F ANT
OE07 CO 87 0E0F 262 SNAG B SHOG
OE0B CO 87 106D 263 E ANT
OE0F 34 08 0E51 264 SHOG ST GAS+3,X'08' STORE RETURN
OE13 36 01 13D8 265 FRUIT A ONE,XR1
OE17 06 31 1343 134D 266 BRUTE AZ CRUI(5),TEN(2) ADD 1 TO CTR
OE1D 30 A3 13C9 267 SNS FLUID,X'A3' SNS PROBES
OE21 3B 80 13C9 268 SBF FLUID,X'80' SET BIT 0 OFF
OE25 3D 02 0A03 269 CLI CNUM,X'02'
OE29 CO 01 0E3D 270 BNE DIX

BC13 FILE CONTROL UNIT FLT SECTION 2

ERR LCC OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
1071 F2 10 0A	388	JT	ACT
1074 38 80 13BE	389	MAT	TBN ART-1,X'80' TURN ON DATA BIT
1078 F2 10 0B	390	JT	AXE
107E F2 87 0C	391	J	BAT
107E 3A 10 13C0	392	ACT	SBN ABNER-1,X'10' SET AP BIT ON
1082 C0 87 1074	393	E	MAT
1086 3A 08 13C2	394	AXE	SBN ELLA-1,X'08' SET DATA BIT ON
108A 31 A3 13C1	395	BAT	LIC ABNER,X'A3' CE LIC FOR CLGCK TIME
108E 31 A3 13C3	396	LIO	ELLA,X'A3' CE LIC FOR DATA TIME
1092 0E 09 13BF 13BF	397	ALC	ART(10),ART SHIFT BITS
1098 C0 87 1059	398	B	ELAN
109C 3C 07 106A	399	ORGY	MVI EON+1,X'07' SET SW OFF FOR SENSE FR
10A0 C0 87 0CB6	400	B	ADV3
10A4 3C 00 1F04	401	*****	SUBROUTINE TO SET N TO 0 *****
10A8 C0 87 0CBE	402	ANTE	MVI ARNE+3,X'00' SET N BYTE TO 0
	403	B	ADV1
	404	*****	SUBROUTINE TO FORCE 256 X PARA CNT OSC *****
10AC 4C 00 13F0 13B0	405	SHOP	MVC ANO-1(1),FAY+1 MOVE COUNT TO COUNTER
10B2 31 A3 13A4	406	SEPAL	LIO ARID,X'A3' CE LIO WR OSC
10B6 0F 01 13F1 13D8	407	SLC	ANC(2),ONE SUBT ONE
10BC C0 01 10B2	408	BEZ	SEPAL CONT TILL 3 ZERO
10C0 C0 87 0CBA	409	E	ADV2 GET NEXT PARA
	410	*****	SUBROUTINE TO BRANCH TO NEW ROUTINE *****
10C4 0C 01 10CD 13B1	411	WHLK	MVC BEAT+3(2),FAY+2
10CA C0 87 10CA	412	BEAT	B BEAT
	413	*****	SUBROUTINE TO CHK STATUS *****
10CE 30 A2 13A0	414	STAI	SNS WAD,X'A2' SENSE BYTES / AND 1
10D2 30 A3 13A2	415	SNS	WED,X'A3' SENSE BYTES 2 AND 3
10D6 3E 48 13A0	416	SBF	WAD,X'A8' SET DONT CARE BITS OFF
10DA 3B 73 13A1	417	SBF	WED-1,X'73' SET DONT CARE BITS OFF
10DE 0D 02 13A1 13B2	418	CLC	WED-1(3),FAY+3 COMP STATUS TO PARA
10E4 C0 81 0CAE	419	BE	ADV5
10E8 C0 87 118A	420	E	TURN
10EC C0 87 0CAE	421	B	ADV5
	422	*****	SET WR OSC BIT ON SERIAL DATA ROUTINE *****
10F0 3A 40 0D7F	423	VARY	SEN ORE+1,X'40' SETSET OSC BIT ON
10F4 3A 40 0D83	424	SBN	ORE+5,X'40' SET OSC BIT ON
10F8 C0 87 0CBE	425	B	ADV1
	426	*****	SET WR OSC BIT OFF SERIAL DATA ROUTINE *****
10FC 3B 40 0D7F	427	WARY	SBF ORE+1,X'40' SET OSC BIT OFF
1100 3B 40 0D83	428	SBF	ORE+5,X'40'
1104 C0 87 0CBE	429	B	ADV1
	430	*****	SET SENSE BY BIT *****
1108 3C 87 0E87	431	WINE	MVI GALA+1,X'87' SET SENSE TO BIT RATE
110C C0 87 0CBE	432	E	ADV1
	433	*****	SET SENSE BY BYTE *****
1110 3C 07 0E87	434	TINE	MVI GALA+1,X'07' SET SENSE TO BYTE RATE
1114 C0 87 0CBE	435	B	ADV1
	436	*****	SET SEP CLK OFF SERIAL DATA ROUTINE *****
1118 3B 20 0D7F	437	WIRE	SEP ORE+1,X'20' SET SEP CLK BIT OFF
111C C0 87 0CBE	438	B	ADV1
	439	*****	SET SEP CLK ON SERIAL DATA ROUTINE *****
1120 3A 20 0D7F	440	WIRY	SBN ORE+1,X'20' SET SEP CLK BIT ON
1124 C0 87 0CBE	441	B	ADV1
	442	*****	SERIALIZE DATA CHAR WITH SENS *****
1128 3C 87 0DE7	443	MINT	MVI FOES+1,X'87' SET SW FOR SMS PROBEK
112C C0 87 0D72	444	B	TRACT
	445	*****	AM CHAR WITH SENSE *****
1130 0C 09 13BF 1371	446	SIXE	MVC ART(10),SPART
1136 3C 87 106A	447	MVI	EON+1,X'87' SET SW FOR SMS PROBES
113A C0 87 1059	448	B	ELAN
	449	*****	SERIALIZE DATA CHAR WITH SENSE AND RESET DFDR *****
113E 3C 87 0DE3	450	LINT	MVI ZONE+1,X'87'
1142 36 01 13D8	451	A	ONE,XR1
1146 C0 87 0D72	452	B	TRACT
	453	*****	TEST CE LIO ROUTINE *****
114A 31 A4 1355	454	ACRID	LIO CORN,X'A4'
114E 31 A4 1357	455	LIO	CORF,X'A4'

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LCC OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
1152 31 A4 1355	456	LIO	CORN,X'A4'
1156 C0 87 0CBE	457	B	ADV1
	458	*****	ROUTINE TO CHECK SCAN FOUND *****
115A 3C 01 1167	459	POCB	MVI FOR+1,X'01'
115E C1 A4 1166	460	TIO	FOR,X'A4'
1162 3B 01 1167	461	SBF	FOR+1,X'01'
1166 3D 00 13B0	462	FCR	CLI FAY+1,X'00'
116A C0 81 0CBA	463	BE	ADV2
116E C0 87 118A	464	B	TURN
1172 C0 87 0CBA	465	B	ADV2
	466	*****	PRINT SUBROUTINE *****
1176 40D540D54040	117E	OGLE	DC CL6' N N ' MOVE Y TO PRINT
117C 3C E8 1271	468	ELF	MVI NIBS+2,X'E8'
1180 F2 87 7C	469	J	FLY
1183 3C E8 1273	470	BUG	MVI NIBS+4,X'E8' MOVE Y TO PRINT
1187 F2 87 79	471	J	FLIT
118A 3C 00 1266	472	TURN	MVI OPINE,X'00' CLEAR UNPACK AREA
118E C0 87 14F7	473	ONLY	B CNCE
1192 0C 15 1265 1266	474	MVC	OPINE-1(22),OPINE
1198 0C 00 1251 1298	475	MVC	ANDES(1),ANDY
119E 34 01 1251	476	ST	ANDES-1,XR1 STORE MSG COUNTR IN PR AREA
11A2 0C 03 125E 1F04	477	NEON	MVC KITE(4),ARNE+3
11A8 30 A2 1257	478	SNS	KNIT-2,X'A2' SENSE 01
11AC 30 A3 1259	479	SNS	KNIT,X'A3' SENSE 23
11B0 3B 4A 1257	480	SBF	KNIT-2,X'A4' SET DONT CARE BITS OFF
11B4 3 1 1258	481	SBF	KNIT-1,X'01' SET DONT CARE BITS OFF
11B8 3 5 1261	482	SNS	KIT,X'A6' SENSE DFPCB
11BC 30 A4 1264	483	SNS	KAT,X'A4' SENSE DFDR
11C0 0C 00 1266 1E00	484	MVC	OPINE(1),BARN
11C6 C0 87 021E	485	B	UNPACK
11CA 18	11CA	486	DC XL1'18'
11CC 1266	11CC	487	DC AL2(OPINE)
11CD 1257	11CE	488	DC AL2(UNIT)
11CF C0 87 122E	489	STAR	E BURN
11D3 0C 03 126D 13FA	490	MVC	NIBS-2(4),ALMS-1 MOVE MSG NUMBER TP PR
11D9 0C 05 1275 117E	491	SLRB	MVC NIBS+6(6),CGLE
11DF 3C 40 1269	492	MVI	NIBS-6,X'40' MOVE BLANK TO PR
11E3 0C 01 1295 117E	493	MVC	UNIT-2(2),OGLE MOVE BLANKS BETWEEN FLDS TO PR
11E9 0C 01 128F 117E	494	MVC	UNIT-8(2),OGLE MOVE BLANKS BETWEEN FLDS TO PR
11EF 0C 01 1289 117E	495	MVC	UNIT-14(2),CGLE MOVE BLANKS BETWEEN FLDS TO PR
11F5 0C 01 127F 117E	496	MVC	UNIT-24(2),CGLE MOVE BLANKS BETWEEN FLDS TO PR
11FB C1 A2 117C	497	IIC	ELF,X'A2' TEST FOR EUSY
11FF C1 A0 1183	498	FLY	TIO BUG,X'A0' TEST FOR ERROR
1203 C0 87 021A	499	FLIT	E PRINT
1207 01	1207	500	DC XL1'01'
1208 2F	1208	501	DC XL1'2F'
1209 1297	120A	502	DC AL2(UNIT)
120B 3D F9 13F7	503	CLI	ALMS-4,X'F9'
120F C0 01 121B	504	BNE	PALL
1213 C0 87 021A	505	B	PRINT
1217 06	1217	506	DC XL1'06'
1218 16	1218	507	DC XL1'16'
1219 124D	121A	508	DC AL2(CALL)
121C C0 87 021A	509	PALL	B PRINT
121E 15	121F	510	DC XL1'15'
1220 C0 87 0222	511	B	HALT
1224 A001	1225	512	DC XL2'A001'
1226 C0 87 0B2E	513	B	TRUST
122A C0 87 12EC	514	B	GCOUT
122E 0C 05 126F 1342	515	BURN	MVC NIBS(6),CRUX-1
1234 C0 87 11D9	516	B	SLAB
1238 40E9C5D7D3C1C3C5 124D	517	CALL	DC CL22' REPLACE A-W3J2,A-W3K2'
1240 4CC160E6F3D1F26B	517		
1248 C160E6F3D2F2	517		
	021A	518	PRINT EQU X'21A'
	021E	519	UNPACK EQU X'21E'
124E	1251	520	NUT DS CL4
1252 00	1252	521	ANDES DC XL1'00'

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129613 PAGE 8

B013 FILE CONTROL UNIT FLT SECTION 2

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include instructions like SET SEP CLK ON, SET WRT OSC BIT OFF, etc.

DATE EC NO. 02MAR70 571512 01APR70 571516 06MAY70 571513 01JUL70 571524

PROG ID OB01-3 PAGE 8

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129613 PAGE 8A

B013 FILE CONTROL UNIT FLT SECTION 2

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include instructions like AL2(STATE), AL2(SUMP), etc.

DATE EC NO. 02MAR70 571512 01APR70 571516 06MAY70 571513 01JUL70 571524

PROG ID OB01-3 PAGE 8A

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	
1967	DE	1967	1003	DC	XL1'0E'	GO TO AL FOR SYNC CHAR
1968	1A02	1969	1004	DC	AL2(SUMP)	
196A	DE	196A	1005	DC	XL1'0E'	GO TO ALT PARA
196B	1A10	196C	1006	DC	AL2(STARE)	FOR ID
196D	4E00000000	1971	1007	DC	XL5'4E00000000'	TEST STATUS
1972	0A	1972	1008	DC	XL1'0A'	COMP DFCR
1973	1F0A	1974	1009	DC	AL2(ARNE*3)	DFCR LOCATION
1975	6A000E1014103010	1985	1010	DC	XL17'6A000E10141030101111111111111131'	
197E	1111111111111111		1010			
1985	31		1010			
1986	0A	1986	1011	DC	XL1'0A'	COMP DFCR
1987	1F01	1988	1012	DC	AL2(ARNE)	DFCR LOCATION
1989	5A	1989	1013	DC	XL1'5A'	SET SENSE BY BIT
198A	6A00013517151111	1994	1014	DC	XL11'6A00013517151111191919'	
1992	191919		1014			
1995	6A00017517151111	199F	1015	DC	XL11'6A00017517151111111111'	
199D	111111		1015			
19A0	5E	19A0	1016	DC	XL1'5E'	SET SENSE BY BYTE
19A1	7200FD15	19A4	1017	DC	XL4'7200FD15'	
19A5	1611	19A6	1018	DC	XL2'1611'	COMP DATA
19A7	0E	19A7	1019	DC	XL1'0E'	COMP DFDR
19A8	1E01	19A9	1020	DC	AL2(BARN*1)	
19AA	6AFF133511113110	19BF	1021	DC	XL22'6AFF133511113110111011101110111010111101031'	
19B2	1110111011101110		1021			
19B3	101111101031		1021			
19C0	2A00	19C1	1022	DC	XL2'2A00'	SET NOT BUSY NO ERROR
19C2	6AFF0101	19C5	1023	DC	XL4'6AFF0101'	
19C6	4A	19C6	1024	DC	XL1'4A'	BRANCH TO NEW ROUTINE
19C7	0ABE	19C8	1025	DC	AL2(HASH)	
19C9	40	19C9	1026	DC	XL1'40'	ALT PARA FOR INIT SET TO 8
19CA	02	19CA	1027	DC	XL1'02'	2 OSC
19CB	22	19CB	1028	DC	XL1'22'	SET TO 8 INIT
19CC	2A1C	19CD	1029	DC	XL2'2A1C'	SET BUSY CM ERR OFF
19CE	5A	19CE	1030	DC	XL1'5A'	SET SENSE BY BIT
19CF	6A00011111111111	19D9	1031	DC	XL11'6A00011111111111111113'	
19D7	111113		1031			
19DA	5E	19DA	1032	DC	XL1'5E'	SET SENSE BY BYTE
19DB	6AFF061111101011	19E3	1033	DC	XL9'6AFF06111110101131'	
19E3	31		1033			
19E4	400D	19E5	1034	DC	XL2'400D'	
19E6	6A00024040	19EA	1035	DC	XL5'6A00024040'	
19EB	12	19EB	1036	DC	XL1'12'	RETURN TO MAJOR PARA
19EC	5A	19EC	1037	DC	XL1'5A'	SET SENSE BY BIT
19ED	6E00004151535151	19FF	1038	DC	XL19'6E000041515351515151515151515151'	
19F5	5151515151535151		1038			
19FD	515151		1038			
1A00	5E	1A00	1039	DC	XL1'5E'	SET SENSE BY BYTE
1A01	12	1A01	1040	DC	XL1'12'	RETURN TO MAJOR PARA
1A02	5A	1A02	1041	DC	XL1'5A'	ALT PARA FOR SYNC CHAR
1A03	6A0E01C505050101	1A0D	1042	DC	XL11'6A0E01C505050101010101'	
1A0E	010101		1042			
1A0F	5E	1A0F	1043	DC	XL1'5E'	SET SENSE BY BYTE
1A10	12	1A10	1044	DC	XL1'12'	RETURN TO MAJOR PARA
1A11	5E	1A11	1045	DC	XL1'5E'	SET SENSE BY BYTE
1A11	6A00021535	1A15	1046	DC	XL5'6A00021535'	
1A16	6A540119	1A19	1047	DC	XL4'6A540119'	
1A1A	6A1F0111	1A1D	1048	DC	XL4'6A1F0111'	
1A1E	6AAB0130	1A21	1049	DC	XL4'6AAB0130'	
1A22	6AFC0111	1A25	1050	DC	XL4'6AFC0111'	
1A26	12	1A26	1051	DC	XL1'12'	RETURN TO MAJOR PARA
1A27	5A	1A27	1052	DC	XL1'5A'	SET SENSE BY BIT
1A28	6AFF011012101010	1A32	1053	DC	XL11'6AFF011012101010101010'	
1A30	101010		1053			
1A33	5E	1A33	1054	DC	XL1'5E'	SET SENSE BY BYTE
1A34	6A000A1011101110	1A40	1055	DC	XL13'6A000A10111011101110111011'	
1A3C	1114113011		1055			
1A41	12	1A41	1056	DC	XL1'12'	RETURN TO MAJOR PARA
1A42	5E	1A42	1057	DC	XL1'5E'	ALT PARA FOR DATA FLD

B013 FILE CONTROL UNIT FLT SECTION 2

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1A43	6A00020101	1A47	1058	DC	XL5'6A00020101'
1A48	6A0E0101	1A4B	1059	DC	XL4'6A0E0101'
1A4C	6A000111	1A4F	1060	DC	XL4'6A000111'
1A50	7200FD15	1A53	1061	DC	XL4'7200FD15'
1A54	6A00023515	1A58	1062	DC	XL5'6A00023515'
1A59	6AFF03153111	1A5E	1063	DC	XL6'6AFF03153111'
1A5F	12	1A5F	1064	DC	XL1'12'
1A60	5E	1A60	1065	DC	XL1'5E'
1A61	6AFF0E1010111110	1A71	1066	DC	XL17'6AFF0E1010111110101111010111101030'
1A69	1011111010111110		1066		
1A71	30		1066		
1A72	12	1A72	1067	DC	XL1'12'
1E00			1068	DC	XL1'E00'
1E00	00	1E00	1069	DC	XL1'00'
1F01	00	1F01	1070	DC	CL256
1F01	00	1F01	1071	DC	XL1'00'
1F02		1F04	1072	DC	CL3
		0222	1073	EQU	X'022A'
		FFFF	1075	EQU	X'222'

B013 FILE CONTROL UNIT FLT SECTION 2

B013 FILE CONTROL UNIT FLT SECTION 2

CROSS-REFERENCE

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
GOCUT	A	004	12EC	0554	0073 0161 0514
GRAIN	A	004	105D	0383	
GULP	A	001	1444	0675	0651
HALL	A	0C2	0F99	0355	0057
HALT	C	001	0222	1074	0093 0159 0344 0366 0511 0551 0672 0691
HARM	A	002	1714	0838	0034
HASH	A	006	0ABE	0051	1025
HERE	A	004	1509	0709	0702* 0709
IDLE	A	001	19C9	1026	0840 0916 0998
KAT	A	003	1264	0525	0483*
KELP	A	004	0E5E	0283	0281* 0283
KIT	A	003	1261	0524	0482*
KITE	A	005	125E	0523	0477*
KNIT	A	007	1259	0522	0019* 0020 0022 0478* 0473* 0480* 0481*
LACY	A	004	0DEA	0254	0280 0286 0290 0296 0298
LAF	A	002	134F	0576	
LEGAL	A	002	1383	0592	
LIMP	A	004	0C6B	0161	0139
LINT	A	004	113E	0450	0151
LOAD	C	001	022A	1073	0556
LOG	A	002	195E	0996	0047
LONG	A	004	1387	0593	0594
LUG	A	001	1959	0997	0996
MALL	A	006	0F0C	0334	0057* 0335*
MASK	A	004	12BC	0539	0531* 0534* 0539
MASS	A	004	12B1	0536	0533
MAT	A	004	1074	0389	0393
MAY	A	002	138E	0555	0029 0035
MINT	A	004	1128	0443	0149
MOPE	A	004	139D	0603	0027
MSGOUT	A	027	148F	0694	0656 0680
NAIL	A	004	1023	0371	0328 0346 0361 0368
NEON	A	006	11A2	0477	
NIES	A	009	126F	0527	0468* 0470* 0490* 0491* 0492* 0515*
NOE	A	002	138D	0596	0041
NUT	A	004	1251	0520	
OGLE	A	006	117B	0467	0491 0493 0494 0495 0496
ONCE	A	004	14F7	0702	0473
ONE	A	003	13DB	0627	0168 0171 0172 0173 0174 0175 0179 0230 0238 0265 0373 0381
ORLY	A	004	118E	0473	0407 0451 0542 0544
OPERA	A	002	139F	0557	0015* 0703*
OPINE	A	002	1266	0526	0472* 0474 0474* 0484* 0487
OPUS	A	049	153D	0710	0707
ORE	A	006	0AD8	0056	0674
ORE	A	004	0D7E	0228	0423* 0424* 0427* 0428* 0437* 0440*
ORGY	A	004	109C	0399	0385
PALL	A	004	121E	0509	0504
PALMS	A	005	1364	0584	
PANDA	A	005	0BA9	0109	0176 0216 0219
PANT	A	050	1022	0370	0332 0343 0365 0671 0690
PART	A	006	0D78	0227	0239
PASS	A	004	1316	0564	0056 0535
PEER	A	004	0C5B	0154	0114 0116
PGRT	A	004	0CF6	0190	0183 0188 0190
PINE	A	002	1391	0558	
PLUM	A	001	1A60	1065	0972 0991
POND	A	001	13F2	0639	
POOR	A	004	115A	0459	0153
PORT	A	001	1A27	1052	0941 0987
PRINT	C	001	021A	0518	0088 0154 0329 0336 0340 0362 0499 0505 0509 0546 0648 0653
PROD	A	006	0D0A	0196	0657 0660 0663 0666 0669 0678 0682 0685 0688 0704
RACE	A	004	0DD6	0249	0123
RACY	A	004	0D9B	0235	0246
RASH	A	006	0B0E	0067	0232
					0734

DATE 02MAR70 01APR70 06MAY70 01JUL70
EC NO. 571512 571516 571513 571524

PROG ID 0B01-3
PAGE 11

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
RAT	A	002	1393	0599	0048 0064
REGAL	A	004	1381	0591	0592
RENT	A	001	1540	0713	0712
RINK	A	004	0DA2	0227	0099* 0240* 0277*
ROPE	A	001	139E	0604	
RTNAR	A	002	13ED	0635	
RTN1	A	001	0A10	0012	0008
RTN2	A	001	13FC	0645	0014
RTIADR	A	002	0A07	0008	
RUEE	A	004	0E7E	0291	0289
SAINT	A	006	0ED6	0317	0133
SALT	A	004	0ECE	0314	0132
SAT	A	002	1584	0735	0070
SAW	A	002	131D	0567	
SAY	A	001	1365	0585	
SEYTE2	C	001	020A	0644	
SEEP	A	004	CFD3	0360	0136
SEPAL	A	004	10R2	0406	0408
SET	A	002	1395	0600	0053 0069
SHARK	A	004	0EA6	0303	0131
SHOP	A	006	10AC	0405	0140
SINE	A	006	1130	0446	0150
SKOG	A	004	0E96	0297	0293
SLAE	A	006	11D9	0491	0516
SMART	A	008	1371	0587	0446
SMOG	A	004	0E0F	0264	0256 0260 0262 0295 0297
SKAG	A	004	0E07	0262	0256
SOAP	A	004	13E3	0577	
SOT	A	001	1585	0736	0735
SPIKE	A	006	102D	0373	0374
STAGE	A	004	0A7C	0038	0869
STAIR	A	004	1379	0589	0039
STALE	A	002	0BDD	0121	0119 0120
STALL	A	002	0BDE	0120	0117
STAND	A	004	0BD6	0119	0117* 0118*
STAR	A	004	11CF	0439	0031* 0061*
STARE	A	001	1A10	1045	0923 1006
STAT	A	004	10CE	0414	0142
STATE	A	001	1811	0912	0911
STILE	A	004	1375	0588	0344
STONE	A	004	0D8C	0231	0254
STCOP	A	004	0FFA	0327	0135
STORM	A	006	0A9A	0044	0995
STYLE	A	002	1810	0911	0040
SUMP	A	001	1AC2	1041	0921 0962 0980 1004
TACK	A	004	1037	0375	0371* 0375
TACT	A	004	0D58	0218	0127
TAN	A	003	13CF	0623	0178 0372
TAP	A	002	1397	0601	
TAX	A	002	1786	0870	0030
TAXES	A	001	1787	0871	0870
TEN	A	005	134D	0575	0110 0266
THAT	A	006	1336	0571	0049
THEM	A	006	133C	0572	0052
THICK	A	006	1330	0570	0042
THREE	A	002	13E4	0631	0213
TINE	A	004	1110	0434	0146
TOAD	A	002	13EE	0634	0207* 0208
TONY	A	004	13E2	0630	0051 0067
TRACT	A	006	0D72	0226	0129 0444 0452
TRACY	A	004	0DDA	0250	0248
TRICK	A	006	132A	0569	0036
TRUCK	A	007	132A	0568	0016 0032 0062
TRUST	A	004	0B2E	0075	0072 0095 0513 0553
TRYST	A	004	0B59	0086	0075* 0082 0086
TURN	A	004	118A	0472	0025 0107 0189 0198 0204 0210 0223 0282 0311 0324 0420 0464

DATE 02MAR70 01APR70 06MAY70 01JUL70
EC NO. 571512 571516 571513 571524

PROG ID 0B01-3
PAGE 11A

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129613
PAGE 12

B013 FILE CONTROL UNIT FLT SECTION 2

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
TWC	A	003	13D*	0628	
UNIT	A	040	1297	0528	0488 0493* 0494* 0495* 0496* 0502
UNPACK	C	001	021E	0519	0485
VARY	A	004	10F0	0423	0143
VIP	A	002	1399	0602	
VIRG	A	004	0E26	0072	0792 0837
WAD	A	002	13A0	0605	0414* 0416* 0543* 0561
WALL	A	014	0F43	0348	0334 0355
WARY	A	004	10FC	0427	0144
WED	A	002	13A2	0606	0415* 0417* 0418
WHELK	A	006	10C4	0411	0141
WINE	A	004	1108	0431	0145
WIRE	A	004	1118	0437	0147
WIRY	A	004	1120	0440	0148
WORK	A	004	0E9E	0300	0130
XR1	C	001	0001	0580	0030* 0034* 0040* 0047* 0054* 0065* 0070* 0109 0171* 0172* 0173* 0174* 0175* 0213* 0214 0215* 0218* 0265* 0275 0451* 0476
YELP	A	004	0E56	0281	0276
YORE	A	002	0B5E	0087	0080 0084
YORK	A	004	0EAA	0304	0301
ZEROS	A	004	12FE	0559	0558
ZONE	A	004	0DE2	0252	0102* 0242* 0450*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

DATE 02MAR70 01APR70 06MAY70 01JUL70
EC NO. 571512 571516 571513 571524

PROG ID OB01-3
PAGE 12

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129613
PAGE 12A

B013 FILE CONTROL UNIT FLT SECTION 2

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

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TA0YGA< B/ ..... J8UB0130001
T+-ZDYE YA Q L*CGDQB< 1)*D2E 1ZA(1)<EQLP3B5DV* 9MA1001 H1T-EDV- D Y=DH*HE*BGDC, /1E 1:EB0130002
T+-Z*J60CG0E1X13 OD**< E>YD8X5 J; F1H*J4 OFD4<LI<B GB7X5 J*HC D.DA* .C QLE1<DOH*.;@B GED* Q/EB0130003
T+-D:C<-AA(9(ED QD OAB:-L7GCFD4< L<<BGB7X< 12DD7M 2 A**C18;"/#*(ED RO OAB:-LU00FD4< L(X P6YB0130004
T+-,5/0_#C<-AA1 SC QLE1<@C D.DA* H(EDD 2PGF7X< 1E DD1Q< 2@JC9U@ A# *C18;"/#*1AD; CD GD) 3ZHB0130005
T+-XOC<1=1<U1|U L'00AE:-LU3HAEL" /0_#C<-AA|S| ; : OAE:-LVLHAEQL /0_#OH*..XEGD>D 4B X BJ B0130006
T+-,P<FSE341Y1| A@:DA<E<LN3FTB5* AY-_ (OH*.OLPTD5* 1Y0_;0EH.P@BGB5W <BG /,FB _:Y | /OH 7I B0130007
T+->WHD COH*.<UC R1*R. E|G0<EQLP3F UD54@/06T| *(930 GDFY@A07T| *<U3F TD2GAY->S@Y*DOH* JS?< *YX%0130008
T(-?) *AA+3A Q JD*%LLL-ED:" U 2 <+ EL,"HEWC5:D:" 2/1D< 6?PB*X* E? RD:" /0?)B*4 ..... K DB0130009
T+-OROH*(BXGCGJ3 /0420H*(K<BGCNT /05-OH*(XBGCS# /0:WOH*+3XBGCS /0#-OH*+=XBGCS| /1 -Y@B0130010
T+-1M+2BGDHL /01 ,OH*E,<BGDL /1C +OH*E@<BGD|3 /1D HOH*JD<BGDJT /1D -OH*JH<BGDL /1D =OH* PY@B0130011
T+-2|DE, /1E@H* EFXQ)CH>-3@BG SH -3@EGD>3F6)SG6*G HG<FB6) $R@FA 0XG DE (-A6*G@0;|E6@0 DZ- CD*B0130012
T+-3HD4C /03FC 10/+7<E<L00@ DZ- L6< AC1. /02: (-D L6CQAD*6 J1Q (-D L6CQAD*T /0>ZC H L3A< HD*B0130013
T+-4E302FD@0L6< AC<3 /02C (-<=10 D*CAV 3:0EH( T4 D*C -E360H*JSXB GC|Q: J100H*<9TY ED* 5/HB0130014
T+-5 OH*:<-4CG0E LXBACH# /1FH0H* <,TEUD=U ( J1ZD@G -E260H*JSX%GC.Q 0Z/1,CEDL: 1+10ED <_X 1AUB0130015
T+-5@/1FH0H*< TQ AD=64 J1?(EDLX*B GB:05 J1?0H*.DE4 G- LK<BAC., /1F HOH*<>-0 DZ-LX@0 D:- Q9HB0130016
T+-66D@ 2RA|3|EE L'@0BD:*L6L-HD:$ 2U -@AA|3+0EL*L- AD:P2UA# /03ECO KWA|QO D(:C2GCE< @A04 @,HB0130017
T+-71930GC:| /02 6C-<LDA+Y+ DLZ@E 8C)Q:BA|50H*(6TX HD*H1Y1|4<E<L*X@ GCH. /0:F0H*(TCS CY* Q14B0130018
T+-8X2/ K+B L>|H ED3--D*X2D 3 /1A _OH*+C@BGF44B 9 J(-D16 Q1D4<LLLH TDBB#-A|1|EHH @ ACT4 E/@B0130019
T+-9X+1 L2L-ED@T U 8'+/ L2M4 /1 10 D*HTOGCE| /03 EDH*+LX%GC: T4B 9 /OH*JSX%BGCV88BA+ WOA 7C4B0130020
T+-:SCH# /07D<EE LPLOJG-C /09=OH* (:T@HCYV /08POH* +VT-HD:$ D 8|OH* (:XBGCS- /07D|< L1< -D8B0130021

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DATE 02MAR70 01APR70 06MAY70 01JUL70
EC NO. 571512 571516 571513 571524

PROG ID OB01-3
PAGE 12A

8013 FILE CONTROL UNIT FLT SECTION 2

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+/T9E- BDDAEC-	CEAKNEJHNEJHN	JNNEJHN2+P-ID H	H(O2+ JVD*ODGEE<	ACF,* JET A SDA	SDA -0680130066
T+/DQAS2KA A ED	A 26ES-8EQF,- /E	A- G-BFY ECDJJD	JDDJDDJDDJDDJDD	1DNEAC/XAC/YBE-	BELA 81420130067
T+/V7EY ADD," JE	D-OD1E7SAD6SEIC2	ES-BEQEY E- A NY	HW/VRC/XIMV9WE-	BEMD+P;O+Y-H+P/A	* :3ND0130068
T+/WD EGCJD S	SEA ODADJDDJDDJ	OK6Y- NZD DSEYM	JDDJDFDY JHPEJD	JDDJDFM *JHOD6Q	: OY 8YB0130069
T+/XV*1K5LDD1DED	SDJ DDAEDDADJDA	1H-AD*ODAK-D=6 H	SE/AEE- ADJDDJDI	JDS (J76FDJDEAD	1E 8 R:8B0130070
T+/Y-E BED KCH2	DEJHEJHNEJHNE	LHAEJHNE;DVZDC-D	EA6MA SDA N8KPY	/H5EV6AYO," JE	DEED 8QYB0130071
T+/25<F,2 JDNCH,	" J KDA SDA CPY	B/ JDADDDJDDJAD	KPY -DAE-8A OY	JE2 J4ME- R(JE	B*0< 0B-B0130072
TE/22ELDDV9D*OS	SDADJDA DJJ SDDJ	SKAR			E/CB0130073
R AB					X,8B0130074
T ADA					83YB0130075
EM*E7*-DC*ES	=*MEFJ	C	FE ASC R A SD Q	05550501700	71070*48B0130076

----- LAST PAGE -----

DATE	02MAR70	01APR70	06MAY70	01JUL70	PROG ID	0801-3
EC NO.	571512	571516	571513	571524	PAGE	14

A036 SEEK FUNCTION TEST

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

228 * ROUTINE NO. 02, CHECK ALL HEADS FOR CORRECT OPERATION
229 *
230 * ROUTINE PREFACE
231
0D62 02 0D62 232 RTN2 DC XL1'02' ROUTINE NUMBER
0D63 00 0D63 233 DC XL1'00' ROUTINE FLAGS
0D64 0FFB 0D65 234 DC AL2(RTN3) ADDRESS OF NEXT ROUTINE
235
0D66 3D 00 0B18 236 CLI SETSW,0 HAVE PARAMETERS BEEN ENTERED?
0D6A C0 81 0A10 237 BE SETDSK BRANCH IF NO
0D6E C0 87 1C21 238 B RECALB TO RECALIBRATE SUBROUTINE
239
0D72 C2 01 0EF2 240 RTN2A LA HDMASK,IR1 SET IR1 TO POINT TO DATA TABLE
0D76 7C 00 17 241 HVI 23(,IR1),0 ZERO
0D79 5C 16 16 17 242 HVC 22(23,IR1),23(,IR1) DATA TABLE
0D7D 34 01 0EE5 243 ST MASKPT,IR1 SAVE DATA TABLE POINTER
0D81 C2 02 0FEC 244 LA SELHED+6,IR2 LOAD HEAD SELECT FOR FIXED DISK ONLY
0D85 38 04 020A 245 TBN SECTSW,X'04' TEST SSW FOR BYPASS RUN REMOVABLE
0D89 F2 10 04 246 JT RTN2A1 JUMP IF ON
0D8C C2 02 0EE6 247 LA SELHED,IR2 SET UP HEAD SELECT
0D90 34 02 0FE3 248 RTN2A1 ST HEDPTR,IR2 TABLE POINTER
0D94 3C 00 1C62 249 HVI WRTDFC+1,0 SET FOR CYLINDER 0
0D98 3C 00 0FFA 250 HVI RTNERR,0 ZERO ROUTINE ERROR SWITCH
0D9C 38 02 020A 251 TBN SECTSW,X'02' TEST SSW FOR BYPASS RUN FIXED
0DA0 F2 10 08 252 JT RTN2A2 JUMP IF ON
253
0DA3 C2 02 0F0A 254 LA HDMASK+24,IR2 LOAD LAST ENTRY FOR 4 HEADS
0DA7 3D 00 0B16 255 CLI RENVDS,0 TEST FOR A 4 HEAD DISK
0DAB F2 81 04 256 JE **7 JUMP IF THIS IS ONE
0DAE C2 02 0EFE 257 RTN2A2 LA HDMASK+12,IR2 LOAD LAST ENTRY FOR 2 HEADS
0DE2 34 02 0F0B 258 ST HEDEND,IR2 STORE ENDING VALUE
259
0DB6 35 02 0EF3 260 RTN2B L HEDPTR,IR2 LOAD HEAD SELECT POINTER
0DBA 2C 00 1C63 C0 261 HVC WRTDFC+2(1),0(,IR2) SET CURRENT HEAD
0DBF 2C 00 1DBB 01 262 HVC DISKTP(1),1(,IR2) SET CURRENT DISK
0DC4 2C 00 0DDA 02 263 HVC RTN2C+1(1),2(,IR2) PUT HEAD RESET BIT IN HVI
0DC9 C0 87 1CB2 264 B STRTIO TO SEEK
0DCD 00 265 DC XL1'0' FUNCTION CODE, (CONTROL)
0DCE 00 266 DC XL1'0' CONTROL CODE, (SEEK)
0DCF 1C61 267 DC AL2(WRTDFCY) CONTROL FIELD ADDRESS
0DD1 C0 87 0DD9 268 B RTN2C GOOD RETURN
0DD5 C0 87 0DD9 269 B **4 ERROR RETURN
270
0DD9 3C 00 1C67 271 RTN2C HVI RDDFC+2,*** RESET HEAD BIT IN READ AREA
0DDC C0 87 1CB2 272 B STRTIO TO READ ID
0DE1 01 273 DC XL1'01' FUNCTION CODE, (READ)
0DE2 01 274 DC XL1'01' CONTROL CODE, (ID)
0DE3 1C65 275 DC AL2(RDDFC) CONTROL FIELD ADDRESS
0DE5 C0 87 0DF0 276 B RTN2D GOOD RETURN
277
0DE9 35 01 0EF5 278 L MASKPT,IR' ERROR RETURN, LOAD TABLE PTR.
0DED 7C FF 00 279 HVI 0(,IR1),X'FF' SET BIT FOR ERROR ON READ
280
0DF0 35 01 0FE5 281 RTN2D L MASKPT,IR1 LOAD TABLE POINTER
0DF4 3D FF 1C66 282 CLI RDDFC+1,X'FF' CHECK FOR DATA TRANSPER
0DF8 F2 01 06 283 JNE RTN2E JUMP IF THERE WAS
0DFB 7C FF 01 284 HVI 1(,IR1),X'FF' NO DATA TRANS, SET ERROR BIT
0DFE F2 87 2E 285 J RTN2G+3 STEP TO NEXT CARD
286
0E01 3D 00 1C66 287 RTN2E CLI RDDFC+1,0 CHECK FOR READ CYLINDER 0
0E05 F2 81 06 288 JE RTN2F JUMP IF YES
0E08 7C FF 02 289 HVI 2(,IR1),X'FF' IF NO, SET ERROR BIT
0E0B F2 87 03 290 J **6
291
0E0E 7C FF 04 292 RTN2F HVI 4(,IR1),X'FF' SET BIT TO INDICATE CYL. ADDR. OK
0E11 3D C0 1C63 293 CLI WRTDFC+2,0 CHECK FOR SELECT HEADS 0 OR 2
0E15 F2 81 07 294 JE **10 JUMP IF YES
0E18 38 80 1C67 295 TBN RDDFC+2,X'80' TEST FOR HEAD 1 OR 3 SELECTED

A036 SEEK FUNCTION TEST

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

0E1C F2 87 04 296 J **7 PROCEED
297
0E1F 39 80 1C67 298 TBF RDDFC+2,X'80' TEST FOR HEAD 0 OR 2 SELECTED
0E23 F2 10 06 299 JT RTN2G JUMP IF OK
0E26 7C FF 03 300 HVI 3(,IR1),X'FF' SET BIT FOR SELECTED WRONG HEAD
0E29 F2 87 03 301 J **6
0E2C 7C FF 05 302 RTN2G HVI 5(,IR1),X'FF' SET BIT TO INDICATE HD. SELECT OK
0E2F 4D 03 03 0FF9 303 CLC 3(4,IR1),FORZRO TEST FOR ANY ERROR ON THIS HEAD
0E34 F2 81 04 304 JE **7 JUMP IF NONE
0E37 3C FF 0FFA 305 HVI RTNERR,X'FF' SET ROUTINE ERROR SWITCH
0E3B 0E 01 0EE3 11EA 306 ALC HEDPTR(2),THREE INCREMENT HEAD POINTER
0E41 0E 01 0FE5 0FF3 307 ALC MASKPT(2),SIX INCREMENT RECORDING AREA POINTER
0E47 0D 01 0FE5 0F0B 308 CLC MASKPT(2),HEDEND TEST FOR ALL HEADS TESTED
0E4D F2 81 04 309 JE RTN2LG TO LOG OUT IF ALL TESTED
0E50 C0 87 0DB6 310 B RTN2B BRANCH BACK IF NOT DONE
311
0E54 C2 01 0FP2 312 RTN2LG LA HDMASK,IR1 SET IR1 AS LOG TABLE POINTER
0E58 C2 02 0FD7 313 LA HEDM0-6,IR2 SET POINTER FOR
0E5C 34 02 0FF3 314 ST HEDPTR,IR2 HEAD NUMBER MESSAGE
0E60 3D 00 0FFA 315 CLI RTNERR,0 TEST FOR ANY ERROR
0E64 C0 81 0216 316 BE LINK EXIT ROUTINE IF NO ERRORS
317
0E68 C0 87 021A 318 B PRINT PRINT ROUTINE HEADING
0E6C C1 319 DC XL1'C1'
0E6D 10 320 DC IL1'16'
0E6E 0F1B 321 DC AL2(SUMPR) AL2(SUMPR)
0E70 A001 322 DC XL2'A001'
323
0E72 0E 01 0EE3 0FF3 324 RTN2LA ALC HEDPTR(2),SIX INCREASE HEAD MSG. POINTER
0E78 C0 87 021A 325 B PRINT TO SPACE ONLY
0E7C 11 326 DC XL1'11'
0E7D C2 02 0F3A 327 LA HEDER1,IR2 SET POINTER FOR
0E81 34 02 0FF1 328 ST MSGPTR,IR2 STATUS MESSAGES
329
0E85 0C 01 0E92 0FF3 330 HVC RTN2LB(2),HEDPTR STORE MESSAGE ADDRESS
0E8B C0 87 021A 331 B PRINT PRINT HEAD NUMBER
0E8F 01 332 DC XL1'01'
0E90 06 333 DC IL1'06'
0E91 0000 334 RTN2LB DC AL2(*-*)
335
0E93 7D 00 00 336 RTN2LB CLI 0(,IR1),0 TEST FOR ERROR
0E96 F2 81 0E 337 JE RTN2LD JUMP IF NO ERROR
0E99 0C 01 0EA6 0FF1 338 HVC RTN2LC(2),MSGPTR SET CURRENT MESSAGE ADDRESS
339
0E9F C0 87 021A 340 B PRINT PRINT ERROR
0EA3 01 341 DC XL1'01'
0EA4 1F 342 DC IL1'31'
0EA5 0000 343 RTN2LC DC AL2(*-*)
344
0EA7 D2 01 01 345 RTN2LD LA 1(,IR1),IR1 STEP TABLE POINTER
0EAA 34 01 1DB4 346 ST SCRCH,IR1 STORE FOR COMPARE
0EAE 0D 01 1DB4 0F0B 347 CLC SCRCH(2),HEDEND TEST FOR FINISHED
0EB4 F2 01 17 348 JNE RTN2LE JUMP IF NOT FINISHED
0EB7 3D 00 0FFA 349 CLI RTNERR,0 TEST FOR ANY ERRORS
0EBB C0 81 0216 350 B BE LINK ROUTINE EXIT
351
0EBF C0 87 021A 352 B PRINT TO SPACE ONLY
0EC3 16 353 DC XL1'16' SPACE 6
354
0EC4 C0 87 0222 355 B HALT TO DCP ERROR HALT
0ECB A001 356 DC XL2'A001' HALT ID
0ECA C0 87 0216 357 B LINK ROUTINE EXIT
358
0ECE 0D 01 0FF1 0FD7 359 RTN2LE CLC MSGPTR(2),HEDERE TEST FOR FINISHED ON ONE HEAD
0ED4 C0 81 0E72 360 BE RTN2LA BRANCH TO TEST NEXT HEAD
361
0ED8 0E 01 0FF1 0FF5 362 ALC MSGPTR(2),THIRPV STEP MSG. POINTER
0EDE C0 87 0F93 363 B RTN2LH

A036 SPEK FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
				364	
OEE2	0000	OEE3	365	HEDPTR DC	XL2'0'
OEE4	0000	OEE5	366	HASKPT DC	XL2'0'
				367	
OEE6	00	OEE6	368	SELHED DC	XL1'0'
OEE7	00	OEE7	369	DC	XL1'0'
OEE8	FF	OEE8	370	DC	XL1'FF'
				371	
OEE9	80	OEE9	372	DC	XL1'80'
OEEA	00	OEEA	373	DC	XL1'0'
OEEB	00	OEEB	374	DC	XL1'0'
				375	
OEEC	00	OEEC	376	DC	XL1'0'
OEED	08	OEED	377	DC	XL1'08'
OEEF	FF	OEEF	378	DC	XL1'FF'
				379	
OEEF	80	OEEF	380	DC	XL1'80'
OEF0	08	OEF0	381	DC	XL1'08'
OEF1	00	OEF1	382	DC	XL1'0'
				383	
OEF2	00	OEF2	384	HDMASK DC	XL1'0'
OEF3	00	OEF3	385	DC	XL1'0'
OEF4	00	OEF4	386	DC	XL1'0'
OEF5	00	OEF5	387	DC	XL1'0'
OEF6	00	OEF6	388	DC	XL1'0'
OEF7	00	OEF7	389	DC	XL1'0'
				390	
OEF8	00	OEF8	391	DC	XL1'0'
OEF9	00	OEF9	392	DC	XL1'0'
OEFA	00	OEFA	393	DC	XL1'0'
OEFB	00	OEFB	394	DC	XL1'0'
OEFC	00	OEFC	395	DC	XL1'0'
Oefd	00	Oefd	396	DC	XL1'0'
				397	
OEFF	00	OEFF	398	DC	XL1'0'
OEFF	00	OEFF	399	DC	XL1'0'
OF00	00	OF00	400	DC	XL1'0'
OF01	00	OF01	401	DC	XL1'0'
OF02	00	OF02	402	DC	XL1'0'
OF03	00	OF03	403	DC	XL1'0'
				404	
OF04	00	OF04	405	DC	XL1'0'
OF05	00	OF05	406	DC	XL1'0'
OF06	00	OF06	407	DC	XL1'0'
OF07	00	OF07	408	DC	XL1'0'
OF08	00	OF08	409	DC	XL1'0'
OF09	00	OF09	410	DC	XL1'0'
OF0A	0F0A	OF0B	411	HEDEND DC	AL2(*)
OF0C	E2E4D4D4C1D9E840	OF1B	412	SUMPRT DC	CL16'SUMMARY PRINTOUT'
OF14	D7E9C9D5E3D6E4E3		412		
OF1C	C5D9D9D6D940D6D5	OF3A	413	HEDER1 DC	CL31'ERROR ON READ ID
OF24	4CD9C5C1C440C9C4		413		
OF2C	4040404040404040		413		
OF34	40404040404040		413		
OF3B	D5D640C4C1E3C140	OF59	414	DC	CL31'NO DATA TRANSFER ON READ ID
OF43	E3E9C1D5E2C6C5D9		414		
OF4B	40D6D540D9C5C1C4		414		
OF53	40C9C440404040		414		
OF5A	D9C5C1C440C9D5C3	OF78	415	DC	CL31'READ INCORRECT CYLINDER ADDRESS'
OF62	D6D9D9C5C3E340C3		415		
OF6A	E8E3C9D5C4C5D940		415		
OF72	C1C4C4D9C5E2E2		415		
OF79	C4C9C440D5D6E340	OF97	416	DC	CL31'DID NOT SELECT CORRECT HEAD
OF81	E2C5D3C5C3E340C3		416		
OF89	D6D9D9C5C3E340C8		416		
OF91	C5C1C440404040		416		
OF98	C3E8D3C9D5C4C5D9	OFB6	417	DC	CL31'CYLINDER ADDRESS OK
OFA0	40C1C4C4D9C5E2E2		417		

A036 SPEK FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OPA8	40D6D24040404040		417		
OPB0	4040404040404040		417		
OPB7	C8C5C1C440E2C5D3	OPD5	418	HEDER5 DC	CL31'HEAD SELECTED OK
OPBF	C5C3E3C5C440D6D2		418		
OPC7	4040404040404040		418		
OPCF	4040404040404040		418		
OPD6	OPD5	OPD7	419	HEDERE DC	AL2(HEDER5)
OPD8	C8C5C1C440F0	OPDD	420	HEDNH0 DC	CL6'HEAD 0'
OPDE	C8C5C1C440F1	OPED	421	HEDNH1 DC	CL6'HEAD 1'
OPF4	C8C5C1C440F2	OPF9	422	HEDNH2 DC	CL6'HEAD 2'
OPFA	C8C5C1C440F3	OPFP	423	HEDNH3 DC	CL6'HEAD 3'
OPF0	0000	OPF1	424	HSGPTR DC	XL2'0'
OPF2	0006	OPF3	425	SIX DC	XL2'06'
OPF4	001F	OPF5	426	THIRPV DC	IL2'31'
OPF6	0CC00000	OPF9	427	FORZRO DC	XL4'0'
OPFA	00	OPFA	428	RTNERR DC	XL1'0'

A036 SEEK FUNCTION TEST

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains assembly code for routine NO. 02, including instructions like DC, LA, ST, HVC, and comments such as 'ROUTINE PREPARE', 'HAVE PARAMETERS BEEN ENTERED?', and 'SET IR1 TO POINT TO DATA TABLE'.

A036 SEEK FUNCTION TEST

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains assembly code for routine NO. 02, including instructions like J, TBF, JT, RVI, CLC, and comments such as 'PROCEED', 'TEST FOR HEAD 0 OR 2 SELECTED', and 'SET BIT TO INDICATE HD. SELECT OR TEST FOR ANY ERROR ON THIS HEAD'.

A036 SPEK FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
		364			
OEE2 0008	OEE3 365	HEDPTR	DC	XL2'0'	HEAD SELECT TABLE POINTER
OEE4 0000	OEE5 366	HASKPT	DC	XL2'0'	DATA TABLE POINTER
		367			
OEE6 00	OEE6 368	SELHED	DC	XL1'0'	TO SELECT HEAD 0
OEE7 00	OEE7 369		DC	XL1'0'	TO SELECT UPPER DISK
OEE8 FF	OEE8 370		DC	XL1'FF'	
		371			
OEE9 80	OEE9 372		DC	XL1'80'	TO SELECT HEAD 1
OEEA 00	OEEA 373		DC	XL1'0'	TO SELECT UPPER DISK
OEEB 00	OEEB 374		DC	XL1'0'	
		375			
OEEC 00	OEEC 376		DC	XL1'0'	TO SELECT HEAD 2
OEED 08	OEED 377		DC	XL1'08'	TO SELECT LOWER DISK
OEEF FF	OEEF 378		DC	XL1'FF'	
		379			
OEEF 80	OEEF 380		DC	XL1'80'	TO SELECT HEAD 3
OEF0 08	OEF0 381		DC	XL1'08'	TO SELECT LOWER DISK
OEF1 00	OEF1 382		DC	XL1'0'	
		383			
OEF2 00	OEF2 384	HDMASK	DC	XL1'0'	HEAD 0, ERROR ON READ
OEF3 00	OEF3 385		DC	XL1'0'	HEAD 0, NO DATA TRANSFER
OEF4 00	OEF4 386		DC	XL1'0'	HEAD 0, READ INCORRECT CYL. ADDRESS
OEF5 00	OEF5 387		DC	XL1'0'	HEAD 0, SELECTED WRONG HEAD
OEF6 00	OEF6 388		DC	XL1'0'	HEAD 0, CYLINDER ADDR. OK
OEF7 00	OEF7 389		DC	XL1'0'	HEAD 0 SELECT OK
		390			
OEF8 00	OEF8 391		DC	XL1'0'	HEAD 1, ERROR ON READ
OEF9 00	OEF9 392		DC	XL1'0'	HEAD 1, NO DATA TRANSFER
OEFA 00	OEFA 393		DC	XL1'0'	HEAD 1, READ INCORRECT CYL. ADDRESS
OEFB 00	OEFB 394		DC	XL1'0'	HEAD 1, SELECTED WRONG HEAD
OEFC 00	OEFC 395		DC	XL1'0'	HEAD 1, CYLINDER ADDR. OK
Oefd 00	Oefd 396		DC	XL1'0'	HEAD 1 SELECT OK
		397			
OEFE 00	OEFE 398		DC	XL1'0'	HEAD 2, ERROR ON READ
OEFF 00	OEFF 399		DC	XL1'0'	HEAD 2, NO DATA TRANSFER
OF00 00	OF00 400		DC	XL1'0'	HEAD 2, READ INCORRECT CYL. ADDRESS
OF01 00	OF01 401		DC	XL1'0'	HEAD 2, SELECTED WRONG HEAD
OF02 00	OF02 402		DC	XL1'0'	HEAD 2, CYLINDER ADDR. OK
OF03 00	OF03 403		DC	XL1'0'	HEAD 2 SELECT OK
		404			
OF04 00	OF04 405		DC	XL1'0'	HEAD 3, ERROR ON READ
OF05 00	OF05 406		DC	XL1'0'	HEAD 3, NO DATA TRANSFER
OF06 00	OF06 407		DC	XL1'0'	HEAD 3, READ INCORRECT CYL. ADDRESS
OF07 00	OF07 408		DC	XL1'0'	HEAD 3, SELECTED WRONG HEAD
OF08 00	OF08 409		DC	XL1'0'	HEAD 3, CYLINDER ADDR. OK
OF09 00	OF09 410		DC	XL1'0'	HEAD 3 SELECT OK
OF0A 0F0A	OF0B 411	HEDEND	DC	AL2 (*)	
OF0C E2E4D4D4C1D9E840	OF1B 412	SUPRPT	DC	CL16'SUMMARY PRINTOUT'	
OF14 D7I9C9D5E3D6E4E3				412	
OF1C C5D9D9D6D940D6D5	OF3A 413	HEDER1	DC	CL31'ERROR ON READ ID	
OF24 40D9C5C1C440C9C4				413	
OF2C 4040404040404040				413	
OF34 40404040404040				413	
OF3B D5D640C4C1E3C140	OF59 414		DC	CL31'NO DATA TRANSFER ON READ ID	
OF43 E3E9C1D5E2C6C5D9				414	
OF4B 40D6D540D9C5C1C4				414	
OF53 40C9C440404040				414	
OF5A D9C5C1C440C9D5C3	OF78 415		DC	CL31'READ INCORRECT CYLINDER ADDRESS'	
OF62 D6D9D9C5C3E340C3				415	
OF6A E8E3C9D5C4C5D940				415	
OF72 C1C4C4D9C5E2E2				415	
OF79 C4C9C440D5D6E340	OF97 416		DC	CL31'DID NOT SELECT CORRECT HEAD	
OF81 E2C5D3C5C3E340C3				416	
OF89 D6D9D9C5C3E340C8				416	
OF91 C5C1C440404040				416	
OF98 C3E8D3C9D5C4C5D9	OFB6 417		DC	CL31'CYLINDER ADDRESS OK	
OFA0 40C1C4C4D9C5E2E2				417	

A036 SPEK FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OPA8 40D6D24040404040				417	
OPB0 4040404040404040				417	
OPB7 C8C5C1C440E2C5D3	OPD5 418	HEDERS	DC	CL31'HEAD SELECTED OK	
OPBF C5C3E3C5C440D6D2				418	
OPC7 4040404040404040				418	
OPCF 4040404040404040				418	
OPD6 OPD5	OPD7 419	HEDERE	DC	AL2 (HEDERS)	
OPD8 C8C5C1C440F0	OFDD 420	HEDNH0	DC	CL6'HEAD 0'	
OPDE C8C5C1C440F1	OFE3 421	HEDNH1	DC	CL6'HEAD 1'	
OPF4 C8C5C1C440F2	OFE9 422	HEDNH2	DC	CL6'HEAD 2'	
OPFA C8C5C1C440F3	OFEP 423	HEDNH3	DC	CL6'HEAD 3'	
OPF0 0000	OPF1 424	MSGPTR	DC	XL2'0'	
OPF2 0006	OPF3 425	SIX	DC	XL2'06'	
OPF4 001F	OPF5 426	THIRPV	DC	IL2'31'	
OPF6 0CC00000	OPF9 427	FORZRO	DC	XL4'0'	
OPFA 00	OPFA 428	RTNERR	DC	XL1'0'	

A036 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

11A5	40C9C5E2C5E340C2			551	
11AD	E840C140D9C5C3C1			551	
11B5	D34B			551	
11B7	D6E5D9E4D540E2E6	11E3	552	ERRORB DC	CL45'OVRUN SW MADE AT START OF SK FWD FROM CE TRK. *
11BF	40D4C1C4C540C1E3			552	
11C7	40E2E3C1D9E340D6			552	
11CF	C640E2D240C6E6C4			552	
11D7	40C6D9D6D440C3C5			552	
11DF	40E3D9D24B			552	
11E4	000001	11E6	553	ONE DC	XL3'01'
11E7	0002	11E8	554	TWO DC	XL2'02'
11E9	0003	11EA	555	THREE DC	XL2'03'

A036 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

				557 *		ROUTINE NO. 04, BASIC SEEK TEST	
				558			
				559 *		ROUTINE PREFACE	
				560			
11EB	04	11EB	561	RTN4 DC	XL1'04'	ROUTINE NUMBER	
11EC	00		562	DC	XL1'00'	ROUTINE FLAGS	
11ED	1505	11EE	563	DC	AL2(RTN5)	ADDRESS OF NEXT ROUTINE	
			564				
11EF	3D 00 0B18		565	CLI	SETSN,0	HAVE PARAMETERS BEEN ENTERED?	
11F3	C0 81 0A10		566	BE	SETDSK	BRANCH IF NO	
11F7	C0 87 1C21		567	B	RECALB	TO RECALIBRATE SUBROUTINE	
11FB	3C 00 OFFA		568	HVI	RTNERR,0	ZERO THE ROUTINE ERROR SWITCH	
11FF	C2 01 13FC		569	RTN4A LA	SKTBL4,IR1	SET IR1 TO POINT TO	
1203	34 01 1A2C		570	ST	PRMLST,IR1	BEGINNING OF PARAMETER LIST	
1207	C2 02 1405		571	LA	HISTBL,IR2	CLEAR HISTORY TABLE	
120B	34 02 144F		572	ST	TBLSAV,IR2	SAVE TABLE ADDRESS	
120F	AC 1F 1F 20		573	HVC	TBL4LG-1(TBL4LG,IR2),TBL4LG(,IR2)	ZERO EST. TBL.	
			574				
1213	35 01 1A2C		575	RTN4B L	PRMLST,IR1	LOAD PARAMETER LIST POINTER	
1217	7D FF 00		576	CLI	0(,IR1),I'FF'	CHECK FOR END OF SEEK LIST	
121A	F2 81 9F		577	JE	RTN4LG	JUMP TO LOGOUT	
121D	1C 00 1C62 00		578	HVC	HRTDFC+1(1),0(,IR1)	MOVE NEXT CYL. NO. TO CONTROL FLD.	
			579				
1222	C0 87 1CB2		580	B	STRTIO	TO SEEK	
1226	00	1226	581	DC	XL1'0'	FUNCTION CODE, (CONTROL)	
1227	00	1227	582	DC	XL1'0'	CONTROL CODE, (SEEK)	
1228	1C61	1229	583	DC	AL2(HRTDFC)	CONTROL FIELD ADDRESS	
122A	C0 87 124D		584	B	RTN4B1	GOOD RETURN FROM SIG	
122E	C0 87 1C07		585	B	SENSE	ERROR ON SIG	
1232	02	1232	586	DC	XL1'02'		
1233	35 01 144F		587	L	TBLSAV,IR1	LOAD HISTORY TABLE POINTER	
1237	4C 00 00 1C5C		588	HVC	0(1,IR1),STATUS-	SAVE STATUS BYTE 0	
123C	C0 87 1C07		589	B	SENSE		
1240	03	1240	590	DC	XL1'03'		
1241	48 00 01 1C5C		591	HZZ	1(,IR1),STATUS-1	SAVE BITS 0-3 OF STATUS BYTE 2	
1246	3C FF OFFA		592	HVI	RTNERR,I'FF'	SET THE ROUTINE ERROR SWITCH	
124A	F2 87 0D		593	J	RTN4C		
			594				
124D	C0 87 1C07		595	RTN4B1 B	SENSE	TO SENSE DEVICE STATUS	
1251	02	1251	596	DC	XL1'02'	BYTES 0 AND 1	
1252	38 10 1C5D		597	TBN	STATUS,I'10'	TEST FOR SEEK BUSY	
1256	C0 10 124D		598	BT	RTN4B1	LOOP TILL SEEK BUSY DROPS	
			599				
125A	C0 87 1C07		600	RTN4C B	SENSE	TO SENSE DEVICE STATUS	
125E	02	125E	601	DC	XL1'02'	BYTES 0 AND 1	
125F	C0 87 1C07		602	B	SENSE	TO SENSE DEVICE STATUS	
1263	02	1263	603	DC	XL1'02'	BYTES 0 AND 1	
1264	35 01 144F		604	L	TBLSAV,IR1	LOAD HISTORY TABLE POINTER	
1268	3D C6 14DB		605	CLI	SEEKDR-6,C'F'	CHECK FOR A FORWARD SEEK	
126C	F2 01 03		606	JNE	**6		
126F	7A 01 01		607	SBN	1(,IR1),I'01'	SET FORWARD BIT IN TABLE IF YES	
1272	4C 00 02 1A31		608	HVC	2(1,IR1),TKCTR	SAVE NUMBER OF TRACKS CROSSED	
			609				
1277	C0 87 1CB2		610	B	STRTIO	TO READ ID	
127E	01	127E	611	DC	XL1'01'	FUNCTION CODE, (READ)	
127C	01	127C	612	DC	XL1'01'	CONTROL CODE, (ID)	
127D	1C65	127E	613	DC	AL2(RDDFC)	CONTROL FIELD ADDRESS	
127F	C0 87 1283		614	B	**4		
1283	35 01 1A2C		615	L	PRMLST,IR1	LOAD PARAMETER LIST ADDRESS	
1287	39 03 1C65		616	TBF	RDDFC,I'03'	TEST FOR NO DEFECTIVE OR ALTERNATE	
			617 *			TRACK FLAG BITS ON	
128B	F2 10 05		618	JT	RTN4C2	JUMP IF BOTH CONDITIONS ARE OFF	
128E	1C 00 1C66 00		619	HVC	RDDFC+1(1),0(,IR1)	THIS ADDRESS WAS DUE TO AN	
			620 *			ALTERNATE OR DEFECTIVE TRACK	
			621 *			ASSIGNMENT, SO DUB IS THE CORRECT	
1293	35 02 144F		622	RTN4C2 L	TBLSAV,IR2	LOAD TABLE POINTER	
1297	8C 00 03 1C66		623	HVC	J(1,IR2),RDDFC+1	SAVE ID JUST READ	
129C	1D 00 1C66 00		624	CLC	RDDFC+1(1),0(,IR1)	COMPARE ID READ WITH EXPECTED	

A036 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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1409 C0000000 140C 761 DC XL4'0'
140D C0000000 1410 762 DC XL4'0'
1411 C0000000 1414 763 DC XL4'0'
1415 C0000000 1418 764 DC XL4'0'
1419 C0000000 141C 765 DC XL4'0'
141D C0000000 1420 766 DC XL4'0'
1421 C0000000 1424 767 DC XL4'0'
0020 768 TEL4LG EQU *-HISTBL LENGTH OF HISTORY TABLE
1425 0C04 1426 769 FOUR DC IL2'4'
1427 E2C5C5D240E7E7E7 1445 770 SEKSUM DC CL31'SEEK XXXXXX XXX TRACKS, TO XXX'
142F E7E7E7E740E7E7E7 770
1437 40E3D9C1C3D2E26B 770
143F 40E3D640E7E7E7 770
1446 D5D640C5D9D9D6D9 144D 771 NOERR DC CL8'NO ERROR'
144E 0000 144F 772 TBL SAV DC XL2'0'
1450 00 1450 773 THISER DC XL1'0'
1451 C5D9D9D6D9E240D6 1475 774 DC CL37'ERRORS OCCURRED AFTER DOING A READ ID'
1459 C3C3F4D9D9C5C440 774
1461 C1C6E3C5D940C4D6 774
1469 C9D5C740C140D9C5 774
1471 C1C440C9C4 774
1476 43C1F340C3E8D34B 1481 775 RDIDER DC CL12' AT CYL. XXX'
147E 40E7E7E7 775
1482 C5D9D9D6D9E240D6 14A7 776 ERROR9 DC CL38'ERRORS OCCURRED WHILE SEEKING CYL. XXX'
148A C3C3F4D9D9C5C440 776
1492 F6C8C9D3C540E2C5 776
149A C5E2C9D5C740C3E8 776
14A2 D34440E7E7E7 776
14A8 E2C5C5D2C5C440E3 14B9 777 SEEKTO DC CL18'SEEKED TO CYL. XXX'
14B0 D640C3E8D34B40E7 777
14B8 E7E7 777
14BA C1D9D9C9F5C5C440 14CC 778 SEEKAT DC CL19'ARRIVED AT CYL. XXX'
14C2 C1E340C3E8D34B40 778
14CA E7E7E7 778
14CD E6C8C9D3C540E2C5 14E1 779 SEEKDR DC CL21'WHILE SEEKING XXXXXX'
14D5 C5E2C9D5C740E7E7 779
14DD E7E7E7E7E7 779
14E2 40C6D9D6D440C3E8 14EP 780 OLDADR DC CL14' FROM CYL. XXX'
14EA E34B4CE7E7E7 780
14F0 C6D6D9E5C1D9C4 14P6 781 FORWD DC CL7' FORWARD'
14F7 C9D540D9C5E54B 14PD 782 REV DC CL7' IN REV.'
14FE 40404040404040 1504 783 SVNBLK DC CL7'
    
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DATE 13MAR70 01MAR71 29OCT71 15NOV71 15MAR72
EC NO. 571512 571573 571601 571605 571591

PROG ID 0A03-6
PAGE 8

A036 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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785 * ROUTINE NO. 05, MEASURE HEAD SETTLING TIME
786
1505 05 1505 787 RTN5 DC XL1'05' ROUTINE NUMBER
1506 00 1506 788 DC XL1'00' ROUTINE FLAGS
1507 16B1 1508 789 DC AL2(RTN6) ADDRESS OF NEXT ROUTINE
1509 38 04 0A0C 790 TBN UNA,X'04' TEST FOR HIGH SPEED
150D C0 10 0216 791 BT LINK BYPASS ROUTINE IF DEFINED
792
1511 3D 00 0B1A 793 CLI SETSW,0 HAVE PARAMETERS BEEN ENTERED?
1515 C0 81 0A10 794 BE SETDSK BRANCH IF NO
795
1519 C0 87 1C07 796 B SENSE SENSE DEVICE STATUS
151D 03 151D 797 DC XL1'03' BYTES 2 & 3.
151E 39 04 1C5C 798 TBP STATUS-1,X'04' TEST HEAD SETTL'NG BIT FOR OFF
1522 F2 10 10 799 JT RTN5A JUMP IF OFF
1525 C0 87 021A 800 B PRINT TO PRINT HEAD SETTLING BIT ON
1529 C6 1529 801 DC XL1'C6' FLAGS
152A 21 152A 802 DC IL1'33' LENGTH
152B 1661 152C 803 DC AL2(HEADP1) MESSAGE ADDRESS
152D A090 152E 804 DC XL2'A090' MESSAGE ID
152F C0 87 0222 805 B HALT TO DCP HALT
1533 A090 1534 806 DC XL2'A090' HALT ID
807
1535 0C 01 1C63 0D61 808 RTN5A MVC WRTDFC+2(2),ZERO SET TO SEEK TO ZERO
153B 3C 09 126C 809 MVI SNSID,09 INSERT ID IN PRINT
153P C0 87 1F9C 810 B CVD TO CONVERT CYLINDER NUMBER
1543 1C62 1544 811 DC AL2(WRTDFC+1) ADDRESS OF SOURCE
1545 14A7 1546 812 DC AL2(ERROR9) ADDRESS OF DESTINATION
1547 C0 87 1CP2 813 F STRTIO TO SEEK TO 0
154B 00 154B 814 DC XL1'0' FUNCTION CODE, (CONTROL)
154C 00 154C 815 DC XL1'0' CONTROL CODE, (SEEK)
154D 1C61 154E 816 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
154F C0 87 1565 817 B RTN5B GOOD RETURN
1553 C0 87 1245 818 B PRTSNS ERROR ON SIO
819
1557 C0 87 021A 820 B PRINT TO PRINT ERROR
155B 06 155B 821 DC XL1'06' FLAGS
155C 26 155C 822 DC IL1'38' LENGTH
155D 14A7 155E 823 DC AL2(ERROR9) MESSAGE ADDRESS
155F C0 87 0222 824 B HALT TO DCP ERROR HALT
1563 A'09 1564 825 DC XL2'A009' HALT ID
826
1565 3C 01 1C62 827 RTN5B MVC WRTDFC+1,1 SET TO SEEK TO CYLINDER 1
1569 0C 02 1639 0D61 828 MVI HDTIME(3),ZERO ZERO THE TIME AREA
156P C0 87 1F9C 829 B CVD TO CONVERT CYLINDER NO.
1573 1C62 1574 830 DC AL2(WRTDFC+1) ADDRESS OF SOURCE
1575 14A7 1576 831 DC AL2(ERROR9) ADDRESS OF DESTINATION
832
1577 C0 87 1C07 833 B STRTIO TO SEEK TO 1
157B 00 157B 834 DC XL1'0' FUNCTION CODE, (CONTROL)
157C 00 157C 835 DC XL1'0' CONTROL CODE, (SEEK)
157D 1C61 157E 836 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
157F C0 87 1595 837 B RTN5C GOOD RETURN
1583 C0 87 1245 838 B PRTSNS ERROR ON SIO
839
1587 C0 87 021A 840 B PRINT TO PRINT ERROR
158B 00 158B 841 DC XL1'06' FLAGS
158C 26 158C 842 DC IL1'38' LENGTH
158D 14A7 158E 843 DC AL2(ERROR9) MESSAGE ADDRESS
158F C0 87 0222 844 B HALT TO DCP ERROR HALT
1593 A009 1594 845 DC XL2'A009' HALT ID
846
1595 C2 01 1770 847 RTN5C LA 6000,IR1 TO SENSE STATUS
1599 C0 87 1C07 848 B SENSE BYTES 2 AND 3
159D 03 159D 849 DC XL1'03'
850
159E 38 04 1C5C 851 TBN STATUS-1,X'04' TEST THE HEAD SETTLING BIT
15A2 F2 10 1C 852 JT RTN5D JUMP WHEN IT COMES ON
    
```

DATE 13MAR70 01MAR71 29OCT71 15NOV71 15MAR72
EC NO. 571512 571573 571601 571605 571591

PROG ID 0A03-6
PAGE 8A

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129624
PAGE 9

Table with columns: ADDR, STMT, SOURCE, STATEMENT. Rows include assembly code for functions like DECREMENT DELAY COUNTER, MESSAGE ADDRESS, and HEAD SETTLING TIME.

DATE 13MAR70 01MAR71 29OCT71 15NOV71 15MAR72
EC NO. 571512 571573 571601 571605 571591

PROG ID 0A03-6
PAGE 9

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129624
PAGE 9A

Table with columns: ADDR, STMT, SOURCE, STATEMENT. Rows include assembly code for routines like TEST OF THE SEEK CHECK TIMEOUT COUNTER, IS THIS RUNNING ON DISK 2?, and RUN THIS ROUTINE ONLY WHEN DISK 2 IS NOT READY.

DATE 13MAR70 01MAR71 29OCT71 15NOV71 15MAR72
EC NO. 571512 571573 571601 571605 571591

PROG ID 0A03-6
PAGE 9A

A036 SFEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for SFEK function test, including instructions like LIO, TIO, J, BRUSH, DC, and comments such as 'TO ROUTINE EXIT TO PRINT ERROR' and 'TO SENSE DEVICE STATUS'.

A036 SFEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for SFEK function test, including instructions like DC, MVI, CLI, BE, and comments such as 'ROUTINE TO TEST THE 'GO' AND 'TRACK CROSSING LINES'' and 'TO PRINT INSTRUCTIONS'.

A036 SEEK FUNCTION TEST

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
19F1 A00F                19F2 1224      DC      XL2'A00F'           HALT ID
                               1225
19F3 35 01 1A2C          1226 DIAG8 L      PRHLST,IR1         LOAD ADDRESS OF CURRENT SEEK
19F7 1D 00 1C66 00      1227          CLC      RDDFC+1(1),0(,IR1)    COMPARE ID READ & EXPECTED ID
19FC F2 81 11           1228          JE       DIAG9       JUMP IF THEY ARE EQUAL
19FF 39 03 1C65         1229          TBP      RDDFC,X'03'    TEST FLAG BITS
1A03 F2 90 0A           1230          JF       DIAG9       JUMP IF EITHER ARE ON.
1A06 0C 00 1C62 1A28    1231          HVC      WRTDFC+1(1),DIADFC+1  SET ADDRESS FOR PRINT ROUTINE
1A0C C0 37 1C69         1232          B        SEEKER        TO PRINT SEEK ERROR
1A10 0E 01 1A2C 11E6    1233 DIAG9 ALC     PRHLST(2),ONE      STEP PARAMETER POINTER
1A16 C0 E7 1840         1234          B        DIAG6
                               1235
1A1A 01                 1A1A 1236 SKTBL EQU *
1A1B 00                 1A1A 1237 DC      XL1'01'           TRK 1
1A1C 02                 1A1B 1238 DC      XL1'00'           TRK 0
1A1D 00                 1A1C 1239 DC      XL1'02'           TRK 2
1A1E 09                 1A1D 1240 DC      XL1'00'           TRK 0
1A1F 00                 1A1E 1241 DC      XL1'09'           TRK 9
1A20 10                 1A1F 1242 DC      XL1'00'           TRK 0
1A21 10                 1A20 1243 DC      XL1'10'           TRK 10
1A22 00                 1A21 1244 DC      XL1'10'           TRK 10
1A23 20                 1A22 1245 DC      XL1'00'           TRK 00
1A24 00                 1A23 1246 DC      XL1'20'           TRK 20
1A25 40                 1A24 1247 DC      XL1'00'           TRK 00
1A26 FF                 1A25 1248 DC      XL1'40'           TRK 40
1A27 00                 1A26 1249 DC      XL1'FF'
1A28 00                 1A27 1250 DIADFC EQU *
1A29 00                 1A2A 1251 DC      XL4'0'
1A2A 00                 1A2C 1252 PRHLST DC   XL2'0'
1A2B 00                 1A2E 1253 TIRCTR DC   XL2'0'
1A2C 00                 1A30 1254 TINEST DC   XL2'FF'
1A2D 00                 1A31 1255 TKCTR DC   XL1'0'
1A2E 00                 1A32 1256 HOTSW DC   XL1'0'
                               1257
1A33 C3D6D5D5C5C3E340 1A50 1258 OPINST DC   CL30'CONNECT THE FOLLOWING JUMPERS'
1A3B E3C8C540C6D6D3D3 1258
1A43 D6E6C9D5C740D1E4 1258
1A4B D4D7C5D9E240      1258
1A51 E6F3D9F2D4F0F4A0 1A61 1259 JUMP1 DC   CL17'W3R2M04 - W3G2J02'
1A59 6040E6F3C7F2D1F0 1259
1A61 F2                 1259
1A62 E6F3D9F2D4F0F340 1A72 1260 JUMP2 DC   CL17'W3R2M03 - W3G2J06'
1A6A 6040E6F3C7F2D1F0 1260
1A72 F6                 1260
1A73 E6F3D9F2D7F1F040 1A83 1261 JUMP3 DC   CL17'W3R2P10 - W3G2G04'
1A7B 6040E6F3C7F2C7F0 1261
1A83 F4                 1261
1A84 C7D640D3C9D5C540 1A83 1262 NOGO DC   CL48'GO LINE DOES NOT COME UP ON A SEEK WITH MOVEMENT'
1A8C C4E6C5E240D5D6F3 1262
1A94 40C3D6D4C540E4D7 1262
1A9C 40D6D540C140E2C5 1262
1AA4 C5D240E6C9E3C840 1262
1AAC D4D6E5C5D4C5D5E3 1262
1AB4 C7D640D3C9D5C540 1AD5 1263 GOUPA DC   CL34'GO LINE IS UP FOR A NO MOTION SEEK'
1ABC C9F240E4D740C6D6 1263
1AC4 D940C140D5D640D4 1263
1ACC D6E3C9D6D540E2C5 1263
1AD4 C5D2                 1263
1AD6 C7D640D3C9D5C540 1AP0 1264          DC      CL27'GO LINE HAS DROPPED BEFORE '
1ADE C8C1E240C4D9D6D7 1264
1AE6 D7C5C440C2C5C6D6 1264
1AEE D9C540             1264
1AF1 D9C5C3C5C9E5C9D5 1B1E 1265 GOERLY DC  CL46'RECEIVING CORRECT NO. OF TRACK CROSSING PULSES'
1AF9 C740C3D6D9D9C5C3 1265
1B01 E340D5D64840D6C6 1265
1B09 40E3D9C1C3D240C3 1265
1B11 D9D6E2E2C9D5C740 1265
1B19 D7E4D3E2C5E2      1265

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A036 SEEK FUNCTION TEST

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
1B1F C7D640D3C9D5C540 1B4F 1266      DC      CL48'GO LINE DID NOT DROP AFTER CORRECT NO. OF TRACK '
1E27 C4C9C440D5D6E340 1266
1B2F C4D9D6D740C1C6E3 1266
1B37 C5D940C3D6D9D9C5 1266
1B3F C3E340D5D64840D6 1266
1B47 C640E3D9C1C3D240 1266
1B4F C3D9D6E2E2C9D5C7 1B5D 1267 GOUP DC   CL15'CROSSING PULSES'
1B57 40D7E4D3E2C5E2    1267
1B5E C7D640D3C9D5C540 1B78 1268      DC      CL27'GO LINE HAS DROPPED BEFORE '
1B66 C8C1E240C4D5D6D7 1268
1B6E E7C5C440C2C5C6D6 1268
1B76 D9C540             1268
1B79 D9C5C3C5C9E5C9D5 1B9B 1269 GODROP DC  CL35'RECEIVING ANY TRACK CROSSING PULSES'
1B81 C740C1D5E840E2D3D9 1269
1B89 C1C3D240C3D9D6E2 1269
1B91 E2C9D5C740D7E4D3 1269
1B99 E2C5E2             1269
1B9C C7D640D3C1E3C3C8 1BCA 1270 NOTKCR DC CL47'GO LATCH UP & NO TRACK CROSSING PULSES RECEIVED'
1BA4 40E4D7405040D5D6 1270
1BAC 40E3D9C1C3D240C3 1270
1BB4 D9D6E2E2C9D5C740 1270
1PBC D7E4D3E2C5E240D9 1270
1BC4 C5C3C9C5E5C5C4    1270
1BCB C1C3C3C5E2E240D7 1REA 1271 DETRNT DC  CL32'ACCESS POSITIONED BETWEEN TRACKS'
1BD3 D6E2C9E3C9D6D5C5 1271
1BDB C440C2C5E3E6C5C5 1271
1BE3 D540E3D9C1C3D2E2 1271
1BEB E3D9C1C3D240C3D9 1C06 1272 TKUP DC   CL28'TRACK CROSSING LINE UP SOLID'
1BF3 D6E2E2C9D5C740D3 1272
1PFB C9D5C540E4D740E2 1272
1C03 D6D3C9C4           1272
                               1273 *
1C07 34 08 1C18         1274 SENSE ST   SENSE I/O ROUTINE
1C08 36 08 11E6         1275          A     SNSHOV+5,ARR      SAVE ADDRESS RECALL REGISTER
1C0F 34 08 1C20         1276          ST    ONE,ARR          ADD ONE TO BYPASS PARAMETER
1C13 08 03 1C1A 0000   1277 SNSHOV HNM  SNSEXT+3,ARR      STORE EXIT ADDRESS
1C19 30 00 1C5D         1278 SMS   SMS     SNS+1,+-*        MOVE IN FUNCTION CODE
1C1D C0 87 0000        1279 SNSEXT B   STATUS,0        PERFORM SENSE
                               1280
                               1281
                               1282 *
                               SUBROUTINE TO DO A RECALIBRATE
                               1283
1C21 34 08 1C59         1284 RECALB ST   RECALI+3,ARR      SAVE RETURN ADDRESS
1C25 3C 00 1DBB         1285          HVI   DISKTP,0          SET TO USE HEAD 0
1C29 38 C4 020A         1286          TBN   SECTSW,X'04'  TEST SSW 15
1C2D F2 90 04           1287          JF    **7           JUMP IF OFF
1C30 3C 08 1DBB         1288          HVI   DISKTP,X'08' SET TO USE HEAD 2
1C34 3C 0E 1E6C         1289          HVI   SNSID,X'0E'  INSERT ID IN PRINT
1C38 C0 87 1CB2         1290          B     STRTIO        TO I/O SUBROUTINE
1C3C 00                   1C3C 1291 DC      XL1'00'        FUNCTION CODE, (CONTROL)
1C3D 01                   1C3D 1292 DC      AL2(WRTDFC)  CONTROL FIELD ADDRESS
1C3E 1C61                 1C3F 1293 DC      RECALI          CONTROL CODE, (RECALIBRATE)
1C40 C0 87 1C56         1294          B     RECALI          CONTROL FIELD ADDRESS
1C44 C0 87 1E45         1295          B     PRTSMS        GOOD RETURN
1C48 C0 87 021A         1296          B     PRINT          TO DECODE ERROR
1C4C 06                   1C4C 1297 DC      XL1'06'        TO PRINT 3RD LINE
1C4D 24                   1C4D 1298 DC      IL1'36'        FLAGS
1C4E 0CE8                 1C4E 1299 DC      AL2(RECALE)    LENGTH
                               1300          DC      MESSAGE ADDRESS
1C50 C0 87 0222         1301          B     HALT          TO DCP HALT
1C54 A00E                 1C55 1302 DC      XL2'A00E'       HALT ID
                               1303
1C56 C0 87 0000         1304 RECALI B   *-+           EXIT
                               1305
1C5A 0000                 1C5B 1306 SETR2 DC   XL2'0'
1C5C 0000                 1C5D 1307 STATUS DC  XL2'0'
1C5E 6F6F6F             1C60 1308 THREEQ DC  CL3'???'
                               1309

```


A036 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Includes lines 1D94 through 1E44.

A036 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Includes lines 1E45 through 1F15.

A036 SEFK FUNCTION TEST

ERR LOC OBJPCT CODE ADDR STMT SOURCE STATEMENT

```

1F17 C5D8E4C9D7D4C5D5 1F28 1540 DC CL18'EQUIPMENT CHECK *
1F1F E340C3C8C5C3D240 1540
1F27 4040 1540
1F29 C4C1E3C140C3C8C5 1F3A 1541 DC CL18'DATA CHECK *
1F31 C3D2404040404040 1541
1F39 4040 1541
1F3B D5D640D9C5C3D6D9 1F4C 1542 DC CL18'NO RECORD FOUND *
1F43 C440C6D6E4D5C440 1542
1F4B 4040 1542
1F4D E3D240C3D6D5C4C9 1F5E 1543 DC CL18'TK CONDITION CHECK*
1F55 E3C9D6D540C3C8C5 1543
1F5D C3D2 1543
1F5F E2C5C5D240C3C8C5 1F70 1544 DC CL18'SEEK CHECK *
1F67 C3D2404040404040 1544
1F6F 4040 1544
1F71 E4D5E2C1C6C54040 1F82 1545 STATB2 DC CL18'UNSAFE *
1F79 4040404040404040 1545
1F81 4040 1545
1F83 1546 STMASK EQU *
1F83 80402010 1F86 1547 DC XL4'80402010*
1F87 08040201 1F8A 1548 DC XL4'08040201*
1F8B 00 1F8B 1549 HXBYT DC XL1'00'
1F8C 36 08 11E6 1550 CVD A ONF,ARR ADD 1 TO GET 1ST PARAMETER
1F90 34 08 1FAD 1551 ST FROM+5,ARR INSERT THE FROM ADDR.
1F94 36 08 11E8 1552 A TWO,ARR ADD 2 AND GET THE 2ND PARAMETER
1F98 34 08 1FB3 1553 ST TYBOT+5,ARR INSERT THE TO ADDR.
1F9C 34 08 1FB9 1554 ST OTORZ+5,ARR INSERT THE TO ADDR.
1FA0 36 08 11E6 1555 A ONE,ARR ADD ONE MORE FOR RETURN ADDRESS
1FA4 34 08 1FDC 1556 ST TIXE+3,ARR SET RETURN ADDR.
1FAR 0C C1 1FBF 0000 1557 FROM MVC PROBYT+5(2),*-*
1FAE 0C 01 1FD2 0000 1558 TYBOT MVC TOBYT+3(2),*-*
1FE4 0C 01 1FC3 0000 1559 OTORZ MVC ZROTO+3(2),*-*
1FPA 0C 00 1FB8 0C00 1560 PROBYT MVC HXBYT(1),*-*
1FC0 04 20 0000 1FE7 1561 ZROTO ZAZ *-*(3),UNITS(1) PUT BYTE IN WORK AREA
1FC6 0F 00 1F8E 11E6 1562 DECGAN SLIC HXBYT(1),ONE ZERO THE TO AREA
1FCC F2 82 0A 1563 JL TIXE DECREMENT THE HEX BYTE
1FCF 06 20 0000 1FDD 1564 TOBYT AZ *-*(3),DECONE(1) EXIT IF BELOW 1
1FD5 C0 87 1PC6 1565 B DECGAN INCREMENT THE DECENTL COUNT
1FD9 C0 87 0000 1566 TIXE P *-*
1FDD F1 1FDD 1567 DECONE DC CL1'1' EXIT
1FDF F1F2F3F4F5F6F7F8 1FE7 1568 UNITS DC CL10'1234567890'
1FE6 F9F0 1568
1FEB 1569 STATPR DS CL18
1570
0003 1571 H1 EQU X'03' HALT DISPLAY 1
0076 1572 H2 EQU X'76' HALT DISPLAY 2
0001 1573 XR1 EQU 01
0002 1574 XR2 EQU 02
0008 1575 ARR EQU 08
0002 1576 STAT01 EQU X'02'
0208 1577 SWITCH EQU X'208'
020A 1578 SECTSW EQU X'20A'
0216 1579 LINK EQU X'216'
021A 1580 PRINT EQU X'21A'
021E 1581 UNFACK EQU X'21E'
0222 1582 HALT EQU X'222'
022A 1583 LOAD EQU X'22A'
003C 1584 HF EQU X'3C' HALT DISPLAY 1
003F 1585 HA EQU X'3F' HALT DISPLAY A
0BA6 1586 END BEGIN

```

A036 SEEK FUNCTION TEST

CROSS-REFERENCE

```

SYMBOL T LEN VALUE DEPN REFERENCES
ADREXT A 004 1DAP 1435 1430
ANDY A 001 1779 0995 0941* 0949*
ARR C 001 0008 1575 0024 0726 1274 1275* 1276 1284 1321 1361 1482 1550* 1551 1552*
1553 1554 1555* 1556
A03 A 001 0000 0003
REGIN A 004 08A6 0128 1586
BRUSH A 004 175C 0980 0978
HUSH A 004 1DC2 1447 1379
BYPAS6 A 037 17A9 0998 0936
CKSEEK A 003 1CE8 1374 1372
COPD A 002 1778 0993 0969 0972 0976
CPUSH A 004 174D 0976 0974
CVD A 004 1F8C 1550 0158 0453 0659 0666 0690 0810 0829 1215 1328 1332 1409 1463
CVDARV A 002 1363 0691 0686*
CVDST A 002 130R 0660 0658*
CVDTNO A 002 131E 0667 0665*
DECGAN A 006 1FC6 1562 1565
DECONE A 001 1FDD 1567 1564
DECTIM A 004 163D 0904 0881* 0884* 0886 0887
DELAY1 A 006 1095 0493 0495
DELAY3 A 001 1043 0465 0467
DEMONI A 005 162D C899 0884
DETENT A 032 1BEA 1271 1206
DPCR A 002 1DBD 1443 0131 1368* 1369
DPC3SV A 001 1DB7 1439 1382 1398*
DFDR A 002 1DEP 1444 0132
DIADPC A 001 1A27 1250 1065* 1073 1231
DIAEXT A 004 1998 1189 1063 1091 1114 1129 1152 1163 1176
DIAGA A 004 18A5 1095 1101
DIAGR A 004 1900 1131 1098 1155
DIAG2 A 004 1957 1165 1138
DIAG4 A 004 18DD 1116 1104
DIAG5 A 006 189F 1093 1081 1141
DIAG6 A 004 1840 1061 1234
DIAG7 A 004 19A0 1192 1166 1179
DIAG7A A 004 19CC 1211 1201
DIAG8 A 004 19F3 1226 1197 1214
DIAG9 A 006 1A10 1233 1228 1230
DISKTP A 002 1DFR 1442 0262* 1285* 1288* 1371
ERRR A 004 1021 0452 0469
ERRORR A 045 11E3 0552 0481
ERROR3 A 023 1168 0549 0516
ERROR5 A 007 0D1C 0223 0211
ERROR6 A 023 0DEE 0225 0193
ERROR7 A 015 1151 0548 0505
ERROR9 A 038 14A7 0776 0160 0164 0455 0459 0812 0823 0831 0843
PORSVN A 001 1114 0546 0470
POPWD A 007 14F6 0781 0670 1425
FORZRO A 004 0FF9 0427 0303
POUR A 002 1426 0769 0629 0722
PROBYT A 006 1F8A 1560 1557*
FROM F 001 1F88 1557 1551*
FRSTPS F 001 1DR5 1437 0088* 1057* 1395* 1400 1402*
FSTERR A 004 0B9F 0115 0099
FSDSEK A 003 1D7D 1422 1415
GODROP A 035 189B 1269 1110
GOEFLY A 046 181E 1265 1148
GONG A 002 1774 0991 0943
GOUP F 015 185D 1267 1172
GOUPA A 034 1AD5 1263 1185
HA C 001 003F 1585
HALT C 001 0222 1582 0101 0144 0165 0187 0195 0213 0355 0460 0482 0507 0518 0541
0655 0805 0824 0844 0861 0894 0957 0986 1054 1089 1112 1127
1150 1161 1174 1187 1208 1223 1301 1352 1461 1472
RDMA5K A 001 0EF2 0384 0240 0254 0257 0312
HDTIME A 003 1639 0903 0828* 0865* 0873 0877 0880

```


A036 SFFK FUNCTION TEST

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEPN, REFERENCES. Rows include entries like RTN5D, RTN5E, RTN5F, etc., with their respective values and references.

A036 SFFK FUNCTION TEST

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEPN, REFERENCES. Rows include entries like SPWMSG, STATH2, STATPR, etc., with their respective values and references.

A036 SEEK FUNCTION TEST

A036 SEEK FUNCTION TEST

CROSS-REFERENCE

OBJECT CARD LISTING

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
ER2WK	A	002	1DC1	1445	1433 1434 1492* 1499 1513 1513* 1526*
YORE	A	002	1776	0992	1396* 1397
ZERO	A	003	0D61	0226	0973 0977
ZOTO	A	006	1PC0	1561	0053 0808 0828
					1559*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

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+-Y:YCO. E R:R HA . C C6HB1H @*0XQ+|a. P*HG, J4 B:G2 6TB EH2 (D .YLHAB:GB /30| .ET- 62-A0360001

T+-Z5 -R. a/ P-E @YD?+ DPB*HEAX6 0 |HA. X-E)HA @B EBS, /OH EA/Y. ETO B1-< >/COG /OH D D OQEA0360002

T+-DOS B1Y@E_ E@Y*LS B1@_ E; DB@Z D|@. E_H A 3EAB:DY >3 B- G|* H *-- Y A4 J B- 5QEA0360003

T+., AOE P- B:a OH**A0H@20XR+ *P-HGAC1X21X /OH E J4.+<BG /YFF _ 6|)_*HBB>S /14 6OH* 1-0A0360004

T+-XWB09@ XQ|@ . E32HGW3 /19E0H* BPXQ5B9=-S<BG SH -SCO B1- /0 HB30XPG2) W 8XP E4U S-0A0360005

T+_/>LNO=|IS_N @P8S84CA@| (,5) S WE+|E8>|IS*) 1<X S4UCD6*YV1HCX0| LE<LN2;|S6<TA9*H 0XH 9K4A0360006

T+->*1) N @P8S@P D1<XS4DCN5> (6*P A1+ / 5_V 8_S L2*J 1) IR5_V 5_N 0XP P5_XE+. TO) IT2) P 66+< ;ZXA0360007

T+-?P1;. T A 5 S|E . P<BAB/ 1Z/6 *<EE) ?@BGG *COH* XA0H8DA1) @Z LOH* BPXQ5CHH-SXBG SH -S?H *-XA0360008

T+-OK/: /10/| U ;\$COAGP. /122 *Q*BGC 3 /19E0H* TA1SEH- /OH EASQ HZ@BG SH-B*HAN2T /10 BYHA0360009

T+-1(A0H8DA1)@/ Q (-DP8%BDAC /OH E1SH<H<OH*BHD <OH**A0H8DA1) OA <(CV GE72DAC /OH E1UH SB A0360010

T+-2HCN:-A%EG SH -ATO GE7 /10/OH* *A0H8DA1) OA <GC/ GE72DAC /OH E1TE (GH EOH*BHD EOH* BE>H OT@A0360011

T+-3C1*PK5<. U8>/ 8%PN8%N 0%XT&<T U5*) 9(-S1*PK&<. U8>/ 8%PN8%N 0%XI T&(PE9*PR&<|05<P S&+6 P9 A0360012

T+-3=5@PR6) \$RUC 00@|J6) XE1DCA1>| E6MCD5%XN14CAE (X E0@GLK@|Y44_ @DC B2; (.ED71PO_ 2) H 8%K KEUA0360013

T+-495;. E&<. Y@N @MCN5> (5_N 0*S T1) V 6*PC0) (.0=T LK4C0&<. I86_ L-E)E4CISHCS1) PS1HC B:<+< M2<A0360014

T+-541MC1E (XE5<G IS; I 5_N 0*ST1) V ONCS1*PK&+|0&<| Y44_ @E H C*% XQHHDHDK BGGBG B E8 PZ4A0360015

T+-6?@X0 E500E/* 4 E#V0-H+@C-D -, 2D LB -#W (H+@30 GFHA ":+ HBB?H 6B@HBCOY' X@YD DO-H \$LXA0360016

T+-7DC?R4 -@. (EH +@20 GF<.)>OD % 7E XBGG. H A1 /OH*(6*BGC) U@ A1 XOH**%-DAGFP /07 0(ED 69QAG360017

T+-8VC>N@"0 5 E# V|@*R?HAAX3" -H G.T4 GP\$2-ER@*0. 2/0 (@*06' A1TAYD G+H *R*HGACH GF- 2D Q)BYA0360018

T+-9-|@C@Y*C-|@ ELE<CC*X2-E&@*0" :C-D+81GDC-D+9E" 3C&D+9E@. @YDDOH* (XHAC?. B -*P (H +834 QE*A0360019

T+-: S " :OHBBEXB G /,AD @SY D+ E# TC"| /OHED*HBC3Y 4 -"1C D+U-#T0C* BF-DP " A' C2-68 < 68 KZ<A0360020

T+-#0Z-"10H*RF-D CK &D4 J64CED)_ @. @-DP|E |=XB A /S /OHEE%BG SH - *BG /Q (6*1C' - -68 KC-A0360021

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129624 PAGE 19

A036 SEEK FUNCTION TEST

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+...GCZ<...C#... T+...CO,S9(L HO)U WJ<A0360022 T+...U8@PR6)SRE(SNE(X EO*J 2*J EDA EDA ...DO:|AE+|RO)PS1XP RE(Q @84A0360023 T+...DEDA E(XEO*J 2)P C5_XR1*|T6<|Y4@X ...D2*J 5)STE+.E4@P C84 ...A8A0360024 T+...H1*GEEDA E<|Y4@X N1<PR6<GD1(XE0>I ...5_I EDA EDA EDA ...EDCH1*GDE+.E4@P C8@H :EHA0360025 T+...N2<PA1DC02<PA1DC 12<PA1DC22<PA1DC 3 ...A- ... C AD 4A0A0360026 T+...IGW3 /122 ...*Q*B GDC /19E0H~TA1 SEH~/OH EASQHZ@B G SH *K0A0360027 T+...@ H7 ...6 JGW0HH E60- DEQ)D*P-DBD + A1SDJL /122 ...*Q*BGDHH@B19%OH* ;J* O-@A0360028 T+...G SH-B@BG /5 /12 2 ED*R*BGDIGB E| YCRO-91*Y(-DP8%B DDIP /10G T-AGE3 2DAE EL A0360029 T+...-A@BG SH-A@BG /Q 8-A1*@ /EOH*BFKQ PDOS- @EG SH- @B GG *B+Q *P|HG8%B G /Y H5-A0360030 T+...ED<BG /,PH/P6Y T /OHSY T /OH0.@E 8%PE4*CB1;T05*J 8*U @LYA0360031 T+...1<XDE(PC84CS1;(8@TEE+.E1)I 0@T EO*I 8%PN8%N 0%Y T5)E-5_) 8%PN8%N 0%U OC&A0360032 T+...T5)R-5_) 8%PN8%N UXXTE(PO84CR1;. E84CB:DCAE+.E5;. E8%PE4UCC2<PC4UC S1)M)@A0360033 T+...AG(XEO@GLK'SV6;L WE+.RE(LA1<N O:(8>|A6:(5%R 8_I 1>Q J2 A0360034 T+...CA NAL4 BIT -EY EOH**HLO C",B J| @ (DE.<HBE H4 /J |,A@ P,HA0360035 T+...2 *Q*BGDU7 /10 G THAED'< *P<B GG *CK AGE0@*0" :@Y* RHDA0360036 T+...GG *B(EDHL37FE(? 2 E(: &E< NE<*B GG.HA J1V0H*K-3H AFS0 2:EA0360037 T+.../||@|=-8AE7@HI-8 AFS0J9%BGD/|B J| @ (D 5R<A0360038 T+...B| HHCNAPS1*"OC 2 &" /OH E@BG SH - % 1D A0360039 T+...18-DB(DLG%BG80 ...AZ6C QM</L6> D A@ / PC QM</L'OH* BF/D *H A0360040 T+...A 3EAD6<< /L<GFB *0|2-E7 /?=< ...H3<BG /YBD1L<||@ H.H.4 3TUA0360041 T+...Y A1* L2 D=TB J= B@Y*~|~@HH|HAB<B G /Y @1DA0360042 T+...GAD~=-E 8 A1*@Z <OH*BF-DKG*U@*1J 6|E ...HXA0360043

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129624 PAGE 19A

A036 SEEK FUNCTION TEST

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+...K J. /1|H0H* ...U .C 4<B0U *0 ...-Q A0360044 T+...D8%PE4UC X9=-X9=-X6+~X94C T6*GC4>I,E+|OE+~ X9'POE<PR6)SR ...1)XR5_XSE(SCO=L R6*H NE*A0360045 T+...D5%YN14CAE(XEO*J 2*J 0:(0=TLK4C X9=-E6)X0E;I 5%| C9(XR1*J 9XTI4@N 8%N 21EA0360046 T+...LK4CX9=-S1*PK1*J 8*R 0=TLK4CX9=- A6)XI9*PDE<GT6<| Y44_ 9=-X9XTI4@N 8%N =3QA0360047 T+...X9=-X94CF6)SHE<| Y44_ 9=-X1_SRY%G R1<XN6(XE9M_ EDA EDA AE OXL-DB-3 D H)B A0360048 T+...EOH**A0<9AA1*@ / EO H *BFKQ/EWF-U<B G SH-U OAGP<(QLO IGW3 /1=<GFH@Z@B GG.H " XA0360049 T+.../19E0H*EF-QHEH~/ /OHSY U@ J1SC H 0+65/OH*-TA1SEH~/ /122 ...*Q*BGERP /18 ;:EA0360050 T+...XOH*BHD IO-DP*<B GG *C+ E*P|HEGCQ AE=. /AOROH*BFKQ WEY;-U*BG SH-U*B G /Q \$\$\$A0360051 T+...*A0<8AA1*0A N0E4 BETUO<*HD *HGB-4 BETUO(%BB /Q< /R ETUDEAQ'G=*| /R D;Q KHQA0360052 T+..._OH*N*-CAEDHO| 0 AEZ@0+%BG /,PHJE OY L /OHSY L /OH 0@|C0@|D E4 E' SYO H,8A0360053 T+...<TE0*J 8%PT8'1 I5*) 8%PN8%N 0%Y TE<GL9%GY8UCU5@T EO*J 8%PT8'1|I5*) 8%N OQXA0360054 T+...M1;P26HCC5_LE8UC U5@TE0*J 8%PT8'1 I5*) 8@XM1HCI8UC X947Y94CH2) |L2OC S1*Q 0QA0360055 T+...%00RD@DC72B5C 2-J?B EH2-S @YD (;A A4-DCOI 02|H GD<POE:, /OH EASH PD* 2 HA0360056 T+...E@7D1Z/)4@: 0E PHTFTE781Y1)@CO P;JGW0 DO=*BG /, FA1*ZYI. /OHSYI. 2/1E LQ8A0360057 T+...GG *B+A *P* E@2Y 1Y1)8@:DA<E<P;CF TE7SAY/ (2Y*~<E< P;CFTE7SAY/)@Y* EOH* 9K<A0360058 T+.../OHSYI|3YEG /OH OE76 ...QC HO)|TE|X36)SU8@X N1HC6E<.Y5@GS8XP DE+Q Q3HA0360059 T+...KE|I 2;I 5_MOX/1)+D *P< E@X@*1~ +<SQP2?+0 <POE:, /18-E@% ...C*AO P730 H1DA0360060 T+...G ...H-|"";E .P<B AB/ @11Z) |<E@T3 GFI@'@E_E@YD<|<Q EPL3PFF@B@1/Z'OH* BF-H #/020360061 T+...JFWG /OR E JDE*%B G /YFDJDCORH*BHDC @| D)_LO G\$SB JY E(DE.CHAPS1*"OC -JU @CUA0360062 T+...Y D4 A66@-DD||@ E<%BGG.H AYXOH* Q\$<BGFGC /10G 37 *PT. -JV9+0 *P-H EP30 = HA0360063 T+...G /,P<AE3YHC /OH SYHC2/*U< JY>PTC /10G 3-BGE32ND@ | JY>D;S /ASV+0 *P-H 6BQA0360064 T+...:J*BG /,P|/>SYHL /OHSYHL2/%@/J9 XOH*;J*BG /,A.1? HYRP /OH EA/HH8*B G SH @,QA0360065

A036 SEEK FUNCTION TEST

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+/05YHP2/9TB JX R0H**A0<8/1*2/ XCO EKJGWBYD=+0 *P*BGFI22-/9X0H* ;J*BG /,PKJX;YH. /OH 78EA0360066
T+/VORDBB0Y)*(-D PRKBDPEL /OR21/0 *ADB|OH*BHDB|0Y) A+O *P*BCST2CGW3 /19E0H*BFXQ*P56 --2 7.QA0360067
T+/B, /0NSIH|2/10 9QA1)0/ -|HD;S<B GGUP /OH21SH25EB AOH*BND8A0H**H*B GPC-2C19X0H**X-D AGFN 5Q8A0360068
T+/X0H*000BGG * C+ B*P|H0DKBG /, FRA?DYH3 /0HSH3 /19EC HH-J1-|2 *R?HAXSBGG80*R/K AOH* 3SHA0360069
T+/T/ /YKJX0H* RND | (EDE.A4 GPQ 2YDJ+6<*R-H0B-0 GPH2H<8GGPU+ JY X0;S /1/ E B U DA -L<A0360070
T+/Z* B 6|0 C* CC5_P N1*|TE+|H1HCF5_1 L5>S15*) 4;LH50P R8UCV0*|25|C46PA 97< *CQA0360071
T+/EP1*.J0|.R0*X 25|C36FA 97|G0_G 0|>S36-.P0-A QDC W00~21*CA1'R 4BX N1HCD5XPS6 (P084C C5_E 6L-A0360072
T+/,K1HCU54C05HC A6+.E1)I 9XIT2DC H5>PE5<PN80-06 (I I5*N 2;I 9() 1_S R6<E 5)R 5 (ST2) S H6+H *RHA0360073
T+/K(1*PK1'R 4BX N1HCHO;I 1(X05*- E1DCB1*806*N 6*P C1*|V2)PG6<|06)I E0=(5)R.E (SPE+I R0< 11EA0360074
T+/_H40CC6)SS8X N14CP9(|S1;.G5UC L2)PE6<LI1DCN5>(1(X054CA1>|E6HC C5_XR1*|TE (P0K4C 010 0DDA0360075
T+/>C0*YAO'I 0*X 08>.I5*) 5=LL8XP S1'R 40XN1HCHO;I 1(X05*-E1DCB1*8 06*N 6*PC1*|V2) P GE<D H*HA0360076
T+/>=5;/ 8*YAO'I 0*X08>.I5*) 5=L L8XPS1'R 40GT00/ 9() HDC5UCT6*G C4UCC6)SS8XN14C P9(< *HYA0360077
T+/798XPS6 (X200X E9*PD0*|C1;.SE (~ 08XIT2) SH1*J 0XP T9XPE5HCT6*GC4>. T6*GC4UCC6)SS8X N14 0:QA0360078
T+/0440XN1HCU54C S5_1I1C6HGA-6BAG W(-*H -CGAY C GE7 /0 (-*0LO G5X8A HH0Z D| -)>30 -Y A0360079
T+/1?C/9X0H**X- AGPG /1100H*;J*B G /YFI 3YOH*BHD +OH* A7\$60 C6HG.D < /E 9I<A0360080
T+/2D3A1-|~0*P?H AB<BGG80*R/L0H* -TA15E.X /0HE0JH M>E H0H*BF-DLE<3 /0HEAS<H#0BG SH -B% OYTA0360081
T+/3V/10/0H* CG HGE25 /|S| }>LO GS-0*11WH<*+*0 X A38 K0AG\$4C<EQ)?LXHG|*9BA600/ D+-- PJ*AO360082
T+/4-G1: C2-K- 0 A9D0-DR2|+-<Y SG*H"1680-DKT CGS;# 6H5 /158E H8H*DPEDA0-DH||0 }>LO 5Q4A0360083
T+/5S A65. D) 06< 5 /7A.)_0<0*16 816)_HAETOAGSO # 6H0*0<0 A66|00 }_<BGG+0 /1-<G5Q H884 LHQA0360084
T+/60 0) ?FA<-H DE%*A -0 (S6) _S0 G3EAC QH8JL'0Y* T>-DB.)_ D| A6 4G\$QA/L/E|S2/02 0 < *,EA0360085
T+/7JC 086JH00Y* |T CGS6X AY1 20 G5QA0H**0- G*H <B GG *C+ -*P|HEAC3 *GUE 0 YA0360086
T+/8<(-DP6XBDG|U **19D0YDE0H*BFXQ VGTO-S*BG SH-S*B GG80H 19C|D ;6*B G /,FEJ9CYH# /OH SYH8 0I8A0360087

A036 SEEK FUNCTION TEST

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+/9G0H* (P06<X N1<FXE (-04=-.E8UC S1)PS1*J 0XPF5_X EE+|I5<PO9+(2)H 6)SUB2XN1HCI90 4BA0 60QA0360088
T+/:E00BGG *B0H* RG-H*PJ0*| D;/0H AG?.B /-COH*BPXD AG?H- B0 GX- GAD -E 0 A1*0Z H0H* BF-D ;K*AO360089
T+/:D/*9|E ;:|H AE>HB)HADXEGG74 *-A:G0YDE|H ;/0B GG *COH*BG-H*PJ0 -0-H-0062C /OH E /4 930A0360090
T+/*EGC /0 8>| A8=LS6<.Y0PSE<X W<TE96_ CH5UC054A 6DA 6DA 6DA 6DCI5;| H6;H 536A0360091
T+/@31)PT2)SNE (X E6<J.5<XS0XN14C A1<LRK4CH0)XK1)T U2)~H1)PT6<|H1*1 KEDA 1CGT0HCC2K2 C0U ; 0A0360092
T+/*>EDA 6DA 6(P 0E(XED'SR1DCP5>L N1DA 6+|KE<|05*L I80X05HCC2<PC4>. E1)I 00T20'I 6DA 6D 3Y0A0360093
T+/=Z6DC75;.A1XN 6EA 6DA 6DA 6DB 6B 6B 6B 6 6BAG W(--,LOHD;-4BA= 3(-->LQHD;Q4BA" *C D *6EA0360094
T+/*UG00 0AG*H 0AG0< 0 G8% 6- -900 G8% J9?HBB-Q- -7*B GG0S /0 0-G20*E 5?P 5COA0360095
T / *X=|X0
FE:R*E7*=-DC*PHS =*7HEFI | C *X ASC R A SO Q 13390501700 31472 *E<A0360097

AOE3 SEEK FUNCTION TEST

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
0000                      2          DECK 4
0A00                      3 AOE     START 0
0A00                      4          ORG  X'0A00'
5 *****
6 *          SECTION PREFACE
7 *****
0A00 AOE3                 0A01      8          DC  XL2'A0E3'      PROGRAM ID
0A02 00                   0A02      9          DC  XL1'00'      SECTION FLAGS
0A03 01                   0A03     10          DC  XL1'01'      CURRENT ROUTINE NUMBER
0A04 0000                 0A05     11          DC  XL2'00'      RESERVED
0A06 0BB3                 0A07     12          DC  AL2(RTN1)    ADDRESS OF FIRST ROUTINE PREFIX
0A08 0000                 0A09     13          DC  AL2(*-*)     ADDRESS OF ERROR RE
0A0A A04000              0A0C     14 UNB    DC  XL3'A04000'
0A0D BC1000             0A0F     15 UNB    DC  XL3'B01000'
16
17 *          1. SET SWITCH 1E TO BYPASS RUNNING ON DISK DRIVE 1
18 *          2. SET SWITCH 1F TO BYPASS RUNNING ON DISK DRIVE 2
19
0A10 34 08 0B23         20 SETDSK ST  SETEXT+3,ARR      SAVE EXIT ADDRESS
0A14 3C FF 0B26         21          MVI  SETSW,X'FF'      SET SETUP SWITCH
0A18 38 FF 0B25         22          TBN  SKPUDT,X'FF'      TEST THE SKIP UDT FLAG
0A1C F2 10 B9          23          JT   PRTPSPN      JUMP IF ON
0A1F 3D 00 0BAF        24          CLI  UDTPTR,0          HAS POINTER BEEN INITIALIZED ?
0A23 F2 01 08          25          JNE  UFIND1           JUMP IF YES
26
0A26 C2 01 0232        27          LA   UTAB,XR1           LOAD XR1 IF NO
0A2A 34 01 0BAF        28 UFIND2 ST  UDTPTR,XR1
0A2E 35 01 0BAF        29 UFIND1 L   UDTPTR,XR1
0A32 3C 00 0B24        30          MVI  REMVDS,0
0A36 38 02 020B        31          TBN  SWITCH+3,X'02'    TEST SSW 1E
0A3A F2 10 06          32          JT   *+9              JUMP IF ON, NEVER RUN DISK 1
0A3D 7D A0 00          33          CLI  0(,XR1),X'A0'    TEST FOR UNIT ADDRESS OF 'A'
0A40 F2 81 2F          34          JE   SETA              JUMP IF THERE IS ONE
0A43 38 01 020B        35          TBN  SWITCH+3,X'01'    TEST SSW 1F
0A47 F2 10 06          36          JT   *+9              JUMP IF ON, NEVER RUN DISK 2
0A4A 7D B0 00          37          CLI  0(,XR1),X'B0'    TEST FOR A UNIT ADDRESS OF 'B'
0A4D F2 81 2F          38          JE   SETB              JUMP IF THERE IS ONE
39
0A50 78 10 01          40          TBN  1(,XR1),X'10'    TEST FOR LAST ENTRY
0A53 D2 01 03          41          LA   3(,XR1),XR1      STFP POINTER TO NEXT ENTRY
0A56 C0 90 0A2A        42          BF   UFIND2           CONTINUE IF NOT THE LAST ONE
0A5A C0 87 021A        43          B    PRINT            TO PRINT ALL UNITS TESTED
0A5E 06                   0A5E     44          DC  XL1'06'          FLAGS
0A5F 1A                   0A5F     45          DC  IL1'26'          LENGTH
0A60 0B78                 0A61     46          DC  AL2(NOUNIT)     MESSAGE ADDRESS
0A62 3C 00 0B26         47          MVI  SETSW,0
0A66 0C 01 0BAF 0BB2   48          MVC  UDTPTR(2),ZERO   NO ENTRIES LEFT
0A6C C0 87 022A        49          B    LOAD
0A70 0040                 0A71     50          DC  XL2'40'          FLAGS
51
0A72 08 0Q 1401 0B28   52 SETA  MZZ  LDFCR+1,SPNDLA   SET FOR SPINDLE A.
0A78 3C F1 0B'E       53          MVI  SPNMSG,C'1'
0A7C F2 87 14          54          J    SETBTH           PROCEED
0A7F 08 09 1401 0B29  55 SETB  MZZ  LDFCR+1,SPNDLB   SET FOR SPINDLE B.
0A85 3C F2 0B53        56          MVI  SPNMSG,C'2'
0A89 78 01 02          57          TBN  2(,XR1),X'01'    TEST OPTION BIT FOR REMV. ONLY
0A8C F2 90 04          58          JF   SETBTH           JUMP IF NOT ON
0A8F 3C FF 0B24        59          MVI  REMVDS,X'FF'     SET BIT TO SPECIFY REMOVABLE ONLY
0A93 D2 01 03          60 SETBTH LA  3(,XR1),XR1      STEP UDT POINTER +3
0A96 34 01 0BAF        61          ST  UDTPTR,XR1        STORE FOR NEXT PASS
62
0A9A 08 00 1405 1401   63          MZZ  LDFDR+1,LDFCR+1   SET FOR CURRENT SPINDLE
0AA0 08 00 1411 1401   64          MZZ  SIO+1,LDFCR+1    SET FOR CURRENT SPINDLE
0AA6 08 00 1414 1401   65          MZZ  WAIT+1,LDFCR+1   SET FOR CURRENT SPINDLE
0AAC 08 00 144B 1401   66          MZZ  TSTERR+1,LDFCR+1 SET FOR CURRENT SPINDLE
0AB2 08 00 1346 1401   67          MZZ  SNS+1,LDFCR+1    SET FOR CURRENT SPINDLE
0AB8 08 00 148E 1401   68          MZZ  RLDPCR+1,LDFCR+1 SET FOR CURRENT SPINDLE
0ABE 08 00 1492 1401   69          MZZ  RSIO+1,LDFCR+1   SET FOR CURRENT SPINDLE

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AOE3 SEEK FUNCTION TEST

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
0AC4 C0 87 1333        70          B    SENSE
0AC8 02                 0AC8     71          DC  XL1'02'          ASK FOR DEVICE STATUS BYTES 0 & 1,
0AC9 3C CB 0B27        72          MVI  TRACK#,203      SET FOR FULL CAPACITY DISK
0ACD 38 08 1350        73          TBN  STATUS,X'08'    TEST CYL 100 BIT
0AD1 F2 90 04          74          JF   PRTPSPN        IF OFF CONTINUE
0AD4 3C 67 0B27        75 SET103 MVI  TRACK#,103 SET FOR HALF CAPACITY DISK
0AD8 C0 87 021A        76 PRTPSPN B    PRINT            TO PRINT SECTION HEADING
0ADC 01                 0ADC     77          DC  XL1'01'          FLAGS
0ADD 1D                 0ADD     78          DC  IL1'29'          LENGTH
0ADE 0B46               0ADP     79          DC  AL2(SECMSG)     MESSAGE ADDRESS
0AE0 C0 87 021A        80          B    PRINT            TO PRINT SPINDLE
0AE4 06                 0AE4     81          DC  XL1'06'          FLAGS
0AE5 18                 0AE5     82          DC  IL1'24'          LENGTH
0AE6 0B5E               0AE7     83          DC  AL2(SPNMSG)     MESSAGE ADDRESS
0AE8 3C 00 14FC        84          MVI  PRSTPS,0        SET SWITCH FOR RECALIBRATE
0AEC C2 02 0AF0        85          LA   INTERR-8,XR2    LCLD RETURN ADDRESS IN XR2
0AF0 C0 87 144A        86          B    TSTERR           TO TEST FOR INITIAL ERROR
0AF4 C0 87 0B1C        87          B    SKPEXT           GOOD RETURN
0AF8 3C 00 0B26        88 INTERR MVI  SETSW,0   ERROR RETURN
0AFC 3C FF 0B25        89          MVI  SKPUDT,X'FF'    SET THE SKIP UDT FLAG
0B00 3C 88 15E3        90          MVI  SNSID,X'88'    PUT ID IN SENSE
0B04 C0 87 15BC        91          B    PRTPSNS         TO TEST FOR ANY INITIAL STATUS
0B08 C0 87 021A        92          B    PRINT            TO PRINT INITIAL ERROR
0B0C C6                 0B0C     93          DC  XL1'C6'          FLAGS
0B0D 35                 0B0D     94          DC  IL1'53'          LENGTH
0B0E 0BAD               0B0F     95          DC  AL2(FSTERR)     MESSAGE ADDRESS
0B10 A088               0B11     96          DC  XL2'A088'        MESSAGE ID
0B12 C0 87 0222        97          B    HALT             TO DCP ERROR HALT
0B16 A088               0B17     98          DC  XL2'A088'        HALT ID
0B18 3C 00 0B26        99          MVI  SETSW,0
100
0B1C 3C 00 0B25        101 SKPEXT MVI  SKPUDT,0   RESET THE SKIP UDT FLAG
0B20 C0 87 0000        102 SETEXT B    *-*          EXIT
103
0B24 00                 0B24     104 REMVDS DC  XL1'0'
0B25 00                 0B25     105 SKPUDT DC  XL1'0'
0B26 00                 0B26     106 SETSW DC  XL1'0'
0B27 00                 0B27     107 TRACK# DC  XL1'00'
0B28 A0                 0B28     108 SPNDLA DC  XL1'A0'
0B29 B0                 0B29     109 SPNDLB DC  XL1'B0'
0B2A C2C5C7C9D540E2C5 0B46     110 SECMSG DC  CL29'BEGIN SEEK FUNCTION TEST A0E,'
0B32 C5D240C6E4D5C3E3 110
0B3A C9D6D540E3C5E2E3 110
0B42 40C1F0C56B        110
0B47 D5D6E640E3C5E2E3 0B5E     111 SPNMSG DC  CL24'NOW TESTING DISK DRIVE I'
0B4F C9D5C740C4C9E2D2 111
0B57 40C4D9C9E5C540E7 111
0B5F C1D3D340E4D5C9E3 0B78     112 NOUNIT DC  CL26'ALL UBITS HAVE BEEN TESTED'
0B67 E240C8C1E5C540C2 112
0B6F C5C5D540E3C5E2E3 112
0B77 C5C4               112
0B79 C4C9E2D240D5D6E3 0BA9     113          DC  CL49'DISK NOT READY OR SOLID ERROR ON BEFORE STARTING '
0B81 40D9C5C1C4E840F6 113
0B89 D940E2D6D3C9C440 113
0B91 C5D9D9D6D940D6D5 113
0B99 40C2C5C6D6D9C540 113
0BA1 E2E3C1D9E3C9D5C7 113
0BA9 40                 113
0BAA E3C5E2E3           0BAD     114 FSTERR DC  CL4'TEST'
0BAE 0000               0BAF     115 UDTPTR DC  XL2'0'
0BB0 000000            0EB2     116 ZERO DC  XL3'0'
0232 117 UTAB EQU  X'232'

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A0E3 SEEK FUNCTION TEST
ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

119 * ROUTINE NO. 01, SEEK EACH CYL. FROM ZERO TO MAXIMUM
120 * ONE CYLINDER AT A TIME
121 * ROUTINE PREFACE
122
OBB3 01 OBB3 123 RTN1 DC XL1'01' ROUTINE NUMBER
OBB4 00 OBB4 124 DC XL1'00' ROUTINE FLAGS
OBB5 0D36 OBB6 125 DC AL2(RTN2) ADDRESS OF NEXT ROUTINE
OBB7 3D 00 CB26 126 BEGIN CLI SETSW,0 HAVE PARAMETERS BEEN ENTERED?
OBBB C0 81 0A10 127 BE SETDSK BRANCH IF NO
OBBF 3C 00 1355 128 MVI WRTDFC+1,0 SET TO START AT CYLINDER 0,
OBC3 3C 5C 1356 129 MVI WRTDFC+2,X'5C' SET FOR SECTOR 23
130
OBC7 C0 87 1703 131 RTN1A B CVD TO CONVERT CYL. NO TO DECIMAL
OBCB 1355 OBCB 132 DC AL2(WRTDFC+1) ADDRESS OF SOURCE
OBCD 0CCC OBCD 133 DC AL2(ERROR9) ADDRESS OF DESTINATION
OBCF 3C 09 15E3 134 MVI SNSID,09 INSERT ID IN PRINT
135
OBD3 C0 97 13AD 136 B STRTIO TO START I/O SUBROUTINE
OBD7 00 OBD7 137 DC XL1'00' FUNCTION CODE (CONTROL)
OBD8 00 OBD8 138 DC XL1'00' CONTROL CODE (SEEK)
OBD9 1354 OBD9 139 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
OEDB C0 87 03F1 140 B RTN1B GCOD RETURN
141
OEDF C0 87 15BC 142 B PRTSNS ERROR ON SIO
OEE3 C0 87 021A 143 B PRINT TO PRINT ERROR
OBE7 06 OBE7 144 DC XL1'06' FLAGS
OBE8 33 OBE8 145 DC IL1'51' LENGTH
OBE9 0CCC OBEA 146 DC AL2(ERROR9) MESSAGE ADDRESS
OBEB C0 87 0222 147 B HALT TC DCP ERROR HALT
OBEP A009 OBEF 148 DC XL2'A009' HALT ID
149
OBF1 C0 87 159C 150 RTN1B B VERIFY TO VERIFY HEAD POSITION
OBF5 C0 87 0C48 151 B RTN1E GOOD RETURN FROM VERIFY OPERATION
152
OBF9 3C 0F 15E3 153 RTN1C MVI SNSID,X'0F' INSERT ID IN PRINT
OBFD C0 87 13AD 154 B STRTIO TO I/O SUBROUTINE
OC01 01 OC01 155 DC XL1'01' FUNCTION CODE, (READ)
OC02 01 OC02 156 DC XL1'01' CONTROL CODE, (IDENTIFIER)
OC03 1358 OC04 157 DC AL2(RDDFC) CONTROL FIELD ADDRESS
OC05 C0 87 0C30 158 B RTN1D GOOD RETURN
OC09 0C 02 0C99 159 MVI RDIDER(3),THREEQ PUT ??? IN ADDRESS READ
OC0F 3D FF 1359 160 CLI RDDFC+1,X'FF' CHECK FOR ANY DATA TRANSFER
OC13 F2 81 1A 161 JE RTN1D JUMP IF NO
OC16 C0 87 1703 162 B CVD TO CONVERT ADDRESS JUST READ
OC1A 1359 OC1B 163 DC AL2(RDDFC+1) SOURCE
OC1C 0C99 OC1D 164 DC AL2(RDIDER) DESTINATION
165
OC1E C0 87 153C 166 B PRTSNS TO PRINT UNEXPECTED ERROR
OC22 C0 87 021A 167 B PRINT TO PRINT 3RD LINE
OC26 06 OC26 168 DC XL1'06' FLAGS
OC27 3E OC27 169 DC IL1'62' LENGTH
OC28 0C99 OC29 170 DC AL2(RDIDER) MESSAGE ADDRESS
OC2A C0 87 0222 171 B HALT TO DCP HALT
OC2E A00F OC2F 172 DC XL2'A00F' HALT ID
173
OC30 0D 00 1359 1355 174 RTN1D CLC RDDFC+1(1),WRTDFC+1 COMPARE EXPECTED ID AND ID READ
OC36 F2 81 0F 175 JE RTN1E JUMP IF EQUAL
OC39 3D 02 1358 176 CLI RDDFC,X'02' CHECK FOR DEFECTIVE TRACK
OC3D F2 81 08 177 JE RTN1E JUMP PAST ERROR IF YES
OC40 3D 01 1358 178 CLI RDDFC,X'01' CHECK FOR ALTERNATE TRACK
OC44 C0 01 135C 179 BNE SEEKER TO PRINT SEEK ERROR MESSAGES
OC48 C0 87 129D 180 RTN1E B STEP TO NEXT CYLINDER
OC4C 0D32 OC4D 181 DC AL2(ONE)
OC4E 0D 00 1355 0B27 182 CLC WRTDFC+1(1),TRACK# COMPARE NEW NUMBER WITH MAXIMUM.
OC54 C0 84 0216 183 BH LINK ROUTINE EXIT
OC58 C0 87 0BC7 184 B RTN1A NOT DONE, SEEK NEXT CYLINDER.
185
OC5C E3C8C540D7D9C5E5 0C8D 186 DC CL50'THE PREVIOUS ERRORS OCCURRED AFTER DOING A READ ID'

A0E3 SEEK FUNCTION TEST
ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

0C64 C9D6E4E240C5D9D9 186
0C6C D6D9E240D6C3C3E4 186
0C74 D9D9C5C440C1C6E3 186
0C7C C5D940C4D6C9D5C7 186
0C84 40C140D9C5C1C440 186
0C8C C9C4 186
0C8E 40C1E340C3E8D34B 0C99 187 RDIDER DC CL12' AT CYL. XXX'
0C96 40E7E7E7 187
0C9A E3C8C540D7D9C5E5 0CCC 188 ERROR9 DC CL51'THE PREVIOUS ERRORS OCCURRED WHILE SEEKING CYL. XXX'
0CA2 C916E4E240C5D9D9 188
0CAA D6D9E240D6C3C3E4 188
0CB2 D9D9C5C440E6C8C9 188
0CBA D3C540E2C5C5D2C9 188
0CC2 D5C740C3E8D34B40 188
0CCA E7E7E7 188
0CCD E2C5C5D2C5C440E3 0CE2 189 SEEKTO DC CL22'SEEKED TO CYLINDER XXX'
0CD5 D640C3E8D3C9D5C4 189
0CDD C5D940E7E7E7 189
0CE3 C1D9D9C9E5C5C440 0CF8 190 SEEKAT DC CL22'ARRIVED AT CYLIND. XXX'
0CEB C1E340C3E8D3C9D5 190
0CF3 C44B40E7E7E7 190
0CF9 E6C8C9D3C540E2C5 0D0D 191 SEEKDR DC CL21'WHILE SEEKING XXXXXX'
0D01 C5D2C9D5C740E7E7 191
0D09 E7E7E7E7E7 191
0D0E 40C6D9D6D440C3E8 0D1B 192 OLDADR DC CL14' FROM CYL. XXX'
0D16 D34B40E7E7E7 192
0D1C C6D6D9E6C1D9C4 0D22 193 FORWD DC CL7'FORWARD'
0D23 C9D540D9C5E54B 0D29 194 REV DC CL7'IN REV.'
0D2A 40404040404040 0D30 195 SVNBLK DC CL7'
0D31 0001 0D32 196 ONE DC XL2'01'
0D33 0002 0D34 197 TWO DC XL2'02'
0D35 00 0D35 198 TKCTR DC XL1'0'

A0E3 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. It details assembly code for routine 04, including instructions like DC, CLC, CLI, MVI, and their corresponding comments in English.

A0E3 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. It details assembly code for routine 05, including instructions like DC, CLC, CLI, MVI, and their corresponding comments in English.

AOE3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

474 * ROUTINE NO. 06, SEEK EACH CYLINDER FROM MAXIMUM TO ZERO
475 * NINE CYLINDERS AT A TIME *
476
477 * ROUTINE PREFACE *
478
OFE9 06 OFE9 479 RTN6 DC XL1'06' ROUTINE NUMBER
OFEA 00 OFEA 480 DC XL1'00' ROUTINE FLAGS
OFEB 10A5 OFEC 481 DC AL2(RTN7) ADDRESS OF NEXT ROUTINE
OFED 3D 00 0B26 482 CLI SETSW,0 HAVE PARAMETERS BEEN ENTERED?
OFF1 C0 81 0A10 483 BE SETDSK BRANCH IF NO
OFF5 0C 00 1355 0B27 484 HVC WRTDFC+1(1),TRACK# SET INITIAL ADDRESS TO MAXIMUM
OFFB 3C 5C 1356 485 MVI WRTDFC+2,X'5C' SET FOR SECTOR 23
OFFF C0 87 1703 486 RTN6A B CVD TO CONVERT CYL. NO TO DECIMAL
1003 1355 1004 487 DC AL2(WRTDFC+1) ADDRESS OF SOURCE
1005 0CCC 1006 488 DC AL2(ERROR9) ADDRESS OF DESTINATION
1007 3C 09 15E3 489 NVI SNSID,X'09' INSERT ID IN PRINT
100B C0 87 13AD 490 B STRTIO TO I/O SUBROUTINE
100F 00 100F 491 DC XL1'00' FUNCTION CODE (CONTROL)
1010 00 1010 492 DC XL1'00' CONTROL CODE (SEEK)
1011 1354 1012 493 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
1013 C0 87 1029 494 B RTN6B GOOD RETURN
1017 C0 87 15BC 495 B PRTSNS ERROR RETURN
101B C0 87 021A 496 B PRINT TO PRINT ERROR
101F 06 101F 497 DC XL1'06' FLAGS
1020 33 1020 498 DC IL1'51' LENGTH
1021 0CCC 1022 499 DC AL2(ERROR9) ADDRESS OF LAST PRINT CHARACTER
1023 C0 87 0222 500 B HALT TO DCP ERROR HALT
1027 A009 1028 501 DC XL2'A009' HALT ID
502
1029 C0 87 159C 503 RTN6B B VERIFY TO VERIFY HEAD POSITION
102D C0 87 1080 504 B RTN6E GOOD RETURN FROM VERIFY OPERATION
505
1031 3C 0F 15E3 506 RTN6C MVI SNSID,X'0F' INSERT ID IN PRINT
1035 C0 87 13AD 507 B STRTIO TO I/O SUBROUTINE
1039 01 1039 508 DC XL1'01' FUNCTION CODE, (READ)
103A 01 103A 509 DC XL1'01' CONTROL CODE, (IDENTIFIER)
103B 1358 103C 510 DC AL2(RDDFC) CONTROL FIELD ADDRESS
103D C0 87 1068 511 B RTN6D GOOD RETURN
1041 0C 02 0C99 1353 512 HVC RDIDER(3),THREEQ PUT ??? IN ADDRESS READ
1047 3D FF 1359 513 CLI RDDFC+1,X'FF' CHECK FOR ANY DATA TRANSFER
104B F2 81 1A 514 JE RTN6D JUMP IF NO
104E C0 87 1703 515 B CVD TO CONVERT ADDRESS JUST READ
1052 1359 1053 516 DC AL2(RDDFC+1) SOURCE
1054 0C99 1055 517 DC AL2(RDIDER) DESTINATION
1056 C0 87 15BC 518 B PRTSNS TO PRINT UNEXPECTED ERROR
105A C0 87 021A 519 B PRINT TO PRINT 3RD LINE
105E 06 105E 520 DC XL1'06' FLAGS
105F 3E 105F 521 DC IL1'62' LENGTH
1060 0C99 1061 522 DC AL2(RDIDER) MESSAGE ADDRESS
1062 C0 87 0222 523 B HALT TO DCP HALT
1066 A00F 1067 524 DC XL2'A00F' HALT ID
525
1068 0D 00 1359 1355 526 RTN6D CLC RDDFC+1(1),WRTDFC+1 COMPARE ID READ AND EXPECTED ID
106E F2 81 0F 527 JE RTN6E JUMP IF EQUAL
1071 3D 02 1358 528 CLI RDDFC,X'02' CHECK FOR DEFECTIVE TRACK
1075 F2 81 08 529 JE RTN6E JUMP PAST ERROR IF YES
1078 3D 01 1358 530 CLI RDDFC,X'01' CHECK FOR ALTERNATE TRACK
107C C0 01 135C 531 BNE SEEKER TO PRINT SEEK ERROR MESSAGES
1080 3C 09 10A4 532 RTN6E MVI COUNTR,9 SET STEPPING COUNTER TO NINE
1084 3D 00 1355 533 RTN6F CLY WRTDFC+1,0 IS NEW ADDRESS EQUAL TO ZERO
1088 C0 81 0216 534 BE LINK ROUTINE EXIT
108C C0 87 12E7 535 B STEPR REDUCE SEEK ADDRESS BY ONE
1090 0D32 1091 536 DC AL2(ONE)
1092 0F 00 10A4 0D32 537 SLC COUNTR(1),ONE REDUCE STEPPING COUNTER BY ONE
1098 3D 00 10A4 538 CLI COUNTR,0 TEST STEPPING COUNTER FOR ZERO
109C C0 81 0FFF 539 BE RTN6A LOOP TO NEXT SEEK IF NO
10A0 C0 87 1084 540 B RTN6F
10A4 00 10A4 541 COUNTR DC XL1'0'

AOE3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

543 * ROUTINE NO. 07, MIXED LONG AND SHORT SEEKS
544
10A5 07 10A5 545 RTN7 DC XL1'07' ROUTINE NUMBER
10A6 00 10A6 546 DC XL1'00' ROUTINE FLAGS
10A7 1771 10A8 547 DC AL2(ROM)
548
10A9 C2 01 11BC 549 LA SKTBL,XR1 SET XR1 TO POINT TO
10AD 34 01 11BB 550 ST PRMLST,XR1 BEGINNING OF PARAMETER LIST
10B1 35 01 11BB 551 RTN7A L PRMLST,XR1 LOAD PARAMETER POINTER
10B5 7D FF 00 552 CLI 0(,XR1),X'FF' CHECK FOR END OF TABLE
10B8 C0 81 0216 553 BE LINK EXIT IF AT END OF TABLE
554
10BC 7D EE 00 555 CLI 0(,XR1),X'EE' CHECK FOR RECALIBRATE
10BF F2 01 26 556 JNE RTN7B JUMP IF NO
557
10C2 C0 87 13AD 558 B STRTIO TO RECAL
10C6 00 10C6 559 DC XL1'00' FUNCTION CODE, (CONTROL)
10C7 01 10C7 560 DC XL1'01' CONTROL CODF, (RECALIBRATE)
10C8 1354 10C9 561 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
10CA C0 87 117A 562 B RTN7E GCOD RETURN
10CE 3C 0E 15E3 563 MVI SNSID,X'0E' INSERT ID IN PRINT
10D2 C0 87 15BC 564 B PRTSNS TO DECODE ERROR
10D6 C0 87 021A 565 B PRINT TO PRINT RECALIBRATE ERROR
10DA 06 10DA 566 DC XL1'06' FLAGS
10DB 36 10DB 567 DC IL1'54' LENGTH
10DD 11B9 10DD 568 DC AL2(RECALE) MESSAGE ADDRESS
569
10DE C0 87 0222 570 B HALT TO DCP HALT
1CE2 A00E 10E3 571 DC XL2'A00E' HALT ID
10E4 C0 87 0216 572 B LINK TO DCP
573
10E8 35 01 11BB 574 RTN7B L PRMLST,XR1 LOAD PARAMETER POINTER
10EC 4D 00 00 0B27 575 CLC 0(1,XR1),TRACK# CHECK SEEK ADDRESS WITH MAX.
10F1 F2 84 E6 576 JH RTN7E JUMP IF IT IS TWO LARGE
10F4 1C 00 1355 00 577 MVC WRTDFC+1(1),0(,XR1) INSERT NEXT SEEK ADDRESS
578
10F9 C0 87 13AD 579 B STRTIO TO SEEK
10FD 00 10FD 580 DC XL1'0' FUNCTION CODE, (CONTROL)
10FE 00 10FE 581 DC XL1'0' CONTROL CODE, (SEEK)
10FF 1354 1100 582 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
1101 C0 87 1123 583 B RTN7C GOOD RETURN
1105 C0 87 1703 584 B CVD TO CONVERT CYL. NO.
1109 1355 110A 585 DC AL2(WRTDFC+1) SOURCE
110B 0CCC 110C 586 DC AL2(ERROR9) DEST
587
110D 3C 09 15E3 588 MVI SNSID,X'09'
1111 C0 87 15BC 589 B PRTSNS TO PRINT STATUS
1115 C0 87 021A 590 B PRINT TO PRINT SEEK ERROR
1119 06 1119 591 DC XL1'06' FLAGS
111A 32 111A 592 DC IL1'50' LENGTH
111B 0CCC 111C 593 DC AL2(ERROR9) MESSAGE ADDRESS
111D C0 87 0222 594 B HALT TO DCP HALT
1121 A009 1122 595 DC XL2'A009' HALT ID
596
1123 C0 87 159C 597 RTN7C B VERIFY TO VERIFY HEAD POSITION
1127 C0 87 117A 598 B RTN7E GOOD RETURN FROM VERIFY OPERATION
599
112B 3C 0F 15E3 600 MVI SNSID,X'0F'
112F C0 87 13AD 601 B STRTIO TO READ ID
1133 01 1133 602 DC XL1'01' FUNCTION CODE, (READ)
1134 01 1134 603 DC XL1'01' CONTROL CODE, (ID)
1135 1358 1136 604 DC AL2(RDDFC) CONTROL FIELD ADDRESS
1137 C0 87 1162 605 B RTN7D GOOD RETURN
113B 0C 02 0C99 1353 606 HVC RDIDER(3),THREEQ PUT ??? IN ADDRESS READ
1141 3D FF 1359 607 CLI RDDFC+1,X'FF' CHECK FOR ANY DATA TRANSFER
1145 F2 81 1A 608 JE RTN7D JUMP IF NO
1148 C0 87 1703 609 B CVD TO CONVERT ADDRESS JUST READ
114C 1359 114D 610 DC AL2(RDDFC+1) SOURCE

AOE3 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic error entries for AO E3.

AOE3 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic error entries for AO E3.

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129626
PAGE 7

A0E3 SEEK FUNCTION TEST
ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1226	31	1226	741	DC	IL1'049'
1227	9A	1227	742	DC	IL1'154'
1228	32	1228	743	DC	IL1'050'
1229	99	1229	744	DC	IL1'153'
122A	33	122A	745	DC	IL1'051'
122B	98	122B	746	DC	IL1'152'
122C	34	122C	747	DC	IL1'052'
122D	97	122D	748	DC	IL1'151'
122E	35	122E	749	DC	IL1'053'
122F	96	122F	750	DC	IL1'150'
1230	36	1230	751	DC	IL1'054'
1231	95	1231	752	DC	IL1'149'
1232	37	1232	753	DC	IL1'055'
1233	94	1233	754	DC	IL1'148'
1234	38	1234	755	DC	IL1'056'
1235	93	1235	756	DC	IL1'147'
1236	39	1236	757	DC	IL1'057'
1237	92	1237	758	DC	IL1'146'
1238	3A	1238	759	DC	IL1'058'
1239	91	1239	760	DC	IL1'145'
123A	3B	123A	761	DC	IL1'059'
123B	90	123B	762	DC	IL1'144'
123C	3C	123C	763	DC	IL1'060'
123D	8F	123D	764	DC	IL1'143'
123E	3D	123E	765	DC	IL1'061'
123F	8E	123F	766	DC	IL1'142'
1240	3E	1240	767	DC	IL1'062'
1241	8D	1241	768	DC	IL1'141'
1242	3F	1242	769	DC	IL1'063'
1243	8C	1243	770	DC	IL1'140'
1244	40	1244	771	DC	IL1'064'
1245	8B	1245	772	DC	IL1'139'
1246	41	1246	773	DC	IL1'065'
1247	8A	1247	774	DC	IL1'138'
1248	42	1248	775	DC	IL1'066'
1249	89	1249	776	DC	IL1'137'
124A	43	124A	777	DC	IL1'067'
124B	88	124B	778	DC	IL1'136'
124C	44	124C	779	DC	IL1'068'
124D	87	124D	780	DC	IL1'135'
124E	45	124E	781	DC	IL1'069'
124F	86	124F	782	DC	IL1'134'
1250	46	1250	783	DC	IL1'070'
1251	85	1251	784	DC	IL1'133'
1252	84	1252	785	DC	IL1'132'
1253	4C	1253	786	DC	IL1'076'
1254	83	1254	787	DC	IL1'131'
1255	4D	1255	788	DC	IL1'077'
1256	82	1256	789	DC	IL1'130'
1257	4E	1257	790	DC	IL1'078'
1258	81	1258	791	DC	IL1'129'
1259	4F	1259	792	DC	IL1'079'
125A	80	125A	793	DC	IL1'128'
125B	50	125B	794	DC	IL1'080'
125C	7F	125C	795	DC	IL1'127'
125D	51	125D	796	DC	IL1'081'
125E	7E	125E	797	DC	IL1'126'
125F	52	125F	798	DC	IL1'082'
1260	7D	1260	799	DC	IL1'125'
1261	53	1261	800	DC	IL1'083'
1262	7C	1262	801	DC	IL1'124'
1263	54	1263	802	DC	IL1'084'
1264	7B	1264	803	DC	IL1'123'
1265	55	1265	804	DC	IL1'085'
1266	7A	1266	805	DC	IL1'122'
1267	56	1267	806	DC	IL1'086'
1268	79	1268	807	DC	IL1'121'
1269	57	1269	808	DC	IL1'087'

DATE 13MAR70 06APR70 22MAY70 01AUG70 01MAR71
EC NO. 571512 571516 571513 571531 571573

PROG ID 0A0E-3
PAGE 7

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129626
PAGE 7A

A0E3 SEEK FUNCTION TEST
ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

126A	78	126A	809	DC	IL1'120'
126B	58	126B	810	DC	IL1'088'
126C	77	126C	811	DC	IL1'119'
126D	59	126D	812	DC	IL1'089'
126E	76	126E	813	DC	IL1'118'
126F	5A	126F	814	DC	IL1'090'
1270	75	1270	815	DC	IL1'117'
1271	5B	1271	816	DC	IL1'091'
1272	74	1272	817	DC	IL1'116'
1273	5C	1273	818	DC	IL1'092'
1274	73	1274	819	DC	IL1'115'
1275	5C	1275	820	DC	IL1'092'
1276	72	1276	821	DC	IL1'114'
1277	5D	1277	822	DC	IL1'093'
1278	71	1278	823	DC	IL1'113'
1279	5E	1279	824	DC	IL1'094'
127A	70	127A	825	DC	IL1'112'
127B	5F	127B	826	DC	IL1'095'
127C	6F	127C	827	DC	IL1'111'
127D	60	127D	828	DC	IL1'096'
127E	6E	127E	829	DC	IL1'110'
127F	61	127F	830	DC	IL1'097'
1280	6D	1280	831	DC	IL1'109'
1281	62	1281	832	DC	IL1'098'
1282	6C	1282	833	DC	IL1'108'
1283	63	1283	834	DC	IL1'099'
1284	6B	1284	835	DC	IL1'107'
1285	64	1285	836	DC	IL1'100'
1286	6A	1286	837	DC	IL1'106'
1287	65	1287	838	DC	IL1'101'
1288	69	1288	839	DC	IL1'105'
1289	66	1289	840	DC	IL1'102'
128A	68	128A	841	DC	IL1'104'
128B	67	128B	842	DC	IL1'103'
128C	FF	128C	843	DC	XL1'FFF'
			844		
128D	09	128D	845 RTN9	DC	XL1'09'
128E	00	128E	846	DC	XL1'00'
128F	FFFF	1290	847 NEG1	DC	XL2'FFFF'
			848		
1291	3C 00 0B26		849	MVI	SETSW,0
1295	3C 00 0B25		850	MVI	SKPUDT,0
1299	C0 87 0000		851	B	0

FLAGS

SET ENTRY SWITCH TO ZERO
ZERO THE SKIP UDT FLAG
RESTART PROGRAM

DATE 13 MAR70 06APR70 22MAY70 01AUG70 01MAR71
EC NO. 571512 571516 571513 571531 571573

PROG ID 0A0E-3
PAGE 7A

AOE3 SEEK FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
		853	*	SUBROUTINE TO STEP THE CYLINDER ADDRESS FORWARD *
		854		
129D	34 08 12DC	855	STEPF ST	STEPEX+3,ARR SAVE THE EXIT ADDRESS
12A1	35 01 12DC	856	L	STEPEX+3,XR1 LOAD PARAMETER ADDRESS IN XR1
12A5	0E 01 12DC 0D34	857	ALC	STEPEX+3(2),TWO INCREASE EXIT ADDRESS
12AB	1C 01 12B5 01	858	MVC	ALC+5(2),1(,XR1) SET ADDRESS OF INCREMENT VALUE
12B0	0E 00 1355 0000	859	ALC ALC	WRTDFC+1(1),*-* STEP CONTROL FIELD ADDRESS
12B6	C2 01 12DD	860	LA	FWDTBL,XR1 PUT ADDRESS OF TABLE IN XR1
12BA	1D 00 1355 00	861	CKCYLF CLC	WRTDFC+1(1),0(,XR1) TEST CURRENT CONTROL FIELD ADDRESS
12BF	F2 01 06	862	JNE	STPFWD NOT EQUAL TO ONE IN THE TABLE
12C2	0E 00 1355 0D32	863	ALC	WRTDFC+1(1),ONE STEP CONTROL FIELD ADDRESS
12C8	D2 01 01	864	STPFWD LA	1(,XR1),XR1 INCREMENT TABLE POINTER
12CB	34 01 1332	865	ST	SAVXR1,XR1 SAVE CURRENT VALUE IN XR1
12CF	0D 01 1332 12E6	866	CLC	SAVXR1(2),FWDEND TEST XR1 FOR EQUAL TO TABLE END
12D5	C0 01 12BA	867	BNE	CKCYLF BRANCH BACK IF NOT DONE
12D9	C0 87 0000	868	STEPX B	*-* ROUTINE EXIT
		869		
12DD	04050647	870	FWDTBL EQU *	
12E1	484944B	12E0	871 DC	XL4'04050647'
12E5	12E5	12E4	872 DC	XL4'484944B'
		12E6	873 FWDEND DC	AL2(*)
		874		
		875	*	SUBROUTINE TO STEP THE CYLINDER ADDRESS BACKWARD *
		876		
12E7	34 08 1326	877	STEPR ST	STPREX+3,ARR SAVE THE EXIT ADDRESS
12EB	35 01 1326	878	L	STPREX+3,XR1 LOAD PARAMETER ADDRESS IN XR1
12EF	0E 01 1326 0D34	879	ALC	STPREX+3(2),TWO INCREASE EXIT ADDRESS
12F5	1C 01 12FF 01	880	MVC	SLC+5(2),1(,XR1) SET ADDRESS OF INCREMENT VALUE
12FA	0F 00 1355 0000	881	SLC SLC	WRTDFC+1(1),*-* STEP CONTROL FIELD ADDRESS
1300	C2 01 1327	882	LA	REVTBL,XR1 PUT ADDRESS OF TABLE IN XR1
1304	1D 00 1355 00	883	CKCYLF CLC	WRTDFC+1(1),0(,XR1) TEST CURRENT CONTROL FIELD ADDRESS
1309	F2 01 06	884	JNE	STPREV NOT EQUAL TO ONE IN THE TABLE
130C	0F 00 1355 0D32	885	SLC	WRTDFC+1(1),ONE STEP CONTROL FIELD ADDRESS
1312	D2 01 01	886	STPREV LA	1(,XR1),XR1 INCREMENT TABLE POINTER
1315	34 01 1332	887	ST	SAVXR1,XR1 SAVE CURRENT VALUE IN XR1
1319	0D 01 1332 1330	888	CLC	SAVXR1(2),REVEND TEST XR1 FOR EQUAL TO TABLE END
131F	C0 01 1304	889	BNE	CKCYLF BRANCH BACK IF NOT DONE
1323	C0 87 0000	890	STPREX B	*-* ROUTINE EXIT
		891		
1327	4B4A4948	1327	892 REVTBL EQU *	
132B	47060504	132A	893 DC	XL4'4B4A4948'
132F	132F	132E	894 DC	XL4'47060504'
1331	0000	1330	895 REVEND DC	AL2(*)
		1332	896 SAVXR1 DC	XL2'0'

AOE3 SEEK FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
		898	*	SENSE I/O ROUTINE
		899	SENSE ST	SNSMOV+5,ARR SAVE ADDRESS RECALL REGISTER
1333	34 08 1344	900	A	ONE,ARR ADD ONE TO BYPASS PARAMETER
1337	36 08 0D32	901	ST	SNSXIT+3,ARR STORE EXIT ADDRESS
133B	34 08 134C	902	SNSMOV MNN	SNS+1,*-* MOVE IN FUNCTION CODE
133F	08 03 1346 0000	903	SNS SNS	STATUS,0 PERFORM SENSE
1345	30 00 1350	904	SNSXIT B	*-* EXIT
1349	C0 87 0000	905		
		134E	906 SETXR2 DC	XL2'0'
		1350	907 STATUS DC	XL2'0'
		1353	908 THREEQ DC	CL3'???'
		909		
		1354	910 WRTDFC DC	XL1'00'
		1355	911 DC	XL1'00'
		1356	912 DC	XL1'00'
		1357	913 DC	XL1'00'
		1358	914 RDDFC DC	XL1'00'
		1359	915 DC	XL1'00'
		135A	916 DC	XL1'00'
		135B	917 DC	XL1'00'
		918		
		919	*	ROUTINE TO PRINT SEEK ERROR MESSAGES
		920		
		135C	34 08 13AC	
		1360	0C 02 0CF8 1353	
		1366	3D FF 1359	
		921	SEEKER ST	SKEREX+3,ARR SAVE EXIT ADDRESS
		922	MVC	SEEKAT(3),THREEQ SET SEEK AT MESSAGE TO ???
		923	CLI	RDDFC+1,X'FF' DETERMINE IF ANY DATA WAS TRANS.
		924	*	BY THE READ ID COMMAND JUMP IF NO
		925	JE	SEKERA
		926		
		927	B	CVD TO CONVERT CYL. NO TO DECIMAL
		1372	928 DC	AL2(RDDFC+1) ADDRESS OF SOURCE
		1374	929 DC	AL2(SEEKAT) ADDRESS OF DESTINATION
		930		
		931	SEKERA B	CVD TO CONVERT CYL. NO. TO DECIMAL
		137A	932 DC	AL2(WRTDFC+1) ADDRESS OF SOURCE
		137C	933 DC	AL2(SEEKTO) ADDRESS OF DESTINATION
		934		
		935	B	PRINT TO PRINT ERROR
		1381	936 DC	XL1'C1' FLAGS
		1382	937 DC	IL1'22' LENGTH
		1384	938 DC	AL2(SEEKTO) MESSAGE ADDRESS
		1386	939 DC	XL2'A00A' MESSAGE IDENTIFICATION
		940		
		941	B	PRINT TO PRINT 3RD LINE
		138B	942 DC	XL1'01' FLAGS
		138C	943 DC	IL1'22' LENGTH
		138E	944 DC	AL2(SEEKAT) MESSAGE ADDRESS
		945		
		946	B	PRINT TO PRINT 4TH LINE
		1393	947 DC	XL1'06' FLAGS
		1394	948 DC	IL1'35' LENGTH
		1396	949 DC	AL2(OLDADR) MESSAGE ADDRESS
		950		
		951	B	HALT TO DCP ERROR HALT
		1397	952 DC	XL2'A00A' HALT ID
		139B	A00A	
		953		
		954	B	STRTO TO RECALIBRATE
		139D	955 DC	XL1'00' FUNCTION CODE (CONTROL)
		13A1	956 DC	XL1'01' CONTROL CODE (RECALIBRATE)
		13A2	957 DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
		13A3	958 R	*+4
		13A5	C0 87 13A9	
		959		
		960	SKEREX B	*-* EXIT

AOE3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

962 * START I/O SUBROUTINE
963
13AD 34 08 134E 964 STRTIO ST SETXR2,ARR SAVE ADDRESS RECALL REGISTER.
13B1 35 02 134E 965 L SETXR2,XR2 LOAD XR2 WITH VALUE FROM ARR.
13B5 3C 00 1502 966 MVI DISKTP,0 SET TO RUN ON REMOVABLE DISK
13B9 38 04 020A 967 TBN SECTSW,X'04' TEST FOR BYPASS REMOVABLE
13BD F2 90 04 96P JF **7 JUMP IF NO
13C0 3C 08 1502 969 MVI DISKTP,X'08' SET TO RUN ON FIXED
13C4 3C 00 1500 970 MVI RECAL,0 RESET SWITCH
13C8 3C 00 14FF 971 MVI SAVSW,00 ZERO SWITCH
13CC 3C FF 1359 972 MVI RDDFC+1,X'FF' SET READ ID AREA TO 'FF'
13D0 28 03 1411 00 973 MNN SIO+1,0(,XR2) SET FUNCTION CODE
13D5 2C 00 1412 01 974 MVC SIO+2(1),1(,XR2) SET CONTROL CODE IN SIO
13DA 2C 01 150A 03 975 MVC DFCR(2),3(,XR2) SET DATA ADDRESS FOR DFCR
13DF 38 08 1502 976 TBN DISKTP,X'08' TEST FOR RUN ON LOWER DISK
13E3 F2 10 0B 977 JT SETFIX JUMP IF YES
13E6 3B 08 1411 978 SBP SIO+1,X'08' SET FOR REMOVABLE DISK
13EA 3B 08 1492 979 SBP RSIO+1,X'08' SET FOR REMOVABLE DISK
13EE F2 87 08 980 J CKSEK PROCEED
13F1 3A 08 1411 981 SETFIX SBN SIO+1,X'08' SET FOR FIXED DISK
13F5 3A 08 1492 982 SBN RSIO+1,X'08' SET FOR FIXED DISK
13F9 BD 00 00 983 CKSEK CLI 0(,XR2),00 TEST FOR SEEK
13FC C0 81 1450 984 BE SETADR IF YES, GO SET ADDRESS
1400 31 A6 150A 985 LDPCR LIO DFCR,X'A6' LOAD CONTROL REGISTER
1404 31 A4 150C 986 LDFDR LIO DFCR,X'A4' LOAD DATA REGISTER
1408 3C 00 159B 987 MVI INDXPL,0
140C C2 01 2260 988 LA 88C0,XR1
1410 F3 A0 00 989 SIO SIO X'00',X'A0' START I/O OPERATION
1413 C1 A2 150F 990 WAIT TIO BUSY,X'A2' BRANCH IF BUSY
1417 3D FF 14FF 991 CLI SAVSW,X'FF' IS SWITCH ON?
141B F2 01 2C 992 JNE TSTERR IF NO, SKIP RESTORE
141E 3D 00 0D35 993 CLI TKCTR,0 TEST FOR A ZERO SEEK
1422 F2 81 19 994 JE RESTON JUMP IF YES
1425 0C 02 1508 0BB2 995 MVC HXTIME(3),ZERO ZERO THE TIME AREA
142B C0 87 1333 996 SEEKSN B SENSE TC SENSE DEVICE STATUS
142F 02 142F 997 DC XL1'02' GET BYTES 0 AND 1
1430 0E 02 1508 1505 998 ALC HXTIME(3),TIMKON ADD TO THE TIME AREA
1436 38 10 1350 999 TBN STATUS,X'10' TEST FOR SEEK BUSY
143A C0 10 142B 1000 BT SEEKSN BRANCH BACK IF STILL BUSY
143E 8C 00 03 14FE 1001 RESTON MVC 3(1,XR2),DFC3SV RESTORE N BYTE
1443 BB 01 02 1002 SBP 2(,XR2),01 TURN OFF THE FOR/ REV BIT
1003
1446 35 02 134E 1004 L SETXR2,XR2 RESTORE PARAMETER POINTER
144A E1 A0 08 1005 TSTERR TIO 8(,XR2),X'A0' BRANCH IF ERROR
144D E0 87 04 1006 B 4(,XR2) EXIT
1007
1008 * SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE
1009 * DIRECTION (FORWARD OR REVERSE), TO SEEK
1010
1450 34 08 14FA 1011 SETADR ST ADREXT+3,ARR SAVE EXIT ADDRESS
1454 BD 01 01 1012 CLI 1(,XR2),01 IS THIS A RECALIBRATE?
1457 F2 01 08 1013 JNE SETRCL IF NO, BYPASS SWITCH RESET
145A 3C FF 1500 1014 MVI RECAL,X'FF' SET SWITCH TO INDICATE A RECAL.
145E 3C 00 14FC 1015 MVI FRSTPS,0 RESET RECALIBRATE SWITCH
1462 2C 01 150E 03 1016 SETRCL MVC XR2WK(2),3(,XR2) SAVE ADDR. OF CTL. PLD. ADDR.
1467 35 02 150E 1017 L XR2WK,XR2 LOAD XR2 WITH CONTROL PLD. ADDR.
146B 2C 00 14FE 03 1018 MVC DFC3SV(1),3(,XR2) SAVE N BYTE IN CONTROL FIELD
1470 3C FF 14FF 1019 MVI SAVSW,X'FF' SET SAVE SWITCH
1474 3D 00 14FC 1020 CLI FRSTPS,00 IS THIS FIRST PASS
1478 F2 01 21 1021 JNE SETADA SKIP RECALIBRATE IF NO
147B 3C 01 14FC 1022 MVI FRSTPS,01 SET FIRST PASS SWITCH
147F BB 01 02 1023 SBP 2(,XR2),01 SET FWD/REV BIT TO REV.
1482 BC FF 03 1024 MVI 3(,XR2),255 SET MAXIMUM TRACK CROSSING
1485 3C FF 0D35 1025 MVI TKCTR,255 SET FOR MAXIMUM TRACK CROSSING
1489 3C 00 14FD 1026 MVI LASTAD,00 SET OLD ADDR TO 0
148D 31 A6 150A 1027 RLDFCR LIO DFCR,X'A6' LOAD DATA CONTROL REGISTER
1491 F3 A0 00 1028 RSIO SIO 00,X'A0' SEEK REVERSE
1494 3D FF 1500 1029 CLI RECAL,X'FF' WAS THE I/O REQUEST A RECAL?

AOE3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1498 C0 81 1413 1030 BE WAIT BRANCH IF YES
1031
149C C0 87 1703 1032 SETADA B CVD TO CONVERT OLD SEEK ADDRESS
14A0 14FD 14A1 1033 DC AL2(LASTAD) SOURCE ADDRESS
14A2 0D1B 14A3 1034 DC AL2(OLDADR) DESTINATION ADDRESS
1035
14A4 8D 00 01 14FD 1036 CLC 1(1,XR2),LASTAD COMPARE PRESENT ADDR. WITH NEW ONE
14A9 F2 81 31 1037 JE NOSEEK EQUAL, SEEK IS NOT NECESSARY
14AC F2 84 17 1038 JH FWDSEK NEW ADDR. HIGHER, GO FORWARD SEEK
14AF BB 01 02 1039 SBP 2(,XR2),01 NEW ADDR. LOWER, SET BIT FOR REV.
14B2 0C 00 14FB 14FD 1040 MVC SCRCH(1),LASTAD PLACE LAST ADDR IN WORKAREA
14B8 2F 0C 14FB 01 1041 SLC SCRCH(1),1(,XR2) SUBTRACT NEW ADDR. FROM LAST ADDR.
14BD 0C 06 0D0D 0D29 1042 MVC SEEKDB(7),REV PUT REVERSE IN SEEK DIRECTION MSG.
14C3 F2 87 21 1043 J SETADB PROCEED
1044
14C6 BA 01 02 1045 FWDSEK SBN 2(,XR2),01 SET BIT ON FOR FORWARD SEEK
14C9 2C 00 14FB 01 1046 MVC SCRCH(1),1(,XR2) PLACE NEW ADDR. IN WORKAREA
14CE 0F 00 14FB 14FD 1047 SLC SCRCH(1),LASTAD SUBTRACT LAST ADDR. FROM NEW ADDR.
14D4 0C 06 0D0D 0D22 1048 MVC SEEKDB(7),FORWD PUT FORWARD IN SEEK DIRECTION MSG.
14DA F2 87 0A 1049 J SETADB PROCEED
1050
14DD 3C 00 14FB 1051 NOSEEK MVI SCRCH,0 SET NO. OF TKS. CROSSED TO ZERO.
14E1 0C 06 0D0D 0D30 1052 MVC SEEKDB(7),SVNBLK
1053
14E7 8C 00 03 14FB 1054 SETADB MVC 3(1,XR2),SCRCH PLACE IN NO. OF TRACKS CROSSED
14EC 0C 00 0D35 14FB 1055 MVC TKCTR(1),SCRCH SAVE NUMBER OF TRACKS TO CROSS
14F2 2C 00 14FD 01 1056 MVC LASTAD(1),1(,XR2) SAVE NEW ADDRESS
14F7 0C 87 0000 1057 ADREXT B EXIT
14FB 00 14FB 1058 SCRCH DC XL1'00'
14FC 00 14FC 1059 FRSTPS DC XL1'00'
14FD 00 14FD 1060 LASTAD DC XL1'00'
14FE 00 14FE 1061 DFC3SV DC XL1'00'
14FF 00 14FF 1062 SAVSW DC XL1'00'
1500 00 1500 1063 RECAL DC XL1'00'
1501 0000 1502 1064 DISKTP DC XL2'00'
1503 00005D 1505 1065 TIMKON DC IL3'93'
1506 000000 1508 1066 HXTIME DC XL3'00'
1509 0000 150A 1067 DFCR DC AL2(*-*)
150B 150F 150C 1068 DFCR DC AL2(WORK)
150D 0000 150E 1069 XR2WK DC XL2'00'
150F 1070 WORK EQU *
150F 34 01 159A 1071 BUSY ST TIME,XR1
1513 C0 87 1333 1072 B SENSE
1517 03 1517 1073 DC XL1'03'
1518 38 08 134F 1074 TBN STATUS-1,X'06' TEST FOR INDEX
151C F2 90 04 1075 JF **7 JUMP IF NONE
151F 3C FF 159B 1076 MVI INDXPL,X'FF' SET BIT FOR INDEX RECEIVED
1077
1523 35 01 159A 1077 L TIME,XR1
1527 36 01 1290 1079 A NEG1,XR1
152B C0 84 1413 1080 BH WAIT BRANCH BACK TO TIO IF NOT TIMED OUT
152F 3D FF 159B 1081 CLI INDXPL,X'FF' TEST FOR ANY INDEX BEFORE TIMEOUT
1533 F2 81 10 1082 JE TCVD JUMP IF THERE WAS AN INDEX
1083
1536 C0 87 021A 1084 B PRINT TP PRINT NO INDEX BEFORE TIMEOUT
153A C6 153A 1085 DC XL1'C6'
153B 25 153B 1086 DC IL1'37'
153C 158A 153D 1087 DC AL2(MINDEX) MESSAGE ADDRESS
153E A089 153F 1088 DC XL2'A089' MESSAGE ID
1089
1540 C0 87 0222 1090 B HALT
1544 A089 1545 1091 DC XL2'A089'
1092
1546 C0 87 1703 1093 TCVD B CVD TO CONVERT ROUTINE NUMBER
154A 0A03 154B 1094 DC AL2(BPPX) SOURCE
154C 1598 154D 1095 DC AL2(TIMEOUT) DESTINATION
154E 3C 40 1596 1096 MVI TIMEOUT-2,C'
1097

A0E3 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routines like PRINT, MINDEX, and VERIFY.

A0E3 SEEK FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routines like SUBROUTINE TO PRINT THE CONTENTS OF DEVICE STATUS, and various status and control routines.

AOE3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1696 E340C3C8C5C3D240 1183
 169E 4040 1183
 16A0 C4C1E3C140C3C8C5 16B1 1184 DC CL18'DATA CHECK
 16A8 C3D2404040404040 1184
 16B0 4040 1184
 16B2 D5D640D9C5C3D6D9 16C3 1185 DC CL18'NO RECORD PCUND
 16BA C440C6D6E4D5C440 1185
 16C2 4040 1185
 16C4 E3D240C3D6D5C4C9 16D5 1186 DC CL18'TK CONDITION CHECK
 16CC E3C9D6D540C3C8C5 1186
 16D4 C3D2 1186
 16D6 E2C5C5D240C3C8C5 16E7 1187 DC CL18'SEEK CHECK
 16DE C3D2404040404040 1187
 16E6 4040 1187
 16E8 E4D5E2C1C6C54040 16F9 1188 DC CL18'UNSAFE
 16F0 4040404040404040 1188
 16F8 4040 1188
 16FA 1189 STMASK EQU *
 16FD 1190 DC XL4'80402010'
 16FE 08040201 1701 1191 DC XL4'08040201'
 1702 00 1702 1192 HXBYT DC XL1'00'
 1703 36 08 0D32 1193 CVD A ONE,ARR ADD 1 TO GET 1ST PARAMETER
 1707 34 08 1724 1194 ST FROM+5,ARR INSERT THE FROM ADDR.
 170B 36 08 0D34 1195 A TWO,ARR ADD 2 AND GET THE 2ND PARAMETER
 170F 34 08 172A 1196 ST TYBOT+5,ARR INSERT THE TO ADDR.
 1713 34 08 1730 1197 ST OTORZ+5,ARR INSERT THE TO ADDR.
 1717 36 08 0D32 1198 A ONE,ARR ADD ONE MORE FOR RETURN ADDRESS
 171B 34 08 1753 1199 ST TIYE+3,ARR SET RETURN ADDR.
 171F 3C 01 1736 0000 1200 FROM MVC PROBYT+5(2),*--
 1725 0C 01 1749 0000 1201 TYBOT MVC TOBYT+3(2),*--
 172B 0C 01 173A 0000 1202 OTORZ MVC ZROTO+3(2),*--
 1731 0C 00 1702 0000 1203 PROBYT MVC HXBYT(1),*-- PUT BYTE IN WORK AREA
 1737 04 20 0000 175E 1204 ZROTO ZAZ *-*(3),UNITS(1) ZERO THE TO AREA
 173D 0F 00 1702 0D32 1205 DECGAN SLC HXBYT(1),ONE DECREMENT THE HEX BYTE
 1743 F2 82 0A 1206 JL TIYE EXIT IF BELOW 1
 1746 06 20 0000 1754 1207 TOBYT AZ *-*(3),DECONE(1) INCREMENT THE DECIMAL CCUNT
 174C C0 87 173D 1208 B DECGAN
 1750 C0 87 0000 1209 TIYE EXIT
 1754 F1 1754 1210 DECONE DC CL1'1'
 1755 F1F2F3F4F5F6F7F8 175E 1211 UNITS DC CL10'1234567890'
 175D F9F0 1211
 175F 1770 1212 STATPR DS CL18
 0003 1214 H1 EQU X'03' HALT DISPLAY 1
 0076 1215 H2 EQU X'76' HALT DISPLAY 2
 0001 1216 XR1 EQU 01
 0002 1217 XR2 EQU 02
 0008 1218 ARR EQU 08
 0002 1219 STAT01 EQU X'02'
 0003 1220 STAT23 EQU X'03'
 00A6 1221 CTRL EQU X'A6'
 00A4 1222 DATA EQU X'A4'
 0080 1223 BIT0 EQU X'80'
 0040 1224 BIT1 EQU X'40'
 0208 1225 SWITCH EQU X'208'
 020A 1226 SECTSW EQU X'20A'
 0212 1227 TEST EQU X'212'
 0216 1228 LINK EQU X'216'
 021A 1229 PRINT EQU X'21A'
 021E 1230 UNPACK EQU X'21E'
 0222 1231 HALT EQU X'222'
 022A 1232 LOAD EQU X'22A'
 003C 1233 HF EQU X'3C'
 003F 1234 HA EQU X'3F'
 1771 08 1771 1235 RON DC XL1'08'
 1772 00 1772 1236 DC XL1'00'
 1773 128D 1774 1237 DC AL2(RTN9)
 1775 3D F2 0B5E 1238 CLI SPNMSG,C'2'

AOE3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1779 C0 81 17B9 1239 BE TOOT
 177D 3B 10 17F8 1240 SBF SIOCAL+1,X'10'
 1781 3B 10 1801 1241 SBF S1+1,X'10'
 1785 3B 10 182A 1242 SBF BELL+1,X'10'
 1789 3B 10 1859 1243 SBF SIOF+1,X'10'
 178D 3B 10 185C 1244 SBF RDID+1,X'10'
 1791 3B 10 185F 1245 SBF LOOPIT+1,X'10'
 1795 3B 10 1888 1246 SBF JUNK+1,X'10'
 1799 3B 10 188C 1247 SBF JUNK+5,X'10'
 179D 3B 10 18AD 1248 SBF DONT+1,X'10'
 17A1 3B 10 18B1 1249 SBF DONT+5,X'10'
 17A5 C2 01 0A0C 1250 LA UNA,XR1
 17A9 34 01 17B0 1251 ST LATE+3,XR1
 17AD 38 04 0A0C 1252 LATE TBN UNA,X'04' SEE IF HIGH SPEED DEFINED
 17B1 C0 10 17ED 1253 BT STREC
 17B5 C0 87 0216 1254 WHAT B LINK
 17B9 3A 10 17F8 1255 TOOT SBN SIOCAL+1,X'10'
 17BD 3A 10 1801 1256 SBN S1+1,X'10'
 17C1 3A 10 182A 1257 SBN BELL+1,X'10'
 17C5 3A 10 1859 1258 SBN SIOF+1,X'10'
 17C9 3A 10 185C 1259 SBN RDID+1,X'10'
 17CD 3A 10 185F 1260 SBN LOOPIT+1,X'10'
 17D1 3A 10 1888 1261 SBN JUNK+1,X'10'
 17D5 3A 10 188C 1262 SBN JUNK+5,X'10'
 17D9 3A 10 18AD 1263 SBN DONT+1,X'10'
 17DD 3A 10 18B1 1264 SBN DONT+5,X'10'
 17E1 C2 01 0A0F 1265 LA UNB,XR1
 17E5 34 01 17B0 1266 ST LATE+3,XR1
 17E9 C0 87 17AD 1267 B LATE
 17ED 0C 02 1933 192B 1268 STREC MVC MASTER(4),ABE
 17F3 31 A6 1935 1269 LIO ADRFLD,X'A6'
 17F7 F3 A0 00 1270 SIOCAL SIO X'00',X'A0'
 17FA 0C 01 1937 1939 1271 MVC REAL(2),CAL
 1800 30 A2 1970 1272 S1 SNS BYTE01,B01
 1804 38 10 1970 1273 TBN BYTE01,X'10'
 1808 F2 90 1E 1274 JF BELL
 180B 0F 01 1937 0D32 1275 SLC REAL(2),ONE
 1811 C0 01 1800 1276 BNZ S1
 1815 C0 87 021A 1277 B PRINT PRINT TIME OUT ON RECAL
 1819 C517 181A 1278 DC XL2'C517'
 181B 1950 181C 1279 DC AL2(RTIN)
 181D A011 181E 1280 DC XL2'A011' ** 11
 181F C0 87 0222 1281 B HALT
 1823 A011 1824 1282 DC XL2'A011'
 1825 C0 87 17ED 1283 B STREC
 1829 C1 A0 1887 1284 BELL TIO JUNK,ERROR TIO BR. IF ERROR
 182D 38 40 1970 1285 TBN BYTE01,X'40' TEST FOR CYL 0
 1831 F2 10 14 1286 JT CARL
 1834 C0 87 021A 1287 B PRINT PRINT NO CYL 0 AFTER RECAL
 1838 A012 1839 1288 DC XL2'A012'
 183A 196E 193B 1289 DC AL2(M00)
 183C A012 183D 1290 DC XL2'A012' ** 12
 183E C0 87 0222 1291 B HALT
 1842 A012 1843 1292 DC XL2'A012'
 1844 C0 87 17ED 1293 B STREC
 1848 0C 03 1933 192F 1294 CARL MVC MASTER(4),SK100
 184E 31 A6 1935 1295 LIO ADRFLD,X'A6'
 1852 0C 01 1937 18E2 1296 MVC REAL(2),SF100
 1858 F3 A0 00 1297 SIOF SIO X'00',X'A0'
 185B F3 A1 01 1298 RDID SIO X'01',X'A1'
 185E 30 A2 1970 1299 LOOPIT SNS BYTE01,B01
 1862 38 10 1970 1300 TBN BYTE01,X'10'
 1866 F2 90 43 1301 JF DONT
 1869 0F 01 1937 0D32 1302 SLC REAL(2),ONE
 186F C0 01 185E 1303 BNZ LOOPIT
 1873 C0 87 021A 1304 B PRINT
 1877 C517 1878 1305 DC XL2'C517'
 1879 18F9 187A 1306 DC AL2(SLOW)

A0E3 SEEK FUNCTION TEST

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

```

187B A055          187C 1307      DC   XL2'A055'      ** 55
187D C0 87 0222   1308      B    HALT
1881 A055          1882 1309      DC   XL2'A055'
1883 C0 87 17ED   1310      B    STREC
1887 30 A2 1970   1311 JUNK  SNS   BYTE01,B01    SENSE ALL STATUS
188B 30 A3 1972   1312      SNS   BYTE23,B23
188F C0 87 021E   1313      B    UNPACK
1893 04           1893 1314      DC   XL1'04'
1894 1972         1895 1315      DC   AL2(BYTE23)
1896 1982         1897 1316      DC   AL2(SMSG)
1898 C0 87 021A   1317      B    PRINT
189C C510         189D 1318      DC   XL2'C510'
189E 1982         189F 1319      DC   AL2(SMSG)
18A0 A013         18A1 1320      PC   XL2'A013'
18A2 C0 87 0222   1321      B    HALT
18A6 A013         18A7 1322      DC   XL2'A013'
18A8 C0 87 17ED   1323      B    STREC
18AC C1 A2 18AC   1324 DONT  TIO   DONT,BZY          LOOP TILL BUSY DROPS
18B0 C1 A0 1887   1325      TIO   JUNK,ERROR
18B4 3D 64 1931   1326      CLI  MASTER-2,X'64'  SEE IF CYL 100
18B8 C0 81 17B5   1327      BE   WHAT
18BC C0 87 021A   1328      B    PRINT          PRINT COMPARE ERROR
18C0 C118         18C1 1329      DC   XL2'C118'
18C2 1911         18C3 1330      DC   AL2(PAR)
18C4 A045         18C5 1331      DC   XL2'A045'      ** 45
18C6 C0 87 021E   1332      B    UNPACK
18CA 01           18CA 1333      DC   XL1'01'
18CB 1931         18CC 1334      DC   AL2(MASTER-2)
18CD 1927         18CE 1335      DC   AL2(CYLS)
18CF C0 87 021A   1336      B    PRINT
18D3 0516         18D4 1337      DC   XL2'0516'
18D5 1927         18D6 1338      DC   AL2(CYLS)
18D7 C0 87 0222   1339      B    HALT
18DB A045         18DC 1340      DC   XL2'A045'
18DD C0 87 17ED   1341      B    STREC
18E1 1085         18E2 1342 SP100 DC   XL2'1085'      .04756 MS X 4229 = APPROX 180 MS
18E3 C6C9D3C540C1C3C3 18F9 1343 SLOW DC   CL23'FILE ACCESSING TOO SLOW'
18FB C5E2E2C9D5C74CE3 1343
18FD D6D640E2D3D6E6 1343
18FA E2C5C5D2C5C440E3 1911 1344 PAR  DC   CL24'SEEKED TO WRONG CYLINDER'
1902 D640E6D9D6D5C740 1344
190A C3E8D3C9D5C4C5D9 1344
1912 E2C8D6E4D3C440C2 1927 1345 CYLS DC   CL22'SHOULD BE AT 64 NOT XX'
191A C540C1E340F6F440 1345
1922 D506E340E7E7 1345
1928 000000FF     192B 1346 ABE  DC   XL4'000000FF'
192C 00008164     192F 1347 SK100 DC   XL4'00008164'
1930 00000000     1933 1348 MASTER DC   XL4'00000000'
1934 1930         1935 1349 ADRFLD DC   AL2(MASTER-3)
1936 0000         1937 1350 REAL  DC   XL2'0000'
1938 4000         1939 1351 CAL  DC   XL2'4000'
193A E3C9D4C540D6E4E3 1950 1352 RTIM DC   CL23'TIME OUT ON RECALIBRATE'
1942 40D6D540D9C5C3C1 1352
194A D3C9C2D9C1E3C5 1352
1951 C3E8D340F040D5D6 196E 1353 NOO  DC   CL30'CYL 0 NOT ON AFTER RECALIBRATE'
1959 E340D6D540C1C6E3 1353
1961 C5D940D9C5C3C1D3 1353
1969 C9C2D9C1E3C5 1353
00A2 1354 BZY   EQU  X'A2'
00A0 1355 EPROR EQU  X'A0'
00A2 1356 B01   EQU  X'A2'
00A3 1357 B23   EQU  X'A3'
1970 1358 BYTE01 DC   XL2'0000'
1971 0000       1972 1359 BYTE23 DC   XL2'0000'
1973 40E2E3C1E3E4E240 1982 1360 SMSG DC   CL16' STATUS XXXXXXXX'
197B E7E7E7E7E7E7E7E7 1360
00B7 1361      END  BEGIN
    
```

A0E3 SEEK FUNCTION TEST

CROSS-REFERENCE

SYMBOL T LEN VALUE DEPN REFERENCES

```

ABE  A 004 192B 1346 1268
ADREXT A 004 14F7 1057 1011*
ADRPLD A 002 1935 1349 1269 1295
ALC    A 006 12B0 0859 0858*
ARR    C 001 0008 1218 0020 0855 0877 0899 0900* 0901 0921 0964 1011 1113 1126 1193*
1194 1195* 1196 1197 1198* 1199

A0E  A 001 0000 0003
BEGIN A 004 0BB7 0126 1361
BELL  A 004 1829 1284 1242* 1257* 1274
BIT0  C 001 0080 1223
BIT1  C 001 0040 1224
BUSY  A 004 150F 1071 0990
BYTE01 A 002 1970 1358 1272* 1273 1285 1299* 1300 1311*
BYTE23 A 002 1972 1359 1312* 1315
BZY   C 001 00A2 1354 1324
B01   C 001 00A2 1356 1272 1299 1311
B23   C 001 00A3 1357 1312
CAL   A 002 1939 1351 1271
CARL  A 006 1848 1294 1286
CKCYLF A 005 12BA 0861 0867
CKCYLR A 005 1304 0883 0889
CKSEEK A 003 13F9 0983 0980
COUNTR A 001 10A4 0541 0532* 0537* 0538
CTRL  C 001 00A6 1221
CVD   A 004 1703 1193 0131 0162 0213 0244 0280 0312 0349 0378 0418 0448 0486 0515
0584 0609 0927 0931 1032 1053
1335 1338

CYLS  A 022 1927 1345
DATA  C 001 00A4 1222
DECGAN A 006 173J 1205 1208
DECONE A 001 1754 1210 1207
DFCR  A 002 150A 1067 0975* 0985 1027
DFC3SV A 001 14FE 1061 1001 1018*
DFDR  A 002 150C 1068 0986
DISKTP A 002 1502 1064 0966* 0969* 0976
DONT  A 004 18AC 1324 1248* 1249* 1263* 1264* 1301 1324
ERROR  C 001 00A0 1355 1284 1325
ERROR9 A 051 0CCC 0188 0133 0146 0215 0228 0282 0296 0351 0362 0420 0432 0488 0499
0586 0593

FORWD  A 007 0D22 0193 1048
FOUR  A 002 15BB 1122 1120
PROBYT A 006 1731 1203 1200*
FROM  A 006 171F 1200 1194*
FRSTPS A 001 14FC 1059 0084* 1015* 1020 1022*
FSTERR A 004 0BAD 0114 0095
FWDEND A 002 12E6 0873 0866
FWDSEK A 003 14C6 1045 1038
FWDTBL A 001 12DD 0870 0860
HA    C 001 003F 1234
HALT  C 001 0222 1231 0097 0147 0171 0229 0253 0257 0321 0363 0386 0433 0457 0500
0523 0570 0594 0618 0951 1090 1103 1281 1291 1308 1321 1339
1133 1168 1175

HEXSTA A 008 1657 1179
HF      C 001 003C 1233
HXBYT  A 001 1702 1192 1203* 1205*
HXTIME A 003 1508 1066 0995* 0998*
H1     C 001 0003 1214
H2     C 001 0076 1215
INDXPL A 001 159B 1110 0987* 1076* 1081
INTERR A 004 0AF8 0088 0085
JUNK   A 004 1887 1311 1246* 1247* 1261* 1262* 1284 1325
LASTAD A 001 14FD 1060 1026* 1033 1036 1040 1047 1056*
LATE  A 004 17AD 1252 1251* 1266* 1267
LDFCR  A 004 1400 0985 0052* 0055* 0063 0064 0065 0066 0057 0068 0069
LDFDR  A 004 1404 0986 0063*
LINK  C 001 0216 1228 0183 0263 0333 0396 0400 0469 0534 0553 0572 1254
LOAD  C 001 022A 1232 0049
LOOPIT A 004 185E 1299 1245* 1260* 1303
    
```


AOE3 SEEK FUNCTION TEST

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEPN, REFERENCES. Lists various symbols and their associated values and references.

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

AOE3 SEEK FUNCTION TEST

OBJECT CARD LISTING

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

Table with columns: CL 1 THROUGH 16, CL 17 THROUGH 32, CL 33 THROUGH 48, CL 49 THROUGH 64, CL 65 THROUGH 80, CL 81 THROUGH 96. Contains object card listings with various alphanumeric codes.

AOE3 SEEK FUNCTION TEST

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+-BJ,SDAD5T /0@ GC HKWJ(LI-@LO-H APXBGEO<LOE2ROH* N?<BG /YF|-2ROH* BHD |C@ LOJ(N@YD ||E H) 1*AOE30022

AOE3 SEEK FUNCTION TEST

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+ /ETDLKHEI.2/0- :BA@J+---MU,4< B AEE 1Z/MH<E@MCCO ER7B 'I-@: "OE H MC37"E|*2 K0' 4 5@YD JHHAOE30044

A0E3 SEEK FUNCTION TEST

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+/U(AJQRI@BG SH -J*BGE=4E/*\$I4@N 0*|C1;.S2)PG&+| 05UCS4*\$W8%PE4%P DE+|OE+\$R5_PG&<| Y4@U QA4A0E30066

T+/VH5*LE6;.H5>L L1DCB1MCA84C6'DC H5>{ 9=* C" B AR R< & C T2)LEE(\$U84C05MC R1*< \$A*A0E30067

T+JWB0) |IO_XA8@P C:({ @DCN5>{ 5_N 0*\$T1)V 6*PC0)| IO_XA8@M &+. T0;|U8UCX9=-X9=- X90 '0-A0E30068

EB*)*E7*=-DC"PHS ="7H&F| C F% ASC R A SO Q 16570501700 3027102%A0E30069

----- LAST PAGE -----

DATE 13MAR70 06APR70 22MAY70 01AUG70 01MAR71
EC NO. 571512 571516 571513 571531 571573

PROG ID 0A0E-3
PAGE 16

A056 DISK WRITE FUNCTION TEST

Table with columns: ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including statements like START 0, DECK 4, SECTION PREFACE, and various DC, MVI, SETB instructions.

A056 DISK WRITE FUNCTION TEST

Table with columns: ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including statements like MZZ RLDPCR+1, LDPCR+1, MVI TRACK#,203, and various DC, MVI, SETB instructions.

445679

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk write function test, including instructions like TSTSPN, CLI, JNE, MVI, etc., and comments such as 'STONE EXIT ADDRESS' and 'DO WE WANT TO RUN ON FIXED?'.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk write function test, including instructions like ROUTINE NO. 01, CHECK FUNCTION OF NO RECORD FOUND, and various control codes like XL1'01', AL2(RTN2), etc.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains error codes like 0CD3, 0CDB, 0CE3, etc., and source statements like 'CL06'CE CYL', 'CL48'NO ERROR WHEN EXPECTED AFTER DOING A WRITE DATA'.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code like 'OED5 02', 'OED6 00' and comments like 'ROUTINE NO. 02, CHECK WRITE FUNCTION USING HEADS 0 & 2', 'TO SEEK CE TRACK'.

A056 DISK WRITE FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	
			312			
OE9B	3D FF 1919		313	RTN2C1	CLI WRTDFC+3,X'FF'	TEST SECTOR COUNTER FOR STEPPING.
CE9F	F2 81 10		314		JE RTN2C2	PROCEED IF OK.
OE2	C0 87 021A		315		B PRINT	TO PRINT SECTOR COUNTER NOT STEPPED
OE6	C6	OE6	316	DC	XL1'C6'	FLAGS
OE7	2B	OE7	317	DC	IL1'43'	LENGTH
OE8	0F9B	OE9	318	DC	AL2(ERRO2B)	MESSAGE ADDRESS
OEAA	A013	OEAB	319	DC	XL2'A013'	MESSAGE IDENTIFICATION
OEAC	C0 87 0222		320		B HALT	TO DCP HALT
OEBO	A013	OE81	321	DC	XL2'A013'	HALT ID
			322			
OE82	0D 00 1918 0DE4		323	RTN2C2	CLC WRTDFC+2(1),EXPSEC	CHECK HEAD & SECTOR NO. AFTER
			324	*		WRITE IS COMPLETED, (EXPECT NO CHG.)
OE88	F2 81 10		325		JE RTN2D	PROCEED IF OK
OE8B	C0 87 021A		326		B PRINT	TO PRINT ERROR
OE8F	C6	OE8F	327	DC	XL1'C6'	FLAGS
OE8C	44	OE8C	328	DC	IL1'68'	LENGTH
OE81	0DE3	OE82	329	DC	AL2(ERRO2D)	MESSAGE ADDRESS
OE83	A014	OE84	330	DC	XL2'A014'	MESSAGE IDENTIFICATION
OE85	C0 87 0222		331		B HALT	TO DCP HALT
OE89	A014	OE8A	332	DC	XL2'A014'	HALT ID
OE8E	C2 02 1DFE		333	RTN2D	LA WORK,IR2	SET IR2 TO POINT TO WORK AREA
OE8F	BD E7 80		334	RTN2F	CLI 0,(IR2),X'E7'	CHECK WORK AREA FOR NO CHANGE
OE82	F2 01 14		335		JNE RTN2E	JUMP TO PRINT IF WRT. PLD. IS CHG.
OE85	E2 02 01		336		LA 1,(IR2),IR2	NOT DONE, INCREMENT IR2
OE88	34 02 1939		337		ST SNSXR2,IR2	NO CHG, SET TO CHECK NEXT BYTE
OE8C	0D 01 1939 1827		338	CLC	SNSXR2(2),WORK1	CHECK IR2 FOR REACHED UPPER LIMIT.
OE8E	F2 81 14		339		JE RTN2G	TO ROUTINE END.
OE85	C0 87 0ECP		340		B RTN2F	CHECK NEXT BYTE
OE89	C0 87 021A		341	RTN2E	B PRINT	TO PRINT DATA FIELD WAS CHANGED
OE8E	C6	OE8E	342	DC	XL1'C6'	FLAGS
OE8E	34	OE8E	343	DC	IL1'52'	LENGTH
OE8F	0PCF	OE8F	344	DC	AL2(ERRO2C)	MESSAGE ADDRESS
OE81	A015	OE82	345	DC	XL2'A015'	MESSAGE IDENTIFICATION
OE83	C0 87 0222		346		B HALT	TO DCP HALT
OE87	A015	OE88	347	DC	XL2'A015'	HALT ID
			348			
OE89	3D 5C 1918		349	RTN2G	CLI WRTDFC+2,X'5C'	TEST FOR LAST SECTOR OF TRACK 0
OE8D	F2 01 08		350		JNE RTN2H	JUMP IF NOT DONE
OE80	C0 87 1670		351		B CKHD	TO CHECK FOR ERRORS
OE84	C0 87 0DF9		352		B RTN2A	
OE88	0E 00 1918 182B		353	RTN2H	ALC WRTDFC+2(1),ONESEC	NOT COMPLETE, STEP TO NEXT SECTOR
OE8E	0E 00 0DE4 182B		354	ALC	EXPSEC(1),ONESEC	INCREASE EXPECTED HEAD & SECTOR NO.
OE84	C0 87 0E40		355		B RTN2B	REPEAT ON NEXT SECTOR
OE88	E3C8C540D7D9C5E5	OE8B	356	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A WRITE'	
OE80	C9D6E4E240C5D9D9		356			
OE88	D6D9E240E6C5D9C5		356			
OE80	40D7D9C5E2C5D5E3		356			
OE88	40C1C6E3C5D940C4		356			
OE80	D6C9D5C740C140E6		356			
OE88	E9C9E3C5		356			
OE8C	40C4C1E3C140C3D6	OE80	357	ERRO2A	DC CL37' DATA COMMAND USING HEAD X, SECTOR XX'	
OE84	D4E4C1D5C440E4E2		357			
OE8C	C9D5C740C8C5C1C4		357			
OE84	40E76B40E2C5C3E3		357			
OE8C	D6D940E7E7		357			
OE81	F2C5C3E3D6D940C3	OE8B	358	ERRO2B	DC CL43'SECTOR COUNTER IN CONTROL FIELD NOT STEPPED'	
OE89	D6E4D5E3C5D940C9		358			
OE81	D540C3D6D5E3D9D6		358			
OE89	D340C6C9C5D3C440		358			
OE81	D5D6E340E2E3C5D7		358			
OE89	D7C5C4		358			
OE8C	E6D9C9E3C540C6C9	OE8F	359	ERRO2C	DC CL52'WRITE FIELD WAS ALTERED AFTER GIVING WRT. DATA CMD.'	
OE84	C5D3C440E6C1E240		359			
OE8C	C1E3E3C5D9C5C440		359			
OE84	C1C6E3C5D940C7C9		359			
OE8C	E5C9D5C740E6D9E3		359			
OE84	4B40C4C1E3C140C3		359			

A056 DISK WRITE FUNCTION TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			359		
	0FCC D4C5C4B				

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for routine 03, including instructions like DC, LA, ST, CLI, BE, B, MVI, SVC, MVC, etc.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for routine 03, including instructions like RTN3C1 CLI, JE, B, PRINT, DC, etc.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk write function test, including routines for checking write data, setting parameters, and testing for good seek.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk write function test, including routines for checking head & sector no., setting work area, and testing for good seek.

45609

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR, LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include assembly code and comments for routines such as 'ROUTINE NO. 05, CHECK WRITE FUNCTION USING...' and 'TEST ENDING HEAD & SECTOR ADDRESS...'.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR, LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include assembly code and comments for routines such as 'TO PRINT HEAD & SECTOR ADDRESS...' and 'CL39'ECTLY AFTER A WRITE WITH HEAD SWITCHING'...'.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including routines for checking cylinder end, seeking, and writing data.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including routines for jumping if correct, printing, and testing for errors.

AC56 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including error handling and sector error recording.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including error handling and seek testing.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic test steps and error messages for disk write function.

44571b

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic test steps and error messages for disk write function, including a detailed error recording table.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including instructions like SETXR2, L, MVI, SVC, etc.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write function test, including instructions like RWAIT, SETADA, CLC, JE, etc.

A056 DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for A056, including subroutines for printing device status and shifting bits in control fields.

A05C DISK WRITE FUNCTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for A05C, including subroutines for printing device status and shifting bits in control fields.

145723

A056 DISK WRITE FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1D66 20 1D66 1221 DC XL1'20'
1D67 40 1D67 1222 DC XL1'40'
1D68 80 1D68 1223 DC XL1'80'

A056 DISK WRITE FUNCTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1D69 00 1225 * SUBROUTINE TO CONVERT A NUMBER TO DECIMAL
1D6A 36 C8 191F 1D69 1226 HXBYT DC XL1'0'
1D6E 34 C8 1D8B 1227 CVD A ONE,ARR ADD ONE TO GET FIRST PARAMETER
1D72 36 0E 1829 1228 ST FROM+5,ARR INSERT THE FROM ADDRESS
1D76 34 C8 1D91 1229 A TWO,ARR ADD TWO TO GET THE SECOND PARAMETER
1D7A 34 0E 1D97 1230 ST TYBOT+5,ARR INSERT THE TO ADDR
1D7E 36 C8 191F 1231 ST OTORZ+5,ARR
1D82 34 0E 1D8A 1232 A ONE,ARR ADD ONE FOR EXIT ADDRESS
1D86 0C 01 1D9D 00C0 1233 ST TIXE+3,ARR STORE EXIT ADDRESS
1E8C 0C 01 1DB0 0000 1234 FROM MVC FROMBYT+5(2),*-*
1D92 0C 01 1DA1 0000 1235 TYBOT MVC TOBYT+3(2),*-*
1D98 0C 00 1D69 0000 1236 OTORZ MVC ZROTO+3(2),*-*
1D9E 04 20 C000 1DEB 1237 FROMBYT MVC HXBYT(1),*-* PUT BYTE IN WORK AREA
1DA4 0F 00 1D69 191F 1238 ZROTO ZAZ ***(3),UNITS(1) ZERO THE TO AREA
1DAA F2 62 0A 1239 DECGAN SLC HXBYT(1),ONE DECREMENT THE HEX BYTE
1DAD 06 20 0000 1DE1 1240 JL TIXE JUMP IF BELOW 1
1DB3 CC 87 1DA4 1241 TOBYT AZ ***(3),DECODE(1) INCREMENT THE DECIMAL COUNT
1CE7 C0 87 0000 1242 B DECGAN
1DBB 34 08 1DE0 1243 TIXE B *** EXIT
1CEP OC 00 1C9C 0F65 1244 ALARM ST EALARM+3,X'08' STORE RETURN
1DC5 C0 87 021A 1245 MVC LNE1-15(1),EFRO2A-11 SET HEAT MSG
1DC9 02 1246 B PRINT
1DCA 20 1DC9 1247 DC XL1'02'
1CEB 1CAB 1DCA 1248 DC IL1'32'
1DCD C0 87 021A 1DCC 1249 DC AL2(LNE1)
1DD1 02 1DD1 1250 B PRINT
1DD2 3B 1DD1 1251 DC XL1'02'
1ED3 1CE6 1DD2 1252 DC IL1'59'
1DD5 C0 87 021A 1DD4 1253 DC AL2(LNE2)
1DD9 06 1254 B PRINT
1DDA 27 1DD9 1255 DC XL1'06'
1CLR 1D0D 1CDA 1256 DC IL1'39'
1DDD C0 87 0000 1DDC 1257 DC AL2(LNE3)
1DE1 F1 1258 EALARM B ***
1DE2 F1F2F3F4F5F6F7F8 1DE1 1259 DECODE DC CL1'1'
1CEA F9F0 1DEB 1260 UNITS DC CL10'1234567890'
1DEC 1260
1DFD 1261 STATPR DS CL18
1DFE 1262 WORK EQU *
1EPE 1263 DS CL256
1FPD 1264 DS CL256
0003 1265 H1 EQU X'03' HALT DISPLAY 1
C076 1266 H2 EQU X'76' HALT DISPLAY 2
CC01 1267 XR1 EQU 01
C002 1268 XR2 EQU 02
CC08 1269 ARR EQU 08
0002 1270 STAT01 EQU X'02'
CC03 1271 STAT23 EQU X'03'
00A6 1272 CTRL EQU X'A6'
C0A4 1273 DATA EQU X'A4'
C080 1274 BIT0 EQU X'80'
C040 1275 BIT1 EQU X'40'
C208 1276 SWITCH EQU X'208'
020A 1277 SECTSH EQU X'20A'
C212 1278 TEST EQU X'212'
C216 1279 LINK EQU X'216'
021A 1280 PRINT EQU X'21A'
021E 1281 UNPACK EQU X'21E'
0222 1282 HALT EQU X'222'
022A 1283 LOAD EQU X'22A'
003C 1284 HP EQU X'3C' HALT DISPLAY F
C03F 1285 HA EQU X'3F' HALT DISPLAY A
0226 1286 PACK EQU X'226'
CC33 1287 END BEGIN

445739

A056 DISK WRITE FUNCTION TEST

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEPN, REFERENCES. Contains cross-reference data for symbols like UDTPTB, UFIND1, UNITS, etc.

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

AC56 DISK WRITE FUNCTION TEST

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

Main body of object card listings, including lines like T+-Y:YEQ... and T+-Z5... with various alphanumeric codes and symbols.

A056 DISK WRITE FUNCTION TEST

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+@J LBPFLU (JU 9FB-2-JL /O#|OH* BF%QC@=-E*BG SH -EL5*PJT2 ET /1R 00H* (=E8 FJ-QH08 C;E 1LDA0560022

A056 DISK WRITE FUNCTION TEST

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+@TO>TT1MCO1UC C5_PT6) SLE<SI1) DE (PO84CS8@PP5@P D6<106) XE0=|L:DC A1>|E6HCA6+S2;| EE+Q SLOA0560044

A056 DISK WRITE FUNCTION TEST

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+/U542N 6*PA1<X N14CI1DCA84CT2<N 02N 0=TL LGHFLU5 JU 9F <R.- 0 AD74H* A #H4A0560066

T+/V0 C6HPLM5 /U 51 EV2-CF84 .. R7-DX JDS 3-HFZY 2D % *S4A0560067

T+/W,+0-R2LXHPU3 2/0--EAW+--EL.4 <BAF/ 1Z/DS<EG EXE0 FLYR7E0 FLX R7-0AFHU EW00APN% EXLM 7H4A0560068

T+/XW JDSG <R60< @ AISO-DR2|+- <F SPDI /1U-A OAPM4 R(3HAPZ* 1VG @B GPK BC DR|JU70H* BH < :2QA0560069

T+/Y/C DR|1U7C RL-YC|~aEV@ AF-- < <EV,KA TMBFLP /Y 3/2 T-/0E4BAD K7&DAO DEG30 FZ6 X JY = 8A0560070

T+/Z+X0<5 /D-.. EV-<@*1DP|E EV< APVH@ JDM>ODB?|@ C| EVLFWFZ?3Y C AY/Z+TE AFZP2-KP 2/AD 81EA0560071

T+/EP>0DBC EU1D N.0 EU0G2/1;: EH % ADL E@ FZ<EV-H GA,0 "HGBY0 1D L. EVEG /0 *0 A0560072

T+/,K |@ A7= C "0 4 JX50H*RH < 8BAU6@Z D|@EYTH AP3H6 JD/0HER?37 *FD.2-JC /0HE1SM \$<: =/HA0560073

T+/X(S*BG SH-S*E GGOYH 1%+|D \$C<B G /,FEJX+YH* /OH SYH@ /0 @AXM1) \$ 084CISHCRES>LT2)P EE+* :RYA0560074

T+/_H9'POE<XN1<P XG(-U4=-.E8UCS1)P S1*J 0XPF5_XEG+| I5<PO9+< C6HP@? /1U- XBG /8BFL* \$9LX @:QA0560075

T+/>C J?<+ HR(?H GACYAF@0@ J>GO-D \$=@HBGE@ /0HE0ED \$=: . \$; *DJ7 'C- FLS2U T /OH E JH Q8@A0560076

T+/>G-4' A_8@YD HB-HA4-DK0H*\$S16 PB-2-KH@-A>G(D \$_@BGFK COH*BG-H R(17Z0-D <HBGE@ /1% 4ZHA0560077

T+/?9U<BG /YBGJ? ZOH* CS8@GT9+I 0>TI1;I 2)N 2<P XE4 (F 0E(\$PEDA EDA EDA ED *0*A0560078

T+/04&DCI5;|E6;P E5;|I5_N 6*PO1D? M2;.S2) PG6<GD1(V .E(LA6).E6+LI5'L E5;(0@TE0*I EDC D0;< Q5<A0560079

T+/1?0MCC2<PC4UA EDA EDA 5)R 6*P C5_XDE<\$09(PDEDA 8*I 0'SN1<IT2)\$ W6<|H1*|K8XPE4UC C2<M E8XA0560080

T+/2D0'I EDA EDA E+LN8XGF1HA EDA EDA EDA E3C1MC T6*GC4W_2<PA1DC XE4C180CD1*\$E0=| I9*M =2XA0560081

T+/3VP<|05;(.G+| EB>|I5*) 5<GY6<- I9*N 1%GL8XN 1)X R5_XSK4CT6;/ 0-C 96+|0E<|L1*GR6<\$ L0** ##<A0560082

T+/4-KXPE+|H2;I 2<J 2;I 5_N OMC C1MCP0*|KE4CR1)- LK4CP0*|KK8A BA HA HA (-)OTHAGNY 5 /4 OR*A0560083

T+/5SOTQBFEU4 /5 E|)O@HBGN15 ED X A5 BO GHQE; B@Z D+-)035 GMC 2-E-S -G /1450H* -J<A0560084

T+/60A -EHD A -E HDEA - 6EAD-(-)S3QHFEU4BA6J(-)V3QBFJ@4BA6:C D)YE C D)X C D)YE 6TYA0560085

T+/7J 0 GOU E -):02 GOURG*H BB-Q-)8*BGGE L /0 (-)8 0 GIO IR*BG /YBHA2,0H* BF-H 2\$8A0560086

TPJ7,+13WOB*BF-Q XGE7 /0 @-G2@*L 5*7-8=- @BQA0560087

1/19/70

A056 DISK WRITE FUNCTION TEST

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

ECC(*E7*=-DC*PHS =*7H&P| | C P% ASC R A SO Q 23240501700 50172JLYA0560088

----- LAST PAGE -----

A063 VERIFY DATA

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

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0000 0A00
2 DECK 4
3 A06 START 0
4 ORG X'0A00'
5 *****
6 * SECTION PREFACE *
7 *
0A01 0A01 8 DC XL2'A063' PROGRAM ID
0A02 0A02 9 DC XL1'00' SECTION FLAGS
0A03 0A03 10 DC XL1'01' CURRENT ROUTINE NUMBER
0A04 0A04 11 DC XL2'00' RESERVED
0A06 0A07 12 DC AL2(RTN1) ADDRESS CF FIRST ROUTINE PREFEX
0A08 0A09 13 DC AL2(ETABLE) ADDRESS OF ERROR RECORDING TABLE
0A0A 0A1000 14 DC XL3'A01000'
15 *
16 *****
17
18 * OPERATING INSTRUCTIONS *
19 *
20 * 1. SET SWITCH 15 TO BYPASS RUNNING ON THE REMOVABLE DISK *
21 * 2. SET SWITCH 16 TO BYPASS RUNNING ON THE FIXED DISK *
22 * 3. SET SWITCH 1E TO BYPASS RUNNING ON DISK DRIVE 1 *
23 * 4. SET SWITCH 1F TO BYPASS RUNNING ON DISK DRIVE 2 *
24
0A0D 0A0D 34 08 0AF5 25 SETDSK ST SETEXT+3,APP SAVE EXIT ADDRESS
0A11 0A11 3C FF 0B13 26 MVI SETSW,X'FF' SET SETUP SWITCH
27
0A15 0A15 3D 00 0B11 28 CLI UDTPTR,0 HAS POINTER BEEN INITIALIZED?
0A19 0A19 F2 01 08 29 JNE UFIND1 JUMP IF YES
0A1C 0A1C C2 01 0232 30 LA UTAB,XR1 LOAD IF NO
0A20 0A20 34 01 0B11 31 DFIND2 ST UDTPTR,XR1
0A24 0A24 35 01 0B11 32 UFIND1 L UDTPTR,XR1
0A28 0A28 3C 00 0B12 33 MVI REMVDS,0 ZERO THE REMOVABLE ONLY SWITCH
0A2C 0A2C 38 02 020B 34 TBN SWITCH+3,X'C2' TEST SSW 1E
0A30 0A30 F2 10 06 35 JT *+9 JUMP IF CN, NEVER RUN DISK 1
0A33 0A33 7D A0 00 36 CLI 0(,XR1),X'A0' TEST FOR A UNIT ADDRESS OF 'A'
0A36 0A36 F2 81 2F 37 JE SETA JUMP IF THERE IS ONE
0A39 0A39 38 01 020B 38 TBN SWITCH+3,X'01' TEST SSW 1F
0A3D 0A3D F2 10 06 39 JT *+9 JUMP IF ON, NEVER RUN DISK 2
0A40 0A40 7D B0 00 40 CLI 0(,XR1),X'B0' TEST FOR A UNIT ADDRESS OF 'B'
0A43 0A43 F2 81 2F 41 JE SETB JUMP IF THERE IS ONE
0A46 0A46 78 10 01 42 TBN 1(,XR1),X'10' TEST FOR LAST ENTRY
0A49 0A49 D2 01 03 43 LA 3(,XR1),XR1 STEP POINTER TO NEXT ENTRY
0A4C 0A4C C0 90 0A20 44 BF UFIND2 CONTINUE IF NOT THE LAST ENTRY
0A50 0A50 C0 87 021A 45 B PRINT TO PRINT ALL UNITS SELECTED
0A54 0A54 06 46 DC XL1'06' FLAGS
0A55 0A55 1A 47 DC IL1'26' LENGTH
0A56 0A56 0B0F 48 DC AL2(NOUNIT) MESSAGE ADDRESS
0A58 0A58 3C 00 0B13 49 MVI SETSW,0
0A5C 0A5C 0C 01 0B11 50 MVC UDTPTR(2),TWOZR
0A62 0A62 C0 87 022A 51 B LOAD
0A66 0A66 0040 52 DC XL2'40' TO PRINT NO ENTRIES LEFT
53 FLAGS
0A68 0A68 08 00 1A35 54 SETA MZZ LD R+1,SPNDLA SET TO RUN ON SPINDLE 'A'
0A6E 0A6E 3C F1 0B46 55 MVI SPNMSG,C'1' SET MESSAGE FOR SPINDLE '1'
0A72 0A72 F2 87 14 56 J SETBTH PROCEED
57
0A75 0A75 08 00 1A35 58 SETB MZZ LDFCR+1,SPNDB SET FOR SPINDLE B.
0A7B 0A7B 3C F2 0B46 59 MVI SPNMSG,C'2' SET MESSAGE FOR SPINDLE '2'
0A7F 0A7F 78 01 02 60 TBN 2(,XR1),X'01' TEST OPTION BIT FOR REMOVABLE ONLY
0A82 0A82 F2 90 04 61 JF SEIBTH JUMP IF NOT ON
0A85 0A85 3C FF 0B12 62 MVI REMVDS,X'FF' SET BIT TO SPECIFY REMOVABLE ONLY
63
0A89 0A89 D2 01 03 64 SETETH LA 3(,XR1),XR1 STEP POINTER TO NEXT ENTRY
0A8C 0A8C 34 01 0B11 65 ST UDTPTR,XR1
0A90 0A90 08 00 1A39 1A35 66 MZZ LDFDR+1,LDFCR+1 SET FOR CURRENT SPINDLE
0A96 0A96 C8 00 1A62 1A35 67 MZZ SIO+1,LDFCR+1 SET FOR CURRENT SPINDLE
0A9C 0A9C 08 00 1A65 1A35 68 MZZ WAIT+1,LDFCR+1 SET FOR CURRENT SPINDLE
0AA2 0A9A 08 00 1AAC 1A35 69 MZZ TSTERR+1,LDFCR+1 SET FOR CURRENT SPINDLE

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A063 VERIFY DATA

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

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0AA8 0A08 08 00 1AAF 1A35 70 MZZ ISTSCN+1,LDFCR+1 SET FOR CURRENT SPINDLE
0AAE 0A0A 08 00 19D7 1A35 71 MZZ SNS+1,LDFCR+1 SET FOR CURRENT SPINDLE
0AB4 0A0B 08 00 1AEA 1A35 72 MZZ RLDPCR+1,LDFCR+1 SET FOR CURRENT SPINDLE
0ABA 0A0A 08 00 1AEE 1A35 73 MZZ RSIO+1,LDFCR+1 SET FOR CURRENT SPINDLE
0ACO 0A0C 00 87 19C9 74 B SENSE
0AC4 0A04 02 75 DC XL1'02' ASK FOR DEVICE STATUS BYTES 0 & 1,
0AC5 0A05 3C CB 0B14 76 MVI TRACK#,203 SET FOR FULL CAPACITY DISK
0AC9 0A09 38 08 19E0 77 TBN STATJS,X'08' TEST CYL 100 BIT
0ACD 0A0D F2 90 04 78 JF PRTSPN IF OFF, CONTINUE
0ADO 0A0D 3C 67 0B14 79 MVI TRACK#,103 SET TO DO 103 CYL.
0AD4 0A04 C0 87 021A 80 PRTSPN B PRINT TO PRINT SECTION HEADING
0AD8 0A08 01 81 DC XL1'01' FLAGS
0AD9 0A09 23 82 DC IL1'35' LENGTH
0ADA 0A0A 0B69 83 DC AL2(SEMSG) MESSAGE ADDRESS
0ADC 0A0C 00 87 021A 84 B PRINT TO PRINT SPINDLE
0AEO 0A0E 06 85 DC XL1'06' FLAGS
0AE1 0A01 18 86 DC IL1'24' LENGTH
0AE2 0A02 0B46 87 DC AL2(SPNMSG) MESSAGE ADDRESS
0AE4 0A04 3C 00 182D 88 MVI HDTBL+3,0 ZERO HEAD
0AEB 0A0B 0C 02 182C 182D 89 MVC HDTBL+2(3),HDTBL+3 ERROR FLAGS
0AEE 0A0E 3C 00 1832 90 MVI PRSTPS,0 SET SWITCH FOR RECALIBRATE
0AF2 0A0F 00 87 0000 91 SETEXT B *-* EXIT
92
0AF6 0A0F C1D3D340E4D5C9E3 0B0F 93 NOUNIT DC CL26'ALL UNITS HAVE BEEN TESTED'
0AFE 0A0E E240C8C1E5C540C2 93
0B06 0A06 C5C5D540E3C5E2E3 93
0B0E 0A0E C5C4 93
0B10 0A10 0000 94 UDIPTR DC XL2'0'
0B12 0A12 00 95 UTAB EQU X'232'
0B13 0A13 00 96 REMVDS DC XL1'0'
0B14 0A14 00 97 SETSW DC XL1'0'
0B15 0A15 A0 98 TRACK# DC XL1'00'
0B16 0A16 B0 99 SPNDLA DC XL1'A0'
0B17 0A17 00 100 SPNDLE DC XL1'B0'
0B18 0A18 00 101 RUNRMV DC XL1'0'
0B19 0A19 0000 102 RUNFIX DC XL1'0'
0B1B 0A1B 00 103 TWCZR DC XL2'0'
0B1C 0A1C C9D5E5C1D3C9C440 104 PASS DC XL1'0'
0B24 0A24 E2E2E640E2C5E3E3 105 INVFLG DC CL19'INVALID SSW SETTING'
0B2C 0A2C C9D5C7 105
0B2F 0A2F D5D6E640E3C5E2E3 106 SPNMSG DC CL24'NOW TESTING DISK DRIVE X'
0B37 0A37 C9D5C740C4C9E2D2 106
0B3I 0A3I 40C4D9C9E5C540E7 106
0B47 0A47 C2C5C7C9D540E5C5 107 SECMMSG DC CL35'BEGIN VERIFY DATA FUNCTION TEST A06'
0B4F 0A4F E9C9C6E840C4C1E3 107
0B57 0A57 C140CC6E4D5C3E3C9 107
0B5F 0A5F D6E540E3C5E2E340 107
0B67 0A67 C1F0F6 107

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A063 VERIFY DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
0CCC	D6D9E240D6C3C3F4		235	
0CD4	D9D9C5C44CE6C6C9		235	
0CDC	E3C540E2C5C5D2C9		235	
0CE4	D5C740E3C8C54C		235	
0CEE	C3C540C3E8D3	OCF0	236	ERROR9 DC CL06'CE CYL'
0CF1	E5C5D9C9C6E84C0C	0D22	237	ERR1A DC CL50'VERIFY DATA USING A NONEXISTANT SECT. ID, NO ERR.'
0CF9	C1E3C140E4E2C9E		237	
0DC1	C740C140D5D6E5C5		237	
0DC9	E7C9E2E3C1D5E34C		237	
0D11	E2C5C3E34B40C9C4		237	
0D19	6B40D5D640C5D9D9		237	
0D21	4B40		237	
0D23	D5E640D9C5C34E40	0D56	238	DC CL52'NO REC. FOUND NOT SET BY A VERIFY DATA COMMAND USIN'
0D2B	C6D6E4D5C440D5D6		238	
0D33	E340E2C5E340C2E8		238	
0D3B	40C140E5C5D9C9C6		238	
0D43	E840C4C1E3C140C3		238	
0D4B	D6E4D4C1D5C440E4		238	
0D53	E2C9D540		238	
0D57	C740C140E2C5C3E3	0D69	239	ERR1B DC CL19'G A SECTOR ID OF FF'
0D5F	D6E940C9C440D6C6		239	
0D67	40C6C6		239	
0D6A	I3C8C540D7D9C5E5	0D9D	240	DC CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A VERIF'
0D72	C9D6E4E240C5D9D9		240	
0D7A	D6D9E240E6C5D9C5		240	
0D82	40D7D9C5E2C5D5E3		240	
0D8A	40C1C6E3C5D940C4		240	
0D92	D6C9D5C740C140E5		240	
0D9A	C5D9C9C6		240	
0D9E	E840D6C640F240E2	0DC0	241	ERR05A DC CL35'Y OF 2 SECTORS USING HEAD SWITCHING'
0DA6	C5C3E3D6D9E240E4		241	
0DAE	E2C9D5C740C8C5C1		241	
0DB6	C440E2E6C9E3C3C8		241	
0DBF	C9D5C7		241	
0DC1	C6C5C1C4405040E2	0DF4	242	DC CL52'HEAD & SECTOR BYTE OF CONTROL FIELD NOT STEPPED CORR'
0DC9	C5C3E3D6D940C2E6		242	
0DD1	E3C540D6C640C3D6		242	
0DD9	D5E3D9D6D340C6C9		242	
0DE1	C5E3C440D5DEE340		242	
0DE9	E2E3C5D7D7C5C44C		242	
0DF1	C3E6D9D9		242	
0DF5	C5C3E3D3E840C1C6	0E1C	243	ERR05E DC CL40'ECTLY AFTER A VERIFY WITH HEAD SWITCHING'
0E1D	I3C5D940C140F5C5		243	
0E05	D9C5C6E840E6C9E3		243	
0E0E	C840C8C5C1C440E2		243	
0E15	E6C9E3C3C8C9D5C7		243	

A063 VERIFY DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
			245 *	ROUTINE NO. 02, CHECK VERIFY FUNCTION
			246 *	USING HEADS 0 & 2
			247	
0E1D	02	0E1D	248	RTN2 DC XL1'02'
0E1E	00	0E1E	249	DC XL1'00'
0E1F	10D4	0E20	250	DC AL2(RTN3)
			251	
0E21	C2 02 1829		252	LA HDTBL-1,XR2
0E25	34 02 180F		253	ST TBLH,XR2
0E29	3D 00 0B13		254	CLI SETSW,0
0E2D	C0 81 0A0D		255	BE SETDSK
0E31	C0 87 0B6A		256	RTN2A B TSTSPN
0E35	C2 02 1810		257	LA SECTBL,XR2
0E39	BC 00 17		258	MVI 23(XR2),0
0E3C	AC 16 16 17		259	PVC 22(23,XR2),23(XR2)
0E40	0C 00 19C0	0B14	260	MVC WRTDFC+1(1),TRACK#
0E46	3C 00 19C1		261	MVI WRTDFC+2,0
0E4A	3C 00 10D3		262	MVI EXPSEC,0
0E4E	3C 09 1BA4		263	MVI SNSID,09
			264	
0E52	C0 87 19F8		265	B STRTIO
0E56	00	0E56	266	DC XL1'01'
0E57	00	0E57	267	DC XL1'01'
0E58	19BF	0E59	268	DC AL2(WRTDFC)
0E5A	C0 87 0E74		269	B RTN2A1
0E5E	C0 C7 0E62		270	F **4
0E62	C0 87 1B7D		271	F PRTSNS
0E66	C0 87 021A		272	B PRINT
0E6A	06	0E6A	273	DC XL1'06'
0E6B	35	0E6B	274	DC JL1'53'
0E6C	0CF0	0E6D	275	DC AL2(ERRORS)
0E6E	C0 87 0222		276	B HALT
0E72	A009	0E73	277	DC XL2'A009'
			278	
0E74	C0 87 18B1		279	RTN2A1 B TSTSEK
			280	
0E78	3C E7 1E89		281	RTN2B MVI WORK+255,X'E7'
0E7C	0C FE 1E88 1E89		282	MVC WORK+256(255),WORK+255
			283	
0E82	3C 12 1BA4		284	MVI SNSID,X'12'
0E86	3C 00 19C2		285	MVI WRTDFC+3,0
0E8A	0C 00 19C1 10D3		286	MVC WRTDFC+2(1),EXPSEC
0E90	C0 87 19F8		287	B STRTIO
0E94	02	0E94	288	DC XL1'02'
0E95	00	0E95	289	DC XL1'00'
0E96	19BF	0E97	290	DC AL2(WRTDFC)
0E98	C0 87 0EA4		291	F RTN2B1
0E9C	C0 87 0FA0		292	B **4
0EA0	C0 87 0F6A		293	B WRTER2
			294	
0EA4	3C 22 1EA4		295	RTN2B1 MVI SNSID,X'22'
0EAB	3C 00 19C2		296	MVI WRTDFC+3,0
0EAC	0C 00 19C1 10D3		297	MVC WRTDFC+2(1),EXPSEC
0EB2	C0 87 19F8		298	B STRTIO
0EB6	01	0EB6	299	DC XL1'01'
0EB7	03	0EB7	300	DC XL1'03'
0EB8	15EF	0EB9	301	DC AL2(WRTDFC)
0EBA	CC 87 0FED		302	F RTN2B2
0EBE	C0 87 0EC2		303	B **4
			304	
0EC2	C3 87 1CCB		305	RTN2C B SHIFT
0EC6	19BF	0EC7	306	DC AL2(WRTDFC)
0EC8	C0 87 1D1C		307	B CVD
0ECC	1D10	0ECD	308	DC AL2(CYLCN)
0EC1	0FE6	0ECF	309	DC AL2(ERK02A)
0ED0	3C 40 0FE4		310	MVI ERK02A-2,C'
0ED4	C0 87 1790		311	B SETERR
0ED8	C0 87 1B7D		312	B PRTSNS

A063 VERIFY DATA

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

0EDC C0 87 021A      313      B      PRINT      TO PRINT THIRD LINE
0EE0 06              0EE0 314      DC      XL1'06'    FLAGS
0EE1 5A              0EE1 315      DC      IL1'90'    LENGTH
0EE2 0FE6            0EE3 316      DC      AL2(ERR02A) MESSAGE ADDRESS
0EE4 C0 87 0222      317      B      HALT      TO DCP HALT
0EE8 A022            0EE9 318      DC      XL2'A022'  HALT ID
0EEA F2 87 64        319      J      RTN2G
320
0EED C0 87 187C      321 RTN2B2 B      TSTDAT     TO TEST DATA ADDRESS
0EF1 1D8A            0EF2 322      DC      AL2(WORK)
323
0EF3 3D FF 19C2      324 RTN2C1 CLI  WRTDFC+3,X'FF' TEST SECTOR COUNTER FOR STEPPING.
0EF7 F2 81 10        325      JE      RTN2C2   PROCEED IF OK.
0EFA C0 87 021A      326      B      PRINT     TO PRINT SECTOR COUNTER NOT STEPPED
0EFE C6              0EFE 327      DC      XL1'C6'    FLAGS
0EFF 2B              0EFF 328      DC      IL1'43'    LENGTH
0F00 1011            0F01 329      DC      AL2(ERR02B) MESSAGE ADDRESS
0F02 A023            0F03 330      DC      XL2'A023'  MESSAGE IDENTIFICATION
0F04 C0 87 0222      331      B      HALT     TO DCP HALT
0F08 A023            0F09 332      DC      XL2'A023'  HALT ID
333
0F0A 0D 00 19C1 10D3 334 RTN2C2 CLC  WRTDFC+2(1),EXPSEC CHECK HEAD & SECTOR NO. AFTER
335 *                335      *                WRITE IS COMPLETED, (EXPECT NO CHG.)
336
0F10 F2 81 10        336      JE      RTN2D   PROCEED IF OK
0F13 C0 87 021A      337      B      PRINT     TO PRINT ERROR
0F17 C6              0F17 338      DC      XL1'C6'    FLAGS
0F18 45              0F18 339      DC      IL1'69'    LENGTH
0F19 1089            0F1A 340      DC      AL2(ERR02D) MESSAGE ADDRESS
0F1E A024            0F1C 341      DC      XL2'A024'  MESSAGE IDENTIFICATION
0F1D C0 87 0222      342      B      HALT     TO DCP HALT
0F21 A024            0F22 343      DC      XL2'A024'  HALT ID
344
0F23 C2 02 1D8A      345 RTN2D  LA      WORK,XR2   SET XR2 TO POINT TO WORK AREA
0F27 BD E7 00        346 RTN2F  CLI  0(XR2),X'E7' CHECK WORK AREA FOR NO CHANGE
0F2A F2 01 14        347      JNE     RTN2E   JUMP TO PRINT IF WRT. FLD. IS CHG.
0F2D E2 02 01        348      LA      1(XR2),XR2 NOT DONE, INCREMENT XR2
0F30 34 02 19E2      349      ST      SNSXR2,XR2 NO CHG, SET TO CHECK NEXT BYTE
0F34 0D 01 19E2 1928 350      CLC     SNSXR2(2),WORK2 CHECK XR2 FOR REACHED UPPER LIMIT.
0F3A F2 81 14        351      JE      RTN2G   TO ROUTINE END.
0F3D C0 87 0F27      352      B      RTN2F   CHECK NEXT BYTE
353
0F41 C0 87 021A      354 RTN2E  B      PRINT     TO PRINT DATA FIELD WAS CHANGED
0F45 C6              0F45 355      DC      XL1'C6'    FLAGS
0F46 33              0F46 356      DC      IL1'51'    LENGTH
0F47 1044            0F48 357      DC      AL2(ERR02C) MESSAGE ADDRESS
0F49 A025            0F4A 358      DC      XL2'A025'  MESSAGE IDENTIFICATION
0F4E C0 87 0222      359      B      HALT     TO DCP HALT
0F4F A025            0F50 360      DC      XL2'A025'  HALT ID
361
0F51 3D 5C 19C1      362 RTN2G  CLI  WRTDFC+2,X'5C' TEST FOR LAST SECTOR OF TRACK 0
0F55 F2 01 08        363      JNE     RTN2J   JUMP IF NOT DONE
0F58 C0 87 179E      364      B      CKHED   TO CHECK FOR ERRORS
0F5C C0 87 0E31      365 RTN2H  B      RTN2A
0F60 0E 00 10D3 1926 366 RTN2J  ALC  EXPSEC(1),ONESEC INCREASE EXPECTED HEAD & SECTOR NO.
0F66 C0 87 0E78      367      B      RTN2E   REPEAT ON NEXT SECTOR
368
0F6A 3C 12 1BA4      369 WRTR2  MVI  SNSID,X'12' PUT ID IN SENSE
0F6E C0 87 1B7D      370      B      PRSNS   TO PRINT STATUS ERROR
0F72 35 01 180F      371      L      TBLH,XR1
0F76 1C 00 10D2 04   372      MVC     ERR02E(1),4(XR1) MOVE HEAD NO. TO ERROR MSG.
373
0F7B C0 87 021A      374      B      PRINT     TO PRINT WRITE ERROR
0F7F 06              0F7F 375      DC      XL1'06'    FLAGS
0F80 49              0F80 376      DC      IL1'73'    LENGTH
0F81 10D2            0F82 377      DC      AL2(ERR02E) MESSAGE ADDRESS
0F83 C0 87 0222      378      B      HALT     TO DCP ERROR HALT
0F87 A012            0F88 379      DC      XL2'A012'  HALT ID
0F89 C0 87 0F5C      380      B      RTN2H
    
```

A063 VERIFY DATA

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

381
0FB8 E3C8C540D7D9C5E5 0FC0 382      DC      CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A VERIFY'
0F95 C916E4E240C5D9D9 382
0F9D D6D9E240E6C5D9C5 382
0FA5 40D7D9C5E2C5D5E3 382
0FAD 40C1C6E3C5D940C4 382
0FB5 I6C9D5C740C140E5 382
0FBD C5D9C9C6        382
0FC1 E840C4C1E3C140C3 0FE6 383  ERR02A DC  CL38'Y DATA COMMAND USING HEAD X, SECTOR XX'
0FC9 D6D4D4C1D5C440E4 383
0FD1 E2C9D5C740C8C5C1 383
0FD9 C440E76B40E2C5C3 383
0FE1 E3D6D940E7E7    383
0FE7 E2C5C3E3D6D940C3 1011 384  ERR02E DC  CL43'SECTOR COUNTER IN CONTROL FIELD NOT STEPPED'
0FEF E6F4D5E3C5D940C9 384
0FF7 D540C3D6D5E3D9D6 384
0FF9 D340C6C9C5D3C440 384
1007 D5D6E340E2E3C5D7 384
100F D7C5C4        384
1012 E6D9C9E3C540C6C9 1044 385  ERR02C DC  CL51'WRITE FIELD WAS ALTERED AFTER GIVING A VERIFY CHND.'
101A C5E3C440E6C1E240 385
1022 C1D3E3C5D9C5C440 385
102A C1C6E3C5D940C7C9 385
1032 E5C9D5C740C140E5 385
103A C5E9C6E840C3D4D5 385
1042 C44B40        385
1045 C8C5C1C4405040E2 1078 386      DC      CL52'HEAD & SECTOR BYTE OF CONTROL FIELD CHANGED AFTER A '
104D C5C3E3D6D940C2E8 386
1055 E3C540D6C640C3D6 386
105D D5E3D9D6D340C6C9 386
1065 C5E3C440C3C8C1D5 386
106D C7C5C440C1C6E3C5 386
1075 D940C140        386
1079 D6D5C540E2C5C3E3 1089 387  ERR02D DC  CL17'ONE SECTOR VERIFY'
1081 E6I940E5C5D9C9C6 387
1089 E8        387
108A E3C8C540D7D9C5E5 10BA 388      DC      CL49'THE PREVIOUS ERRORS OCCURRED WHILE DOING A WRITE '
1092 C9D6E4E240C5D9D9 388
109A D6D9E240D6C3C3E4 388
10A2 D9D9C5C440E6C8C9 388
10AA D3C540C4D6C9D5C7 388
10B2 40C140E6D9C9E3C5 388
10BA 40        388
10BB C4C1E3C140C3D6D4 10D2 389  ERR02E DC  CL24'DATA COMND. USING HEAD X'
10C3 E5C44B40E4E2C9D5 389
10CB C740C8C5C1C440E7 389
10D3 00        10D3 390  EXPSEC DC  XL1'0'
    
```

A063 VERIFY DATA

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains assembly code for routine verification, including instructions like DC, LA, ST, and MVI with associated addresses and comments.

A063 VERIFY DATA

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A063 VERIFY DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for verifying data, including routines for checking sector counters and writing data.

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A063 VERIFY DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
18CE	01	18CE	994	DC	XL1'01'
18CF	18E6	18D0	995	DC	AL2 (IDFLD-2)
18D1	C0 87 18D5		996	B	**4
18D5	C0 87 18D9		997	B	**4
18D9	CD 00 18E7 0B14		998	CLC	IDFLD-1(1),TRACK#
18DF	F2 01 07		999	JNE	SEEKER
			1000		
18E2	C0 87 0000		1001	SEKEXT B	**-*
18E6	C00000	18E8	1002	IDFLD DC	XL3'0'
			1003		
			1004		
			1005	*	COME HERE IF AN ERROR OCCURED
			1006	*	WHILE SEEKING THE CE TRACK
			1007		
18E9	C0 87 1D1C		1008	SEEKER B	CVD
18ED	18F7	18EE	1009	DC	AL2 (IDFLD-1)
18EF	1996	18F0	1010	DC	AL2 (ARIVED)
18F1	C0 87 021A		1011	B	PRINT
18F5	C1	18F5	1012	DC	XL1'C1'
18F6	2A	18F6	1013	DC	IL1'42'
18F7	197F	18F8	1014	DC	AL2 (SEKER1)
18F9	A03C	18FA	1015	SEEKID DC	XL2'A03C'
			1016		
18FB	C0 87 021A		1017	B	PRINT
18FF	01	18FF	1018	DC	XL1'01'
1900	17	1900	1019	DC	IL1'23'
1901	1996	1902	1020	DC	AL2 (ARIVED)
			1021		
1903	C0 87 021A		1022	B	PRINT
1907	06	1907	1023	DC	XL1'06'
1908	28	1908	1024	DC	IL1'40'
1909	19BE	190A	1025	DC	AL2 (SEKER2)
			1026		
1903	3C 00 0B1B		1027	MVI	PASS,0
190F	3C 00 0B13		1028	MVI	SETSW,0
1913	3C 00 1B32		1029	MVI	FRSTPS,0
1917	C0 87 0222		1030	E	HALT
191E	A03C	191C	1031	DC	XL2'A03C'
191D	C0 87 0000		1032	B	0
			1033		
1921	0000	1922	1034	WORK1 DC	AL2 (*-*)
1923	0002	1924	1035	TWO DC	XL2'02'
1925	C0C4	1926	1036	ONESEC DC	XL2'04'
1927	1E89	1928	1037	WORK2 DC	AL2 (WORK+255)
1929	1F89	192A	1038	WORK3 DC	AL2 (WORK+511)
			1039		
192B	C4C1E3C140C1C4C4	1955	1040	DA1PR1 DC	CL43'DATA ADDRESS WAS STEPPED TO INCORRECT VALUE'
1933	D9C5E2E240E6C1E2		1040		
193B	40E2E3C5D7D7C5C4		1040		
1943	40E3D640C9D5C3D6		1040		
194B	D9D9C5C3E340E5C1		1040		
1953	D3E4C5		1040		
1956	C5D9D9D6D940D6C3	197F	1041	SEKER1 DC	CL42'ERROR OCCURRED WHILE SEEKING THE CE TRACK,'
195E	C3E4D9D9C5C440E6		1041		
1966	C8C9D3C540E2C5C5		1041		
196E	D2C9D5C740E3C8C5		1041		
1976	40C3C540E3D9C1C3		1041		
197E	D26B		1041		
1980	C1D9D9C9E5C5C440	1996	1042	ARIVED DC	CL23'ARRIVED AT CYL. NO. XXX'
1988	C1E340C3E8D34B40		1042		
1990	D5E64B40E7E7E7		1042		
1997	D9E4D540E2C5C5D2	19BE	1043	SEKER2 DC	CL40'RUN SEEK TEST SECTION A03 FOR MORE INFO.'
199F	40E3C5E2E340E2C5		1043		
19A7	C3E3C9D6D540C1F0		1043		
19AF	F340C6D6D940D4D6		1043		
19B7	D9C540C9D5C6D64B		1043		
19BF	00	19BF	1044	WRTDFC DC	XL1'00'
19C0	00	19C0	1045	DC	XL1'00'

A063 VERIFY DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
19C1	00	19C1	1046	DC	XL1'00'
19C2	00	19C2	1047	DC	XL1'00'
			1048		
19C3	00	19C3	1049	RDDPC DC	XL1'00'
19C4	00	19C4	1050	DC	XL1'00'
19C5	00	19C5	1051	DC	XL1'00'
19C6	00	19C6	1052	DC	XL1'00'
19C7	0001	19C8	1053	ONE DC	XL2'01'
			1054		
			1055	*****	*****
			1056	*	SENSE I/O ROUTINE
19C9	34 08 19E2	1057	SENSE ST	SNSXR2,ARR	SAVE ADDRESS RECALL REGISTER
19CD	35 01 19E2	1058	L	SNSXR2,XR1	LOAD XR1 WITH VALUE FROM ARR.
19D1	18 03 19D7 00	1059	MNN	SNS+1,0(,XR1)	MOVE IN FUNCTION CCDE
19D6	30 00 19E0	1060	SNS	SNS STATUS,0	PERFORM SENSE
19DA	DD 87 01	1061	B	1(,XR1)	EXIT
			1062		
19DD	0000	19DE	1063	SETXR2 DC	XL2'0'
19DF	0000	19E0	1064	STATUS DC	XL2'0'
19E1	0000	19E2	1065	SNSXR2 DC	XL2'0'
			1066		
			1067	*	ERROR RECORDING TABLE
19E3	00	19E3	1068	ETAELE EQU	*
19E4	00	19E4	1069	QCODE DC	XL1'0'
19E5	0000	19E4	1070	CCODE DC	XL1'0'
19E6	0000	19E6	1071	SNS01 DC	XL2'0'
19E7	0000	19E8	1072	SNS23 DC	XL2'0'
19E9	00000000	19EC	1073	DCFI DC	XL4'0'
19ED	00000000	19F0	1074	DCFF DC	XL4'0'
19F1	0000	19F2	1075	DFCRI DC	XL2'0'
19F3	00C0	19F4	1076	DFDRI DC	XL2'0'
19F5	0000	19F6	1077	DFDRF DC	XL2'0'
19F7	00	19F7	1078	RCUTNO DC	XL1'0'

A063 VERIFY DATA

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1080 * START I/O SUBROUTINE
1081
1082 STPTIO ST SETXR2,ARR SAVE ADDRESS RECALL REGISTER.
1083 L SETXR2,XR2 LOAD XR2 WITH VALUE FROM ARR.
1084 MVI SAVSW,00 ZERO SWITCH
1085 MNN SIO+1,0(,XR2) SET FUNCTION CODE
1086 MVC SIO+2(1),1(,XR2) SET CONTROL CODE IN SIO
1087 MVC DFCR(2),3(,XR2) SET DATA ADDRESS FOR DFCR
1088 TBN DISKTP,X'08' TEST FOR RUN ON LOWER DISK
1089 JT SETFIX JUMP IF YES
1090 SBP SIO+1,X'08' SET FOR REMOVABLE DISK
1091 SBF RSIO+1,X'08' SET FOR REMOVABLE DISK
1092 J CKSEEK JUMP TO CHECK FOR SEEK
1093 SETFIX SBN SIO+1,X'08' SET FOR FIXED DISK
1094 SBN RSIO+1,X'08' SET FOR FIXED DISK
1095 CKSEEK CLI 0(,XR2),00 TEST FOR SEEK
1096 BE SETADR IF YES, GO SET ADDRESS
1097 LDPCR LIO DFCR,X'A6' LOAD CONTROL REGISTER
1098 LDPLR LIO DFDR,X'A4' LOAD DATA REGISTER
1099 MVC QCODE(1),SIO+1
1100 MVC CCODE(1),SIO+2
1101 MVC DFCRI(2),DFCR
1102 MVC DFDRI(2),DFDR
1103 L DFCR,XR1
1104 MVC DCFI(4),3(,XR1)
1105 LA 6600,XR1 LOAD DELAY VALUE IN XR1
1106 SIO SIO X'00',X'A0' START I/C OPERATION
1107 WAIT TIO BUSY,X'A2' TEST FOR BUSY
1108 B SENSE
1109 DC XL1'04'
1110 MVC DFDRF(2),STATUS
1111 L DFCR,XR1
1112 MVC DCFI(4),3(,XR1)
1113 B SENSE
1114 DC XL1'02'
1115 MVC SNS01(2),STATUS
1116 B SENSE
1117 DC XL1'03'
1118 MVC SNS23(2),STATUS
1119 MVC ROUTNO(1),RPFK
1120 CLI SAVSW,X'FF' IS SWITCH ON?
1121 JNE TSTERR IF NO, SKIP RESTORE
1122 MVC 3(1,XR2),DFC3SV RESTORE N BYTE
1123 SBF 2(,XR2),01 TURN OFF THE FOR/ REV BIT
1124 L SETXR2,XR2 RESTORE PARAMETER POINTER
1125 TSTERR TIO 12(,XR2),X'A0' BRANCH IF ERROR
1126 TSTSCN TIO 8(,XR2),X'A4' BRANCH IF SCAN FOUND
1127 B 4(,XR2) EXIT
1128
1129 * SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE
1130 * DIRECTION (FORWARD OR REVERSE), TO SEEK
1131
1132 SETADR ST ADREXT+3,ARR SAVE EXIT ADDRESS
1133 CLI 1(,XR2),01 IS THIS A RECALIBRATE?
1134 JNE **7 IF NO, BYPASS SWITCH RESET
1135 MVI FRSTPS,0 RESET RECALIBRATE SWITCH
1136 MVC XR2WK(2),3(,XR2) SAVE ADDR. OF CTL. PLD. ADDR.
1137 L XR2WK,XR2 LOAD XR2 WITH CONTROL PLD. ADDR.
1138 MVC DFC3SV(1),3(,XR2) SAVE N BYTE IN CONTROL FIELD
1139 MVI SAVSW,X'FF' SET SAVE SWITCH
1140 CLI FRSTPS,00 IS THIS FIRST PASS
1141 JNE SETADA SKIP RECALIBRATE IF NO
1142 MVI FRSTPS,01 SET FIRST PASS SWITCH
1143 SBP 2(,XR2),01 SET FWD/REV BIT TO REV.
1144 MVI 3(,XR2),255 SET MAXIMUM TRACK CROSSING
1145 MVI LASTAD,00 SET OLD ADDR TO 0
1146 RLDFCR LIO DFCR,X'A6' LOAD DATA CONTROL REGISTER
1147 RSIO SIO 00,X'A0' SEEK REVERSE

A063 VERIFY DATA

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1148
1149 SETADA CLC 1(1,XR2),LASTAD COMPARE PRESENT ADDR. WITH NEW ONE
1150 JE NOSEEK EQUAL, SEEK IS NOT NECESSARY
1151 JH FWDSEK NEW ADDR. HIGHER, DO FORWARD SEEK
1152 SBF 2(,XR2),01 NEW ADDR. LOWER, SET BIT FOR REV.
1153 MVC SCRCH(1),LASTAD PLACE LAST ADDR IN WORKAREA
1154 SLC SCRCH(1),1(,XR2) SUBTRACT NEW ADDR. FROM LAST ADDR.
1155 J SETADB PROCEED
1156
1157 FWDSEK SBN 2(,XR2),01 SET BIT ON FOR FORWARD SEEK
1158 MVC SCRCH(1),1(,XR2) PLACE NEW ADDR. IN WORKAREA
1159 SLC SCRCH(1),LASTAD SUBTRACT LAST ADDR. FROM NEW ADDR.
1160 J SETADB PROCEED
1161
1162 NOSEEK MVI 3(,XR2),0 SET NO. OF TKS. CROSSED TO ZERO.
1163 J ADREXT TO EXIT
1164
1165 SETADB MVC 3(1,XR2),SCRCH PLACE IN NO. OF TRACKS CROSSED
1166 MVI LASTAD(1),1(,XR2) SAVE NEW ADDRESS
1167 ADREXT B ** EXIT
1168 SCRCH DC XL1'00'
1169 FRSTPS DC XL1'00'
1170 LASTAD DC XL1'00'
1171 DFC3SV DC XL1'00'
1172 SAVSW DC XL1'00'
1173 DISKTP DC XL2'0'
1174 DFCR DC AL2(*-*)
1175 DFER DC AL2(WORK)
1176 XR2WK DC XL2'0'
1177 NEG1 DC XL2'FFFF'
1178 BUSY A NEG1,XR1 DECREMENT DELAY COUNTER
1179 BH WAIT RETURN TO TIO IF NOT TIME OUT
1180 B CVD TIME OUT OCCURED, CONVERT ROUT. NO.
1181 DC AL2(RPFK) CURRENT ROUTINE NO.
1182 DC AL2(TIMOUT) ADDRESS OF DESTINATION
1183 MVI TIMOUT-2,C' TO PRINT TIMEOUT OCCURED
1184 B PRINT
1185 DC XL1'C6' FLAGS
1186 DC IL1'21' LENGTH
1187 DC AL2(TIMOUT) MESSAGE ADDRESS
1188 DC XL2'A08E' MESSAGE ID
1189 THALT B HALT TO DCP ERROR HALT
1190 DC XL2'A08E' HALT ID
1191 B 0
1192 TIMOUT DC CL21'TIMEOUT IN ROUTINE XX'
1193 RPFK EQU X'A03'

A063 VERIFY DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for subroutine to print device status, including instructions like PRTXNS, UNPACK, MVI, LA, STPSNS, etc.

A063 VERIFY DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for equipment and data checks, including instructions like DC, SHFT, ST, L, A, B, etc.

A063 VERIFY DATA

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

1299 * SUBROUTINE TO CONVERT A NUMBER TO DECIMAL
1300
1D1B 00 1D1B 1301 HXBYT DC XL1'0'
1D1C 36 08 19C8 1302 CVD A ONE,ARR ADD ONE TO GET FIRST PARAMETER
1D20 34 08 1D3D 1303 ST FROM+5,ARR INSERT THE FROM ADDRESS
1D24 36 08 1924 1304 A TWO,ARR ADD TWO TO GET THE SECOND PARAMETER
1D28 34 08 1D43 1305 ST TYBOT+5,ARR INSERT THE TO ADDR
1D2C 34 08 1D49 1306 ST OTORZ+5,ARR
1D30 36 08 19C8 1307 A ONE,ARR ADD ONE FOR EXIT ADDRESS
1D34 34 08 1D6C 1308 ST TIXE+3,ARR STORE EXIT ADDRESS
1D38 0C 01 1D4F 0000 1309 FRM MVC FROBYT+5(2),*-*
1D3E 0C 01 1D62 0000 1310 TYBOT MVC TOBYT+3(2),*-*
1D44 0C 01 1D53 0000 1311 OTCRZ MVC ZROTO+3(2),*-*
1D4A 0C 00 1D1B 0000 1312 FRCBYT MVC HXBYT(1),*-* PUT BYTE IN WORK AREA
1D50 04 20 0000 1D77 1313 ZROTO ZAZ *-*(3),UNITS(1) ZERO THE TO AREA
1D56 0F 00 1D1B 19C8 1314 DECGAN SLC HXBYT(1),ONE DECREMENT THE HEX BYTE
1D5C F2 82 0A 1315 JL TIXE JUMP IF BELOW 1
1D5F 06 20 0000 1D6D 1316 TOBYT AZ *-*(3),DECONE(1) INCREMENT THE DECIMAL COUNT
1D65 C0 87 1D56 1317 B DECGAN
1D69 C0 87 0000 1318 TIXE B EXIT
1D6D F1 1D6D 1319 DECONE DC CL1'1'
1D6E F1F2F3F4F5F6F7F8 1D77 1320 UNITS DC CL10'1234567890'
1D76 F9F0 1320
1D78 1D89 1321 STATPR DS CL18
1D8A 1322 WOKK EQU *
1E89 1323 DS CL256
1E8A 1F89 1324 DS CL256
1325
0003 1326 H1 EQU X'03' HALT DISPLAY 1
0076 1327 H2 EQU X'76' HALT DISPLAY 2
0001 1328 XR1 EQU 01
0002 1329 XR2 EQU 02
0008 1330 ARR EQU 08
0002 1331 STAT01 EQU X'02'
0003 1332 STAT23 EQU X'03'
00A6 1333 CTRL EQU X'A6'
00A4 1334 DATA EQU X'A4'
0080 1335 BIT0 EQU X'80'
0040 1336 BIT1 EQU X'40'
0208 1337 SWITCH EQU X'208'
020A 1338 SECTSW EQU X'20A'
0212 1339 TEST EQU X'212'
0216 1340 LINK EQU X'216'
021A 1341 PRINT EQU X'21A'
021E 1342 UNPACK EQU X'21E'
0222 1343 HALT EQU X'222'
022A 1344 LOAD EQU X'22A'
003C 1345 HF EQU X'3C' HALT DISPLAY F
003F 1346 HA EQU X'3F' HALT DISPLAY A
0C2E 1347 END BEGIN

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A063 VERIFY DATA

CROSS-REFERENCE

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SYMBOL T LEN VALUE DEFN REFERENCES
ADREXT A 004 1B2D 1167 1132* 1163
ALLHED A 026 184B 0953 0935
ARIVED A 023 1996 1042 1010 1020
ARR C 001 0008 1330 0025 0109 0896 0906 0961 0983 1057 1082 1132 1197 1267 1302*
A06 A 001 0000 0003 1303 1304* 1305 1306 1307* 1308
BEGIN A 0C4 0C2E 0179 1347
BIT0 C 0G1 0080 1335
BIT1 C 001 0G40 1336
BUSY A 004 1B40 1178 1107
CCODE A 001 19E4 1070 1100*
CKHDER A 006 17F0 0930 0165
CKHED A 004 179E 0906 0364 0511
CKHEDA A 003 17AA 0909 0914
CKSEK A 003 1A2D 1095 1092
CTRL C 001 00A6 1333
CVD A 004 1D1C 1302 0307 0454 1008 1180
CYLNO A 001 1D10 1286 0308 0455 0897 1272* 1279*
DATA C 001 00A4 1334 0966
LATEXT A 004 18AD 0978 0961* 0962 0964* 0969
DATID1 A 002 18A6 0975
DATPR1 A 043 1955 1040 0974
DCPF A 004 19F0 1074 1112*
DCFI A 004 19EC 1073 1104*
DECGAN A 006 1D56 1314 1317
DECONE A 001 1D6D 1319 1316
DFCR A 002 1B39 1174 1087* 1097 1101 1103 1111 1146
DFCRI A 002 19F2 1075 1101*
DFC3SV A 001 1B34 1171 1122 1138*
DFDR A 002 1B3B 1175 1093 1102
DFDRF A 002 19F6 1077 1110*
DFDRI A 002 19F4 1076 1102*
DISKTP A 002 1B37 1173 0143* 0153* 0917 1088
ERBOR9 A 006 0CF0 0236 0195 0275 0422 0555 0671 0702 0797
ERR02A A 038 0FE6 0383 0309 0310* 0316 0456 0457* 0463 0901*
ERR02B A 043 1011 0384 0329 0476 0603 0731
ERR02C A 051 1044 0385 0357 0504 0631 0759
ERR02D A 017 1089 0387 0340 0487
ERR02E A 024 10D2 0389 0372* 0377 0518* 0522
ERR04A A 036 13B0 0638 0587* 0591
ERR04E A 029 1401 0640 0614
ERR05A A 035 0DC0 0241 0719
ERR05E A 040 0E1C 0243 0742
ERR06A A 026 1691 0887 0829
ERR06E A 021 16DA 0889 0845
ERR06C A 031 172D 0891 0860
ERR06D A 030 177F 0893 0872
ERR1A A 050 0D22 0237 0213
ERR1B A 019 0D69 0239 0228
ETABLE A 001 19E3 1068 0013
EXPSEC A 001 10D3 0390 0262* 0286 0297 0334 0366* 0409* 0433 0444 0481 0513*
FIXDSK A 005 1872 0955 0919
FIXED A 004 0BE0 0147 0140
FOURFF A 004 187B 0957 0930
FROBYT A 006 1D4A 1312 1309*
FROM A 006 1D38 1309 1303*
FRSTPS A 001 1B32 1169 0090* 1029* 1135* 1140 1142*
PWDSEK A 003 1B0C 1157 1151
HA C 001 003F 1346
HALT C 001 0222 1343 0126 0196 0215 0230 0276 0317 0331 0342 0359 0378 0423 0464
0478 0489 0506 0523 0556 0592 0605 0616 0633 0672 0703 0720
0733 0744 0761 079E 0832 0848 0863 0875 0926 0937 0976 1030
1139
HDEXT A 004 17EC 0928 0906* 0910
HDTBL A 001 182A 0945 0088* 0089 0089* 0252 0399 0536 0651 0777 0930
HEXSTA A 008 1C20 1251 1204 1241 1248

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A063 VERIFY DATA

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SETB	A	006	0A75	0058	0041
SETBTH	A	003	0A89	0064	0056 0061
SETDSK	A	004	0A0D	0025	0180 0255 0402 0539 0654 0780
SETERA	A	003	178E	0899	0897*
SETEPR	A	004	1780	0896	0311 0458
SETERK	A	004	179A	0902	0896*
SETEXT	A	004	0AF2	0091	0025*
SETFIX	A	004	1A25	1093	1089
SETRMV	A	004	0BC4	0139	0116 0135 0137
SETSPN	A	006	0B7C	0114	0111
SETSW	A	001	0B13	0097	0026* 0049* 0161* 0179 0254 0401 0538 0653 0779 1028*
SETXR2	A	002	19DE	1063	1082* 1083 1124
SHFEXT	A	004	1D0C	1284	1267* 126E 1269 1271* 1281
SHFTBL	A	001	1D11	1288	1273
SHIFT	A	004	1CCB	1267	0305 0452
SIO	A	003	1A61	1106	0067* 1085* 1086* 1090* 1093* 1099 1100
SKTSTA	A	004	18B5	0984	0988
SNS	A	004	19D6	1060	0071* 1059*
SNSID	A	002	1BA4	1214	0183* 0263* 0284* 0295* 0369* 0410* 0431* 0442* 0515* 0543* 0565* 0575* 0659* 0690* 0706* 0785* 0816*
SNSXR2	A	002	19E2	1065	0349* 0350 0496* 0497 0623* 0624 0751* 0752 0912* 0913 1057* 1058
SNSO1	A	002	19E6	1071	1115*
SNS23	A	002	19E8	1072	1118*
SPNDLA	A	001	0B15	0099	0054
SPNDLB	A	001	0B16	0100	0058
SPNMSG	A	024	0B46	0106	0055* 0055* 0087
STATPR	A	018	1D89	1321	1216* 1223
STATUS	A	002	19E0	1064	0077 0182* 0221 0838 0968 0987 0989 1060* 1110 1115 1118 1203 1218 1240
STATWD	A	018	1C32	1253	1207 1213
STAT01	C	001	0002	1331	0219 083E 0985 1199
STAT23	C	001	0003	1332	
STEP	A	001	0C29	0167	0142* 0150 0163*
STMASK	A	001	1CC3	1262	1208 1243
STPSNS	A	004	18BE	1225	1206* 1219 1232 1234*
STRTIO	A	004	19F8	1082	0185 0203 0265 0287 0298 0412 0434 0445 0545 0567 0578 0661 0682 0692 0708 0787 0808 0819 0878 0992
SWITCH	C	001	0208	1337	0034 0038
TBLEND	A	002	1829	0944	0913
TBLH	A	002	180F	0941	0141* 0149* 0152* 0253* 0371 0400* 0517 0537* 0586 0652* 0764* 0778* 0877* 0900 0907
TBN	A	003	1CF4	1277	1275* 1280
TEST	C	001	0212	1339	0128
TRALT	A	004	1B5E	1189	
TIMOUT	A	021	1B7C	1192	1182 1183* 1187
TIKE	A	004	1D69	1318	1308* 1315
TOBYT	A	006	1D5F	1316	1310*
TRACK#	A	001	0B14	0098	0076* 0079* 0184 0260 0407 0541 0657 0783 0998
TSTBT	A	004	1BAF	1218	1215* 1225
TSTDAT	A	004	187C	0961	0321 0468 0595 0723 0851
TSTERR	A	003	1AAB	1125	0069* 1121
TSTEXT	A	004	0C02	0156	0109* 0145
TSTFIX	A	004	0BB2	0134	0131
TSTRMV	A	004	0BA7	0130	0119
TSTSCN	A	003	1AAE	1126	0070*
TSTSEK	A	004	18B1	0983	0199 0279 0426 0559 0675 0801
TSTSPN	A	004	0B6A	0109	0181 025E 0403 0540 0655 0782
TSTSW	A	004	0B88	0118	0113 0129
TWO	A	002	1924	1035	0964 127C 1304
TWOZR	A	002	0B1A	0103	0050 0114 0201
TYBOT	A	006	1D3E	1310	1305*
UDTPTR	A	002	0B11	0094	0028 0031* 0032 0050* 0065*
UFIND1	A	004	0A24	0032	0029
UFIND2	A	004	0A20	0031	0044
UNITS	A	010	1D77	1320	1313
UNPACK	C	001	021E	1342	1201 1238

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571512 571516 571513 571531 571540

PROG ID 0A06-3
PAGE 15

A063 VERIFY DATA

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
UTAB	C	001	0232	0095	0030
WAIT	A	004	1A64	1107	0068* 1179
WORK	A	001	1D8A	1322	0281* 0282 0282* 0322 0345 0428* 0429 0429* 0469 0492 0561* 0562 0562* 0563 0563* 0596 0619 0677* 0678 0678* 0679 0679* 0724 0747 0803* 0804 0804* 0805 0805* 0852 1037 1038 1175
WORK1	A	002	1922	1034	0963* 0968
WORK2	A	002	1928	1037	0350 0497
WORK3	A	002	192A	1038	0624 0752
WRTDFC	A	001	19BF	1044	0260* 0261* 0268 0285* 0286* 0290 0296* 0297* 0301 0306 0324 0334 0362 0407* 0408* 0415 0432* 0433* 0437 0443* 0444* 0448 0453 0471 0481 0509 0541* 0542* 0548 0566* 0570 0576* 0577* 0581 0598 0608 0657* 065E* 0664 0681* 0685 0691* 0695 0707* 0711 0726 0736 0783* 0784* 0790 0807* 0811 0817* 0818* 0822 0854 0866 0881
WRTER2	A	004	0F6A	0369	0293 0573 0688 0814
WRTER3	A	004	1221	0515	0440
XR1	C	001	0001	1328	0030* 0031 0032* 0036 0040 0042 0043 0043* 0060 0064 0064* 0065 0371* 0372 0517* 0518 0586* 0587 0900* 0901 0907* 0915 0920 1058* 1059 1061 1103* 1104 1105* 1111* 1112 1178* 1207* 1216 1229 1229* 1235 1242* 1268* 1274 1274* 1277
XR2	C	001	0002	1329	0252* 0253 0257* 0258 0259 0259 0345* 0346 0348 0348* 0349 0399* 0400 0404* 0405 0406 0406 0492* 0493 0495 0495* 0496 0536* 0537 0619* 0620 0622 0622* 0623 0651* 0652 0747* 0748 0750 0750* 0751 0777* 0778 0898* 0899 0908* 0909 0911 0911* 0912 0962* 0963 1083* 1085 1086 1087 1095 1122 1123 1124* 1125 1126 1127 1133 1136 1137* 1138 1143 1144 1149 1152 1154 1157 1158 1162 1165 1166 1208* 1215 1228 1228* 1243* 1269* 1270* 1271 1273* 1275 1276 1282 1282*
XR2WK	A	002	1B3D	1176	1136* 1137
ZBOCTR	A	004	0C06	0158	0115 0148
ZROTO	A	006	1D50	1313	1311*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571512 571516 571513 571531 571540

PROG ID 0A06-3
PAGE 15A

A063 VERIFY DATA

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+-@J-<BGF77 /OH EAVY|9%BG SH-H?H GR<BGF60)ST7"*. 2-JC /OHE1S%ED E TOH*BHD TC E ROJC LAYD #1UA0630022
T+<D<BG /,FJJB IYBL /OHSYBLB /6 H?;* @-DM8-HA (H R8-4AF;HRH|HAE<B GC2- /OHE1T<EJH VOH* KIOA0630023
T+<G SH-IL5*F*G 2 ET /1;;OH**<E8 D<R|X|BGCX-@D/> UOH*S-LMAF @* AC KA<BG /YFKJCKOH* BHE RQRA0630024
T+<BD%BG53T2<N 5'XE9*XO9+I 1) X R5_XSE+\$E6*N 5'X E8%PN84CA1>|E6MC D5%KN14CA6+PE6*X F:D @3*A0630025
T+<GTOHCC5_L M0)PDE+LS2) PG6<T E0*J 96_8%PC8'S R6+-X8%PC8'SR6<| 09 (PT1) V 2) N 0'S MR'U LSYA0630026
T+ / 85_ (1%XE4@J 5) \$TE+. T1) -P1*L W6*XT1MCF2*PL1DC W0;I 0)|T1)XE1DC A1>|E6HCG2;PI5*) 0M LZ-A0630027
T+/A39*PR1>/ 0'L N1D_2<PA1DAEE+. E0=|06HCB:+|E6 (\$ FE<|05;|R5_ (1% E4@J 02TA5*-E1DC A1>< JK*A0630028
T+/B>1) V 0MC05*N 8%PC8'SR6+PE6*X F:+|H1MCP6*PV2)\$ J8UCE6)X06;I 5%| C9 (XR1*J 9%TI42N 1(Q E2*A0630029
T+/CZ2) PG6<E 9_X I8@N 1<GTOHCC5_L N1D_9+. I5*) 2<P A1DCX < DULB /- (HQC34 B1| -EY (OH* 09@A0630030
T+/DUB6,B /-E? P,AQOR00 P* .EC2- F+D@-ACL| USZ<B GF-- AW"OH*JH@B GDJX /1_'0H*BF-Q 5C| 70HA0630031
T+/E-0H*BHE IOH* Q%L3XGYU<"/:HGUY @E/>U| RO-0 P*D E4@BGF--B AW"OH* JO@BGDN- /1H/|B* SZCO HY-A0630032
T+/FE AXBC ROJC LOH*E= DCF\$"/1P UOH*J;*BGG<XR?@B GGJ0)D "W|D |9<B GE8C /1_'0H*BF-R EC=Q N. #A0630033
T+/GNOH*BHD X@Y) UOH*Q-A6H1-@R0?H AD<BG /,PH1 JYB| /OHSYB< (AXAD(| 2-JC /OHE1U6E6SE UOH* <A0630034
T+/HE SH-I<HBGQD '90C2 JLS -D4 /X SCEDR8/U@YDM0H* J7%BG /,F<1ADYBP /OHSYBH'7AXA@-D HOH* ;S6A0630035
T+/I.E9# /1CYC- E41UW0H*J.300P:L /1_' (EDQC10 D (H DOH*BF-RID(. /OH SYAS /1HLA H %H PFBU 91DA0630036
T+/HF (HQC34 B1| -EY (OH*.E-0 P* .ECO F+D@BJ>UOH* R= P\$"/1H<OH* K; %BGF77 /OHEATH <@< \$K4A0630037
T+/.A/OHSY X /1S 1|A -S63=G8--S63 "GYU;STOKF:E@ JX BOH*R= H P\$"/1H @OH*K><BGC6Y@H/> U| D 5-4A0630038
T+/.@P*H@ AXA0H* R= DCF\$"/1.30H* K6<BGF745 J-|G LY&L /OHEAV-LX<B G SH-H%BGFGO)ST7 "P*H 29A0630039
T+<7@YD60H*BF%Q ,DAF-H@BG SH-H34 DF*G2-JC /OHE1VJ H E YOH*BHD YO-H)S,4E |HAE+HB LE PF: H *9YA0630040
T+/(2CEDR8/UD@YD MOH* LH@BG /,F<1A DYBP /OHSYBP /1I Q8@TEE (~R1;PI5>L S6<PR6)SR8UCW1) X EE (* "T8A0630041
T+ / 6*PS1)PT8<G F8@PR6<L02)PG6<E 9*PR2*\$YE<|05 (L A5*J 9+. I5*) 2<J .E+),E+.E0=|06;I @D 1HEA0630042
T+ / |YHDC12<PA1DA EE+.E0=|06HCB:+| EE (\$FE<|05;|R5_ (1%XE4@J 5) \$TE+. T1)-P1*J 0'SR6*P C8'< RY*A0630043

A063 VERIFY DATA

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+-@J-<BGF77 /OH EAVY|9%BG SH-H?H GR<BGF60)ST7"*. 2-JC /OHE1S%ED E TOH*BHD TC E ROJC LAYD #1UA0630022
T+<D<BG /,FJJB IYBL /OHSYBLB /6 H?;* @-DM8-HA (H R8-4AF;HRH|HAE<B GC2- /OHE1T<EJH VOH* KIOA0630023
T+<G SH-IL5*F*G 2 ET /1;;OH**<E8 D<R|X|BGCX-@D/> UOH*S-LMAF @* AC KA<BG /YFKJCKOH* BHE RQRA0630024
T+<BD%BG53T2<N 5'XE9*XO9+I 1) X R5_XSE+\$E6*N 5'X E8%PN84CA1>|E6MC D5%KN14CA6+PE6*X F:D @3*A0630025
T+<GTOHCC5_L M0)PDE+LS2) PG6<T E0*J 96_8%PC8'S R6+-X8%PC8'SR6<| 09 (PT1) V 2) N 0'S MR'U LSYA0630026
T+ / 85_ (1%XE4@J 5) \$TE+. T1) -P1*L W6*XT1MCF2*PL1DC W0;I 0)|T1)XE1DC A1>|E6HCG2;PI5*) 0M LZ-A0630027
T+/A39*PR1>/ 0'L N1D_2<PA1DAEE+. E0=|06HCB:+|E6 (\$ FE<|05;|R5_ (1% E4@J 02TA5*-E1DC A1>< JK*A0630028
T+/B>1) V 0MC05*N 8%PC8'SR6+PE6*X F:+|H1MCP6*PV2)\$ J8UCE6)X06;I 5%| C9 (XR1*J 9%TI42N 1(Q E2*A0630029
T+/CZ2) PG6<E 9_X I8@N 1<GTOHCC5_L N1D_9+. I5*) 2<P A1DCX < DULB /- (HQC34 B1| -EY (OH* 09@A0630030
T+/DUB6,B /-E? P,AQOR00 P* .EC2- F+D@-ACL| USZ<B GF-- AW"OH*JH@B GDJX /1_'0H*BF-Q 5C| 70HA0630031
T+/E-0H*BHE IOH* Q%L3XGYU<"/:HGUY @E/>U| RO-0 P*D E4@BGF--B AW"OH* JO@BGDN- /1H/|B* SZCO HY-A0630032
T+/FE AXBC ROJC LOH*E= DCF\$"/1P UOH*J;*BGG<XR?@B GGJ0)D "W|D |9<B GE8C /1_'0H*BF-R EC=Q N. #A0630033
T+/GNOH*BHD X@Y) UOH*Q-A6H1-@R0?H AD<BG /,PH1 JYB| /OHSYB< (AXAD(| 2-JC /OHE1U6E6SE UOH* <A0630034
T+/HE SH-I<HBGQD '90C2 JLS -D4 /X SCEDR8/U@YDM0H* J7%BG /,F<1ADYBP /OHSYBH'7AXA@-D HOH* ;S6A0630035
T+/I.E9# /1CYC- E41UW0H*J.300P:L /1_' (EDQC10 D (H DOH*BF-RID(. /OH SYAS /1HLA H %H PFBU 91DA0630036
T+/HF (HQC34 B1| -EY (OH*.E-0 P* .ECO F+D@BJ>UOH* R= P\$"/1H<OH* K; %BGF77 /OHEATH <@< \$K4A0630037
T+/.A/OHSY X /1S 1|A -S63=G8--S63 "GYU;STOKF:E@ JX BOH*R= H P\$"/1H @OH*K><BGC6Y@H/> U| D 5-4A0630038
T+/.@P*H@ AXA0H* R= DCF\$"/1.30H* K6<BGF745 J-|G LY&L /OHEAV-LX<B G SH-H%BGFGO)ST7 "P*H 29A0630039
T+<7@YD60H*BF%Q ,DAF-H@BG SH-H34 DF*G2-JC /OHE1VJ H E YOH*BHD YO-H)S,4E |HAE+HB LE PF: H *9YA0630040
T+/(2CEDR8/UD@YD MOH* LH@BG /,F<1A DYBP /OHSYBP /1I Q8@TEE (~R1;PI5>L S6<PR6)SR8UCW1) X EE (* "T8A0630041
T+ / 6*PS1)PT8<G F8@PR6<L02)PG6<E 9*PR2*\$YE<|05 (L A5*J 9+. I5*) 2<J .E+),E+.E0=|06;I @D 1HEA0630042
T+ / |YHDC12<PA1DA EE+.E0=|06HCB:+| EE (\$FE<|05;|R5_ (1%XE4@J 5) \$TE+. T1)-P1*J 0'SR6*P C8'< RY*A0630043



A072 READ DATA (DIAGNOSTIC)

```
ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
0000                      2      DECK 4
OA00                      3 A07  START 0
                          4      ORG   X'0A00'
                          5 *****
                          6 *      SECTION PREFACE
                          7 *
OA00 A072                OA01  8      DC   XL2'A072'      PROGRAM ID
OA02 00                  OA02  9      DC   XL1'00'      SECTION FLAGS
OA03 01                  OA03 10     DC   XL1'01'      CURRENT ROUTINE NUMBER
OA04 0000                OA05 11     DC   XL2'00'      RESERVED
OA06 0C33                OA07 12     DC   AL2(RTN1)     ADDRESS OF FIRST ROUTINE PREFEX
OA08 1917                OA09 13     DC   AL2(ETABLE)   ADDRESS OF ERROR RECORDING TABLE
OA0A A01000             OA0C 14     DC   XL3'A01000'
                          15 *
                          16 *****
                          17
                          18 *      OPERATING INSTRUCTIONS
                          19 *
                          20 *      1. SET SWITCH 15 TO BYPASS RUNNING ON THE REMOVABLE DISK
                          21 *      2. SET SWITCH 16 TO BYPASS RUNNING ON THE FIXED DISK
                          22 *      3. SET SWITCH 1E TO BYPASS RUNNING ON DISK DRIVE 1
                          23 *      4. SET SWITCH 1F TO BYPASS RUNNING ON DISK DRIVE 2
                          24
OA0D 34 08 0AF5         25 SETDSK ST  SETEXIT+3,ARR      SAVE EXIT ADDRESS
OA11 3C FF 0B13        26 MVI     SETSW,X'FF'          SET SETUP SWITCH
                          27
OA15 3D 00 0B11        28 CLI     UDTPTR,0             HAS POINTER BEEN INITIALIZED?
OA19 F2 01 08          29 JNE     UFIND1              JUMP IF YES
OA1C C2 01 0232        30 LA     UTAB,XR1            LOAD IF NO
OA20 34 01 0B11        31 UFIND2 ST  UDTPTR,XR1
OA24 35 01 0B11        32 UFIND1 L   UDTPTR,XR1
OA28 3C 00 0B12        33 MVI     RENVDS,0           ZERO SWITCH FOR REMOVABLE DISK
OA2C 38 02 020B        34 TBN    SWITCH+3,X'02'     TEST SSW 1E
OA30 F2 10 06          35 JT     **9                 JUMP IF ON, NEVER RUN DISK DRIVE 1
OA33 7D A0 00          36 CLI    0(,XR1),X'A0'      TEST FOR A UNIT ADDRESS OF 'A'
OA36 F2 81 2F          37 JE     SETA                JUMP IF THERE IS ONE
OA39 38 01 020B        38 TBN    SWITCH+3,X'01'     TEST SSW 1F
OA3D F2 10 06          39 JT     **9                 JUMP IF ON, NEVER RUN DISK DRIVE 2
OA40 7D 80 00          40 CLI    0(,XR1),X'B0'      TEST FOR A UNIT ADDRESS OF 'B'
OA43 F2 81 2F          41 JE     SETB                JUMP IF THERE IS ONE
OA46 78 10 01          42 TBN    1(,XR1),X'10'     TEST FOR LAST ENTRY
OA49 D2 01 03          43 LA     3(,XR1),XR1        STEP POINTER TO NEXT ENTRY
OA4C C0 90 0A20        44 BF     UFIND2              CONTINUE IF NOT THE LAST ENTRY
OA50 C0 87 021A        45 B      PRINT              TO PRINT ALL UNITS SELECTED
OA54 06                  OA54 46     DC   XL1'06'          FLAGS
OA55 1A                  OA55 47     DC   XL1'26'          LENGTH
OA56 0B0F                OA57 48     DC   AL2(NOUNIT)     MESSAGE ADDRESS
OA58 3C 00 0B13        49 MVI     SETSW,0
OA5C 0C 01 0B11 0B1A   50 MVC     UDTPTR(2),TWOZR
OA62 C0 87 022A        51 B      LOAD              TO PRINT NO ENTRIES LEFT
OA66 0040                OA67 52     DC   XL2'40'          FLAGS
                          53
OA68 08 00 1969 0B15   54 SETA   MZZ  LDPCR+1,SPNDLA   SET TO RUN ON SPINDLE 'A'
OA6E 3C F1 0B46        55 MVI     SPMSG,C'1'        SET MESSAGE FOR SPINDLE '1'
OA72 F2 87 14          56 J      SETBH              PROCEED
                          57
OA75 08 00 1969 0B16   58 SETB   MZZ  LDPCR+1,SPNDLB   SET FOR SPINDLE B.
OA7B 3C F2 0B46        59 MVI     SPMSG,C'2'        SET MESSAGE FOR SPINDLE '2'
OA7F 78 01 02          60 TBN    2(,XR1),X'01'     TEST OPTION BIT FOR REMV. DISK ONLY
OA82 F2 90 04          61 JF     SETBH              JUMP IF OFF
OA85 3C FF 0B12        62 MVI     RENVDS,X'FF'     SET BIT FOR REMOVABLE DISK ONLY
                          63
OA89 D2 01 03          64 SETBTH LA  3(,XR1),XR1     STEP POINTER TO NEXT ENTRY
OA8C 34 01 0B11        65 ST     UDTPTR,XR1
OA90 08 00 196D 1969   66 MZZ    LDPCR+1,LDPCR+1     SET FOR CURRENT SPINDLE
OA96 08 00 1996 1969   67 MZZ    SIO+1,LDPCR+1       SET FOR CURRENT SPINDLE
OA9C 08 00 1999 1969   68 MZZ    WAIT+1,LDPCR+1     SET FOR CURRENT SPINDLE
OAA2 08 00 19E1 1969   69 MZZ    TSTERR+1,LDPCR+1   SET FOR CURRENT SPINDLE
```

A072 READ DATA (DIAGNOSTIC)

```
ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
OAA8 08 00 19E4 1969   70 MZZ    TSTSCN+1,LDPCR+1     SET FOR CURRENT SPINDLE
OAAE 08 00 190B 1969   71 MZZ    SNS+1,LDPCR+1          SET FOR CURRENT SPINDLE
OAB4 08 00 1A1F 1969   72 MZZ    RLDPCR+1,LDPCR+1   SET FOR CURRENT SPINDLE
OABA 08 00 1A23 1969   73 MZZ    RSIO+1,LDPCR+1      SET FOR CURRENT SPINDLE
OACO C0 87 18FD        74 B      SENSE
OAC4 02                  OAC4 75     DC   XL1'02'          ASK FOR DEVICE STATUS BYTES 0 & 1,
OAC5 3C CB 0B14        76 MVI     TRACK#,203        SET FOR FULL CAPACITY DISK
OAC9 F8 08 1914        77 TBN    STATUS,X'08'       TEST CYL 100 BIT
OACD F2 90 04          78 JF     PRSTSPN           IF OFF CONTINUE
OADO 3C 67 0B14        79 MVI     TRACK#,103       SET FOR 1/2 CAPACITY DISK
                          80
OAD4 C0 87 021A        81 PRSTSPN B  PRINT          TO PRINT SECTION HEADING
OAD8 01                  OAD8 82     DC   XL1'01'          FLAGS
OAD9 2C                  OAD9 83     DC   IL1'44'          LENGTH
OADA 0B72                OADB 84     DC   AL2(SECHMSG)      MESSAGE ADDRESS
OADC C0 87 021A        85 B      PRINT          TO PRINT SPINDLE
OAE0 06                  OAE0 86     DC   XL1'06'          FLAGS
OAE1 18                  OAE1 87     DC   IL1'24'          LENGTH
OAE2 0B46                OAE3 88     DC   AL2(SPNMSG)       MESSAGE ADDRESS
OAE4 3C 00 1763        89 MVI     HDTBL+3,0        ZERO HEAD
OAE8 0C 02 1762 1763  90 MVC     HDTBL+2(3),HDTBL+3 ERROR FLAGS
OAEA 3C 00 1A67        91 MVI     PRSTPS,0        SET SWITCH FLA RECALIBRATE
OAF2 C0 87 0000        92 SETEXT B  **
                          93
OAF6 C1D3D340E4D5C9E3  94 NOUNIT DC  CL26'ALL UNITS HAVE BEEN TESTED'
OAFE E240C8C1E5C540C2  94
OB06 C5C5D540E3C5E2E3  94
OB0E C5C4               94
OB10 0000                OB11 95     UDTPTR DC   XL2'0'
                          0232 96     UTAB  EQU   X'232'
OB12 00                  OB12 97     RENVDS DC  XL1'0'
OB13 00                  OB13 98     SETSW  DC   XL1'0'
OB14 00                  OB14 99     TRACK# DC  XL1'00'
OB15 A0                  OB15 100    SPNDLA DC  XL1'A0'
OB16 B0                  OB16 101    SPNDLB DC  XL1'B0'
OB17 00                  OB17 102    RUNRMV DC  XL1'0'
OB18 00                  OB18 103    RUNFIX DC  XL1'0'
OB19 0000                OB1A 104    TWOZR  DC  XL2'0'
OB1B 00                  OB1B 105    PASS   DC  XL1'0'
OB1C C9D5E5C1D3C9C440  106
OB24 E2E2E640E2C5E3E3  106
OB2C C9D5C7             106
OB2F D5D6E640E3C5E2E3  107
OB37 C9D5C740C4C9E2D2  107
OB3F 40C4D9C9E5C540Z7  107
OB47 C2C5C7C9D540D9C5  108
OB4F C1C440C4C1E3C140  108
OB57 C4C9C1C7D5D6E2E3  108
OB5F C9C340C6E4D5C3E3  108
OB67 C9D6D540E3C5E2E3  108
OB6F 40C1F0F7           108
```

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for diagnostic routine A072, including instructions like TSTSPN, CLI, JNE, MVI, J, SETSPN, CLC, JZ, J, ZROCTR, SETRMV, TSTSW, TBN, JF, B, DC, XL1'C6', IL1'19', AL2(INVFLG), XL2'AOPA', HALT, DC, XL2'AOPA', TEST, B, TSTSW, TSTRMV, TBN, SECTSW, X'04', JT, TSTFIX, MVI, RUNRMV, X'FF', TSTFIX, TBN, SECTSW, X'02', JT, SETRMV, REMVDS, X'FF', JE, SETRMV, MVI, RUNFIX, X'FF', SETRMV, CLI, RUNRMV, 0, JE, FIXED, ALC, TBLH(2), ONE, MVI, STEP, 1, MVI, DISKTP, 0, MVI, RUNRMV, 0, J, TSTEXT, FIXED, CLI, RUNFIX, 0, JE, ZROCTR, ALC, TBLH(2), ONE, CLI, STEP, 1, JE, *+9, ALC, TBLH(2), ONE, MVI, DISKTP, X'08', MVI, RUNFIX, 0, TSTEXT, B, *--, ZROCTR, CLI, X'02'03', 05, MVI, PASS, 0, JNE, *+11, MVI, SETSW, 0, B, 0, MVI, STEP, 0, CLI, X'0A03', 03, BE, CKHDER, B, LINK, DC, XL1'0', STEP, DC, XL1'0'.

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for diagnostic routine A072, including instructions like ROUTINE NO. 01, CHECK FUNCTION OF NO RECORD FOUND, SENSE BIT, (BYTE 0, BIT 5), USING THE READ DATA DIAGNOSTIC COMMAND, ROUTINE PREFACE, ROUTINE NO., ROUTINE FLAGS, ADDRESS OF NEXT ROUTINE, BEGIN, CLI, SETSW, 0, BE, SETDSK, B, TSTSPN, MVI, STATUS-1, 0, MVI, SNSID, 09, MVC, RDDFC+1(1), TRACK#, B, STRTIO, DC, XL1'00', DC, XL1'00', DC, AL2(RDDFC), B, RTN1A1, B, *+4, B, PRSNS, TO DECODE ERROR, B, PRINT, TO PRINT, DC, XL1'06', DC, IL1'53', DC, AL2(ERROR9), B, HALT, TO DCP HALT, DC, XL2'A009', HALT ID, RTN1A1, B, TSTSEK, TO TEST FOR GOOD SEEK, MVI, RDDFC+1, X'FF', SET CYLINDER NO. TO FORCE A WRP., MVI, RDDFC+2, 0, SET TRACK &, MVI, RDDFC+3, 0, SECTOR VALUES, B, STRTIO, TO I/O SUBROUTINE, DC, XL1'01', FUNCTION CODE (READ), DC, XL1'02', CONTROL CODE (DATA DIAGNOSTIC), DC, AL2(RDDFC), CONTROL FIELD ADDRESS, B, RTN1A2, GOOD RETURN, (NOT EXPECTED), B, *+4, B, RTN1B, NORMAL RETURN FROM EXPECTED ERROR, B, PRINT, TO PRINT ROUTINE ERROR, DC, XL1'06', FLAGS, DC, IL1'70', LENGTH, DC, AL2(ERR1A), ADDRESS OF LAST PRINT CHARACTER, DC, XL2'A030', MESSAGE ID, B, HALT, TO DCP HALT, DC, XL2'A030', HALT ID, B, RTN1B, B, SENSE, TO SENSE I/O SUBROUTINE, DC, AL1(STAT01), DEVICE STATUS BYTES 0 & 1, B, TBN, STATUS-1, X'04', TEST BYTE 0, BIT 5 FOR ON, * 224, THIS IS 'NO RECORD FOUND', B, RTN1C, BRANCH IF ON, B, PRINT, TO PRINT ERROR, DC, XL1'06', FLAGS, DC, IL1'80', LENGTH, DC, AL2(ERR1B), ADDRESS OF LAST PRINT CHARACTER, DC, XL2'A031', MESSAGE ID, B, HALT, TO DCP HALT, DC, XL2'A031', HALT ID, B, RTN1C, B, RTN1A, ROUTINE EXIT, DC, CL47'THE PREVIOUS ERRORS OCCURRED WHILE SEEKING THE '.

A072 READ DATA (DIAGNOSTIC)

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

OCDO C9D6E4E240C5D9D9 237
OCD8 D6D9E240D6C3C3E4 237
OCE0 D9D9C5C440E6C8C9 237
OCE8 D3C540E2C5C5D2C9 237
OCFO D5C740E3C8C540 237
OCF7 C3C540C3E8D3 OCFC 238 ERROR9 DC CL06'CE CYL'
OCFD D9C5C1C440C4C1E3 OD30 239 DC CL52'READ DATA DIAGNOSTIC USING A NON EXISTANT SECTOR ID,'
OD05 C140C4C9C1C7D5D6 239
OD0D E2E3C9C340E4E2C9 239
OD15 D5C740C140D5D6D5 239
OD1D 40C5E7C9E2E3C1D5 239
OD25 E340E2C5C3E3D6D9 239
OD2D 40C9C46B 239
OD31 C4C9C440D5D6E340 OD42 240 ERR1A DC CL18'DID NOT GIVE ERROR'
OD39 C7C9E5C540C5D9D9 240
OD41 D6D9 240
OD43 D5D640D9C5C34B40 OD76 241 DC CL52'NO REC. FOUND NOT SET BY A READ DATA DIAGNOSTIC COM'
OD4B C6D6E4D5C440D5D6 241
OD53 E340E2C5E340C2E8 241
OD5B 40C140D9C5C1C440 241
OD63 C4C1E3C140C4C9C1 241
OD6B C7D5D6E2E3C9C340 241
OD73 C3D6D440 241
OD77 D4C1D5C440E4E2C9 OD92 242 ERR1B DC CL28'MAND USING A SECTOR ID OF PF'
OD7F D5C740C140E2C5C3 242
OD87 E3D6D940C9C440D6 242
OD8F C640C6C6 242
OD93 D9C5C1C440C6C9C5 ODBC 243 DC CL42'READ FIELD DOES NOT CONTAIN EXPECTED DATA '
OD9B D3C440C4D6C5E240 243
ODA3 D5D6E340C3D6D5E3 243
ODAB C1C9D540C5E7D7C5 243
ODB3 C3E3C5C440C4C1E3 243
ODBB C140 243
ODBD C1C6E3C5D940C7C9 ODE1 244 ERR02F DC CL37'AFTER GIVING A READ DATA DIAG. COMND.'
ODC5 E5C9D5C740C140D9 244
ODCD C5C1C440C4C1E3C1 244
ODD5 40C4C9C1C74B40C3 244
ODDD D6D4D5C44B 244
ODE2 00 ODE2 245 EXPSEC DC XL1'0'

A072 READ DATA (DIAGNOSTIC)

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

247 * ROUTINE NO. 02, CHECK READ DATA DIAGNOSTIC FUNCTION
248 * USING HEADS 0 & 2
249
ODE3 02 ODE3 250 RTN2 DC XL1'02' ROUTINE NUMBER
ODE4 00 ODE4 251 DC XL1'00' ROUTINE FLAGS
ODE5 10DE ODE6 252 DC AL2(RTN3) ADDRESS OF NEXT ROUTINE PREFIX
253
ODE7 C2 02 175F 254 LA HDTBL-1,XR2 SET POINTER
ODEB 34 02 175C 255 ST TBL,XR2 FOR HEAD 0, REMOVABLE DISK
ODEF 3D 00 0B13 256 CLI SETSW,0 HAVE PARAMETERS BEEN ENTERED?
ODF3 C0 81 0A0D 257 BE SETDSK BRANCH IF NO
ODF7 C0 87 0B73 258 RTN2A B TSTSPN
ODFB C2 02 175D 259 LA SECTBL,XR2 SET ERROR TABLE POINTER
ODFF 3C 00 175D 260 HVI SECTBL,0 ZERO SECTOR
OE03 0C 00 18F4 0B14 261 HVC WRTDFC+1(1),TRACK# SET SEEK ADDRESS TO CE TRACK
OE09 3C 00 18F5 262 HVI WRTDFC+2,0 SET FOR HEAD 0, SECTOR 0
OE0D 3C 00 0DE2 263 HVI EXPSEC,0 SET EXPECTED HEAD & SECTOR NO.
OE11 3C 09 1ADB 264 HVI SNSID,09 INSERT ID IN PRINT
265
OE15 C0 87 192C 266 B STRTIO TO SEEK CE TRACK
OE19 00 ODE19 267 DC XL1'0' FUNCTION CODE (CONTROL)
OE1A 00 ODE1A 268 DC XL1'0' CONTROL CODE (SEK)
OE1B 18F3 ODE1C 269 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
OE1D C0 87 0E37 270 B RTN2A1 GOOD RETURN
OE21 C0 87 0E25 271 B **4
OE25 C0 87 1AB4 272 B PRTSNS TO DECODE ERROR
OE29 C0 87 021A 273 B PRINT TO PRINT
OE2D 06 ODE2D 274 DC XL1'06' FLAGS
OE2E 35 ODE2E 275 DC IL1'53' LENGTH
OE2F 0CFC ODE3J 276 DC AL2(ERROR9) MESSAGE ADDRESS
OE31 C0 87 0222 277 B HALT TO DCP HALT
OE35 A009 ODE36 278 DC XL2'A009' HALT ID
279
OE37 C0 87 17E7 280 RTN2A1 B TSTSEK TO CHECK FOR A GOOD SEEK
281
OE3B 3C E7 1DC2 282 RTN2B HVI WORK+255,7'E7' SET WRITE FIELD
OE3F 0C FE 1DC1 1DC2 283 HVC WORK+254(255),WORK+255
284
OE45 3C 00 1EC2 285 HVI READ+255,0 SET READ FIELD
OE49 0C FE 1EC1 1EC2 286 HVC READ+254(255),READ+255 TO ZEROS
287
OE4F 3C 12 1ADB 288 HVI SNSID,X'12' PUT MESSAGE ID IN PRINT
OE53 3C 00 18F6 289 HVI WRTDFC+3,0 SET TO WRITE ONE SECTOR
OE57 0C 00 18F5 ODE2 290 HVC WRTDFC+2(1),EXPSEC SET SECTOR NO IN CONTROL FIELD
291
OE5D C2 01 1CC3 292 LA WORK,XR1 SET WRITE DATA ADDRESS
OE61 34 01 1A70 293 ST DFDR,XR1 IN DATA CONTROL FIELD
294
OE65 C0 87 192C 295 B STRTIO TO I/O SUBROUTINE
OE69 02 ODE69 296 DC XL1'02' FUNCTION CODE (WRITE)
OE6A 00 ODE6A 297 DC XL1'00' CONTROL CODE (DATA)
OE6B 18F3 ODE6C 298 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
OE6D C0 87 0E79 299 B RTN2B1 GOOD RETURN
OE71 C0 87 0E75 300 B **4
OE75 C0 87 0F64 301 B WRTER2 ERROR RETURN
302
OE79 3C 32 1ADB 303 RTN2B1 HVI SNSID,X'32' PUT ID IN PRINT
OE7D 3C 00 18F6 304 HVI WRTDFC+3,0 SET TO READ ONE SECTOR
OE81 0C 00 18F5 ODE2 305 HVC WRTDFC+2(1),EXPSEC SET SECTOR NO IN CONTROL FIELD
306
OE87 C2 01 1DC3 307 LA READ,XR1 SET READ DATA ADDRESS
OE8B 34 01 1A70 308 ST DFDR,XR1 IN DATA CONTROL FIELD
309
OE8F C0 87 192C 310 B STRTIO TO READ DATA
OE93 01 ODE93 311 DC XL1'01' FUNCTION CODE (READ)
OE94 02 ODE94 312 DC XL1'02' CONTROL CODE (DATA DIAGNOSTIC)
OE95 18F3 ODE96 313 DC AL2(WRTDFC) CONTROL FIELD ADDRESS
OE97 C0 87 0ECA 314 B RTN2B2 GOOD RETURN

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for A072, including error codes like 0E9B, 0E9F, 0EA3, etc., and their corresponding addresses and source statements.

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for A072, including error codes like 0F4C, 0F50, 0F51, etc., and their corresponding addresses and source statements.

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1247	C0 87 021A	550	RTN3J	B	PRINT TO PRINT DATA COMPARE ERROR
124B	C6	124B	551	DC	XL1'06' FLAGS
124C	4F	124C	552	DC	IL1'79' LENGTH
124D	0DE1	124E	553	DC	AL2(ERRO2F) MESSAGE ADDRESS
124F	A036	1250	554	DC	XL2'A036' MESSAGE ID
1251	C0 87 0222	555	B	HALT TO DCP ERROR HALT	
1255	A036	1256	556	DC	XL2'A036' HALT ID
1257	C0 87 16EB	558	RTN3K	B	CHKED TO CHECK FOR ERRORS
125B	C0 87 10F2	559	B	RTN3A	
125F	3C 16 1ADB	560	WRTER3	HVI	SNSID,X'16' TO PUT ID IN SENSE PRINT
1263	35 01 175C	562	L	TBLH,XR1	
1267	1C 00 10DD 04	563	HVC	ERRO2E(1),4(,XR1)	MOVE HEAD NO. TO ERROR MSG.
126C	C0 87 1AB4	564	B	PRTSNS	TO PRINT STATUS ERRORS
1270	C0 87 021A	566	B	PRINT TO PRINT WRITE ERROR	
1274	06	1274	567	DC	XL1'06' FLAGS
1275	3A	1275	568	DC	IL1'58' LENGTH
1276	10DD	1277	569	DC	AL2(ERRO2E) MESSAGE ADDRESS
1278	C0 87 0222	570	B	HALT TO DCP ERROR HALT	
127C	A016	127D	571	DC	XL2'A016' HALT ID
127E	C0 87 1257	572	B	RTN3K TO ROUTINE EXIT	
1282	E3C8C540D7D9C5E5	12B5	574	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A READ'
128A	C9D6E4E240C5D9D9	574			
1292	D5D9E240E6C5D9C5	574			
129A	40D7D9C5E2C5D5E3	574			
12A2	40C1C6E3C5D940C4	574			
12AA	D6C9D5C740C140D9	574			
12B2	C5C1C440	574			
12B6	C4C1E3C140C4C9C1	12DB	575	ERR03A DC	CL38'DATA DIAG. COMND. USING HD. 1 SECT XL'
12BE	C74B40C3D6D4D5C4	575			
12C6	4B40E4E2C9D5C740	575			
12CE	C8C44B40F140E2C5	575			
12D6	C3E340E7E740	575			

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
					577 * ROUTINE NO. 04. CHECK READ DATA DIAGNOSTIC
					578 * USING MULTIPLE SECTORS
					579 * HEADS 0 & 2
					580
12DC	04	12DC	581	RTN4 DC	XL1'04' ROUTINE NUMBER
12DD	00	12DD	582	DC	XL1'00' ROUTINE FLAGS
12DE	1578	12DF	583	DC	AL2(RTN5) ADDRESS OF NEXT ROUTINE PREFIX
					584
12E0	C2 02 175F		585	LA	HDTBL-1,XR2 LOAD HEAD NO. POINTER
12E4	34 02 175C		586	ST	TBLH,XR2 STOFE
12E8	3D 00 0B13		587	CLI	SETSW,0 HAVE PARAMETERS BEEN ENTERED?
12EC	C0 81 0A0D		588	BE	SETDSK BRANCH IF NO
12F0	C0 87 0B73		589	RTN4A B	TSTSPN
12F4	0C 00 18F4 0B14		590	HVC	WRTDFC+1(1),TRACK# SET WRITE ADDRESS TO CE TRACK
12FA	3C 00 18F5		591	HVI	WRTDFC+2,0 SET FOR HEAD 0, SECTOR 0
12FE	3C 09 1ADB		592	HVI	SNSID,09 INSERT ID IN PRINT
					593
1302	C0 87 192C		594	B	STRTIO TO SEEK CE TRACK
1306	00	1306	595	DC	XL1'0' FUNCTION CODE (CONTROL)
1307	00	1307	596	DC	XL1'0' CONTROL CODE (SEEK)
1308	18F3	1309	597	DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
130A	C0 87 1324		598	B	RTN4A1 GOOD RETURN
130E	C0 87 1312		599	B	**4
1312	C0 87 1AB4		600	B	PRTSNS TO DECODE ERROR
1316	C0 87 021A		601	B	PRINT TO PRINT
131A	06	131A	602	DC	XL1'06' FLAGS
131B	35	131B	603	DC	IL1'53' LENGTH
131C	0CFC	131D	604	DC	AL2(ERROR9) MESSAGE ADDRESS
131E	C0 87 0222		605	B	HALT TO DCP HALT
1322	A009	1323	606	DC	XL2'A009' HALT ID
					607
1324	C0 87 17E7		608	RTN4A1 B	TSTSEK TO TEST FOR A GOOD SEEK
					609
1328	3C 10 1EC2		610	RTN4B HVI	WORK+511,X'10' SET
132C	0C FE 1EC1 1EC2		611	HVC	WORK+510(255),WORK+511 2 SECTOR
1332	0C FF 1DC2 1DC3		612	HVC	WORK+255(256),WORK+256 WORKAREA
					613
1338	3C 12 1ADB		614	HVI	SNSID,X'12' PUT ID IN PRINT
133C	3C 01 18F6		615	HVI	WRTDFC+3,01 SET TO WRITE 2 SECTORS
					616
1340	C2 01 1CC3		617	LA	WORK,XR1 SET WRITE ADDRESS
1344	34 01 1A70		618	ST	DFDR,XR1 IN DATA CONTROL FIELD
					619
1348	C0 87 192C		620	B	STRTIO TO WRITE DATA, (2 SECTORS)
134C	02	134C	621	DC	XL1'02' FUNCTION CODE (WRITE)
134D	00	134D	622	DC	XL1'00' CONTROL CODE (DATA)
134E	18F3	134F	623	DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
1350	C0 87 135C		624	B	RTN4B1 GOOD RETURN
1354	C0 87 1358		625	B	**4
1358	C0 87 0F64		626	B	WRTER2 ERROR RETURN
					627
135C	3C 35 1ADB		628	RTN4F1 HVI	SNSID,X'35' PUT ID IN PRINT
1360	3C 01 18F6		629	HVI	WRTDFC+3,01 SET TO READ 2 SECTORS
1364	3C 00 18F5		630	HVI	WRTDFC+2,0 SET TO START AT SECTOR 0
					631
1368	3C 00 1EC2		632	HVI	WORK+511,0 SET READ IN AREA
136C	0C FE 1EC1 1EC2		633	HVC	WORK+510(255),WORK+511 TO ALL
1372	0C FF 1DC2 1DC3		634	HVC	WORK+255(256),WORK+256 ZEROS
					635
1378	C2 01 1DC3		636	LA	READ,XR1 SET READ DATA ADDRESS
137C	34 01 1A70		637	ST	DFDR,XR1 IN DATA CONTROL FIELD
					638
					639
1380	C0 87 192C		640	B	STRTIO TO READ DATA
1384	01	1384	641	DC	XL1'01' FUNCTION CODE (READ)
1385	02	1385	642	DC	XL1'02' CONTROL CODE (DATA DIAGNOSTIC)
1386	18F3	1387	643	DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
1388	C0 87 13AB		644	B	RTN4B2 GOOD RETURN

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
138C	C0 87 1390		645	B	**4
			646		
1390	C0 87 1AB4		647	RTN4C B	PRTSWS TO PRINT SENSE INFO
1394	35 01 175C		648	L	TBLH,XR1 LOAD HEAD NO. POINTER
1398	1C 00 1467 04		649	MVC	ERR04A-13(1),4(,XR1) PUT HEAD NO. IN ERROR MSG.
139D	C0 87 021A		650	B	PRINT TO PRINT 3RD LINE
13A1	06	13A1	651	DC	XL1'06' FLAGS
13A2	5E	13A2	652	DC	IL1'94' LENGTH
13A3	1474	13A4	653	DC	AL2(ERR04A) MESSAGE ADDRESS
13A5	C0 87 0222		654	B	HALT TO DCP HALT
13A9	A035	13AA	655	DC	XL2'A035' HALT ID
			656		
13AB	C0 87 17B2		657	RTN4B2 B	TSTDAT TO TEST DATA ADDRESS
13AF	1DC3	13B0	658	DC	AL2(READ) EXPECTED ADDRESS
			659		
13B1	3D FF 18F6		660	RTN4C1 CLI	WRTDPC+3,X'FF' TEST SECTOR COUNTER FOR STEPPING
13B5	F2 81 10		661	JE	RTN4C2 PROCEED IF OK
13B8	C0 87 021A		662	B	PRINT TO PRINT SECTOR COUNTER NOT STEPPED
13BC	C6	13BC	663	DC	XL1'C6' FLAGS
13BD	2B	13BD	664	DC	IL1'43' LENGTH
13BE	'00B	13BF	665	DC	AL2(ERR02B) MESSAGE ADDRESS
13C0	A033	13C1	666	DC	XL2'A033' MESSAGE IDENTIFICATION
13C2	C0 87 0222		667	B	HALT TO DCP HALT
13C6	A033	13C7	668	DC	XL2'A033' HALT ID
			669		
13C8	3D 04 18F5		670	RTN4C2 CLI	WRTDPC+2,04 CHECK HEAD & SECTOR NO. AFTER
			671	*	WRITE IS COMPLETED, (SHOULD STEP)
			672	JE	RTN4D JUMP IF STEPPED CORRECTLY
13CC	F2 81 10		673	B	PRINT
13CF	C0 87 021A		674	DC	XL1'C6' FLAGS
13D3	C6	13D3	675	DC	IL1'96' LENGTH
13D4	60	13D4	676	DC	AL2(ERR04B) MESSAGE ADDRESS
13D5	14D4	13D6	677	DC	XL2'A038' MESSAGE IDENTIFICATION
13D7	A038	13D8	678	B	HALT TO DCP HALT
13D9	C0 87 0222		679	DC	XL2'A038' HALT ID
13DD	A038	13DE	680		
			681	RTN4D LA	READ,XR2 SET XR2 TO POINT TO WORKAREA
13E3	BD 10 00		682	RTN4F CLI	0(,XR2),X'10' CHECK EACH BYTE OF READ FIELD
13E6	F2 01 14		683	JNE	RTN4E JUMP TO PRT. IF RD. DATA IS NG.
13E9	E2 02 01		684	LA	1(,XR2),XR2 SET TO CHECK NEXT BYTE
13EC	34 02 1916		685	ST	SNSXR2,XR2 STORE FOR COMPARE
13F0	0D 01 1916	1C03	686	CLC	SNSXR2(2),READ1 CHECK XR2 FOR UPPER LIMIT
13F6	F2 81 14		687	JE	RTN4G TO ROUTINE END IF DONE
13F9	C0 87 13E3		688	B	RTN4F CHECK NEXT BYTE
			689		
13FD	C0 87 021A		690	RTN4E B	PRINT TO PRINT READ FIELD IS INCORRECT
1401	C6	1401	691	DC	XL1'C6' FLAGS
1402	4F	1402	692	DC	IL1'79' LENGTH
1403	0DE1	1404	693	DC	AL2(ERR02F) MESSAGE ADDRESS
1405	A036	1406	694	DC	XL2'A036' MESSAGE IDENTIFICATION
1407	C0 87 0222		695	B	HALT TO DCP HALT
140B	A036	140C	696	DC	XL2'A036' HALT ID
			697		
140D	0E 01 175C 18FC		698	RTN4G ALC	TBLH(2),ONE STEP HEAD NO. POINTER
1413	C0 87 12F0		699	B	RTN4A ROUTINE EXIT
1417	E3C8C540D7D9C5E5	144A	700	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A READ '
141F	C9D6E4E240C5D9D9		700		
1427	D6D9E240E6C5D9C5		700		
142F	40D7D9C5E2C5D5E3		700		
1437	40C1C673C5D940C4		700		
143F	D6C9D5C740C140D9		700		
1447	C5C1C440		700		
144B	C4C1E3C140C4C9C1	1474	701	ERR04A DC	CL42'DATA DIAG. COMND. USING HD. X, SECT. 0 & 1'
1453	C74B40C3D6D4D5C4		701		
145B	4B40E4E2C9D5C740		701		
1463	C8C44B40E76B40E2		701		
146B	C5C3E34B40F04050		701		
1473	40F1		701		

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1475	C8C5C1C4405040E2	14A8	702	DC	CL52'HEAD & SECTOR BYTE OF CONTROL FIELD NOT STEPPED CORR'
147D	C5C3E3D6D940C2E8		702		
1485	E3C540D6C640C3D6		702		
148D	D5E3D9D6D340C6C9		702		
1495	C5D3C440D5D6E340		702		
149D	E2E3C5D7D7C5C440		702		
14A5	C3D6D9D9		702		
14A9	C5C3E3D3E840C1C6	14D4	703	ERR04B DC	CL44'ECTLY AFTER A 2 SECTOR READ DATA DIAGNOSTIC'
14B1	E3C5D940C140F240		703		
14B9	E2C5C3E3D6D940D9		703		
14C1	C5C1C440C4C1E3C1		703		
14C9	40C4C9C1C7D5D6E2		703		
14D1	E3C9C340		703		
14D5	E3C8C540D7D9C5E5	1508	704	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A READ '
14DD	C9D6E4E240C5D9D9		704		
14E5	D6D9E240E6C5D9C5		704		
14ED	40D7D9C5E2C5D5E3		704		
14F5	40C1C6E3C5D940C4		704		
14FD	D6C9D5C740C140D9		704		
1505	C5C1C440		704		
1509	C4C1E3C140C4C9C1	1520	705	ERR05A DC	CL24'DATA DIAG. OF 24 SEDTORS'
1511	C74B40D6C640F2F4		705		
1519	40E2C5C4E3D6D9E2		705		
1521	C8C5C1C4405040E2	1550	706	DC	CL48'HEAD & SECTOR BYTE OF CTL. FLD. NOT STEPPED CORR'
1529	C5C3E3D6D940C2E8		706		
1531	E3C540D6C640C3E3		706		
1539	D34B40C6D3C44B40		706		
1541	D5D6E340E2E3C5D7		706		
1549	D7C5C440C3D6D9D9		706		
1551	C5C3E3D3E840C1C6	1577	707	ERR05B DC	CL39'ECTLY AFTER A 24 SECTOR READ DATA DIAG'
1559	E3C5D940C140F2F4		707		
1561	40E2C5C3E3D6D940		707		
1569	D9C5C1C440C4C1E3		707		
1571	C140C4C9C1C740		707		

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for program A072, including routine numbers and addresses.

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for program A072 (8A), including routine numbers and addresses.

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for error A072, including sector error recording and error messages.

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for error A072, including seek error handling and data address checks.

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			974		
1839	C0 87 021A		975	B	PRINT
183D	06	183D	976	DC	XL1'06'
183E	28	183E	977	DC	IL1'40'
183F	18F2	1840	978	DC	AL2(SEKER2)
			979		
1841	3C 00 0B1B		980	MVI	PASS,0
1845	3C 00 0B13		981	MVI	SETSW,0
1849	3C 00 1A67		982	MVI	FRSTPS,0
184D	C0 87 0222		983	B	HALT
1851	A03C	1852	984	DC	XL2'A03C'
1853	C0 87 0000		985	B	0
			986		
1857	0000	1858	987	WORK1 DC	AL2(*-*)
1859	0002	185A	988	TFO DC	XL2'02'
185B	0004	185C	989	ONESEC DC	XL2'04'
185D	1DC2	185E	990	WORK2 DC	AL2(WORK+255)
			991		
185F	C4C1E3C140C1C4C4	1889	992	DATPR1 DC	CL43'DATA ADDRESS WAS STEPPED TO INCORRECT VALUE'
1867	D9C5E2E240E6C1E2		992		
186F	40E2E3C5D7D7C5C4		992		
1877	40E3D640C9D5C3D6		992		
187F	D9D9C5C3E340E5C1		992		
1887	D3E4C5		992		
188A	C5D9D9D6D940D6C3	18B3	993	SEKER1 DC	CL42'ERROR OCCURRED WHILE SEEKING THE CE TRACK,'
1892	C3E4D9D9C5C440E6		993		
189A	C8C9D3C540E2C5C5		993		
18A2	D2C9D5C740E3C8C5		993		
18AA	40C3C540E3D9C1C3		993		
18B2	D2B6		993		
18B4	C1D9D9C9E5C5C440	18CA	994	ARRIVED DC	CL23'ARRIVED AT CYL. NO. XXX'
18BC	C1E340C3E8D34B40		994		
18C4	D5D64B40E7E7E7		994		
18CB	D9E4D540E2C5C5D2	18F2	995	SEKER2 DC	CL40'RUN SEEK TEST SECTION A03 FOR MORE INFO.'
18D3	40E3C5E2E340E2C5		995		
18DB	C3E3C9D6D540C1F0		995		
18E3	F340C6D6D940D4D6		995		
18EB	D9C540C9D5C6D64B		995		

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			18F3	997	WRTDFC DC XL1'00'
			18F4	998	DC XL1'00'
			18F5	999	DC XL1'00'
			18F6	1000	DC XL1'00'
				1001	
			18F7	1002	RDDFC DC XL1'00'
			18F8	1003	DC XL1'00'
			18F9	1004	DC XL1'00'
			18FA	1005	DC XL1'00'
			18FB	0001	18FC 1006 ONE DC XL2'01'
				1007	
				1008	*****
				1009	* SENSE I/O ROUTINE
			18FD	34 08 1916	1010 SENSE ST SNSXR2,ARR
			1901	35 01 1916	1011 L SNSXR2,IR1
			1905	18 03 190B 00	1012 MNN SNS+1,0(,XR1)
			190A	30 00 1914	1013 SNS SNS STATUS,0
			190E	D0 87 01	1014 B 1(,XR1)
				1015	
			1911	0000	1912 1016 SETXR2 DC XL2'0'
			1913	0000	1914 1017 STATUS DC XL2'0'
			1915	0000	1916 1018 SNSXR2 DC XL2'0'
				1019	
				1020	* ERROR RECORDING TABLE
			1917	00	1917 1021 ETABLE EQU *
			1918	00	1917 1022 QCODE DC XL1'0'
			1919	0000	1918 1023 CCODE DC XL1'0'
			191B	00C0	191A 1024 SNS01 DC XL2'0'
			191D	00000000	191C 1025 SNS23 DC XL2'0'
			1921	00000000	1920 1026 DCFI DC XL4'0'
			1925	0000	1924 1027 DCFP DC XL4'0'
			1927	0000	1926 1028 DFCRI DC XL2'0'
			1929	0000	1928 1029 DFDRI DC XL2'0'
			192B	00	192A 1030 DFDRI DC XL2'0'
					192B 1031 ROUTNO DC XL1'0'

A072 READ DATA (DIAGNOSTIC)

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1033 * START I/O SUBROUTINE
1034
192C 34 08 1912 1035 STRTIO ST SETXR2,ARR SAVE ADDRESS RECALL REGISTER.
1930 35 02 1912 1036 L SETXR2,XR2 LOAD XR2 WITH VALUE FROM ARR.
1934 3C 00 1A6A 1037 MVI SAVSW,00 ZERO SWITCH
1938 28 03 1996 00 1038 HNN SIO+1,0(,XR2) SET FUNCTION CODE
193D 2C 00 1997 01 1039 MVC SIO+2(1),1(,XR2) SET CONTROL CODE IN SIO
1942 2C 01 1A6E 03 1040 MVC DPCR(2),3(,XR2) SET DATA ADDRESS FOR DPCR
1947 38 08 1A6C 1041 TBN DISKTP,X'08' TEST FOR RUN ON LOWER DISK
1948 F2 10 0B 1042 JT SETPIX JUMP IF YES
194E 3B 08 1996 1043 SBF SIO+1,X'08' SET FOR REMOVABLE DISK
1952 3B 08 1A23 1044 SBF RSIO+1,X'08' SET FOR REMOVABLE DISK
1956 F2 87 08 1045 J CKSEK JUMP TO CHECK FOR SEEK
1959 3A 08 1996 1046 SETPIX SBN SIO+1,X'08' SET FOR FIXED DISK
195D 3A 08 1A23 1047 SBN RSIO+1,X'08' SET FOR FIXED DISK
1961 BD 00 00 1048 CKSEK CLI 0(,XR2),00 TEST FOR SEEK
1964 C0 81 19E9 1049 BE SETADR IF YES, GO SET ADDRESS
1968 31 A6 1A6E 1050 LDFCR LIO DPCR,X'A6' LOAD CONTROL REGISTER
196C 31 A4 1A70 1051 LDFDR LIO DFDR,X'A4' LOAD DATA REGISTER
1970 0C 00 1917 1996 1052 MVC QCODE(1),SIO+1
1976 0C 00 1918 1997 1053 MVC CCODE(1),SIO+2
197C 0C 01 1926 1A6E 1054 MVC DFCRI(2),DFCR
1982 0C 01 1928 1A70 1055 MVC DFDR(2),DFDR
1988 35 01 1A6E 1056 L DPCR,XR1
198C 1C 03 1920 03 1057 MVC DCFI(4),3(,XR1)
1991 C2 01 19C8 1058 LA 6600,XR1
1995 F3 A0 00 1059 SIO SIO X'00',X'A0' LOAD DELAY VALUE IN XR1
1998 C1 A2 1A77 1060 WAIT TIO BUSY,X'A2' START I/O OPERATION
199C C0 87 18FD 1061 B SENSE TEST FOR BUSY
19A0 04 19A0 1062 DC XL1'04'
19A1 0C 01 192A 1914 1063 MVC DFDRF(2),STATUS
19A7 35 01 1A6E 1064 L DPCR,XR1
19AB 1C 03 1924 03 1065 MVC DCFI(4),3(,XR1)
19B0 C0 87 18FD 1066 B SENSE
19B4 02 19B4 1067 DC XL1'02'
19B5 0C 01 191A 1914 1068 MVC SNS01(2),STATUS
19BB C0 87 18FD 1069 B SENSE
19BF 03 19BF 1070 DC XL1'03'
19C0 0C 01 191C 1914 1071 MVC SNS23(2),STATUS
19C6 0C 00 192B 0A03 1072 MVC ROUTNO(1),RPFY
19CC 3D FF 1A6A 1073 CLI SAVSW,X'FF'
19D0 C0 01 19E0 1074 BNE TSTERR IS SWITCH ON?
19D4 8C 00 03 1A69 1075 MVC 3(1,XR2),DFC3SV IF NO, SKIP RESTORE
19D9 BB 01 02 1076 SBF 2(,XR2),01 RESTORE N BYTE
19DC 35 02 1912 1077 L SETXR2,XR2 TURN OFF THE FOR/ REV BIT
19E0 E1 A0 0C 1078 TSTERR TIO 12(,XR2),X'A0' RESTORE PARAMETER POINTER
19E3 E1 A4 08 1079 TSTSCN TIO 8(,XR2),X'A4' BRANCH IF ERROR
19E6 E0 87 04 1080 B 4(,XR2) BRANCH IF SCAN FOUND
1081 EXIT
1082 * SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE
1083 * DIRECTION (FORWARD OR REVERSE), TO SEEK
1084
19E9 34 08 1A65 1085 SETADR ST ADREXT+3,ARR SAVE EXIT ADDRESS
19ED BD 01 01 1086 CLI 1(,XR2),01 IS THIS A RECALIBRATE?
19F0 F2 01 04 1087 JNE *+7 IF NO, BYPASS SWITCH RESET
19F3 3C 00 1A67 1088 MVI FRSTPS,0 RESET RECALIBRATE SWITCH
19F7 2C 01 1A72 03 1089 MVC XR2WK(2),3(,XR2) SAVE ADDR. OF CTL. PLD. ADDR.
19FC 35 02 1A72 1090 L XR2WK,XR2 LOAD XR2 WITH CONTROL PLD. ADDR.
1A00 2C 00 1A69 03 1091 MVC DFC3SV(1),3(,XR2) SAVE N BYTE IN CONTROL PIPID
1A05 3C FF 1A6A 1092 MVI SAVSW,X'FF' GET SAVE SWITCH
1A09 3D 00 1A67 1093 CLI FRSTPS,00 IS THIS FIRST PASS
1A0D F2 01 15 1094 JNE SETADA SKIP RECALIBRATE IF NO
1A10 3C 01 1A67 1095 MVI FRSTPS,01 SET FIRST PASS SWITCH
1A14 BB 01 02 1096 SBF 2(,XR2),01 SET FWD/REV BIT TO REV.
1A17 BC FF 03 1097 MVI 3(,XR2),255 SET MAXIMUM TRACK CROSSING
1A1A 3C 00 1A68 1098 HVI LASTAD,00 SET OLD ADDR TO 0
1A1E 31 A6 1A6E 1099 RLDPCR LIO DPCR,X'A6' LOAD DATA CONTROL REGISTER
1A22 F3 A0 00 1100 RSIO SIO 00,X'A0' SEEK REVERSE

A072 READ DATA (DIAGNOSTIC)

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1101
1A25 8D 00 01 1A68 1102 SETADA CLC 1(1,XR2),LASTAD COMPARE PRESENT ADDR. WITH NEW ONE
1A2A F2 81 25 1103 JE NOSEK EQUAL, SEEK IS NOT NECESSARY
1A2D F2 84 11 1104 JH FWDSEK NEW ADDR. HIGHER, DO FORWARD SEEK
1A30 BB 01 02 1105 SBF 2(,XR2),01 NEW ADDR. LOWER, SET BIT FOR REV.
1A33 0C 00 1A66 1A68 1106 MVC SCRCH(1),LASTAD PLACE LAST ADDR IN WORKAREA
1A39 2F 00 1A66 01 1107 SLC SCRCH(1),1(,XR2) SUBTRACT NEW ADDR. FROM LAST ADDR.
1A3E F2 87 17 1108 J SETADB PROCEED
1109
1A41 BA 01 02 1110 FWDSEK SBN 2(,XR2),01 SET BIT ON FOR FORWARD SEEK
1A44 2C 00 1A66 01 1111 MVC SCRCH(1),1(,XR2) PLACE NEW ADDR. IN WORKAREA
1A49 0F 00 1A66 1A68 1112 SLC SCRCH(1),LASTAD SUBTRACT LAST ADDR. FROM NEW ADDR.
1A4F F2 87 06 1113 J SETADB PROCEED
1114
1A52 BC 00 03 1115 NOSEK MVI 3(,XR2),0 SET NO. OF TKS. CROSSED TO ZERO.
1A55 F2 87 0A 1116 J ADREXT TO EXIT
1117
1A58 8C 00 03 1A66 1118 SETADB MVC 3(1,XR2),SCRCH PLACE IN NO. OF TRACKS CROSSED
1A5D 2C 00 1A68 01 1119 MVC LASTAD(1),1(,XR2) SAVE NEW ADDRESS
1A62 C0 87 0000 1120 ADREXT B *-* EXIT
1A66 00 1A66 1121 SCRCH DC XL1'00'
1A67 00 1A67 1122 PRSTPS DC XL1'00'
1A68 00 1A68 1123 LASTAD DC XL1'00'
1A69 00 1A69 1124 DFC3SV DC XL1'00'
1A6A 00 1A6A 1125 SAVSW DC XL1'00'
1A6B 0000 1A6C 1126 DISKTP DC XL2'0'
1A6D 0000 1A6E 1127 DPCR DC AL2(*-*)
1A6F 1CC3 1A70 1128 DFDR DC AL2(WORK)
1A71 0000 1A72 1129 XR2WK DC XL2'0'
1A73 0294 1A74 1130 SIXSIX DC IL2'0660'
1A75 FFFF 1A76 1131 NEG1 DC XL2'FFFF'
1A77 36 01 1A76 1132 BUSY A NEG1,XR1 DECREMENT DELAY COUNTER
1A7B C0 84 1998 1133 BH WAIT RETURN TO TIO IF NOT TIME OUT
1A7F C0 87 1C55 1134 B CVD TIME OUT OCCURED, CONVERT ROUT. NO.
1A83 0A03 1A84 1135 DC AL2(RPFY) CURRENT ROUTINE NO.
1A85 1AB3 1A86 1136 DC AL2(TIMOUT) ADDRESS OF DESTINATION
1A87 3C 40 1AB1 1137 MVI TIMOUT-2,C' '
1A8B C0 87 021A 1138 B PRINT TO PRINT TIMEOUT OCCURED
1A8F C6 1A8F 1139 DC XL1'C6' FLAGS
1A90 15 1A90 1140 DC IL1'21' LENGTH
1A91 1AB3 1A92 1141 DC AL2(TIMOUT) MESSAGE ADDRESS
1A93 A08E 1A94 1142 DC XL2'A08E' MESSAGE ID
1A95 C0 87 0222 1143 THALT B HALT TO DCP ERROR HALT
1A99 A08E 1A9A 1144 DC XL2'A08E' HALT ID
1A9B C0 87 0000 1145 B 0
1A9F E3C9D4C5D6E4E340 1AB3 1146 TIMOUT DC CL21'TIMEOUT IN ROUTINE YX'
1AA7 C9D540D9D6E4E3C9 1146
1AAF D5C540E7E7 1146

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic code details for A072.

A072 READ DATA (DIAGNOSTIC)

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic code details for A072 (continued).

A072 READ DATA (DIAGNOSTIC)

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1C77	OC 01	1C9B	0000	1264	TYBOT MVC TOBYT+3(2),*--
1C7D	OC 01	1C8C	0000	1265	OTORZ MVC ZROTO+3(2),*--
1C83	OC 00	1C54	0000	1266	PROBYT MVC HXBYT(1),*--
1C89	04 20	0000	1CB0	1267	ZROTO ZAZ ***(3),UNITS(1)
1C8F	0F 00	1C54	18FC	1268	DECGAN SLC HXBYT(1),ONE
1C95	F2 82	0A		1269	JL TIXE
1C98	06 20	0000	1CA6	1270	TOBYT AZ ***(3),DECONE(1)
1C9E	C0 87	1C8F		1271	B DECGAN
1CA2	C0 87	0000		1272	TIXE B **-
1CA6	F1			1273	DECONE DC CL1'1'
1CA7	F1F2F3F4F5F6F7F8	1CB0		1274	UNITS DC CL10'1234567890'
1CAF	F9F0			1274	
1CB1		1CC2	1275	STATPR DS CL18	
		1CC3	1276	WORK EQU *	
1CC3		1DC2	1277	DS CL256	
		1DC3	1278	READ EQU *	
1DC3		1EC2	1279	DS CL256	
			1280	* PROGRAM EQUATES	
		0003	1281	H1 EQU X'03'	
		0076	1282	H2 EQU X'76'	
		0001	1283	XR1 EQU 01	
		0002	1284	XR2 EQU 02	
		0008	1285	ARR EQU 08	
		0002	1286	STAT01 EQU X'02'	
		0003	1287	STAT23 EQU X'03'	
		00A6	1288	CTRL EQU X'A6'	
		00A4	1289	DATA EQU X'A4'	
		0080	1290	BIT0 EQU X'80'	
		0040	1291	BIT1 EQU X'40'	
		0208	1292	SWITCH EQU X'208'	
		020A	1293	SECTSW EQU X'20A'	
		0212	1294	TEST EQU X'212'	
		0216	1295	LINK EQU X'216'	
		021A	1296	PRINT EQU X'21A'	
		021E	1297	UNPACK EQU X'21E'	
		0222	1298	HALT EQU X'222'	
		022A	1299	LOAD EQU X'22A'	
		003C	1300	HF EQU X'3C'	
		003F	1301	HA EQU X'3F'	
		0C37	1302	END BEGIN	

POT BYTE IN WORK AREA
ZERO THE TO AREA
DECREMENT THE HEX BYTE
JUMP IF BELOW 1
INCREMENT THE DECIMAL COUNT

EXIT

HALT DISPLAY 1
HALT DISPLAY 2

HALT DISPLAY F
HALT DISPLAY A

A072 READ DATA (DIAGNOSTIC)

				CROSS-REFERENCE													
SYMBOL	T	LEN	VALUE	DEFN	REFERENCES												
ADREXT	A	004	1A62	1120	1085* 1116												
ALLHED	A	026	1781	0904	0886												
ARRIVED	A	023	18CA	0994	0963 0973												
ARR	C	001	0008	1285	0025 0110 0847 0857 0914 0936 1010 1035 1085 1151 1222 1256*												
					1257 1258* 1259 1260 1261* 1262												
A07	A	001	0000	0003													
BEGIN	A	004	0C37	0180	1302												
BIT0	C	001	0080	1290													
BIT1	C	001	0040	1291													
BUSY	A	004	1A77	1132	1060												
CCODE	A	001	1918	1023	1053*												
CKHDER	A	006	173D	0881	0166												
CKHED	A	004	16EB	0857	0390 0558												
CKHEDA	A	003	16F7	0860	0865												
CKSEEK	A	003	1961	1048	1045												
CTRL	C	001	00A6	1288													
CVD	A	004	1C55	1256	0319 0486 0961 1134												
CYLNO	A	001	1C49	1241	0320 0487 0848 1227* 1234*												
DATA	C	001	00A4	1289	0919												
DATEXT	A	004	17E3	0931	0914* 0915 0917* 0922												
DATID1	A	002	17DC	0928													
DATPR1	A	043	1889	0992	0927												
DCPF	A	004	1924	1027	1065*												
DCPI	A	004	1920	1026	1057*												
DECGAN	A	006	1C8F	1268	1271												
DECONE	A	001	1CA6	1273	1270												
DPCR	A	002	1A6E	1127	1040* 1050 1054 1056 1064 1099												
DFCRI	A	002	1926	1028	1054*												
DFC3SV	A	001	1A69	1124	1075 1091*												
DFDR	A	002	1A70	1128	0293* 0308* 0460* 0475* 0618* 0637* 0749* 0781* 1051 1055												
DFDRF	A	002	192A	1030	1063*												
DFDRI	A	002	1928	1029	1055*												
DISKTP	A	002	1A6C	1126	0144* 0154* 0868 1041												
ERR09	A	006	0CFC	0238	0196 0276 0443 0604 0737												
ERR02A	A	038	0FE0	0405	0321 0322* 0328 0488 0489* 0495 0852*												
ERR02B	A	043	100B	0406	0341 0508 0665 0809												
ERR02C	A	016	104E	0408	0369 0536												
ERR02D	A	032	10A2	0410	0352 0519												
ERR02E	A	011	10DD	0412	0394* 0399 0563* 0569												
ERR02F	A	037	0DE1	0244	0386 0553 0693 0837												
ERR03A	A	038	12DB	0575													
ERR04A	A	042	1474	0701	0649* 0653												
ERR04B	A	044	14D4	07C3	0676												
ERR05A	A	024	1520	0705	0797												
ERR05B	A	039	1577	0707	0820												
ERR1A	A	018	0D42	0240	0215												
ERR1B	A	028	0D92	0242	0230												
ETABLE	A	001	1917	1021	0013												
EXPSEC	A	001	0DE2	0245	0263* 0299 0305 0346 0430* 0457 0472 0513												
FIXDSK	A	005	17A8	0906	0870												
FIXED	A	004	0BE9	0148	0141												
FOURFF	A	0G4	17B1	0908	0881												
PROBYT	A	006	1C83	1266	1263*												
FROM	A	006	1C71	1263	1257*												
FRSTPS	A	001	1A67	1122	0091* 0982* 1088* 1093 1095*												
FRDSEK	A	003	1A41	1110	1104												
HA	C	001	003F	1301													
HALT	C	001	0222	1298	0127 0197 0217 0232 0277 0329 0343 0354 0371 0388 0400 0444												
					0496 0510 0521 0538 0555 0570 0605 0654 0667 0678 0695 0738												
					0798 0811 0822 0839 0877 0888 0929 0983 1143												
HDEXT	A	004	1739	0879	0857* 0861												
HDTBL	A	001	1760	0896	0089* 0090 0090* 0254 0421 0585 0718 0881												
HEXSTA	A	008	1B57	1204	1157 1194 1201												
HF	C	001	003C	1300													
HXBYT	A	001	1C54	1255	1266* 1268*												
H1	C	001	0003	1281													

A072 READ DATA (DIAGNOSTIC)

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SETSPN	A	006	0B85	0115	0112
SETSW	A	001	0B13	0098	0026* 0049* 0162* 0180 0256 0423 0587 0720 0981*
SETXR2	A	002	1912	1016	1035* 1036 1077
SHFEXT	A	004	1C45	1239	1222* 1223 1224 1226* 1236
SHFTBL	A	001	1C4A	1243	1228
SHIFT	A	004	1C04	1222	0317 0484
SIO	A	003	1995	1059	0067* 1038* 1039* 1043* 1046* 1052 1053
SIXSIX	A	002	1A74	1130	
SKTSTA	A	004	17EB	0937	0941
SNS	A	004	190A	1013	0071* 1012*
SNSID	A	002	1ADB	1167	0184* 0264* 0288* 0303* 0392* 0431* 0455* 0470* 0561* 0592* 0614* 0628* 0726* 0776*
SNSXR2	A	002	1916	1018	0361* 0362 0378* 0379 0528* 0529 0545* 0546 0685* 0686 0829* 0830 0863* 0864 1010* 1011 1068*
SNS01	A	002	191A	1024	1071*
SNS23	A	002	191C	1025	1071*
SPNDLA	A	001	0B15	0100	0054
SPNDLB	A	001	0B16	0101	0058
SPNMSG	A	024	0B46	0107	0055* 0059* 0088
STATPR	A	018	1CC2	1275	1169* 1176
STATUS	A	002	1914	1017	0377 0183* 0223 0921 0940 0942 1013* 1063 1068 1071 1156 1171 1193
STATWD	A	018	1B69	1206	1160 1166
STAT01	C	001	0002	1286	0221 0938 1153
STAT23	C	001	0003	1287	
STEP	A	001	0C32	0168	0143* 0151 0164*
STMASK	A	001	1BFA	1215	1161 1196
STPSNS	A	004	1AF5	1178	1159* 1172 1185 1187*
STRTIO	A	004	192C	1035	0186 0205 0266 0295 0310 0433 0462 0477 0594 0620 0640 0727 0751 0768 0786 0945
SWITCH	C	001	0208	1292	0034 0038
TBLEND	A	002	175F	0895	0864
TBLH	A	002	175C	0892	0142* 0150* 0153* 0255* 0393 0422* 0562 0586* 0648 0698* 0719* 0842* 0851 0858 1230* 1235 0129
TBN	A	003	1C2D	1232	
TEST	C	001	0212	1294	
TEALT	A	004	1A95	1143	
TIMOUT	A	021	1AB3	1146	1136 1137* 1141
TIXE	A	004	1CA2	1272	1262* 1269
TOBYT	A	006	1C98	1270	1264*
TRACK#	A	001	0B14	0099	0076* 0079* 0185 0261 0428 0590 0724 0951
TSTBT	A	004	1AE6	1171	1168* 1178
TSTDAT	A	004	17B2	0914	0333 0500 0657 0801
TSTERR	A	003	19E0	1078	0069* 1074
TSTEXT	A	004	0C0B	0157	0110* 0146
TSTFIX	A	004	0BBB	0135	0132
TSTRMV	A	004	0BB0	0131	0120
TSTSCN	A	003	19E3	1079	0070*
TSTSEK	A	004	17E7	0936	0200 0280 0447 0608 0741
TSTSPN	A	004	0B73	0110	0182 0258 0425 0589 0722
TSTSW	A	004	0B91	0119	0114 0130
TWO	A	002	185A	0988	0917 1225 1258
TWOZR	A	002	0B1A	0104	0050 0115
TYBOT	A	006	1C77	1264	1259*
UDTPTR	A	002	0B11	0095	0028 0031* 0032 0050* 0065*
UFIND1	A	004	0A24	0032	0029
UFIND2	A	004	0A20	0031	0044
UNITS	A	010	1CB0	1274	1267
UNPACK	C	001	021E	1297	1154 1191
UTAB	C	001	0232	0096	0030
WAIT	A	004	1998	1060	0068* 1133
WORK	A	001	1CC3	1276	0282* 0283 0283* 0292 0357 0449* 0450 0450* 0459 0524 0610* 0611 0611* 0612 0612* 0617 0632* 0633 0633* 0634 0634* 0743* 0744 0744*
WORK1	A	002	1858	0987	0748 0764* 0765 0765* 0990 1128
WORK2	A	002	185E	0990	0916* 0921 0362 0529

A072 READ DATA (DIAGNOSTIC)

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
WRTDFC	A	001	18F3	0997	0261* 0262* 0269 0289* 0290* 0298 0304* 0305* 0313 0318 0336 0346 0428* 0429* 0436 0456* 0457* 0465 0471* 0472* 0480 0485 0503 0513 0590* 0591* 0597 0615* 0623 0629* 0630* 0643 0660 0670 0724* 0725* 0730 0746* 0754 0759* 0760 0766* 0771 0777* 0778* 0789 0804 0814
WRTER2	A	004	0F64	0392	0301 0626 0757
WRTER3	A	004	125F	0561	0468 0774
XR1	C	001	0001	1283	0030* 0031 0032* 0036 0040 0042 0043 0043* 0060 0064 0064* 0065 0292* 0293 0307* 0308 0393* 0394 0459* 0460 0474* 0475 0562* 0563 0617* 0618 0636* 0637 0648* 0649 0748* 0749 0780* 0781 0851* 0852 0858* 0866 0871 1011* 1012 1014 1056* 1057 1058* 1064* 1065 1132* 1160* 1169 1182 1182* 1188 1195* 1223* 1229 1229* 1232
XR2	C	001	0002	1284	0254* 0255 0259* 0357* 0358 0360 0360* 0361 0374* 0375 0377 0377* 0378 0421* 0422 0426* 0524* 0525 0527 0527* 0528 0541* 0542 0544 0544* 0545 0585* 0586 0681* 0682 0684 0684* 0685 0718* 0719 0825* 0826 0828 0828* 0829 0849* 0850 0859* 0860 0862 0862* 0863 0915* 0916 1036* 1038 1039 1040 1048 1075 1076 1077* 1078 1079 1080 1086 1089 1090* 1091 1096 1097 1102 1105 1107 1110 1111 1115 1118 1119 1161* 1168 1181 1181* 1196* 1224* 1225* 1226 1228* 1230. 1231 1237 1237*
XR2WK	A	002	1A72	1129	1089* 1090
ZROCTR	A	004	0C0F	0159	0116 0149
ZROTO	A	006	1C89	1267	1265*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

A072 READ DATA (DIAGNOSTIC)

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+-Y:YGH...CC< RE: E C6HB?M@%X L|E .D-HAB<HA TH 4 E%J(ED.DLO B1H 8 -H.@/ P-E...@YD ?+ D PJUA0720001
T+-Z5 -?2D R'X C 2-K'8D GK E| U Y -OH*BF-QEB0@% LC D.DE%EOH*BH-A B RE%N|D.J?H GE - QQ8A0720002
T+-DO AVZB1Q@- F; DB@Z D||@.D_H A 3EAB1DH AV_FOU H AROFOUH AWRFOU H AX/FOUH AXUFOU H AU @94A0720003
T+.,B1VZB EGIV ZB EH1VZOH*Q*EH @20%N+ -RE|HEAC1 XB1L /OHE KO.*%B G /YFP_F| PQ00 BE6H R: A0720004
T+-XHE6@ AZXOH* <GL44CU5*XT8UC HO;PE5<.E1)N 8@P S8@PD B-% 2)PVO)|I1DC S8>Q J-8A0720005
T+_/E+.EB=|I5+~ N5>B 8@PS8@XN14C D2; .K6<LR2;PEE+~ B1*-I5MCR1*GD6<L A8@E 1<XA1'PO8>| I04 OT-A0720006
T+->*1>LNO=|I5_N 8@PS84CA@|*4B 0 +|E .F"HA@33"B1? 2/00(E%QB1,2-QG 2/308A-HH@Z QOH* BF%Q 5DMA0720007
T+-?PD0>Y|, /OH SY|, /OHKOH*.UL- D -,2D @@"OXP+ H BB?HEB37"B1.2-E@ @"O%Q|E .E"HAEE8 AE50 RZ0A0720008
T+-OKP|0@ 802| ESCO B1-2/2H' % Q@YD-C-DPPAT@|ED <<?HAA-8AE50Q"CO HPW0@ %QOH* C4 EB-< P8QA0720009
T+-1(| .F"HAABC0 B| /0 | <<T4 CB-| -J*OH*BE- A 7T|E .D@BAB-7 /0_3| RD30IF_% < A- 8C%AO720010
T+-2H= %MOH*R. F| - /0130H*<Q*B GF,L /OHEATH<"<B G SH-B*BGE=*@*1T 8| Q=LO F|, /1U % EH 5H@A0720011
T+-3CF| - /02POH* <U@BGC~ /OHE1UQ (E D OOH*BHD OOH* Q"EH8AAULO@ <1<B G /,FM 6KYCG /OH SYCD : %A0720012
T+-3=OH*<| =|H1MC P6*PV2) \$U8UCE6) X O6;I 5%|C9(XR1*J 9%TI4@N 8%PE4%X N14CT2<N 0@H 0=T L6*M)34A0720013
T+-490*J 1<GTOMC D2*GG5) \$S8@XC@+L S2) PGE<E 5) \$NE<P X2; .T0) PTE+.E0=| 06MCI1F?D2*J 5) \$ TE<* "JQA0720014
T+-542;PE@<PR6) \$ R5) R 6*PCK4CF5>L N1DCN5(> 8%PTE<. YE<E 6*PA1DCD0;| AE<LI0*-N5>.T2*(0'Q ;0%AO720015
T+-675DCM0) PDE+L S2) PGE<E 8%PC8) \$ RE<XDE (\$FE<\$F6*P A1DCF2*PL1DCD5%P SE (PO84CC5_PTO*X NE<M 488A0720016
T+-7D9'-E0=|E1DC D0;|AE<GF8@PRE<- I9*YN14CAE (XE0*J 1<GTOMCD2*GGK4C C5_LN1D% - E7%N BE5@ -TUA0720017
T+-8V (HPPC4 B1| -EY(OH*. @HBE54 @ A))C Q' %M| Q'LO C;H@BJ,\$OH* R. F|| /0870H* +I* %T%AO720018
T+-9-/1D40H*BF-Q 5C|3 /OHSY X /1- X|*)0-3=G*D) OT0 G%N"/#AG%N@D/, \$| Q'-0 F|M(8%N AG<< 088A0720019
T+-: \$(DE*<BGFPO B AT30H*+;BGCXP /0'U|CHE630 F|Q < AT5C;-B J7C(D E*<BGFPOA /T30H* +2% 6A<A0720020
T+-@0/0:-OH**AAT 30H**NJ1IC= @E " ;OH*O3*BGF,L /OH EAVY|8<BG SH-<?H GU%BGE#H) 037"FI\$ 2-J 6S-A0720021

A072 READ DATA (DIAGNOSTIC)

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+-@JOH*BF%Q,D > -<@BG SH-<04 F|M (8?HAD<BG /,FNAB SYCL /OHSYCLB /3 C7;* @-DM8-HA(H RE-4 8RUA0720022
T+-' < JUOPE#2-JL /O@DOH*BF%RCDD: -(*BG SH- (*HBG*+ '90C2 JLS -D@ /U OCEBRE/OC@YDNOH* |<% R:HA0720023
T+-=G/OHE1U@ (8E 60H*BHD 60H*O:@B GC-*@D/, \$ (EDPPA0 D(4DOH*E<BG /Y F+1C) OH*BHD KOH* |P+< MODA0720024
T+-"B2<N 5'XE9*X 09+I 1) XR5_XSE+\$ E6*N 5'XE8%PH84C A1>|E6MCD5%N14C AE(XE0*J 1<GTOMC D2*D @CUA0720025
T+-"14 0'SH5*J .E+LS2) PGE<TDK4C XE+.EO=(.E+~X8%P C8'SRE<|09(P1) V 2)N 0'SN8'XO@4C F2*M EH A0720026
T+ / 84@J 5) \$TE+. T1)~P1*LN6*XT1HC F2*PL1DCW0;I 0)| T1) XE1DCA1>|E6MC G2;PI5*) OHCR1*G DE<E 1YHA0720027
T+ /A30;|AE<LI0*- N5>.T2*(0'SH5<G N1<TE0*J HDCS1*| T5_V 0>TT1MCO1UC C5_PT6) \$LE<SI 1)| DE<< #TDA0720028
T+ /B>2<GN1@PDE<G P8@PRE<E 5_PEE+. E0=|06MCR1*GD6<L A8@E 1<XA1'PO8>| I04CE6) X06MCO0@| U6) U 2\$@A0720029
T+ /CZ1*J 9%TI4@N 1(\$I5*) OHCW6*X T1MCD0;|AE<|05(P DK4CU8%N14CH1*G DE+*C A.*0-HPQLE BE50 PH0A0720030
T+ /DU|E .L@BAB-7 /0_30-HPPLO E54 < AT4B1@-AT5|H (8TOIF_? /1U% Q@@BGDL. /1D-OH* E< R1%AO720031
T+ /E-/OHEATH<"<B G SH-B*BGE=*@917 BC|8) 0J7B| ;0-3 =GXD;OT00F_%@ AT 6C Q'E7S0-D*03E AFX #LQA0720032
T+ /FE0H*R. H F|| /1E40H*J*<BGDV@ @ (1,\$| Q'-0 F|M (8%NAG*<4 JZ00H* R. DBP|| /1GE0H* JW% NH<A0720033
T+ /GN/10DF|| /11 NGDU|8C1 C' \$ /1\$ (OH*E<BG /YFO-~ -OH*BHD 7@Y;KOH* P%/7C|~@Q'?HAD<B G /Y QTQA0720034
T+ /HE1S%EB: 30H* BHD 3CE Q'67S@YD EOH*BF%RMDH- (<B G SH- (<HBG*+*90C 2 JLS -D@ /UOCED RE/- 89EA0720035
T+ /I.P?HAE<BGD-" /OHE1U@<ELD 50H* BHD 50-H) 0*7X |H AE+HB L@BFPJQ(JU OG |2-JL /O@20H* BF%Q "HHA0720036
T+ /HFLO7/YCS /OH SYCS /1\$,OH*E@TO OF_X5 J) *G E7EL /1D40H*BF-Q:D(7 /OHSYA\$ /1IP@AT ZE (* 2J*A0720037
T+ /-A6*PV2) \$U8UC E6) X06;I 9%PR1MC P6*PS1) PTE<GF8@P RE<LO2) PGE<E 6*P A1DCD0;|AE<LI0*) .E<< 290A0720038
T+ /-@5_LN1D_ 9+. I5*) 2<J.E|E 8%P C84CX94 D AN80-H PP36BE50' %LOHD HC*BGB7<< AT4B1E @ A- 520A0720039
T+ /<7'LOIF_? /1U % Q@@BGD2L /1< KOH*E<BG /YF(83 @OH*BHD IOH*P930 EG%N"/#AG%N"17 BG*< \$QA0720040
T+ / (2|AH@E630AF|\$ B J3C(DE*<BGFPO B AT30H*LP<BGD5T /0'U|CHE630AF|Q @ AT5| ;0-3=GXD ;0-0 KH A0720041
T+ /+ "17BG*|B J7 C(DE*<BGFPOA /T 30H*LD@BGD9C /1D 4(EDPPA0 EP*DOH* BF-R;EGL /OHSYCP /1* =E@A0720042
T+ /|Y%/7C|~@Q'?H AD<BG /,FH1 .YC| /OHSY<<'AAT5@YD 60H*BF%R-E(K-<B G SH-+<HBG*+D C 2 J@ K.HA0720043

A072 READ DATA (DIAGNOSTIC)

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+/ST8-HA(HRE-4 APJQ* HAE<BGD=| /OHE1U@ (8E 6OH* BHD 6C-DPPAT@OH* K@+|H1MCP6*PV2)\$ U8U "/HA0720044

T+/J; 1)XR5_XSE+\$ E6*N 5'IE8%PN84C A1>|E6HCD5%KN14C AE (XEO*J 1<GTOMC D2*GGK4CC5_LN1D_ '9+H 1BHA0720045

T+/KR2)PGE<TDK4C XE4CS1*|TK4C0&EA @*TEO*J NDCS1*| T5_V 0>TT1MCO1UC C5_PT6) \$L&<\$I1)| DE (M 2AHA0720046

T+/LM5> (8>|E5'- E1DCC5_IR1*|T4=/ 0*ST1) V OMC2&+. EO=|O6MCR1*GDE<L A8@E 1<XA1'PO8>| I04 " 7R&A0720047

T+/H|@ATEE (~R1:P I5>LSE<PR6) \$R8UC W1) XEE (~R1; -E5; (0*ST1) V 1(\$I5*) OMC1*GDE<LA8@E 1<U ER4A0720048

T+/NH0*) .E (\$FE|. 4E+.E1+|06; .H1*G DEEA 8%PC8'\$RE<. Y8@N 5%R 0=|LK4C P4@J.E (PO84CS8@P P5@H KC4A0720049

T+/OE1DCC5_XR1*| T4=/ 0*ST1) V OMC 2'DCS1*|T5_V 6*P A1DCD0; |AE<LI0*) AEC""@HBE6 4 /) *|E " M:4A0720050

T+/P B1| -EY(OH* .+00 F|E.EC2 F|H @BJ,\$OH*R. F|| /|P OH*N,%BGF,L /OHEATH<"<BG SH -B* *Y&A0720051

T+/P#|1-X|)0-3 =G*D)OT0 F|SB J3 C (DE*<BGFKOB AT 3OH*N%\$BGE; , /0' UC- Q'J/*|)OQ'-H AA< " 33NA0720052

T+/Q6/1P+|@)0-3 =G*D)OT0 F|S /|U % - Q@@BGESE /|Q)OH*KP30:F_X@E1T 6|H Q' *HAG*4 JZ 0|EM 3E%AO720053

T+/R1G%K"/#AG%. /|U% 8HQ@BGESE /|R|OH*E<BG /Y *LAN-OH*BHD :OH* P%/7C|-@Q' ?HAD<B G /Y 60YA0720054

T+/EX1S%EB: 3OH* BHD 3|)OQ'-HAD<B G /,FN1W7YCX /OH SYCXB /7C?-@ @-D H8-HA (HRE-4APJQ * "H LBVA0720055

T+/SX-JL /1EROH* BF%R|C:F-(%BG SH -(-8AE5OQ"<BGEQO 4BASDC 07J1I0-H PPS3" CHAE50* " NA< " 1.4A0720056

T+/S/O (-P|CH AE53B /|) ?E @YD @8-HA (HRE-4APJQ PP@ AE?)@"0 <AA; :E:4' AZ%AYDFC E PX/* 6E@A0720057

T+/|)DA0 E9-DOH* BF%QSE:+-/XBG SH -/%BG (1)TE+G " EHOOH*BF%QEE8P -/@BG SH-/@BG /Q :J%AO720058

T+/;QE54 @|. 1@=.04@XD&<PR6)\$ RE+\$I8@/ 0)|LE<T EO+LS8_\$L2*J 1) X R5_V 9%XT2DCH1*G DE+* -34A0720059

T+/~L&+~I9=~X&<L I8_P2;~E1(XE5+W .""""3EHE=Q5 /- W. DQO D+ J-WPE, /|T'Z 4APJ&QO|H AD< " HA0720060

T+/~+/OHE1S%QSE ~OH*BHD ~OH* C6 HFA? /|T' T-EFJL DA-,+ DRD"H&H<B GFKOA J-*OH*QB@B GF @ 8SYA0720061

T+///IC6 QG6%K@-D GOH* <BGGEM QGJT@OH*BF%DDP.+ -|<BG /YAE1THOH* BF-QYF|H@ %\$| .D30 KS-A0720062

T+/SD AZXOB*BHD @OH* H AA7 B1<GTOMCA1<LB1;.. S&+\$A8UCS8@PP5@P DE+|O&<XN0'\$R6*P C84 ---A0720063

T+/S"9*GL9<PE6) X O6HCO0@|U6) YE1DC W2<XL1MCS1*PK2) P G&+|H1MCC1MCT6*G C4W?A6) XI9*PD&<G T&<< \$B*A0720064

T+/T:: ((.6 (POK4C I9=~R9 (N 8%PE4UC T1;.TE+.EO=|I5_E 0-C3&<\$O6HCH5_X E&<XN1_R. 32*A0720065

A072 READ DATA (DIAGNOSTIC)

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+/U5 " D4BAUO (6D RE/-CF&X < RE(B G & C&HFJH5 /U K| " &CEAC720066

T+/VOPWY 1WO BO FR*A. DES-<8BAZ X@/ .+0-RVXHP\$| 2/0-:BAWO+--EH#4 " <BAP;U1Z/Z><EE E* 0 " N8YA0720067

T+/W. AUPFRQ< AU QFR*< JUWFW@< JU YFX 5 JZ>G <RH | B JXH@: " OEH@)@B GF|4DC DRH/UH (6D E\$ /0 4.8A0720068

T+/XW 1UU @BGF|4 BC DRP/UMOH*Q" < < JU*YJ&< AU,B-< " 12D0 DR8H0 " 1Z Z>ODB (EHRD>F-C+P UB+ " 2\$A0720069

T+/Y//O&4BAZV?ED A@-DD| " ER2OAFXH C (EH&+S0 FWUC| |@ EET4 FW-2 JH@ JZ X>ODB?|@C| " EECF WFW8 OE<A0720070

T+/Z*@: T& APWT 2-KP2/AP# &H< AZ WFW-? AZW ~HGE#Y A SO FWQACO ER/Z Y@Y*P? " C@Y*HT " CFWQ @Q-A0720071

T+/DP. " EE G /0 G<< " H" " @6 J26OHE RW<BGGEMH 1D3|D E*BG /,PEJD3YH# /OH N: A0720072

T+/,KHDB+OH* +| I5<PO9+ (2) N 6)\$ U8@XN1CX93&HF3, /|T' XBG /8BPFJS \$M3OAP?SB J_20-H \$=X " \$ &A0720073

T+/% (OHEO&D\$EE " E90 *DJ3B C- FJ|2U T /OHE JH *OT4 F>-2-E,S -G K J. /1,*|Q E' ?E AHT0 :@UA0720074

T+/_H-A,6 (DSIXB GF|4COH*BG-HREA_ PO-D " <HBP", /1, " OH*BF-H) F5- /0 " @>|A8=LS6<.Y8@P SE<U " QUA0720075

T+/>C5MCH1;), & 5) R 5_) EDA EDA EDA EDA 2) PT1) XV1) PT2) \$ NE (XE6<J.5<XS8XI N14 " ;SYA0720076

T+/>=0*LD6H_ 5<G R4%PQ9<XP5<PN84C C2<PC4UA E<LA8@E 0@TEO' I EDA EDA E (POE (XEO'SR1DC F5>E H <A0720077

T+/795*J EDCT4UC C5_PD2;|I5_N 0@T EO'.S1*PK&<|H1*| KEDA EDA EDCU5;. A1XN EDA EDA EDA ED ")<A0720078

T+/04-D -D -D -D ;OT&HGD-5 J1H (6H *KCQBPEY4 /|H| *K*HBDZ5 EDX AO > BO GC&E; " B@Z D+ " 9A*A0720079

T+/12GDU'EA0>@YD G8-HA0H**H@PG " A -EHD A -EHD 6BATA@ (-*)TQHFY 4BA1@ (-*-TQHF|O 4BA0 RH-A0720080

T+/2DZ&OAGH- 0 AGIX " OAGHO 0 GEE &- " *% @ GE&Q" |HBB-Q- " *ZXBGGH" /0 @-G 2@E E&B*A0720081

TAJ20'-S7=|XO :80A0720082

ECC)*E7*=-DC"PH\$ = "7H&P| | C " FX ASC R A SO Q 11410818700 8197062 A0720083

LAST PAGE



A083 READ DATA

EPR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
			2		DECK 4
0000			3	A08	START 0
0A00			4		ORG X'0A00'
			5		*****
			6	*	SECTION PREFACE *
			7	*	*
0A00	A083		0A01	8	DC XL2'A083' PROGRAM ID
0A02	00		0A02	9	DC XL1'00' SECTION FLAGS
0A03	01		0A03	10	DC XL1'01' CURRENT ROUTINE NUMBER
0A04	0000		0A05	11	DC XL2'00' RESERVED
0A06	0C22		0A07	12	DC AL2(RTN1) ADDRESS OF FIRST ROUTINE PREFEX
0A08	1A6E		0A09	13	DC AL2(ETABLE) ADDRESS OF ERROR RECORDING TABLE
0A0A	A01000		0A0C	14	DC XL3'A01000'
			15	*	*
			16		*****
			17		
			18	*	OPERATING INSTRUCTIONS *
			19	*	*
			20	*	1. SET SWITCH 15 TO BYPASS RUNNING ON THE REMOVABLE DISK *
			21	*	2. SET SWITCH 16 TO BYPASS RUNNING ON THE FIXED DISK *
			22	*	3. SET SWITCH 1E TO NEVER RUN ON DISK DRIVE 1 *
			23	*	4. SET SWITCH 1F TO NEVER RUN ON DISK DRIVE 2 *
			24		
0A0D	34 08 0AEP		25	SETDSK ST	SETEXT+3,APR SAVE EXIT ADDRESS
0A11	3C FF 0B0D		26	MVI	SETSW,X'FF' SET SETUP SWITCH
			27		
0A15	3D 00 0B0B		28	CLI	UDTPTR,0 HAS POINTER BEEN INITIALIZED?
0A19	F2 01 08		29	JNE	UFIND1 JUMP IF YES
0A1C	C2 01 0232		30	LA	UTAB,XR1 LOAD IF NO
0A20	34 01 0B0B		31	UFIND2 ST	UDTPTR,XR1
0A24	35 01 0B0B		32	UFIND1 L	UDTPTR,XR1
0A28	C2 02 1ABC		33	LA	LDPCR+1,XR2
0A2C	5C 00 0B0C		34	MVI	REMVDS,0 RESET SWITCH FOR REMOVABLE ONLY
0A30	38 02 020B		35	TBN	SWITCH+3,X'02' TEST SSW 1E
0A34	F2 10 06		36	JT	*+9 JUMP IF ON, NEVER RUN DISK DRIVE 1
0A37	7D A0 00		37	CLI	0(,XR1),X'A0' TEST FOR A UNIT ADDRESS OF 'A'
0A3A	F2 81 2F		38	JE	SETA JUMP IF THERE IS ONE
0A3D	38 01 020B		39	TBN	SWITCH+3,X'01' TEST SSW 1F
0A41	F2 10 06		40	JT	*+9 JUMP IF CN, NEVER RUN DISK DRIVE 2
0A44	7D B0 00		41	CLI	0(,XR1),X'B0' TEST FOR A UNIT ADDRESS OF 'B'
0A47	F2 81 2E		42	JE	SETB JUMP IF THERE IS ONE
0A4A	78 10 01		43	TBN	1(,XR1),X'10' TEST FOR LAST ENTRY
0A4D	D2 01 03		44	LA	3(,XR1),XR1 STEP POINTER TO NEXT ENTRY
0A50	C0 90 0A20		45	BF	UFIND2 CONTINUE IF NOT THE LAST ENTRY
0A54	C0 87 021A		46	E	PRINT TO PRINT ALL UNITS SELECTED
0A58	06	0A58	47	DC	XL1'06' FLAGS
0A59	1A	0A59	48	DC	IL1'26' LENGTH
0A5A	CB09	0A5B	49	DC	AL2(NOUNIT) MESSAGE ADDRESS
0A5C	3C 00 0B0D		50	MVI	SETSW,0
0A60	0C 01 0B0B 0B14		51	MVC	UDTPTR(2),TWOZR
0A66	C0 87 022A		52	B	LOAD TO PRINT NO ENTRIES LEFT
0A6A	0040	0A6B	53	DC	XL2'40' FLAGS
			54		
0A6C	88 00 00 0B0F		55	SETA	MZZ 0(,XR2),SPNDLA SET FOR SPINDLE A
0A71	3C F1 0B40		56	MVI	SPNMSG,C'1' SET MESSAGE FOR SPINDLE '1'
0A75	F2 87 13		57	J	SETBTH PROCEED
			58		
0A78	88 00 00 0B10		59	SETB	MZZ 0(,XR2),SPNDLB SET FOR SPINDLE B.
0A7D	3C F2 0B40		60	MVI	SPNMSG,C'2' SET MESSAGE FOR SPINDLE '2'
0A81	78 01 02		61	TBN	2(,XR1),X'01' TEST OPTION BIT FOR REVOLVABLE ONLY
0A84	F2 90 04		62	JF	SETBTH JUMP IF NOT ON
0A87	3C FF 0B0C		63	MVI	REMVDS,X'FF' SET BIT TO RUN REMOVABLE ONLY
			64		
0A8B	D2 01 03		65	SETBTH LA	3(,XR1),XR1 STEP POINTER TO NEXT ENTRY
0A8E	34 01 0B0B		66	ST	UDTPTR,XR1
0A92	28 00 1AC0 00		67	MZZ	LDPCR+1.0(,XR2) SET FOR CURRENT SPINDLE
0A97	28 00 1AC8 00		68	MZZ	SIO+1,0(,XR2) SET FOR CURRENT SPINDLE
0A9C	28 00 1ACB 00		69	MZZ	WAIT+1,0(,XR2) SET FOR CURRENT SPINDLE

A083 READ DATA

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
			70	MZZ	TSTERR+1,0(,XR2) SET FOR CURRENT SPINDLE
			71	MZZ	TSTSCN+1,0(,XR2) SET FOR CURRENT SPINDLE
			72	MZZ	SNS+1,0(,XR2) SET FOR CURRENT SPINDLE
			73	MZZ	RLDFCR+1,0(,XR2) SET FOR CURRENT SPINDLE
			74	MZZ	RSIO+1,0(,XR2) SET FOR CURRENT SPINDLE
			75	B	SENSE
			76	DC	XL1'02' ASK FOR DEVICE STATUS BYTES 0 & 1,
			77		
			78	SET203 MVI	TRACK#,203 SET FOR FULL CAPACITY DISK
			79	TBN	STATUS,X'08' TEST CYL 100 BIT
			80	JF	PRTSPN JUMP IF OFF
			81	MVI	TRACK#,103 SET FOR 1/2 CAPACITY DISK
			82	PRTEPN E	PRINT TO PRINT SECTION HEADING
			83	DC	XL1'01' FLAGS
			84	DC	IL1'33' LENGTH
			85	DC	AL2(SECMMSG) MESSAGE ADDRESS
			86	E	PRINT TO PRINT SPINDLE
			87	DC	XL1'06' FLAGS
			88	DC	IL1'24' LENGTH
			89	DC	AL2(SPNMSG) MESSAGE ADDRESS
			90	MVI	HDTBL+3,0 ZERO HEAD
			91	MVC	HDTBL+2(3),HDTBL+3 ERROR FLAGS
			92	MVI	PRSTPS,0 SET SWITCH FOR RECALIPRATE
			93	SETEXT B	** EXIT
			94		
			95	NOUNIT DC	CL26'ALL UNITS HAVE BEEN TESTED'
			96	UDTPTR DC	XL2'0'
			97	UTAB EQU	X'232'
			98	REMVDS DC	XL1'0'
			99	SETSW DC	XL1'0'
			100	TRACK# DC	XL1'00'
			101	SPNDLA DC	XL1'A0'
			102	SPNDLB DC	XL1'B0'
			103	RUNRMV DC	XL1'0'
			104	RUNFIX DC	XL1'0'
			105	TWCZR DC	XL2'0'
			106	PASS DC	XL1'0'
			107	INVFLG DC	CL19'INVALID SSW SETTING'
			108		
			109	SPNMSG DC	CL24'NOW TESTING DISK DRIVE X'
			110		
			111	SECMMSG DC	CL33'BEGIN READ DATA FUNCTION TEST A08'
			112		
			113		
			114		
			115		
			116		
			117		
			118		
			119		
			120		

A083 R E A D D A T A

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1116	F2 87 92		449	J	RTN3K
			450		
1119	C0 87 189B		451	RTN3E2	B TSTDAT
111D	1FC0	111E	452	DC	AL2(READ+256)
			453		
111F	3D FP 1A4D		454	RTN3C1	CLI WRTDFC+3,X'FF'
1123	F2 81 10		455	JE	RTN3C2
1126	C0 87 021A		456	B	PRINT
112A	C6	112A	457	DC	XL1'C6'
112B	2B	112B	458	DC	IL1'43'
112C	0F49	112D	459	DC	AL2(ERRO2E)
112E	A043	112F	460	DC	XL2'A043'
1130	C0 87 0222		461	E	HALT
1134	A043	1135	462	DC	XL2'A043'
			463		
1136	0D 00 1A4C 105A		464	RTN3C2	CLC WRTDFC+2(1),EXPSEC
			465		
113C	F2 81 10		466	JE	RTN3D
113F	C0 87 021A		467	B	PRINT
1143	C6	1143	468	DC	XL1'C6'
1144	43	1144	469	DC	IL1'67'
1145	0FC5	1146	470	DC	AL2(ERRO2D)
1147	A044	1148	471	DC	XL2'A044'
1149	C0 87 0222		472	E	HALT
114D	A044	114E	473	DC	XL2'A044'
			474		
114F	C2 02 1DC0		475	RTN3D	LA WORK,XR2
1153	BD E7 00		476	RTN3F	CLI 0(XR2),X'E7'
1156	F2 01 14		477	JNE	RTN3E
1159	E2 02 01		478	LA	1(XR2),XR2
115C	34 02 1A6D		479	ST	SNSXR2,XR2
1160	0D 01 1A6D 1996		480	CLC	SNSXR2(2),WORK1
1166	F2 81 14		481	JE	RTN3G
1169	C0 87 1153		482	B	RTN3F
			483		
116D	C0 87 021A		484	RTN3E	B PRINT
1171	C6	1171	485	DC	XL1'C6'
1172	39	1172	486	DC	IL1'57'
1173	0FE2	1174	487	DC	AL2(ERRO2C)
1175	A045	1176	488	DC	XL2'A045'
1177	C0 87 0222		489	B	HALT
117B	A045	117C	490	DC	XL2'A045'
			491		
117D	C2 02 1EC0		492	RTN3G	LA READ,XR2
1181	BD E7 00		493	RTN3H	CLI 0(XR2),X'E7'
1184	F2 01 14		494	JNE	RTN3J
1187	E2 02 01		495	LA	1(XR2),XR2
118A	34 02 1A6D		496	ST	SNSXR2,XR2
118E	0D 01 1A6D 1D00		497	CLC	SNSXR2(2),READ1
1194	F2 81 14		498	JE	RTN3K
1197	C0 87 1181		499	B	RTN3H
			500		
119B	C0 87 021A		501	RTN3J	B PRINT
119F	C6	119F	502	DC	XL1'C6'
11A0	4A	11A0	503	DC	IL1'74'
11A1	1059	11A2	504	DC	AL2(ERRO2F)
11A3	A046	11A4	505	DC	XL2'A046'
11A5	C0 87 0222		506	B	HALT
11A9	A046	11AA	507	DC	XL2'A046'
			508		
11AB	3D DC 1A4C		509	RTN3K	CLI WRTDFC+2,X'DC'
11AF	F2 01 08		510	JNE	RTN3M
11B2	C0 87 17BD		511	B	CKHED
11B6	C0 87 106F		512	RTN3L	B RTN3A
11BA	0E 00 105A 199A		513	RTN3E	ALC EXPSEC(1),ONESEC
11C0	C0 87 108A		514	B	RTN3B
			515		
11C4	3C 16 1BD8		516	WRTER3	MVI SNSID,X'16'

A083 R E A D D A T A

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
11C8	35 01 182E		517	L	TBLH,XR1
11CC	1C 00 100F 04		518	MVC	ERRO2E(1),4(XR1)
11D1	C0 87 1BB1		519	B	PRTSNS
			520		
11D5	C0 87 021A		521	B	PRINT
11D9	06	11D9	522	DC	XL1'06'
11DA	4A	11DA	523	DC	IL1'74'
11DB	100F	11DC	524	DC	AL2(ERRO2E)
11DE	C0 87 0222		525	B	HALT
11E1	A016	11E2	526	DC	XL2'A016'
11E3	C0 87 11B6		527	B	RTN3L

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129634
PAGE 6

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			529 *		ROUTINE NO. 04, CHECK READ DATA *
			530 *		USING MULTIPLE SECTORS *
			531 *		HEADS 0 & 2
			532		
11E7 04		11E7	533 RTN4	DC	XL1'04'
11E8 00		11E8	534	DC	XL1'00'
11E9 139B		11EA	535	DC	AL2(RTN5)
			536		
11EB C2 02 1848			537	LA	HDTBL-1, XR2
11EF 34 02 182E			538	ST	TBLH, XR2
11F3 3D 00 0B0D			539	CLI	SETSW, 0
11F7 C0 81 0A0D			540	BE	SETDSK
11FB C0 87 0B62			541 RTN4A	B	TSTSPN
11FF 3C 00 1A4C			542	MVI	WRTDFC+2, 0
1203 C0 87 18ED			543	B	SEEKCE
			544		
1207 3C 10 1FBF			545 RTN4B	MVI	WORK+511, X'10'
120E 0C FE 1FBE 1FBF			546	MVC	WORK+510(255), WORK+511
1211 0C FF 1EBF 1ECO			547	MVC	WORK+255(256), WORK+256
			548		
1217 3C 12 1BD8			549	MVI	SNSID, X'12'
121B 3C 01 1A4D			550	MVI	WRTDFC+3, 01
			551		
121F C2 01 1DC0			552	LA	WORK, XR1
1223 34 01 1B6D			553	ST	DFDR, XR1
			554		
1227 C0 87 1A83			555	B	STRTIO
122E 02	122B	556	DC	XL1'02'	
122C 00	122C	557	DC	XL1'00'	
122D 1A4A	122E	558	DC	AL2(WRTDFC)	
122F C0 87 123B		559	B	RTN4E1	
1233 C0 87 1237		560	B	**4	
1237 C0 87 0EA4		561	B	WRTER2	
			562		
123B 3C 42 1BD8		563 RTN4B1	MVI	SNSID, X'42'	
123F 3C 01 1A4D		564	MVI	WRTDFC+3, 01	
1243 3C 00 1A4C		565	MVI	WRTDFC+2, 0	
			566		
1247 3C 00 1FBF		567	MVI	WORK+511, 0	
124B 0C FE 1FBE 1FBF		568	MVC	WORK+510(255), WORK+511	
1251 0C FF 1EBF 1ECO		569	MVC	WORK+255(256), WORK+256	
			570		
1257 C0 87 1A83		571	B	STRTIO	
125B 01	125B	572	DC	XL1'01'	
125C 00	125C	573	DC	XL1'00'	
125D 1A4A	125E	574	DC	AL2(WRTDFC)	
125F C0 87 1282		575	B	RTN4E2	
1263 C0 87 1267		576	B	**4	
			577		
1267 C0 87 1BB1		578 RTN4C	B	PRTSNS	
126B 35 01 182E		579	L	TBLH, XR1	
126F 1C 00 1339 04		580	MVC	ERR04A-13(1), 4(, XR1)	
1274 C0 87 021A		581	B	PRINT	
1278 06	1278	582	DC	XL1'06'	
1279 59	1279	583	DC	IL1'89'	
127A 1346	127B	584	DC	AL2(ERR04A)	
127C A0 87 0222		585	B	HALT	
1280 A042	1281	586	DC	XL2'A042'	
			587		
1282 C0 87 189B		588 RTN4B2	B	TSTDAT	
1286 1FC0	1287	589	DC	AL2(WORK+512)	
			590		
1288 3D FF 1A4D		591 RTN4C1	CLI	WRTDFC+3, X'FF'	
128C F2 81 10		592	JE	RTN4C2	
128F C0 87 021A		593	B	PRINT	
1293 C6	1293	594	DC	XL1'C6'	
1294 2B	1294	595	DC	IL1'43'	
1295 0F49	1296	596	DC	AL2(ERR02B)	

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571512 571516 571513 571531 571540

PROG ID 0A08-3
PAGE 6

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129634
PAGE 6A

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1297 A043		1298	597	DC	XL2'A043'
1299 C0 87 0222		598	F	HALT	
129D A043		129E	599	DC	XL2'A043'
			600		
129F 3D 04 1A4C		601 RTN4C2	CLI	WRTDFC+2, 04	
			602 *		
12A3 F2 81 10		603	JE	RTN4D	
12A6 C0 87 021A		604	B	PRINT	
12AA C6	12AA	605	DC	XL1'C6'	
12AB 54	12AB	606	DC	IL1'84'	
12AC 139A	12AD	607	DC	AL2(ERR04B)	
12AE A048	12AF	608	DC	XL2'A048'	
12B0 C0 87 0222		609	B	HALT	
12B4 A048	12B5	610	DC	XL2'A048'	
			611		
12B6 C2 02 1DC0		612 RTN4D	LA	WORK, XR2	
12BA BD 10 00		613 RTN4F	CLI	0(, XR2), X'10'	
12BD F2 01 14		614	JNE	RTN4E	
12C0 E2 02 01		615	LA	1(, XR2), XR2	
12C3 34 02 1A6D		616	ST	SNSXR2, XR2	
12C7 0D 01 1A6D 1996		617	CLC	SNSXR2(2), WORK1	
12CD F2 81 14		618	JE	RTN4G	
12D0 C0 87 12BA		619	B	RTN4F	
			620		
12D4 C0 87 021A		621 RTN4E	B	PRINT	
12D8 C6	12D8	622	DC	XL1'C6'	
12D9 4A	12D9	623	DC	IL1'74'	
12DA 1059	12DB	624	DC	AL2(ERR02F)	
12DC A046	12DD	625	DC	XL2'A046'	
12DE C0 87 0222		626	B	HALT	
12E2 A046	12E3	627	DC	XL2'A046'	
			628		
12E4 0E 01 182E 1A53		629 RTN4G	ALC	TBLH(2), ONE	
12EA C0 87 11FB		630	B	RTN4A	
12EE E3C8C540D7D9C5E5	1321	631	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A READ'	
12F6 C9I6E4E240C5D9D9		631			
12FE D6D9E240E6C5D9C5		631			
1306 40D7D9C5E2C5D5E3		631			
130E 40C1C6E3C5D940C4		631			
1316 I6C9D5C740C140D9		631			
131E C5C1C440		631			
1322 C4C1E3C140C3D6D4	1346	632	ERR04A	DC	CL37'DATA COMMAND USING HD. X, SECT. 0 & 1'
132A D4C1D5C440E4E2C9		632			
1332 D5C740C8C44B40E7		632			
133A 6B40E2C5C3E34B40		632			
1342 F0405040F1		632			
1347 C8C5C1C4405040E2	137A	633	DC	CL52'HEAD & SECTOR BYTE OF CONTROL FIELD NOT STEPPED CORR'	
134F C5C3E3D6D940C2E8		633			
1357 E3C540D6C640C3D6		633			
135F D5E3D9D6D340C6C9		633			
1367 C5D3C440D5D6E340		633			
136F E2E3C5D7D7C5C440		633			
1377 C3D6D9D9		633			
137B C5C3E3D3E840C1C6	139A	634	ERR04B	DC	CL32'ECTLY AFTER A 2 SECTOR READ DATA'
1383 E3C5D940C140F240		634			
138E E2C5C3E3D6D940D9		634			
1393 C5C1C440C4C1E3C1		634			

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571512 571516 571513 571531 571540

PROG ID 0A08-3
PAGE 6A

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
		636 *		ROUTINE NO. 05, CHECK READ DATA FUNCTION
		637 *		USING HEAD SWITCHING
		638 *		BEGIN WITH HEAD 0, SECTOR 23,
		639 *		END WITH HEAD 1, SECTOR 0
139B 05	139B	640 RTN5	DC	XL1'05' ROUTINE NUMBER
139C 00	139C	641	DC	XL1'00' ROUTINE FLAGS
139D 1578	139E	642	DC	AL2(RTN6) ADDRESS OF NEXT ROUTINE PREFIX
		643		
139F C2 02 1849		644	LA	HDTBL,XP2
13A3 34 02 182E		645	ST	TBLH,XP2
13A7 3D 00 080D		646	CLI	SETSW,0 HAVE PARAMETERS BEEN ENTERED?
13AE C0 81 0A0D		647	BE	SETDSK BRANCH IF NO
13AF C0 87 0A62		648 RTN5A	B	TSTSPN
13B3 3C 5C 1A4C		649	MVI	WRTDFC+2,X'5C' SET FOR HEAD 0, SECTOR 23
13B7 C0 87 18E2		650	B	SEEKCE TO SEEK THE CE TRACK
13BF 3C E7 1FBF		651 RTN5B	MVI	WORK+511,X'E7' SET
13BF 0C FF 1FBE 1FBF		652	MVC	WORK+510(256),WORK+511 DATA
13C5 0C FE 1EBE 1EBF		653	MVC	WORK+254(255),WORK+255 FIELD
13CE 3C 18 1BD8		654	MVI	WNSID,X'18' PUT ID IN PRINT
13CF 3C 01 1A4D		655	MVI	WRTDFC+3,1 SET TO WRITE TWO SECTORS
13D3 C2 01 1DC0		656	LA	WORK,XR1 SET WRITE DATA ADDRESS
13D7 34 01 1B6D		657	ST	DFDR,XR1 IN DATA CONTROL FIELD
13DE C0 87 1A83		658	B	STRTIO TO I/O SUBROUTINE
13DF 02	13DF	659	DC	XL1'02' FUNCTION CODE (WRITE)
13E0 00	13E0	660	DC	XL1'00' CONTROL CODE (DATA)
13E1 1A4A	13E2	661	DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
13E3 C0 87 13EF		662	B	RTN5B1 GOOD RETURN
13E7 C0 87 13EB		663	B	**4
13EB C0 87 0EA4		664	B	WRTER2 ERROR RETURN
13EF 3C 09 1BD8		665 RTN5B1	MVI	SNSID,X'09' PUT ID IN PRINT
13F3 3C 5C 1A4C		666	MVI	WRTDFC+2,X'5C' SET TO START AT TRACK 0 SECTOR 23
13F7 C0 87 1A83		667	B	STRTIO TO SEEK
13FB 00	13FB	668	DC	XL1'0' FUNCTION CODE (CONTROL)
13FC 0A	13FC	669	DC	XL1'0' CONTROL CODE (SEEK)
13FD 1A4A	13FE	670	DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
13FF C0 87 1419		671	B	RTN5B2 GOOD RETURN
1403 C0 87 1407		672	B	**4
1407 C0 87 1BB1		673	B	PRTSNS TO DECODE ERROR
140B C0 87 021A		674	B	PRINT TO PRINT
140F 06	140F	675	DC	XL1'06' FLAGS
1410 34	1410	676	DC	IL1'52' LENGTH
1411 0C8C	1412	677	DC	AL2(ERROR9) MESSAGE ADDRESS
1413 C0 87 0222		678	B	HALT TO DCP HALT
1417 A009	1418	679	DC	XL2'A009' HALT ID
		680		
1419 3C 4A 1BD8		681 RTN5B2	MVI	SNSID,X'4A' PUT ID IN PRINT
141D 3C 01 1A4D		682	MVI	WRTDFC+3,1 SET TO READ 2 SECTORS
		683		
1421 3C 00 1FBF		684	MVI	WORK+511,0 SET READ AREA
1425 0C FE 1FBE 1FBF		685	MVC	WORK+510(255),WORK+511 TO
142B 0C FF 1EBF 1ECO		686	MVC	WORK+255(256),WORK+256 ALL ZEROS
		687		
1431 C0 87 1A83		688	B	STRTIO TO READ 2 SECTORS
1435 01	1435	689	DC	XL1'01' FUNCTION CODE (READ)
1436 C0	1436	690	DC	XL1'00' CONTROL CODE (DATA)
1437 1A4A	1438	691	DC	AL2(WRTDFC) CONTROL FIELD ADDRESS
1439 C0 87 1453		692	B	RTN5E3 GOOD RETURN
143E C0 87 1441		693	B	**4
		694		
1441 C0 87 1BB1		695 RTN5C	B	PRTSNS TO PRINT SENSE INFO.
1445 C0 87 021A		696	B	PRINT TO PRINT 3RD LINE
1449 06	1449	697	DC	XL1'06' FLAGS
144A 5A	144A	698	DC	IL1'90' LENGTH
144B 1518	144C	699	DC	AL2(ERROR5A) MESSAGE ADDRESS
144D C0 87 0222		700	B	HALT TO DCP HALT
1451 A04A	1452	701	DC	XL2'AC4A' HALT ID
		702		
1453 C0 87 189B		703 RTN5B3	B	TSTDAT TO TEST DATA ADDRESS

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
		1457 1FC0	1458 704	DC AL2(WORK+512) EXPECTED ADDRESS
			705	
1459 3D FF 1A4D		706 RTN5C1	CLI	WRTDFC+3,X'FF' TEST SECTOR COUNTER FOR STEPPING
145D F2 81 10		707	JZ	RTN5C2 PROCEED IF OK
1460 C0 87 021A		708	B	PRINT TO PRINT SECTOR COUNTER NOT STEPPED
1464 C6	1464	709	DC	XL1'C6' FLAGS
1465 2B	1465	710	DC	IL1'43' LENGTH
1466 0F49	1467	711	DC	AL2(ERROR2B) MESSAGE ADDRESS
1468 A043	1469	712	DC	XL2'AC43' MESSAGE IDENTIFICATION
146A C0 87 0222		713	B	HALT TO DCP HALT
146E A043	146F	714	DC	XL2'A043' HALT ID
		715		
1470 3D 80 1A4C		716 RTN5C2	CLI	WRTDFC+2,X'80' TEST ENDING HEAD & SECTOR ADDRESS
1474 F2 81 10		717	JZ	RTN5D PROCEED IF OK
1477 C0 87 021A		718	B	PRINT TO PRINT HEAD & SECTOR ADDRESS
		719 *		NOT STEPPED CORRECTLY
147B C6	147B	720	DC	XL1'C6' FLAGS
147C 5F	147C	721	DC	IL1'95' LENGTH
147D 1577	147E	722	DC	AL2(ERROR5B) MESSAGE ADDRESS
147F A049	1480	723	DC	XL2'A049' MESSAGE IDENTIFICATION
1481 C0 87 0222		724	B	HALT TO DCP HALT
1485 A049	1486	725	DC	XL2'A049' HALT ID
		726		
1487 C2 02 1DC0		727 RTN5D	LA	WORK,XR2 SET XR2 TO POINT TO WORK AREA
148E BD E7 00		728 RTN5F	CLI	0(,XR2),X'E7' CHECK EACH BYTE OF READ FIELD
148E F2 01 14		729	JNE	RTN5E JUMP TO PRINT IF RD. DATA NG.
1491 E2 02 01		730	LA	1(,XR2),XP2 NOT DONE, INCREMENT XF2
1494 34 02 1A6D		731	ST	SNSXR2,XR2 SET TO CHECK NEXT BYTE
1498 0D 01 1A6D 1996		732	CLC	SNSXR2(2),WORK1 CHECK XR2 FOR UPPER LIMIT
149E F2 81 14		733	JE	RTN5G IF DONE, GO TO ROUTINE END
14A1 C0 87 148B		734	B	RTN5F NOT DONE, CHECK NEXT BYTE
		735		
14A5 C0 87 021A		736 RTN5E	B	PRINT TO PRINT DATA FIELD WAS CHANGED
14A9 C6	14A9	737	DC	XL1'C6' FLAGS
14AA 4A	14AA	738	DC	IL1'74' LENGTH
14AB 1059	14AC	739	DC	AL2(ERROR2F) MESSAGE ADDRESS
14AD A046	14AE	740	DC	XL2'A046' MESSAGE IDENTIFICATION
14AF C0 87 0222		741	B	HALT TO DCP HALT
14B3 A046	14B4	742	DC	XL2'A046' HALT ID
		743		
14B5 0E 01 182E 1A53		744 RTN5G	ALC	TBLH(2),ONE
14BB C0 87 13AF		745	B	RTN5A
		746		
14BF E3C8C540D7D9C5E5	14F2	747	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A READ'
14C7 C9D6E4E240C5D9D9		747		
14C7 D6D9E240E6C5D9C5		747		
14D7 40D7D9C5E2C5D5E3		747		
14DF 40C1C6E3C5D940C4		747		
14E7 D6C9D5C740C140D9		747		
14EF C5C1C440		747		
14F3 C4C1E3C140D6C6F40	1518	748	ERR05A	DC CL38'DATA OF 2 SECTORS USING HEAD SWITCHING'
14FB F240E2C5C3E3D6D9		748		
1503 E240E4E2C9D5C740		748		
150E C8C5C1C440E2E6C9		748		
1513 E3C3C8C9D5C7		748		
1519 C8C5C1C4405040E2	154C	749	DC	CL52'HEAD & SECTOR BYTE OF CONTROL FIELD NOT STEPPED CORR'
1521 C5C3E3D6D940C2FE		749		
1529 E3C540E6C640C3D1		749		
1531 D5E3D9D6D340C6C9		749		
1539 C5D3C440D5D6E340		749		
1541 E2E3C5D7D7C5C440		749		
1549 C3D6D9D9		749		
154D C5C3F3D3E840C1C6	1577	750	ERR05B	DC CL43'ECTLY AFTEK A READ DATA USING HD. SWITCHING'
1555 E3C5D940C140D9C1		750		
155B C1C440C4C1E3C140		750		
1565 E3E2C9D5C740C8C4		750		
156D 4E40E2E6C5E3C3C8		750		
1575 C9D5C7		750		

AQ83 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
		752 *			ROUTINE NO. 06, CHECK FUNCTION OF END OF CYLINDER
		753 *			SENSE BIT, (BYTE 1, BIT 2)
		754 *			USING THE READ DATA COMMAND
		755			
		756 *			ROUTINE PREFACE
		757			
1578 06		1578 758	RIN6	DC	XL1'06' ROUTINE NUMBER
1579 C0		1579 759		DC	XL1'00' ROUTINE FLAGS
157A FFFF		157B 760		DC	XL2'FFFF' LAST ROUTINE FLAG
		761			
157C C2 02 1849		762		LA	HDTBL, XR2
1580 34 02 182E		763		ST	TBLH, XR2
1584 3D 00 0B0D		764		CLI	SETSW, 0
1588 C0 81 0A0D		765		BE	SETDSK
		766			HAVE PARAMETERS BEEN ENTERED?
		767			BRANCH IF NO.
158C C0 87 0B62		767	RTN6A	B	TSTSPN
1590 3C DC 1A4C		768		MVI	WRTDFC+2, X'DC'
1594 C0 87 18ED		769		P	SEEKCE
		770			SET FOR HEAD 1, SECTOR 23
		771			TO SEEK THE CE TRACK
1598 3C E7 1FBF		771	RTN6B	MVI	WORK+511, X'E7' SET
159C 0C FE 1FBF 1FBF		772		MVC	WORK+510 (255), WORK+511 2 SECTOR
15A2 0C FF 1EBF 1ECO		773		MVC	WORK+255 (256), WORK+256 WRITE FIELD
		774			
15A8 3C 00 1A4D		775		MVI	WRTDFC+3, 00 SET TO WRITE 1 SECTOR
		776			
15AC C2 01 1DC0		777		LA	WORK, YR1 SET WRITE DATA ADDRESS
15B0 34 01 1B6D		778		ST	DFDR, XR1 IN DATA CONTROL FIELD
		779			
15B4 C0 87 1A83		780		B	STRTIO TO WRITE DATA
15B8 02	15B8	781		DC	XL1'02' FUNCTION CODE (WRITE)
15B9 00	15B9	782		DC	XL1'00' CONTROL CODE (DATA)
15BA 1A4A	15BB	783		DC	AL2 (WRTDFC) CONTROL FIELD ADDRESS
15BC C0 87 15C8		784		B	RTN6B1 GOOD RETURN
15C0 C0 87 15C4		785		B	**4
15C4 C0 87 0EA4		786		B	WRTER2 ERROR RETURN
		787			
15C8 3C 4C 1BD8		788	RTN6B1	MVI	SNSID, X'4C' PUT ID IN PRINT
15CC 3C 01 1A4D		789		MVI	WRTDFC+3, 1 SET TO READ 2 SECTORS
15D0 3C DC 1A4C		790		MVI	WRTDFC+2, X'DC' SET FOR HEAD 1, SECTOR 23
15D4 C0 87 1A83		791		B	STRTIO TO READ DATA, (EXPECT END OF CYL.)
15D8 01	15D8	792		DC	XL1'01' FUNCTION CODE (READ)
15D9 00	15D9	793		DC	XL1'00' CONTROL CODE (DATA)
15DA 1A4A	15DB	794		DC	AL2 (WRTDFC) CONTROL FIELD ADDRESS
15DC C0 87 15E8		795		P	RTN6B2 GOOD RETURN, (NOT EXPECTED)
15E0 C0 87 15E4		796		B	**4
15E4 C0 87 15F8		797		B	RTN6C ERROR RETURN, (EXPECTED)
15E8 C0 87 021A		798	RTN6B2	B	PRINT TO PRINT NO ERROR FROM TIO
15EC C6	15EC	799		DC	XL1'C6' FLAGS
15ED 50	15ED	800		DC	IL1'80' LENGTH
15EE 16A5	15EF	801		DC	AL2 (ERR06A) MESSAGE ADDRESS
15F0 A04C	15F1	802		DC	XL2'A04C' MESSAGE IDENTIFICATION
		803			
15F2 C0 87 0222		804		B	ALT TO DCP HALT
15F6 A04C	15F7	805		DC	XL2'A04C' HALT ID
		806			
15F8 C0 87 1A54		807	RTN6C	B	SENSE TO SENSE DEVICE STATUS
15FC 02	15FC	808		DC	AL1 (STAT01) BYTES 0 & 1.
		809			
15FD 38 20 1A6B		810		TBN	STATUS, X'20' TEST BYTE 1 BIT 2 FOR ON,
		811 *			(THIS IS 'END OF CYLINDER')
1601 F2 10 10		812		JT	RTN6D JUMP IF ON
		813			
1604 C0 87 021A		814		B	PRINT TO PRINT SENSE BIT NOT ON
1608 C6	1608	815		DC	XL1'C6' FLAGS
1609 4C	1609	816		DC	IL1'76' LENGTH
160A 16P1	160B	817		DC	AL2 (ERR06B) MESSAGE ADDRESS
160C A04E	160D	818		DC	XL2'A04E' MESSAGE IDENTIFICATION
		819			

AQ83 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
		160E C0 87 0222		820	B HALT TO DCP HALT
		1612 A04E	1613	821	DC XL2'A04E' HALT IDENTIFICATION
				822	
		1614 C0 87 189B		823	RTN6D B TSTDAT TO TEST DATA ADDRESS
		1618 1ECC	1619	824	DC AL2(WORK+256) EXPECTED ADDRESS
				825	
		161A 3D 00 1A4D		826	CLI WRTDFC+3, 00 TEST SECTOR COUNTER FOR STEPPING
		161E F2 81 10		827	RTN6E JE RTN6E JUMP IF CORRECT
		1621 C0 87 021A		828	B PRINT TO PRINT SECTOR COUNTER NOT
				829 *	STEPPED CORRECTLY
		1625 C6	1625	830	DC XL1'C6' FLAGS
		1626 58	1626	831	DC IL1'88' LENGTH
		1627 1749	1628	832	DC AL2 (ERR06C) MESSAGE ADDRESS
		1629 A043	162A	833	DC XL2'A043' MESSAGE IDENTIFICATION
				834	
		162B C0 87 0222		835	B HALT TO DCP HALT
		162F A043	1630	836	DC XL2'A043' HALT ID
				837	
		1631 3D DC 1A4C		838	RTN6E CLI WRTDFC+2, X'DC' CHECK HEAD & SECTOR NO. AFTER
				839 *	WRITE IS COMPLETED, (SHOULD NOT STP)
		1635 F2 81 10		840	JE RTN6F JUMP IF NO CHANGE
		1638 C0 87 021A		841	B PRINT TO PRINT ERROR
		163C C6	163C	842	DC XL1'C6' FLAGS
		163D 55	163D	843	DC IL1'85' LENGTH
		163E 179E	163F	844	DC AL2 (ERR06D) MESSAGE ADDRESS
		1640 A04F	1641	845	DC XL2'A04F' MESSAGE IDENTIFICATION
				846	
		1642 C0 87 0222		847	B HALT TO DCP HALT
		1646 A04F	1647	848	DC XL2'A04F' HALT ID
		1648 0E 01 182E 1A53		849	RTN6F ALC TBLH (2), ONE
		164E C0 87 18ED		850	B SEEKCE SEEK TO CLEAR THE END OF CYL.
		1652 C0 87 158C		851	B RTN6A
				852	
		1656 C140E3C5E2E340C9	1689	853	DC CL52'A TEST I/O ON ERROR DID NOT BRANCH AFTER ATTEMPTING
		165E 61E640D6D540C5D9		853	
		1666 D9D6D940C4C9C440		853	
		166E D5D6E340C2D9C1D5		853	
		1676 C3C840C1C6E3C5D9		853	
		167E 40C1E3E3C5D4D7E3		853	
		1686 C9D5C740		853	
		168A E3E640D9C5C1C440	16A5	854	ERR06A DC CL28'TO READ DATA PAST END OF CYL'
		1692 C4C1E3C140D7C1E2		854	
		169A E340C5D5C440D6C6		854	
		16A2 40C3E8D3		854	
		16A6 C5D5C440D6C640C3	16D9	855	DC CL52'END OF CYL. SENSE BIT NOT SET AFTER ATTEMPTING TO RE'
		16AE E8D34B40E2C5D5E2		855	
		16B6 C540C2C9E340D5D6		855	
		16BE E340E2C5E340C1C6		855	
		16C6 E3C5D940C1E3E3C5		855	
		16CE D4D7E3C9D5C740E3		855	
		16D6 D640D9C5		855	
		16DA C1C440C4C1E3C140	16F1	856	ERR06E DC CL24'AD DATA PAST END OF CYL.'
		16E2 I7C1E2E340C5D5C4		856	
		16EA 40D6C640C3E8D34B		856	
		16F2 E2C5C3E3D6D940C3	1725	857	DC CL52'SECTOR COUNTER IN CONTROL FIELD NOT STEPPED CORRECTL'
		16FA D6E4D5E3C5D940C9		857	
		1702 D540C3D6D5E3D9D6		857	
		170A D340C6C9C5D3C440		857	
		1712 D5D6E340E2E3C5D7		857	
		171A D7C5C440C3D6D9D9		857	
		1722 C5C3E3D3		857	
		172E E840C1C6E3C5D940	1749	858	ERR06C DC CL36'Y AFTER A READ DATA PAST END OF CYL.'
		173E C140D9C5C1C440C4		858	
		1736 C1E3C140D7C1E2E3		858	
		173E 40C5D5C440D6C640		858	
		1746 C3E8D34B		858	
		174A C8C5C1C4405040E2	177D	859	DC CL52'HEAD & SECTOR BYTE OF CONTROL FIELD CHANGED AFTER A '
		1752 C5C3E3D6D940C2E8		859	

A083 READ DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for error handling, including sector error detection and message printing.

A083 READ DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for error handling, including disk error detection and message printing.

A083 READ DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic error codes and descriptions for the left page.

A083 READ DATA

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic error codes and descriptions for the right page.

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1083	*				START I/O SUBROUTINE
1084					
1A83	34 08	1A69	1085	STRTIO ST	SETXR2,ARR SAVE ADDRESS RECALL REGISTER.
1A87	35 02	1A69	1086	L	SETXR2,XR2 LOAD XR2 WITH VALUE FROM ARR.
1A8B	3C 00	1B67	1087	MVI	SAYSW,00 ZERO SWITCH
1A8F	28 03	1AC8 00	1088	MNN	SIO+1,0(,XR2) SET FUNCTION CODE
1A94	2C 00	1AC9 01	1089	MVC	SIO+2(1),1(,XR2) SET CONTROL CODE IN SIO
1A99	2C 01	1B6B 03	1090	MVC	DPCR(2),3(,XR2) SET DATA ADDRESS FOR DPCR
1A9E	3B 08	1AC8	1091	TSTTP SBF	SIO+1,X'08' SET FOR REMOVABLE DISK
1AA2	3B 08	1B20	1092	SBF	RSIO+1,X'08' SET FOR REMOVABLE DISK
1AA6	39 08	1B69	1093	TBF	DISKTP,X'08' TEST FOR RUN ON LOWER DISK
1AAA	F2 10	08	1094	JT	CKSF EK JUMP TO CHECK FOR SEEK
1AAD	3A 08	1AC8	1095	SETPIX SBN	SIO+1,X'08' SET FOR FIXED DISK
1AB1	3A 08	1B20	1096	SBN	RSIO+1,X'08' SET FOR FIXED DISK
1AB5	BD 00	00	1097	CKSEEK CLI	0(,XR2),00 TEST FOR SEEK
1AB8	F2 81	2F	1098	JE	SETADR IF YES, GO SET ADDRESS
1ABB	31 A6	1B6B	1099	LDFCR LIO	DPCR,X'A6' LOAD CONTROL REGISTER
1ABF	31 A4	1B6D	1100	LDFDR LIO	DFDR,X'A4' LOAD DATA REGISTER
1AC3	C2 01	19C8	1101	LA	6600,XR1 LOAD DELAY VALUE IN REGISTER
1AC7	F3 A0	00	1102	SIC SIO	X'00',X'A0' START I/C OPERATION
1ACA	C1 A2	1B74	1103	WAIT TIO	BUSY,X'A2' TEST FOR BUSY
1ACE	3D FF	1B67	1104	CLI	SAYSW,X'FF' IS SWITCH ON?
1AD2	F2 01	0C	1105	JNE	TSTERR IF NO, SKIP RESTORE
1AD5	8C 00	03 1B66	1106	MVC	3(1,XR2),DFC3SV RESTORE N BYTE
1ADA	BB 01	02	1107	SBF	2(,XR2),01 TURN OFF THE FOR/ REV BIT
1AD8	35 02	1A69	1108	L	SETXR2,XR2 RESTORE PARAMETER POINTER
1AE1	E1 A0	0C	1109	TSTERR TIO	12(,XR2),X'A0' BRANCH IF ERROR
1AE4	E1 A4	08	1110	TSTSCN TIO	8(,XR2),X'A4' BRANCH IF SCAN FOUND
1AE7	E0 87	04	1111	B	4(,XR2) EXIT
1112					
1113	*				SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE
1114	*				DIRECTION (FORWARD OR REVERSE), TO SEEK
1115					
1AEA	ED 01	01	1116	SETADR CLI	1(,XR2),01 IS THIS A RECALIBRATE?
1AED	F2 01	04	1117	JNE	**7 IF NO, BYPASS SWITCH RESET
1AF0	3C 00	1B64	1118	MVI	FRSTPS,0 RESET RECALIBRATE SWITCH
1AF4	2C 01	1B6F 03	1119	MVC	XR2WK(2),3(,XR2) SAVE ADDR. OF CTL. PLD. ADDR.
1AF9	35 02	1B6F	1120	L	XR2WK,XR2 LOAD XR2 WITH CONTROL PLD. ADDR.
1AFD	2C 00	1B66 03	1121	MVC	DFC3SV(1),3(,XR2) SAVE N BYTE IN CONTROL FIELD
1B02	3C FF	1B67	1122	MVI	SAYSW,X'FF' SET SAVE SWITCH
1B06	3D 00	1B64	1123	CLI	FRSTPS,00 IS THIS FIRST PASS
1B0A	F2 01	15	1124	JNE	SETADA SKIP RECALIBRATE IF NO
1B0D	3C 01	1B64	1125	MVI	FRSTPS,01 SET FIRST PASS SWITCH
1B11	FB 01	02	1126	SBF	2(,XR2),01 SET FWD/REV BIT TO REV.
1B14	BC FF	03	1127	MVI	3(,XR2),255 SET MAXIMUM TRACK CROSSING
1B17	3C 00	1B65	1128	MVI	LASTAD,00 SET OLD ADDR TO 0
1B1E	31 A6	1B6B	1129	RLDPCR LIO	DPCR,X'A6' LOAD DATA CONTROL REGISTER
1B1F	F3 A0	00	1130	RSIO SIO	00,X'A0' SEEK REVERSE
1131					
1B22	8D 00	01 1B65	1132	SETADA CLC	1(1,XR2),LASTAD COMPARE PRESENT ADDR. WITH NEW ONE
1B27	F2 81	25	1133	JE	NOSEEK EQUAL, SEEK IS NOT NECESSARY
1B2A	F2 84	11	1134	JH	FWDSEK NEW ADDR. HIGHER, DO FORWARD SEEK
1B2D	BB 01	02	1135	SBF	2(,XR2),01 NEW ADDR. LOWER, SET BIT FOR REV.
1B30	0C 00	1D63 1B65	1136	MVC	SCRCH(1),LASTAD PLACE LAST ADDR IN WORKAREA
1B36	2F 00	1B63 01	1137	SLC	SCRCH(1),1(,XR2) SUBTRACT NEW ADDR. FROM LAST ADDR.
1B3E	F2 87	17	1138	J	SETADB PROCEED
1139					
1B3E	BA 01	02	1140	FWDSEK SBN	2(,XR2),01 SET BIT CN FOR FORWARD SEEK
1B41	2C 00	1B63 01	1141	MVC	SCRCH(1),1(,XR2) PLACE NEW ADDR. IN WORKAREA
1B46	0F 00	1B63 1B65	1142	SLC	SCRCH(1),LASTAD SUBTRACT LAST ADDR. FROM NEW ADDR.
1B4C	F2 87	06	1143	J	SETADB PROCEED
1144					
1E4F	BC 00	03	1145	NOSEEK MVI	3(,XR2),0 SET NO. OF TKS. CROSSED TO ZERO.
1B52	F2 87	0A	1146	J	ADREXT TO EXIT
1147					
1B55	8C 00	03 1B63	1148	SETADB MVC	3(1,XR2),SCRCH PLACE IN NO. OF TRACKS CROSSED
1B5A	2C 00	1B65 01	1149	MVC	LASTAD(1),1(,XR2) SAVE NEW ADDRESS
1B5F	C0 87	1ABB	1150	ADREXT B	LDFCR EXIT

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1B63	00		1B63	1151	SCRCH DC XL1'00'
1B64	00		1B64	1152	PRSTPS DC XL1'00'
1B65	00		1B65	1153	LASTAD DC XL1'00'
1B66	00		1B66	1154	DFC3SV DC XL1'00'
1B67	00		1B67	1155	SAYSW DC XL1'00'
1B68	0000		1B68	1156	DISKTP DC XL2'0'
1B6A	0000		1B6B	1157	DPCR DC AL2(*-*)
1B6C	1DC0		1B6D	1158	DFER DC AL2(WORK)
1B70	0000		1B6F	1159	XR2WK DC XL2'0'
1B7E	FFFF		1B71	1160	NEG1 DC XL2'FFFF'
1B72	0294		1B73	1161	SIXSIX DC IL2'0660'
1B74	36 01	1B71		1162	BUSY A NEG1,XR1 DECREMENT DELAY COUNTER
1B78	C0 84	1ACA		1163	BH WAIT RETURN TO TIO IF NOT TIME OUT
1B7C	C0 87	1D52		1164	B CVD TIME OUT OCCURED, CONVERT ROUT. NO.
1B80	0A03		1B81	1165	DC AL2(RPFK) CURRENT ROUTINE NO.
1B82	1B80		1B83	1166	DC AL2(TIMOUT) ADDRESS OF DESTINATION
1B84	3C 40	1BAE		1167	MVI TIMOUT-2,C' TO PRINT TIMEOUT OCCURED
1B88	C0 87	021A		1168	B PRINT FLAGS
1B8C	C6		1B8C	1169	DC XL1'C6' LENGTH
1B8D	15		1B8D	1170	DC IL1'21' MESSAGE ADDRESS
1B8E	1B80		1B8F	1171	DC AL2(TIMOUT) MESSAGE ID
1B90	A08E		1B91	1172	DC XL2'A08E' MESSAGE ID
1B92	C0 87	0222	1B92	1173	THALT B TO DCP ERROR HALT
1B96	A08E		1B97	1174	DC XL2'A08E' HALT ID
1B98	C0 87	0000		1175	B 0
1B9C	E3C9D4C5D6E4E340		1B80	1176	TIMOUT DC CL21'TIMEOUT IN ROUTINE XX'
1BA4	C9D540D9D6E4E3C9			1176	
1BAC	E5C540E7E7			1176	
			0A03	1177	RPFK EQU X'A03'

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			1179	*	SUBROUTINE TO PRINT THE CONTENTS OF DEVICE STATUS *
			1180		
1BB1	34 08 1C37		1181	PRTSNS ST	PRTEXT+3,ARR SAVE ADDRESS RECALL REGISTER
1BB5	C0 87 1A54		1182	E	SENSE TO PERFORM SENSE
1BB9	02	1BB9	1183	DC	AL1(STAT01) GET DEVICE STATUS BYTES 0 & 1.
1BBA	3C 01 1BP3		1184	MVI	STPSNS+1,X'01' SET FOR COMPLETION OF FIRST BYTE
1BBE	C0 87 021E		1185	B	UNPACK TO UNPACK STATUS BYTES
1BC2	02	1BC2	1186	DC	XL1'02'
1BC3	1A6B	1BC4	1187	DC	AL2(STATUS)
1BC5	1C50	1BC6	1188	DC	AL2(HEXSTA-4)
			1189		
1BC7	C2 01 1C66		1190	LA	STATWD,XR1 SET XR1 TO POINT TO FIRST MESSAGE
1BCB	C2 02 1CF7		1191	LA	STMASK,XR2 SET XR2 TO POINT TO TEST MASK
			1192		
1BCF	C0 87 021A		1193	B	PRINT TO PRINT SNS WITH HEADING
1BD3	C1	1BD3	1194	DC	XL1'C1' FLAGS
1BD4	01	1BD4	1195	DC	IL1'01' LENGTH
1BD5	1C66	1BD6	1196	DC	AL2(STATWD) ADDRESS OF LAST PRINT CHARACTER
1BD7	AC00	1BD8	1197	SNSID DC	XL2'A000' MESSAGE IDENTIFICATION
1BD9	2C 00 1BE4 00		1198	MOVEBT MVC	TSTBT+1(1),0(,XR2) SET MASK BIT IN TEST BITS INSTRUCT.
1BDE	1C 10 1DBF 00		1199	MVC	STATPR(18),0(,XR1) SET MESSAGE IN FIELD
			1200		
1BE3	38 00 1A6A		1201	TSIBT TBN	STATUS-1,*-* TEST CURRENT BIT FOR ON
1BE7	F2 90 08		1202	JF	STPSNS BYPASS PRINT IF OFF
1BEA	C0 87 021A		1203	B	PRINT TO PRINT SNS WITHOUT HEADING
1BFE	01	1BEE	1204	DC	XL1'01' FLAGS
1BEF	12	1BEF	1205	DC	IL1'18' LENGTH
1BF0	1DBF	1BF1	1206	DC	AL2(STATPR) ADDRESS OF LAST PRINT CHARACTER
			1207		
1BF2	3D 00 1BE4		1208	STPSNS CLI	TSTBT+1,*-* TEST FOR FINISHED
1BF6	F2 81 0A		1209	JE	SENSA JUMP IF FINISHED WITH THIS BYTE
			1210		
1BF9	E2 02 01		1211	LA	1(,XR2),XR2 STEP XR2 TO POINT TO NEXT MASK BIT
1BFC	D2 01 12		1212	SENSB LA	18(,XR1),XR1 STEP XR1 TO POINT TO NEXT MESSAGE
1BFF	C0 87 1BD9		1213	B	MOVEBT GO TEST NEXT SENSE BIT
			1214		
1C03	3D 80 1BF3		1215	SENSA CLI	STPSNS+1,X'80' TEST FOR COMPLETION OF 2ND BYTE
1C07	F2 81 22		1216	JE	PRTHSX TO EXIT IF DONE
1C0A	3C 80 1BF3		1217	MVI	STPSNS+1,X'80' SET FOR CHECK OF 2ND BYTE
1C0E	34 01 1C1A		1218	ST	SENSC+3,XR1 SAVE XR1
1C12	C0 97 1A54		1219	B	SENSE TO SENSE
1C16	03	1C16	1220	DC	XL1'03' BYTES 2 & 3
1C17	C2 01 0000		1221	SENSC LA	*-*,XR1 RELOAD XR1
			1222		
1C1B	C0 87 021E		1223	B	UNPACK
1C1F	02	1C1F	1224	DC	XL1'02'
1C20	1A6B	1C21	1225	DC	AL2(STATUS)
1C22	1C54	1C23	1226	DC	AL2(HEXSTA)
1C24	C2 02 1CF7		1227	LA	STMASK,XR2 SET BIT POINTER
1C28	C0 87 1BFC		1228	B	SENSB TO PROCESS 2ND BYTE
1C2C	C0 87 021A		1229	PRTHSX B	PRINT TO PRINT STATUS IN HEX
1C30	02	1C30	1230	DC	XL1'02'
1C31	1D	1C31	1231	DC	IL1'29'
1C32	1C54	1C33	1232	DC	AL2(HEXSTA)
1C34	C0 87 0000		1233	PRTEXT B	*-* SUBROUTINE EXIT
1C38	E2E3C1E3E4E240C2	1C4C	1234	DC	CL21'STATUS BYTES IN HEX, '
1C40	E8E3C5E240C9D540		1234		
1C48	C8C5E76B40		1234		
1C4D	00C0000000000000	1C54	1235	HEXSTA DC	XL8'0'
			1236		
1C55	D5D640D6D7404040	1C66	1237	STATWD DC	CL18'NO OP
1C5D	4040404040404040		1237		
1C65	4040		1237		
1C67	C9D5E3C5D9E5C5D5	1C78	1238	DC	CL18'INTERVENTION REQD.'
1C6F	E3C9D6D540D9C5D8		1238		
1C77	C44B		1238		
1C79	E4C9E2E2C9D5C740	1C8A	1239	DC	CL19'MISSING ADDR. MARK'
1C81	C1C4C4D94B40D4C1		1239		

A083 READ DATA

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1C89	D9D2		1239		
1C8B	C5E8E4C9D7D4C5D5	1C9C	1240	DC	CL18'EQUIPMENT CHECK
1C93	E340C3C8C5C3D240		1240		
1C9B	4040		1240		
1C9D	C4C1E3C140C3C8C5	1CAE	1241	DC	CL18'DATA CHECK
1CA5	C3D2404040404040		1241		
1CAD	4040		1241		
1CAF	D5D640D9C5C3D6D9	1CC0	1242	DC	CL18'NO RECORD FOUND
1CB7	C440C6D6E4D5C440		1242		
1CBF	4040		1242		
1CC1	E3D240C3D6D5C4C9	1CD2	1243	DC	CL18'TK CONDITION CHECK'
1CC9	E3C9D6D540C3C8C5		1243		
1CD1	C3D2		1243		
1CD3	E2C5C5D240C3C8C5	1CE4	1244	DC	CL18'SEEK CHECK
1CDB	C3D2404040404040		1244		
1CE3	4040		1244		
1CE5	E4D5E2C1C6C54040	1CF6	1245	DC	CL18'UNSAFE
1CED	4040404040404040		1245		
1CF5	4040		1245		
		1CF7	1246	STMASK EQU	*
1CF7	80402010	1CFA	1247	DC	XL4'80402010'
1CFE	08040201	1CFE	1248	DC	XL4'08040201'
1CF9	1FBF	1D00	1249	READ1 DC	AL2(READ+255)
			1250		
			1251	*	SUBROUTINE TO SHIFT BITS IN CONTROL FIELD
			1252		
1D01	34 08 1D4E		1253	SHIFT ST	SHFEXT+3,ARR STORE ADDRESS RECALL REGISTER
1D05	35 01 1D45		1254	L	SHFEXT+3,XR1 LOAD EXIT ADDRESS IN XR1
1D09	35 02 1D45		1255	L	SHFEXT+3,XR2 LOAD EXIT ADDRESS IN XR2
1D0D	36 02 1998		1256	A	TWO,XR2 INCREASE BY 2
1D11	34 02 1D45		1257	ST	SHFEXT+3,XR2 STORE FOR TRUE EXIT ADDRESS
1D15	3C 00 1D46		1258	MVI	CYLNO,0 ZER WORK AREA
1D19	C2 02 1D47		1259	LA	SHFTBL,XR2 LOAD ADDRESS OF SHIFT TABLE IN XR2
1D1D	75 01 01		1260	L	1(,XR1),XR1 LOAD CONTROL FIELD ADDRESS IN XR1
1D20	2C 00 1D2B 00		1261	MVCTBN MVC	TBN+1(1),0(,XR2) INSERT CORRECT MASK FOR TEST BITS
1D25	2C 00 1D31 05		1262	MVC	SBN+1(1),5(,XR2) INSERT CORRECT BITS FOR SET BITS
1D2A	78 00 02		1263	TBN TBN	2(,XR1),*-* TEST ONE BIT FOR ON
1D2D	F2 90 04		1264	JF	**7 JUMP IF OFF
1D30	3A 00 1D46		1265	SBN SBN	CYLNO,*-* SET ONE BIT ON IN DECIMAL FIELD
1D34	3D 40 1D2B		1266	CLI	TBN+1,X'40' TEST FOR LAST BIT
1D38	F2 81 07		1267	JE	SHFEXT JUMP TO EXIT IF ALL DONE
1D3B	E2 02 01		1268	LA	1(,XR2),XR2 NOT DONE, STEP XR2
1D3E	C0 87 1D20		1269	B	MVCTBN TO TEST NEXT BIT
1D42	C0 87 0000		1270	SHFEXT B	*-* EXIT
			1271		
1D46	00	1D46	1272	CYLNO DC	XL1'0'
			1273		
1D47	04	1D47	1274	SHFTBL DC	XL1'04'
1D48	08	1D48	1275	DC	XL1'08'
1D49	10	1D49	1276	DC	XL1'10'
1D4A	20	1D4A	1277	DC	XL1'20'
1D4B	40	1D4B	1278	DC	XL1'40'
1D4C	01	1D4C	1279	DC	XL1'01'
1D4D	02	1D4D	1280	DC	XL1'02'
1D4E	04	1D4E	1281	DC	XL1'04'
1D4F	08	1D4F	1282	DC	XL1'08'
1D50	10	1D50	1283	DC	XL1'10'

A083 R E A D D A T A

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
		1285	*		SUBROUTINE TO CONVERT A NUMBER TO DECIMAL
		1286			
1D51	00	1D51	1287	HXBVT DC	XL1'0'
1D52	36 08 1A53	1288	CVD A		ONE,ARR
1D56	34 08 1D73	1289	ST		FROM+5,ARR
1D5A	36 08 1998	1290	A		TWO,ARR
1D5E	34 08 1D79	1291	ST		TYBOT+5,ARR
1D62	34 08 1D7F	1292	ST		OTORZ+5,ARR
1D66	36 08 1A53	1293	A		ONE,ARR
1D6A	34 08 1DA2	1294	ST		TI XE+3,ARR
1D6E	0C 01 1D85 0000	1295	FROM MVC		FROBYT+5(2),*--*
1D74	0C 01 1D98 0000	1296	TYBOT MVC		TOBYT+3(2),*--*
1D7A	0C 01 1D89 0000	1297	OTORZ MVC		ZROTO+3(2),*--*
1D80	0C 00 1D51 0000	1298	FRCBYT MVC		HXBVT(1),*--*
1D86	04 20 0000 1DAD	1299	ZROTO ZAZ		*--*(3),UNITS(1)
1D8C	0F 00 1D51 1A53	1300	DECGAN SLC		HXBVT(1),ONE
1D92	F2 82 0A	1301	JL		TI XE
1D95	06 20 0000 1DA3	1302	TOBYT AZ		*--*(3),DECONE(1)
1D9B	CO 87 1D8C	1303	E		DECGAN
1D9F	CO 87 0000	1304	TI XE B		*--*
1DA3	F1	1DA3	1305	DECONE DC	CL1'1'
1DA4	F1F2F3F4F5F6F7F8	1DA4	1306	UNITS DC	CL10'1234567890'
1DAC	F9F0	1306			
1DAE		1DBF	1307	STATPR DS	CL18
1DC0		1DC0	1308	WORK EQU	*
1EC0		1EBF	1309	DS	CL256
		1ECO	1310	READ EQU	*
		1FBF	1311	DS	CL256
			1312		
		0003	1313	H1 EQU	X'03'
		0076	1314	H2 EQU	X'76'
		0001	1315	XR1 EQU	01
		0002	1316	XR2 EQU	02
		0008	1317	ARR EQU	08
		0002	1318	STAT01 EQU	X'02'
		0003	1319	STAT23 EQU	X'03'
		00A6	1320	CTEL EQU	X'A6'
		00A4	1321	DATA EQU	X'A4'
		0080	1322	BIT0 EQU	X'80'
		0040	1323	BIT1 EQU	X'40'
		0208	1324	SWITCH EQU	X'208'
		020A	1325	SECTSW EQU	X'20A'
		0212	1326	TEST EQU	X'212'
		0216	1327	LINK EQU	X'216'
		021A	1328	PRINT EQU	X'21A'
		021E	1329	UNPACK EQU	X'21E'
		0222	1330	HALT EQU	X'222'
		022A	1331	LOAD EQU	X'22A'
		003C	1332	HF EQU	X'3C'
		003P	1333	HA EQU	X'3P'
		0C26	1334	END	BEGIN

HALT DISPLAY 1
HALT DISPLAY 2

HALT DISPLAY F
HALT DISPLAY A

A083 R E A D D A T A

				CROSS-REFERENCE													
SYMBOL	T	LEN	VALUE	DEPN	REFERENCES												
ADREXT	A	004	1B5F	1150	1146												
ALLHED	A	026	186A	0920	0902												
ARRIVED	A	023	1A21	1044	1012 1022												
ARR	C	001	0C08	1317	0025 0111 0863 0873 0930 0962 0985 1060 1085 1181 1253 1288*												
					1289 1290* 1291 1292 1293* 1294												
A08	A	001	0000	0003													
BEGIN	A	004	0C26	0179	1334												
BIT0	C	001	0080	1322													
BIT1	C	001	0040	1323													
BUSY	A	004	1B74	1162	1103												
CCODE	A	001	1A6F	1073													
CKHDER	A	006	180F	0897	0167												
CKHED	A	004	17BD	0873	0352 0511												
CKHEDA	A	003	17C9	0876	0881												
CKSEEK	A	003	1A85	1097	1094												
CTRL	C	001	00A6	1320													
CVD	A	004	1D52	1288	0278 0437 1010 1164												
CYLNO	A	001	1D46	1272	0279 0438 0864 1258* 1265*												
DATA	C	001	00A4	1321	0935												
DATEXT	A	004	18E9	0960	0930* 0931 0933* 0938 0951												
DATID1	A	002	18CE	0948													
DATID2	A	002	18E2	0957													
DATPR1	A	043	19C7	1041	0947												
DATPR2	A	025	19E0	1042	0956												
DAT01A	A	004	18D9	0953	0942												
DCFF	A	004	1A7B	1077													
DCFI	A	004	1A77	1076													
DECGAN	A	006	1D8C	1300	1303												
DECONE	A	001	1DA3	1305	1302												
DPCR	A	002	1B6B	1157	1090* 1099 1129												
DPCRI	A	002	1A7D	1078													
DPC3SV	A	001	1B66	1154	1106 1121*												
DFDR	A	002	1B6D	1158	0252* 0267* 0411* 0426* 0553* 0657* 0778* 1100												
DFDRF	A	002	1A81	1080													
DFDRI	A	002	1A7F	1079													
DISKTP	A	002	1B69	1156	0145* 0155* 0884 1093												
ERROR9	A	006	0CBC	0216	0677 0976												
ERR02A	A	036	0F1E	0369	0280 0281* 0287 0439 0440* 0446 0868*												
ERR02B	A	043	0F49	0370	0300 0459 0596 0711												
ERR02C	A	005	0F82	0372	0328 0487												
ERR02D	A	015	0FC5	0374	0311 0470												
ERR02E	A	025	100F	0376	0359* 0364 0518* 0524												
ERR02F	A	032	1059	0378	0345 0504 0624 0739												
ERR04A	A	037	1346	0632	0580* 0584												
ERR04B	A	032	139A	0634	0607												
ERR05A	A	038	1518	0748	0699												
ERR05B	A	043	1577	0750	0722												
ERR06A	A	028	16A5	0854	0801												
ERR06B	A	024	16F1	0856	0817												
ERR06C	A	036	1749	0858	0832												
ERR06D	A	033	179E	0860	0844												
ERR1A	A	007	0CF7	0218	0196												
ERR1B	A	015	0D3A	0220	0208												
ETABLE	A	001	1A6E	1071	0013												
EXPSEC	A	001	105A	0379	0238* 0249 0264 0305 0354* 0397* 0408 0423 0464 0513*												
FIXDSK	A	005	1891	0922	0886												
FIXED	A	004	0BD8	0149	0142												
FOURFF	A	004	189A	0924	0897												
FROBYT	A	006	1D80	1298	1295*												
FROM	A	006	1D6E	1295	1289*												
FRSTPS	A	001	1B64	1152	0092* 1031* 1118* 1123 1125*												
PWDSEK	A	003	1B3E	1140	1134												
HA	C	001	003F	1333													
HALT	C	001	0222	1330	0128 0198 0210 0288 0302 0313 0330 0347 0365 0447 0461 0472												
					0489 0506 0525 0585 0598 0609 0626 0678 0700 0713 0724 0741												
					0804 0820 0835 0847 0893 0904 0949 0958 0977 1032 1173												

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129634
PAGE 14

A083 READ DATA

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
HDEXT	A	004	180B	0895	0873* 0877
HDTBL	A	001	1849	0912	0090* 0091 0091* 0229 0388 0537 0644 0762 0897
HEXSTA	A	008	1C54	1235	1188 1226 1232
HF	C	001	003C	1332	
HXEYT	A	001	1D51	1287	1298* 1300*
H1	C	001	0003	1313	
H2	C	001	0076	1314	
IDFLD	A	003	195C	1004	0997 1000 1011
INVFLG	A	019	0B28	0107	0125
LASTAD	A	001	1B65	1153	1128* 1132 1136 1142 1149*
LDFCR	A	004	1ABB	1099	0033 1150
LDADR	A	004	1ABF	1100	0067*
LINK	C	001	0216	1327	0168 0898 0906
LOAD	C	001	022A	1331	0052
MOVEBT	A	005	1BD9	1198	1213
MVCTBN	A	005	1D20	1261	1269
NEG1	A	002	1B71	1160	1162
NOSEEK	A	003	1B4F	1145	1133
NOUNIT	A	026	0B09	0095	0049
ONE	A	002	1A53	1056	0143 0151 0154 0629 0744 0849 1288 1293 1300
ONEHED	A	034	188C	0921	0883* 0886* 0887* 0891
ONESEC	A	002	199A	1038	0354 0513
OTORZ	A	006	1D7A	1297	1292*
PASS	A	001	0B15	0106	0112 0114* 0161* 1029*
PRINT	C	001	021A	1328	0046 0082 0086 0122 0193 0205 0284 0297 0308 0325 0342 0361 0443 0456 0467 0484 0501 0521 0581 0593 0604 0621 0674 0696 0708 0718 0736 0798 0814 0828 0841 0888 0899 0944 0953 0973 1013 1019 1024 1168 1193 1203 1229
PRTEXT	A	004	1C34	1233	1181*
PRTHX	A	004	1C2C	1229	1216
PRTSNS	A	004	1BB1	1181	0283 0360 0442 0519 0578 0673 0695 0972
PRTSPN	A	004	0ACE	0082	0080
QCODE	A	001	1A6E	1072	
RDDFC	A	001	1A4E	1052	0184* 0185* 0189
READ	A	001	1EC0	1310	0244* 0245 0245* 0266 0293 0333 0403* 0404 0404* 0425 0452 0492 1249
READ1	A	002	1D00	1249	0338 0497
REMTDS	A	001	0B0C	0098	0034* 0063* 0138
RLDFCR	A	004	1B1B	1129	0073*
RMVDSK	A	005	1896	0923	0883
ROUTNO	A	001	1A82	1081	
RPFY	C	001	0A03	1177	1165
RSIO	A	003	1B1F	1130	0074* 1092* 1096*
RTN1	A	001	0C22	0175	0012
RTN1A	A	004	0C2E	0181	0213
RTN1A2	A	004	0C58	0193	0190
RTN1B	A	004	0C68	0200	0192
RTN1C	A	004	0C84	0213	0204
RTN2	A	001	0D3B	0225	0177
RTN2A	A	004	0D4F	0233	0353
RTN2B	A	004	0D6A	0241	0355
RTN2E1	A	004	0DA8	0262	0258
RTN2B2	A	004	0DF9	0292	0273
RTN2C	A	004	0DCE	0276	
RTN2C1	A	004	0DFP	0295	
RTN2C2	A	006	0E16	0305	0296
RTN2D	A	004	0E2F	0316	0307
RTN2E	A	004	0E4D	0325	0318
RTN2F	A	003	0E33	0317	0323
RTN2G	A	004	0E5D	0333	0322
RTN2H	A	003	0E61	0334	0340
RTN2J	A	004	0E7B	0342	0335
RTN2K	A	004	0E8B	0350	0290 0339
RTN2L	A	004	0E96	0353	0367
RTN2M	A	006	0E9A	0354	0351
RTN3	A	001	105B	0384	0227

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571512 571516 571513 571531 571540

PROG ID 0A08-3
PAGE 14

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129634
PAGE 14A

A083 READ DATA

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
RTN3A	A	004	106F	0392	0512
RTN3B	A	004	108A	0400	0514
RTN3B1	A	004	10C8	0421	0417
RTN3E2	A	004	1119	0451	0432
RTN3C	A	004	10EE	0435	
RTN3C1	A	004	111F	0454	
RTN3C2	A	006	1136	0464	0455
RTN3D	A	004	114F	0475	0466
RTN3E	A	004	116D	0484	0477
RTN3F	A	003	1153	0476	0482
RTN3G	A	004	117D	0492	0481
RTN3H	A	003	1181	0493	0499
RTN3J	A	004	119B	0501	0494
RTN3K	A	004	11AB	0509	0449 0498
RTN3L	A	004	11B6	0512	0527
RTN3M	A	006	11BA	0513	0510
RTN4	A	001	11E7	0533	0386
RTN4A	A	004	11FB	0541	0630
RTN4B	A	004	1207	0545	
RTN4B1	A	004	123B	0563	0559
RTN4B2	A	004	1282	0588	0575
RTN4C	A	004	1267	0578	
RTN4C1	A	004	1288	0591	
RTN4C2	A	004	129F	0601	0592
RTN4D	A	004	12B6	0612	0603
RTN4E	A	004	12D4	0621	0614
RTN4F	A	003	12BA	0613	0619
RTN4G	A	006	12E4	0629	0618
RTN5	A	001	139B	0640	0535
RTN5A	A	004	13AF	0648	0745
RTN5B	A	004	13BB	0651	
RTN5E1	A	004	13EF	0665	0662
RTN5E2	A	004	1419	0681	0671
RTN5E3	A	004	1453	0703	0692
RTN5C	A	004	1441	0695	
RTN5C1	A	004	1459	0706	
RTN5C2	A	004	1470	0716	0707
RTN5D	A	004	1487	0727	0717
RTN5E	A	004	14A5	0736	0729
RTN5F	A	003	148B	0728	0734
RTN5G	A	006	14B5	0744	0733
RTN6	A	001	1578	0758	0642
RTN6A	A	004	158C	0767	0851
RTN6B	A	004	1598	0771	
RTN6B1	A	004	15C8	0788	0784
RTN6E2	A	004	15E8	0798	0795
RTN6C	A	004	15F8	0807	0797
RTN6D	A	004	1614	0823	0812
RTN6E	A	004	1631	0838	0827
RTN6F	A	006	1648	0849	0840
RUNFIX	A	001	0B12	0104	0116 0140* 0149 0156*
RUNRMV	A	001	0B11	0103	0134* 0141 0146*
SAVSW	A	001	1B67	1155	1087* 1104 1122*
SEN	A	004	1D30	1265	1262*
SCRCH	A	001	1B63	1151	1136* 1137* 1141* 1142* 1148
SECMSG	A	033	0B61	0109	0085
SECTBL	A	001	182F	0909	0234 0393 0865 0875
SECTSW	C	001	020A	1325	0120 0132 0136
SEEKCE	A	004	18ED	0962	0183 0239 0398 0543 0650 0769 0850
SEEKER	A	004	195D	1010	0993 1001
SEEKEX	A	004	1921	0981	0962*
SEEKID	A	002	196E	1017	
SEEKTS	A	004	191D	0980	0970
SEKER1	A	042	1A0A	1043	1016
SEKER2	A	040	1A49	1045	1027
SEKEXT	A	004	1956	1003	0985*

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571512 571516 571513 571531 571540

PROG ID 0A08-3
PAGE 14A

A083 READ DATA

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SENSA	A	004	1C03	1215	1209
SENSB	A	003	1BFC	1212	1228
SENSC	A	004	1C17	1221	1218*
SENSE	A	004	1A54	1060	0075 0200 0807 0934 0986 1182 1219
SETA	A	005	0A6C	0055	0038
SETADA	A	005	1B22	1132	1124
SETADB	A	005	1B55	1148	1138 1143
SETADR	A	003	1AEA	1116	1098
SETB	A	005	0A78	0059	0042
SETBTH	A	003	0A8B	0065	0057 0062
SETDSK	A	004	0A0D	0025	0180 0232 0391 0540 0647 0765
SETERA	A	003	17AD	0866	0864*
SETEFR	A	004	179F	0863	0282 0441
SETERX	A	004	17B9	0869	0863*
SETEXT	A	004	0AEC	0093	0025*
SETFIX	A	004	1AAD	1095	
SETRMV	A	004	0BBC	0141	0118 0137 0139
SETSPN	A	006	0B74	0116	0113
SETSW	A	001	0B0D	0099	0026* 0050* 0163* 0179 0231 0390 0539 0646 0764 1030*
SETXR2	A	002	1A69	1066	1085* 1086 1108
SET203	A	004	0ABF	0078	
SHFEXT	A	004	1D42	1270	1253* 1254 1255 1257* 1267
SHFTBL	A	001	1D47	1274	1259
SHIFT	A	004	1D01	1253	0276 0435
SIO	A	003	1AC7	1102	0068* 1088* 1089* 1091* 1095*
SIXSIX	A	002	1B73	1161	
SKTSTA	A	004	1929	0986	0990
SNS	A	004	1A61	1063	0072* 1062*
SNSID	A	002	1BD8	1197	0247* 0262* 0357* 0406* 0421* 0516* 0549* 0563* 0654* 0665* 0681* 0788* 0964*
SNSXR2	A	002	1A6D	1068	0320* 0321 0337* 0338 0479* 0480 0496* 0497 0616* 0617 0731* 0732 0879* 0880 1060* 1061
SNS01	A	002	1A71	1074	
SNS23	A	002	1A73	1075	
SPNDLA	A	001	0B0F	0101	0055
SPNDLB	A	001	0B10	0102	0059
SPNMSG	A	024	0B40	0108	0056* 0060* 0089
STATPR	A	018	1DBF	1307	1199* 1206
STATUS	A	002	1A6B	1067	0079 0182* 0202 0810 0937 0940 0989 0992 1063* 1187 1201 1225
STATWD	A	018	1C66	1237	1190 1196
STAT01	C	001	0002	1318	0201 0808 0987 1183
STAT23	C	001	0003	1319	
STEP	A	001	0C21	0169	0144* 0152 0165*
STMASK	A	001	1CF7	1246	1191 1227
STPSNS	A	004	1BF2	1208	1184* 1202 1215 1217*
STRTIO	A	004	1A83	1085	0186 0254 0269 0413 0428 0555 0571 0658 0667 0688 0780 0791 0966 0994
SWITCH	C	001	0208	1324	0035 0039
TBLEND	A	002	1848	0911	0880
TBLH	A	002	182E	0908	0143* 0151* 0154* 0230* 0358 0389* 0517 0538* 0579 0629* 0645* 0744* 0763* 0849* 0867 0874 1261* 1266 0130
TBN	A	003	1D2A	1263	
TEST	C	001	0212	1326	
THALT	A	004	1B92	1173	
TIMOUT	A	021	1B80	1176	1166 1167* 1171
TIME	A	004	1D9F	1304	1294* 1301
TOEY	A	006	1D95	1302	1296*
TRACK#	A	001	0B0E	0100	0078* 0081* 0963 1000
TSTBT	A	004	1BE3	1201	1198* 1208
TSTDAT	A	004	189B	0930	0292 0451 0588 0703 0823
TSTEFR	A	003	1AE1	1109	0070* 1105
TSTEXT	A	004	0BFA	0158	0111* 0147
TSTFIX	A	004	0BAA	0136	0133
TSTRMV	A	004	0B9F	0132	0121
TSTSCN	A	003	1AE4	1110	0071*
TSTSEK	A	004	1925	0985	0980

A083 READ DATA

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
TSTSPN	A	004	0B62	0111	0181 0233 0392 0541 0648 0767
TSTSW	A	004	0B80	0120	0115 0131
TSTTP	A	004	1A9E	1091	
TWO	A	002	1998	1037	0933 1256 1290
TWOZR	A	002	0B14	0105	0051 0116 0185
TYBOT	A	006	1D74	1296	1291*
UDTPTR	A	002	0B0B	0096	0028 0031* 0032 0051* 0066*
UFIND1	A	004	0A24	0032	0029
UFIND2	A	004	0A20	0031	0045
UNITS	A	010	1DAD	1306	1299
UNPACK	C	001	021E	1329	1185 1223
UTAB	C	001	0232	0097	0030
WAIT	A	004	1ACA	1103	0069* 1163
WORK	A	001	1DC0	1308	0241* 0242 0242* 0251 0316 0400* 0401 0401* 0410 0475 0545* 0546 0546* 0547 0547* 0552 0567* 0569 0569* 0589 0612 0651* 0652 0652* 0653 0653* 0656 0684* 0685 0685* 0686 0686* 0704 0727 0771* 0772 0772* 0773 0773* 0777 0824 1039 1158 0321 048C 0617 0732 0932* 0937
WORK1	A	002	1996	1036	0940
WORK2	A	002	199C	1039	0940
WRTDPC	A	001	1A4A	1047	0237* 0248* 0249* 0257 0263* 0264* 0272 0277 0295 0305 0350 0396* 0407* 0408* 0416 0422* 0423* 0431 0436 0454 0464 0509 0542* 0550* 0558 0564* 0565* 0574 0591 0601 0649* 0655* 0661 0666* 0670 0682* 0691 0706 0716 0768* 0775* 0783 0789* 0790* 0794 0826 0838 0963* 0969
WRTER2	A	004	0EA4	0357	0260 0561 0664 0786
WRTER3	A	004	11C4	0516	0419
XR1	C	001	0001	1315	0030* 0031 0032* 0037 0041 0043 0044 0044* 0061 0065 0065* 0066 0251* 0252 0266* 0267 0358* 0359 0410* 0411 0425* 0426 0517* 0518 0552* 0553 0579* 0580 0656* 0657 0777* 0778 0867* 0868 0874* 0882 0887 1061* 1062 1064 1101* 1162* 1190* 1199 1212 1212* 1218 1221* 1254* 1260 1260* 1263 0033* 0055 0059 0067 0068 0069 0070 0071 0072 0073 0074 0229* 0230 0234* 0235 0236 0236 0316* 0317 0319 0319* 0320 0333* 0338 0336* 0337 0388* 0389 0393* 0394 0395 0395 0475* 0476 0478 0478* 0479 0492* 0493 0495 0495* 0496 0537* 0538 0612* 0613 0615 0615* 0616 0644* 0645 0727* 0728 0730 0730* 0731 0762* 0763 0865* 0866 0875* 0876 0878 0878* 0879 0931* 0932 1086* 1088 1089 1090 1097 1106 1107 1108* 1109 1110 1111 1116 1119 1120* 1121 1126 1127 1132 1135 1137 1140 1141 1145 1148 1149 1191* 1198 1211 1211* 1227* 1255* 1256* 1257 1259* 1261 1262 1268 1268*
XR2	C	001	0002	1316	1119* 1120 0117 0150 1297*
XR2WK	A	002	1B6F	1159	
ZROCTR	A	004	0BFE	0160	
ZROTO	A	006	1D86	1299	

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

A083 READ DATA

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+-Y:YH< E CBH ESD E C&HB>@20% (IE .B"HAB<HA TH 4 E%.(ED.B@HBF,0 @ %<+ HBB"H&AX6 - |H C:0A0830001
T+-Z5-K@8 EH.@/ P-\$ @YD>;A A4-D CCI HH<BG /YFF-% I| .CE0AB0%.E<B G SY EH- %||D .E|H RE4A0830002
T+-D0/1+H .DC3 2B4A8 E.2U E@20% <4-DC(D.B2- F% H E2 Y A,. 3- P>H H E9E Y AZ S B- 1T<A0830003
T+-. , A%* B- F2 OH*EN H@20%+- EE"HEAC1XB0*/OH E KD.Q*BG /YFF _ | QL 0BFD%QLCO F6E @L*A0830004
T+-%WOH* <GL44C U5*XT8UCHO;PEE<. E 1)N 8@PS8@PD B-% 2)P VO|I1DCS8>R 8XP T8@U N/4A0830005
T+_/5*-N5>R 8@P S8@XN14CD2; .K<L R2;PEE+-B1*-I5MC R1*GD<LA8@E 1>L NO=|I5_N 8@PS84C A@|- EJ*A0830006
T+->*(-. "L4 B1P 2 E*@0%N@Y*CE&D .D-%M@YFA@Y*+ Q BB?HEP<BG /,FD0% VY|, /OHSY|, /OH KOH* @*-A0830007
T+-?PB8 8A HH@/ D|@.DL-B -,2D % "0%<@YDD|@.DT4 B1G2-JM+ J->FV< @ E0/| SELO B1G 2/2H "Q<A0830008
T+-OK|E .D?HAG08 AFB8EM34ACBG2-EQ + J->FV<@BA_Z| .D%BG 'A-YC| .E-HABC0 B07 /0 | LDQA0830009
T+-1(CBD' OYCOHD QC@BG /Q E (+34 E07 -EY(OH*.QTO FW, /1T_|@ELCO AFVD.E<BGPY<A AZ +OH* 1Y-A0830010
T+-2HCET /01M0H* <E<BG /,F+037YDC /OHSYDC /1ZM T- DFW,2DAC /OHE1U< (+DAAOH*BHDAAOH* <.>< 09HA0830011
T+-3C2<N 5'XE9*X 09+I 1)XR5_XSE(\$ CO=LR6*PDE+\$H2)| EE+.E1).I5*) 8@T EE<|EE<|Y4'XE0*J 1<D 40UA0830012
T+-3=8@E 9+.I5*) OMCN5_N 1;-I8>| A5;(8%PC8*\$RE<X DE<LI1DCN5>(1@X V1MCE6)X06)POE(X E04% 9KHA0830013
T+-49E<\$09(PDE(P 084CS1;(0>/ OMC R1*GD<LA8@E 0*\$ M5<GN1DCU8%N14C A8%PC8*\$RE<XD6(\$ FE<Q HHOA0830014
T+-541-H DE?B // H(HQ.T4 B07 -EY (OH*.Q%HBFB=@ A; %E/QP| ELCO DE, /1T_|+;?03=G,8 ;?30 J: A0830015
T+-6? A="C|8-?/= "I AH\$6CO FU4< AZ <DE,B J7 (D:\$*B GFY<B AZHOH*(D<B GC EL /O:U|DH\$6CO FU4 N98A0830016
T+-7DC ELAAEO-D ;0C6AF67 /1DC E EKXBG<X /07+OH*) JZH0H*)M/5PC18 @E @*OH*PX@BGF*G /OH 4B6A0830017
T+-8VF-RQC1# /OH SYD.2/9. /1SSG@ ' "1Z(@YDEOH*BF%Q ,C4W-@@BG SH-E04 FU0E0?HAD<BG /, FE0@ @1 A0830018
T+-9-1EADOH*BHDA DO-H)0.7X |HAE+H B L&BFW4 (JZ_PRS 2-JL /0830H*BF%Q 9CBH-J*BG SH-J*H BG% 61HA0830019
T+-: \$?;* @-DM8-H A(HES&4AFW4) |H AE<BGCWG /OHE1UY 6OEAF0H*BHDAP|NC EL |HAB<BGE#7 /05 |C- 218A0830020
T+-#ODEYRWXBGCOY @D/?Q(EDQ./0 D @ DOH*\$%*BG /YFK/ |OH*BHD KOH*+V>| H1MCP6*PV2) \$U8UC E6) U *\$0A0830021

A083 READ DATA

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+-@J5_XSE+\$E6*W 5'XE8%PN84CA1>| E6MCD5%N14CAE(X E0*J 1<GTOMCC5_L M0)PDE+LS2)PGE<T E0*E 7Q<A0830022
T+-'<E+),E+.E0=| 06MCX9=-.E0=|06MC C5>LN8@PRE<XNE<| 05;|R5_(1%XE4@J 5)ST&+.T1)-P1*L W6*U 6B0A0830023
T+-=G8@N 1%XE4@J 9%GSE<GL8@PR1*J 0*\$T1) V 1@XV2)P GE<E 6*PA1DCD0;| AE<|0E(LM0)PD2<P A1D E/H/A0830024
T+-"BMDCS1*|T5_V 0>TT1MCO1UCC5_P T6)SL<S|1)|DE<| H0)PG1*J 0*\$T1) V 0MCO5*N 8%PC8*\$ RE(U 05%AO930025
T+-"1*GD8@TEE (- R1;PI5>LSE<PR6)\$ REUCO0@|U6)XE1DC W2<XL1MCD5%N14C AE+\$R2;|EE<LAB@E 0*Q :\$0A0830026
T+/_85(LA5*J 9+. I5*) 2<PA1DC06*P A1DCF2*PL1DCD5%P SE(PO84CC5_PT0*X NE<PX5@PC8@PDE<L A8@D 69@A0830027
T+/A3E<GF8@PRE<- I9>XN14CAE(XE0*J 1<GTOMCC5_LM0)P D < D;-B //H(H Q.T4 B07 -EY(OH* .Q%8 7- A0830028
T+/B> /-?? P,AQ OE32 FU0@-AAEOH* Q#L3XG,@<"/:=G,@ @ A="C|8-?/= "IAQ \$6CO FU4< AZ<L2, B J4 =.8A0830029
T+/CZOC6A?67 /1D C - EKXBGD<T /1C DOH*J1C1GF'-@ AZ (C ELAAEO-D;0CE AF67 /1DC E EKX8 GDJU 9S4A0830030
T+/DUOH*E%*BGGED EKXBGGNH)J-@;|D |G<BGE9" /1>10H* BF-RNC1# /OHSYD- 2/9. /1SSG@ ' "1Z (@YR *QQA0830031
T+/E-D<BG /,PHO' IYD| /OHSYD<(AZ <DE,2-JC /OHE1U< |1EADOH*BHDAD0-H)0.7X |HAE+HB LE BFW4 Q8QA0830032
T+/FCEDE\$JWO@YD MOH*JM@BG /,F+E= BYDP /OHSYDPB /# ?;* @-DM8-HA(H ES&4AFW4) |HAE<B GDQD M1*A0830033
T+/GN0H*BF%RHDEW -J%BG SH-JT7*FU3 2 ET /1; '0H*\$S08 DEYRWXBGDHY@E/? Q(EDQ./0 D @POH* \$%* 2 HA0830034
T+/H6/OHEAUYS&CB G SH-E%BGD\$QD A+ \$0-HQKCEBFB8' % (OHDHC<BGB6H@ AZ <OH*Q#LUEG#@<"/= =G@# ' QA0830035
T+/I.C|@;?1# |AH \$6COAFU7B J7 (D \$\$*BGFY<E AZHOH* K+@BGDT- /O:U|DH \$6COAFU4@ AZ<| -?00 \$C*A0830036
T+/HF"/=G#@<"1: "G%< /1DC E EKX8 GDY. /1X0H*\$%LB APB8* A<9A<BG /Y POJ(F0H*BHDAP0H* QW1@ -. A0830037
T+/.AOC7"FU72-JC /OHE1S%|KEACOH* PHDAC|EEEL|HAD<B G /,FMA+EYDT /OH SYDTB /7 ?J @-D M8-H EZ A0830038
T+/. @ L&BFW4 (JZ _FRS2-JL /1H:OH* BF%RHDEW-J%BG SH -J-8APB8EM@BGD-? T2<N 5'XE9*X09+I 1)U CH4A0830039
T+/<76)@RUCW1)X EE(-R1;.E5;(0*\$ T1) V 1(\$15*) OMC R1*GD<LA8@E 0*\$ M5<GN1DCU8%N14C H1D% KIDAG830040
T+/(2E+),E+.E0=(.E|A MDC12<PA1DA EE+.E0=|06MCB:+| EE(\$FE<|05;|R5_(1%XE4@J 5)ST&+. T1)* E: A0830041
T+/_5@PDE<|06)X E0=|L:DCA1>|E6MC AE|I 8%PC8*\$RE(X E0*J 1<GTOM EPT B //I(HQ.T4 B07 -EY) #DA0930042
T+/_YC*BGB6H@PAZ <OH*Q#L3XG#@<"1= =G#@<"/:=G,@@FA? Q| DEL*HAG* 4 J _OH*E-OH FU, /1| ?OH* */*A0830043

A083 READ DATA

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+/GTD=? /0:U| U \$6C1*FU3 /1DC ... EK%BGEAX /1EGOH* \$%*BG /YF (2@OH* BHD I|DY\$6COAFU4 @ AD R/OA0830044

A083 READ DATA

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+/U50H*E-0 PU, /1U)OH*RB@BGF*G /OH'EATM<?<BG SH -B*BGFKP /0 (- RO*BGFV@B+A EE@ EYKU J/EA0830066



A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write ID test, including routines for setting switches, testing spindles, and writing data.

A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write ID test, including routines for setting spindles, testing units, and writing data.

A094 DISK WRITE ID TEST

EPR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OB93	C0 87 0222	130	B	HALT	TO DCP HALT
OB97	A009	CB98 131	DC	XL2'A009'	HALT ID
		132			
OB99	C0 87 1705	133 RTN1A	B	TSTSEK	TO TEST FOR GOOD SEEK
		134			
OB9D	3C 00 184C	135	MVI	WORK,0	ZERO THE WRITE AREA
OB11	3C 17 178B	136	MVI	WRTDFC+3,23	SET TO WRITE ONE TRACK
OB15	3C 9C 1963	137	MVI	SNSID,X'9C'	PUT MESSAGE ID IN SENSE PRINT
OB19	3C F0 0CE1	138	MVI	ERR1A,C'0'	SET HEAD 0 IN MESSAGE
OB1D	C0 87 17A8	139	B	STRTIO	TO I/O SUBROUTINE
OB21	02	OB21 140	DC	XL1'02'	FUNCTION CODE (WRITE)
OB22	01	OB22 141	DC	XL1'01'	CONTROL CODE (ID)
OB23	1788	OB23 142	DC	AL2(WRTDFC)	CONTROL FIELD ADDRESS
OB25	C0 87 0BCF	143	B	RTN1B	GOOD RETURN, (EXPECTED)
OB29	C0 87 0BBD	144	B	**4	
OB2D	C0 87 193C	145	B	PRTSNS	ERROR RETURN, (NOT EXPECTED)
OB2E	C0 87 021A	146	B	PRINT	TO PRINT ROUTINE ERROR
OB35	06	OB35 147	DC	XL1'06'	FLAGS
OB36	40	OB36 148	DC	IL1'64'	LENGTH
OB37	0CE1	OB37 149	DC	AL2(ERR1A)	ADDRESS OF LAST PRINT CHARACTER
OB39	C0 87 0222	150	B	HALT	TO DCP HALT
OB3D	A09C	OB3D 151	DC	XL2'A09C'	HALT ID
		152			
OB3F	3D FF 178B	153 RTN1B	CLI	WRTDFC+3,X'FF'	TEST SECTOR COUNTER FOR STEPPING.
OB43	F2 81 10	154	JE	RTN1C	PROCEED IF OK.
OB46	C0 87 021A	155	B	PRINT	TO PRINT SECTOR COUNTER NOT STEPPED
OB4A	C6	OB4A 156	DC	XL1'C6'	FLAGS
OB4B	2B	OB4B 157	DC	IL1'43'	LENGTH
OB4C	0E2C	OB4C 158	DC	AL2(ERR02B)	MESSAGE ADDRESS
OB4E	A016	OB4E 159	DC	XL2'A016'	MESSAGE IDENTIFICATION
OB50	C0 87 0222	160	B	HALT	TO DCP HALT
OB54	A016	OB54 161	DC	XL2'A016'	HALT ID
		162			
OB56	C0 87 178E	163 RTN1C	B	SENSE	TO SENSE DEVICE STATUS
OB5A	04	OB5A 164	DC	XL1'04'	GET THE DATA CONTROL ADDRESS
OB5B	0D 01 17A5 18A3	165	CLC	STATUS(2),DPDR	CHECK DATA ADDRESS AFTER
		166 *			WRITE IS COMPLETED, (EXPECT NO CHG.)
OB5F	F2 81 10	167	JE	RTN1D	PROCEED IF OK
OB64	C0 87 021A	168	B	PRINT	TO PRINT ERROR
OB68	C6	OB68 169	DC	XL1'C6'	FLAGS
OB69	25	OB69 170	DC	IL1'37'	LENGTH
OB6A	0E82	OB6A 171	DC	AL2(ERR02D)	MESSAGE ADDRESS
OB6C	A03E	OB6C 172	DC	XL2'A03E'	MESSAGE IDENTIFICATION
OB6E	C0 87 0222	173	B	HALT	TO DCP ERROR HALT
OC02	A03E	OC02 174	DC	XL2'A03E'	HALT ID
		175			
OC04	38 5C 178A	176 RTN1D	TBN	WRTDFC+2,X'5C'	TEST SECTOR ADDRESS FOR LAST SECTOR
OC08	F2 10 10	177	JT	RTN1E	JUMP IF IT STEPPED CORRECTLY
OC0B	C0 87 021A	178	B	PRINT	TO PRINT SECTOR ADDRESS INCORRECT
OC0F	C6	OC0F 179	DC	XL1'C6'	FLAGS
OC10	31	OC10 180	DC	IL1'49'	LENGTH
OC11	0E5D	OC11 181	DC	AL2(ERR02C)	MESSAGE ADDRESS
OC13	A026	OC13 182	DC	XL2'A026'	MESSAGE IDENTIFICATION
OC15	C0 87 0222	183	B	HALT	TO DCP HALT
OC19	A026	OC19 184	DC	XL2'A026'	HALT ID
		185			
OC1B	3C 00 178A	186 RTN1E	MVI	WRTDFC+2,0	SET TO USE HEAD 0
OC1F	3C 00 178B	187 RTN1F	MVI	WRTDFC+3,0	SET TO VERIFY ONE SECTOR
OC23	C0 87 17A8	188	B	STRTIO	TO VERIFY ONE SECTOR
OC27	01	OC27 189	DC	XL1'01'	FUNCTION CODE, (READ)
OC28	03	OC28 190	DC	XL1'03'	CONTROL CODE, (VERIFY)
OC29	1788	OC29 191	DC	AL2(WRTDFC)	CONTROL FIELD ADDRESS
OC2B	C0 87 0C5B	192	B	RTN1G	GOOD RETURN
OC2F	C0 87 0C33	193	B	**4	
OC33	3C 22 1963	194	MVI	SNSID,X'22'	PUT ID IN SENSE PRINTOUT
OC37	C0 87 193C	195	B	PRTSNS	TO PRINT STATUS ERRORS
OC3B	3C F0 0EC5	196	MVI	ERR02E-10,C'0'	SET HEAD NO. IN MESSAGE
OC3F	C0 87 1A8A	197	B	SHIFT	TO SHIFT SECTOR NUMBER FOR CONVERT

A094 DISK WRITE ID TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OC43	1788	OC44 198	DC	AL2(WRTDFC)	CONTROL FIELD ADDRESS
OC45	C0 87 1ADE	199	B	CVD	TO CONVERT SECTOR NO.
OC49	1ACP	OC4A 200	DC	AL2(CYLNO)	SOURCE
OC4B	0ECP	OC4C 201	DC	AL2(ERR02E)	DESTINATION
OC4D	C0 87 021A	202	B	PRINT	TO PRINT ERROR ON VERIFY
OC51	06	OC51 203	DC	XL1'06'	FLAGS
OC52	4D	OC52 204	DC	IL1'77'	LENGTH
OC53	0ECP	OC54 205	DC	AL2(ERR02E)	MESSAGE ADDRESS
OC55	C0 87 0222	206	B	HALT	TO DCP ERROR HALT
OC59	A022	OC5A 207	DC	XL2'A022'	HALT ID
		208			
OC5B	3D 5C 178A	209 RTN1G	CLI	WRTDFC+2,X'5C'	TEST FOR LAST SECTOR VERIFIED
OC5F	C0 81 0216	210	BE	LINK	TO DCP IF FINISHED
OC63	0E 00 178A 175D	211	ALC	WRTDFC+2(1),ONESEC	NOT DONE, STEP TO NEXT SECTOR
OC69	C0 87 0C1F	212	B	RTN1F	TO VERIFY THE NEXT SECTOR
OC6D	E3C8C540D7D9C5E5	OC9B 213	DC	CL47'THE PREVIOUS ERRORS OCCURRED WHILE SEEKING THE	
OC75	C9D6E4E240C5D9D9	213			
OC7D	D6E9E240D6C3C3E4	213			
OC85	D9D9C5C440E6E8C9	213			
OC8D	D3C540E2C5C5D2C9	213			
OC95	E5C740E3C8C540	213			
OC9C	C3C540C3E8D3	OCA1 214	ERROR9 DC	CL06'CE CYL'	
OCA2	E3C8C540D7D9C5E5	0CCC 215	DC	CL43'THE PREVIOUS ERRORS OCCURRED WHILE DOING A	
OCAA	C9L6E4E240C5D9D9	215			
OCB2	D6D9E240D6C3C3E4	215			
OCBA	D9E9C5C440E6E8C9	215			
OCCE	D3C540C4D6C9D5C7	215			
OCCE	40C140	215			
OCDD	E6E9C9E3C540C9C4	OC21 216	ERR1A DC	CL21'WRITE ID USING HEAD X'	
OCDE	40E4E2C9D5C740C8	216			
OCED	C5C1C440E7	216			

A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for routine NO. 02, including instructions like DC, B, BT, MVI, and comments such as 'ROUTINE NO. 02, CHECK WRITE ID FUNCTION USING HEAD 1'.

A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for routine NO. 02, including instructions like DC, B, BT, MVI, and comments such as 'MESSAGE IDENTIFICATION TO DCP HALT'.

A094 DISK WRITE ID TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			331 *		ROUTINE NO. 03, CHECK WRITE ID FUNCTION
			332 *		USING HEAD 2
			333		
OED0	03	OED0	334	RTN3	DC XL1'03'
OED1	00	OED1	335		DC XL1'00'
OED2	0FF8	OED3	336		DC AL2(RTN4)
			337		
OED4	3D 00 0B12		338		CLI SETSW,0
OED8	C0 81 040D		339		BE SETDSK
OEDC	3D FF 0B11		340		CLI REMVDS,X'FF'
OEE0	C0 81 0216		341		BE LINK
OEE4	38 02 020A		342		TBM SECTSW,X'02'
OEE8	C0 10 0216		343		BT LINK
OEEC	0C 00 1789 0B13		344		HVC WRTDPC+1(1),TRACK0
OEF2	3C 00 178A		345		HVI WRTDPC+2,0
OEF6	3C 08 189F		346		HVI DISKTP,X'08'
OEF8	3C 09 1963		347		HVI SNSID,09
			348		
OEFE	C0 87 17A8		349		B STRTIO
OPC2	00	OP02	350		DC XL1'0'
OP03	00	OP03	351		DC XL1'0'
OP04	1788	OP05	352		DC AL2(WRTDPC)
OP06	C0 87 0F20		353		B RTN3A
OP0A	C0 87 0F0E		354		B **4
OP0E	C0 87 193C		355		B PRTSNS
OP12	C0 87 021A		356		B PRINT
OP16	06	OP16	357		DC XL1'06'
OP17	35	OP17	358		DC IL1'53'
OP18	0CA1	OP19	359		DC AL2(ERROR9)
OP1A	C0 87 0222		360		B HALT
OP1E	AC09	OP1F	361		DC XL2'A009'
			362		
OP20	C0 87 1705		363	RTN3A	B TSTSEK
			364		
OP24	3C 00 184C		365		HVI WORK,0
OP28	3C 9C 1963		366		HVI SNSID,X'9C'
OP2C	3C 17 1788		367		HVI WRTDPC+3,23
OP30	3C F2 0CE1		368		HVI ERR1A,C'2'
OP34	C0 87 17A8		369		B STRTIO
OP38	02	OP38	370		DC XL1'02'
OP39	01	OP39	371		DC XL1'01'
OP3A	1788	OP3B	372		DC AL2(WRTDPC)
OP3C	C0 87 0F56		373		B RTN3B
OP40	C0 87 0F44		374		B **4
			375		
OP44	C0 87 193C		376		B PRTSNS
OP48	C0 87 021A		377		B PRINT
OP4C	06	OP4C	378		DC XL1'06'
OP4D	40	OP4D	379		DC IL1'64'
OP4E	0CE1	OP4F	380		DC AL2(ERR1A)
OP50	C0 87 0222		381		B HALT
OP54	A09C	OP55	382		DC XL2'A09C'
			383		
OP56	3D FF 178B		384	RTN3B	CLI WRTDPC+3,X'FF'
OP5A	F2 81 10		385		JE RTN3C
OP5D	C0 87 021A		386		B PRINT
OP61	C6	OP61	387		DC XL1'C6'
OP62	2B	OP62	388		DC IL1'43'
OP63	0E2C	OP64	389		DC AL2(ERROR2B)
OP65	A016	OP66	390		DC XL2'A016'
OP67	C0 87 0222		391		B HALT
OP6E	A016	OP6C	392		DC XL2'A016'
			393		
OP6D	C0 87 178E		394	RTN3C	B SENSE
OP71	04	OP71	395		DC XL1'04'
OP72	0D 01 17A5 18A3		396		CLC STATUS(2),DPER
			397 *		
OP78	F2 81 10		398		JE RTN3D

A094 DISK WRITE ID TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			399		B PRINT
OP7B	C0 87 021A		400		DC XL1'C6'
OP7F	C6	OP7F	401		DC XL1'37'
OP80	25	OP80	402		DC AL2(ERROR2D)
OP81	0E82	OP82	403		DC XL2'A03E'
OP83	A03E	OP84	404		B HALT
OP85	C0 87 0222		405		DC XL2'A03E'
OP89	A03E	OP8A	406		
			407	RTN3D	TBM WRTDPC+2,X'5C'
OP8B	38 5C 178A		408		JT RTN3E
OP8F	F2 10 10		409		B PRINT
OP92	C0 87 021A		410		DC XL1'C6'
OP96	C6	OP96	411		DC IL1'49'
OP97	31	OP97	412		DC AL2(ERROR2C)
OP98	0E5D	OP99	413		DC XL2'A026'
OP9A	A026	OP9B	414		B HALT
OP9C	C0 87 0222		415		DC XL2'A026'
OPA0	A026	OPA1	416		
			417	RTN3E	HVI WRTDPC+2,0
OPA2	3C 00 178A		418	RTN3F	HVI WRTDPC+3,0
OPA6	3C 00 178B		419		B STRTIO
OPA8	C0 87 17A8		420		DC XL1'01'
OPAE	01	OPAE	421		DC XL1'03'
OPAF	01	OPAF	422		DC AL2(WRTDPC)
OPB0	178A	OPB1	423		B RTN3C
OPB2	C0 87 0FE6		424		B **4
OPB6	C0 87 0FBA		425		HVI SNSID,X'22'
OPFA	3C 22 1963		426		B PRTSNS
OPBE	C0 87 193C		427		HVI ERRO2E-10,C'2'
OPC2	3C F2 0EC5		428		B SHIFT
OPC6	C0 87 1A8A		429		DC AL2(WRTDPC)
OPCA	1788	OPCB	430		B CVD
OPCC	C0 87 1ADE		431		DC AL2(CYLNO)
OPD0	1ACF	OPD1	432		DC AL2(ERROR2E)
OPD2	0ECF	OPD3	433		HVI ERRO2E-2,C'
OPD4	3C 40 0ECD		434		B PRINT
OPDA	C0 87 021A		435		DC XL1'06'
OPDC	06	OPDC	436		DC IL1'77'
OPDD	4D	OPDD	437		DC AL2(ERROR2E)
OPDE	0ECF	OPDF	438		B HALT
OPEO	C0 87 0222		439		DC XL2'A022'
OPEA	A022	OPE5	440		
			441	RTN3G	CLI WRTDPC+2,X'5C'
OPE6	3D 5C 178A		442		BE LINK
OPEA	C0 81 0216		443		ALC WRTDPC+2(1),ONESEC
OPFE	0E C0 178A 175D		444		B RTN3F
OPF4	C0 87 0FA6				

A094 DISK WRITE ID TEST

A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routine 04, including instructions like SETSW, SETDISK, LINK, and RTN4.

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routine 04, including instructions like PRINT, DC, B, and RTN4.

A090 DISK WRITE ID TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

561 * ROUTINE NO. 05, CHECK THE ABILITY TO SELECT
562 * BOTH THE UPPER AND LOWER DISK
563
1120 05 1120 564 RTN5 DC XL1'05' ROUTINE NUMBER
1121 00 1121 565 DC XL1'00' ROUTINE FLAGS
1122 1336 1123 566 DC AL2(RTN6) ADDRESS OF NEXT ROUTINE
567
1124 3D 00 0B12 568 CLI SETSW,0 HAVE PARAMETERS BEEN ENTERED?
1128 CC 81 0A0D 569 BE SETDSK BRANCH IF NO
112C 3D FF 0B11 570 CLI RENVDS,X'FF' TEST FOR RUN REMOVABLE ONLY
1130 C0 81 0216 571 BE LINK EXIT IF YES
1134 38 04 020A 572 TBN SECTSW,X'04' TEST SSW 15
1138 C0 10 0216 573 BT LINK BRANCH IF ON, BYPASS ROUTINE
113C 38 02 020A 574 TBN SECTSW,X'02' TEST SSW 16
1140 C0 10 0216 575 BT LINK BRANCH IF ON, BYPASS ROUTINE
1144 3C 00 189F 576 HVI DISKTP,0 SET FOR REMOVABLE DISK
1148 0C 00 1789 0B13 577 HVC WRTDPC+1(1),TRACK# SET CYLINDER ADDRESS TO CE TRACK
114E 3C 00 178A 578 HVI WRTDPC+2,0 SET FOR HEAD 0, SECTOR 0
1152 3C 09 1963 579 HVI SNSID,09 INSERT ID IN PRINT
580
1156 C0 87 17A8 581 B STRTIO TO SEEK CE TRACK
115A 00 115A 582 DC XL1'0' FUNCTION CODE (CONTROL)
115B 00 115B 583 DC XL1'0' CONTROL CODE (SEEK)
115C 1788 115D 584 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
115E C0 87 1178 585 B RTN5A GOOD RETURN
1162 C0 87 1166 586 B **4
1166 C0 87 193C 587 B PRTSNS TO DECODE ERROR
116A C0 87 021A 588 B PRINT TO PRINT
116E 06 116E 589 DC XL1'06' TO PRINT 3RD LINE
116F 35 116F 590 DC IL1'53' FLAGS
1170 OCA1 1171 591 DC AL2(ERROR9) MESSAGE ADDRESS
1172 C0 87 0222 592 B HALT TO DCP HALT
1176 A009 1177 593 DC XL2'A009' HALT ID
594
1178 C0 87 1705 595 RTN5A B TSTSEK TO CHECK FOR A GOOD SEEK
596
117C 3C 09 1C4B 597 HVI WORK+255,C'F' SET WRITE
1180 0C FE 1C4A 1C4B 598 HVC WORK+254(255),WORK+255 FIELD
1186 C2 02 1B4C 599 LA WORK,IR2 SET DATA ADDRESS
118A 34 02 18A3 600 ST DFDR,IR2 IN DATA CONTROL FIELD
601
118E 3C 12 1963 602 HVI SNSID,X'12' PUT ID IN PRINT
1192 3C 00 178B 603 HVI WRTDPC+3,0 SET TO WRITE ONE SECTOR
1196 C0 87 17A8 604 B STRTIO TO I/O SUBROUTINE
119A 02 119A 605 DC XL1'02' FUNCTION CODE (WRITE)
119B 00 119B 606 DC XL1'00' CONTROL CODE (DATA)
119C 1788 119D 607 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
119E C0 87 1188 608 B RTN5B GOOD RETURN
11A2 C0 87 11A6 609 B **4
610
11A6 C0 87 193C 611 B PRTSNS TO PRINT SENSE INFO.
11AA C0 87 021A 612 B PRINT TO PRINT 3RD LINE
11AE 06 11AE 613 DC XL1'06' FLAGS
11AF 41 11AF 614 DC IL1'65' LENGTH
11B0 12F3 11B1 615 DC AL2(ERROR5A) MESSAGE ADDRESS
11E2 C0 87 0222 616 B HALT TO DCP HALT
11B6 A012 11B7 617 DC XL2'A012' HALT ID
618
11E8 3C 08 189F 619 RTN5B HVI DISKTP,X'08' SET FOR FIXED DISK
11BC 0C 00 1789 0B13 620 HVC WRTDPC+1(1),TRACK# SET CYLINDER ADDRESS TO CE TRACK
11C2 3C 00 178A 621 HVI WRTDPC+2,0 SET FOR HEAD 0, SECTOR 0
11C6 3C 09 1963 622 HVI SNSID,09 INSERT ID IN PRINT
623
11CA C0 87 17A8 624 B STRTIO TO SEEK CE TRACK, FIXED DISK
11CE 00 11CE 625 DC XL1'0' FUNCTION CODE (CONTROL)
11CF 00 11CF 626 DC XL1'0' CONTROL CODE (SEEK)
11D0 1788 11D1 627 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
11D2 C0 87 11E2 628 B RTN5C GOOD RETURN

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A090 DISK WRITE ID TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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11D6 C0 87 11DA 629 B **4
11DA C0 87 193C 630 B PRTSNS TO DECODE ERROR
11DE C0 87 021A 631 B PRINT TO PRINT
11E2 06 11E2 632 DC XL1'06' FLAGS
11E3 34 11E3 633 DC IL1'52' LENGTH
11F4 OCA1 11E5 634 DC AL2(ERROR9) MESSAGE ADDRESS
11E6 C0 87 0222 635 B HALT TO DCP HALT
11EA A009 11E8 636 DC XL2'A009' HALT ID
637
11FC C0 87 1705 638 RTN5C B TSTSEK TO CHECK FOR A GOOD SEEK
639
11FD 3C C6 1C4B 640 HVI WORK+255,C'F' SET WRITE
11F4 0C FE 1C4A 1C4B 641 HVC WORK+254(255),WORK+255 FIELD
642
11FA 3C 12 1963 643 HVI SNSID,X'12' PUT ID IN PRINT
11FE 3C 00 178B 644 HVI WRTDPC+3,0 SET TO WRITE ONE SECTOR
1202 C0 87 17A8 645 B STRTIO TO I/O SUBROUTINE
1206 02 1206 646 DC XL1'02' FUNCTION CODE (WRITE)
1207 00 1207 647 DC XL1'00' CONTROL CODE (DATA)
1208 1788 1209 648 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
120A C0 87 1224 649 B RTN5D GOOD RETURN
120E C0 87 1212 650 B **4
1212 C0 87 193C 651 B PRTSNS TO PRINT SENSE INFO.
1216 C0 87 021A 652 B PRINT TO PRINT 3RD LINE
121A 06 121A 653 DC XL1'06' FLAGS
121B 41 121B 654 DC IL1'65' LENGTH
121C 12F3 121D 655 DC AL2(ERROR5A) MESSAGE ADDRESS
121E C0 87 0222 656 B HALT TO DCP HALT
1222 A012 1223 657 DC XL2'A012' HALT ID
658
1224 3C 00 189F 659 RTN5D HVI DISKTP,0 SET FOR REMOVABLE DISK
1228 0C 00 1789 0B13 660 HVC WRTDPC+1(1),TRACK# SET CYLINDER ADDRESS TO CE TRACK
122E 3C 00 178A 661 HVI WRTDPC+2,0 SET FOR HEAD 0, SECTOR 0
1232 3C 09 1963 662 HVI SNSID,09 INSERT ID IN PRINT
663
1236 C0 87 17A8 664 B STRTIO TO SEEK CE TRACK
123A 00 123A 665 DC XL1'0' FUNCTION CODE (CONTROL)
123B 00 123B 666 DC XL1'0' CONTROL CODE (SEEK)
123C 1788 123D 667 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
123E C0 87 1258 668 B RTN5E GOOD RETURN
1242 C0 87 1246 669 B **4
1246 C0 87 193C 670 B PRTSNS TO DECODE ERROR
124A C0 87 021A 671 B PRINT TO PRINT
124F 06 124E 672 DC XL1'06' FLAGS
124F 35 124F 673 DC IL1'53' LENGTH
1250 OCA1 1251 674 DC AL2(ERROR9) MESSAGE ADDRESS
1252 C0 87 0222 675 B HALT TO DCP HALT
1256 A009 1257 676 DC XL2'A009' HALT ID
677
1258 C0 87 1705 678 RTN5E B TSTSEK TO CHECK FOR A GOOD SEEK
679
125C 3C 00 1D4B 680 HVI WORK+511,0 CLEAR READ
1260 0C FE 1D4A 1D4B 681 HVC WORK+510(255),WORK+511 AREA
1266 C2 02 1C4C 682 LA WORK+256,IR2 SET DATA ADDRESS
126A 34 02 18A3 683 ST DFDR,IR2 IN DATA CONTROL FIELD
684
126E 3C 42 1963 685 HVI SNSID,X'42' PUT ID IN PRINT
1272 3C 00 178B 686 HVI WRTDPC+3,0 SET TO READ ONE SECTOR
1276 C0 87 17A8 687 B STRTIO TO I/O SUBROUTINE
127A 01 127A 688 DC XL1'01' FUNCTION CODE (READ)
127B 00 127B 689 DC XL1'00' CONTROL CODE (DATA)
127C 1788 127D 690 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
127E C0 87 1298 691 B RTN5F GOOD RETURN
1282 C0 87 1286 692 B **4
1286 C0 87 193C 693 B PRTSNS TO PRINT SENSE INFO.
128A C0 87 021A 694 B PRINT TO PRINT 3RD LINE
128E 06 128E 695 DC XL1'06' FLAGS
128F 41 128F 696 DC IL1'65' LENGTH

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A094 DISK WRITE ID TEST

ERR LOC	OBJCT CODE	ADDR	STMT	SOURCE	STATEMENT
1290	12F3	1291	697	DC	AL2(ERRO5A)
1292	C0 87 0222		698	B	HALT
1296	A042	1297	699	DC	XL2'A042'
			700		
1298	3D D9 1D48	701	RTN5F	CLI	WORK+511,C'E'
129C	F2 81 10	702		JE	RTN5G
129F	C0 87 021A	703		B	PRINT
12A3	C6	12A3	704	DC	XL1'C6'
12A4	42	12A4	705	DC	IL1'66'
12A5	1335	12A6	706	DC	AL2(ERRO5B)
12A7	A094	12A8	707	DC	XL2'A094'
12A9	C0 87 0222		708	B	HALT
12AD	A094	12AE	709	DC	XL2'A094'
12AF	C0 87 0216		710	RTN5G	B
12B3	D9C5C1C440D6D940	12B6	711	DC	CLS2'READ OR WRITE DATA ERROR. CHECK HALT ID. 42 IS READ,'
12B8	E6D9C9E3C540C4C4		711		
12C3	E3C140C5B9D9D6D9		711		
12CB	4B40C3C8C5C3D240		711		
12D3	C8C1D3E340C9C44B		711		
12DB	40F4F240C9E240D9		711		
12E3	C5C1C46B		711		
12E7	40F1F240C9E240E6	12F3	712	ERRO5A DC	CL13' 12 IS WRITE.'
12EF	D9C9E3C54B		712		
12F4	C5D9D9D6D940E6C8	1324	713	DC	CL49' ERROR WHEN ATTEMPTING TO SELECT EITHER THE FIXED '
12FC	C5E540C1E3E3C5D4		713		
1304	D7E3C9D5C740E3D6		713		
130C	40E2C5D3C5C3E340		713		
1314	C5C9E3C8C5D940E3		713		
131C	C8C540C6C9E7C5C4		713		
1324	40		713		
1325	D6E940D9C5D4D6E5	1335	714	ERRO5B DC	CL17'OR REMOVABLE DISK'
132D	C1C2D3C540C4C9E2		714		
1335	D2		714		

A094 DISK WRITE ID TEST

ERR LOC	OBJCT CODE	ADDR	STMT	SOURCE	STATEMENT
			716 *		ROUTINE NO. 06, TEST OF LOGICAL END OF CYLINDER
			717		
1336	06	1336	718	RTN6 DC	XL1'06'
1337	00	1337	719	DC	XL1'00'
1338	145F	1339	720	DC	AL2(RTN7)
			721		
133A	3D 00 0B12		722	CLI	SETSW,0
133E	C0 81 0A0D		723	BE	SETDSW
1342	38 04 020A		724	TBN	SECTSW,X'04'
1346	C0 10 0216		725	BT	LINK
134A	3C 09 1963		726	HVI	SNPID,09
134E	0C 00 1789	OB13	727	HVC	WRTDFC+1(1),TRACK#
1354	3C 00 178A		728	HVI	WRTDFC+2,0
1358	3C 00 189F		729	HVI	DISKTP,0
135C	C0 87 17A8		730	B	STRTIO
1360	00	1360	731	DC	XL1'00'
1361	00	1361	732	DC	XL1'00'
1362	1788	1363	733	DC	AL2(WRTDFC)
1364	C0 87 137E		734	B	RTN6A
1368	C0 87 136C		735	B	**4
136C	C0 87 193C		736	B	PRTSWS
1370	C0 87 021A		737	B	PRINT
1374	06	1374	738	DC	XL1'06'
1375	35	1375	739	DC	IL1'53'
1376	0CA1	1377	740	DC	AL2(ERRO59)
1378	C0 87 0222		741	B	HALT
137C	A009	137D	742	DC	XL2'A009'
			743		
137E	C0 87 1705		744	RTN6A B	TSTSEK
			745		
1382	3C 00 184C		746	HVI	WORK,0
1386	3C 80 178A		747	HVI	WRTDFC+2,X'80'
138A	3C 17 178B		748	HVI	WRTDFC+3,23
138E	3C 9C 1963		749	HVI	SNPID,X'9C'
1392	3C F0 0CE1		750	HVI	ERR1A,C'0'
1396	C0 87 17A8		751	B	STRTIO
139A	02	139A	752	DC	XL1'02'
139F	01	139B	753	DC	XL1'01'
139C	1788	139D	754	DC	AL2(WRTDFC)
139E	C0 87 138B		755	B	RTN6B
13A2	C0 87 13A6		756	B	**4
			757		
13A6	C0 87 193C		758	B	PRTSWS
13AA	C0 87 021A		759	B	PRINT
13AE	06	13AE	760	DC	XL1'06'
13AF	40	13AF	761	DC	IL1'64'
13B0	0CE1	13B1	762	DC	AL2(ERR1A)
13B2	C0 87 0222		763	B	HALT
13B6	A09C	13B7	764	DC	XL2'A09C'
			765		
13B8	3C 80 178A		766	RTN6B HVI	WRTDFC+2,X'80'
13BC	3C 18 178B		767	HVI	WRTDFC+3,24
13C0	C0 87 17A8		768	B	STRTIO
13C4	01	13C4	769	DC	XL1'01'
13C5	03	13C5	770	DC	XL1'03'
13C6	1788	13C7	771	DC	AL2(WRTDFC)
13C8	C0 87 138F		772	B	RTN6C
13CC	C0 87 13D0		773	B	**4
13D0	C0 87 178F		774	B	SENSE
13D4	02	13D4	775	DC	XL1'02'
13D5	38 20 17A5		776	TBN	STATUS,X'20'
13D9	F2 10 23		777	BT	RTN6D
13DC	C0 87 021A		778	B	PRINT
13E0	C6	13E0	779	DC	XL1'C6'
13E1	53	13E1	780	DC	IL1'83'
13E2	14BD	13E3	781	DC	AL2(ERRO6A)
13E4	A02C	13E5	782	DC	XL2'A02C'
13E6	C0 87 0222		783	B	HALT

A094 DISK WRITE ID TEST

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
13EA	A02C		13EB	784	DC	XL2'A02C'
13EC	F2 87 10			785	J	RTN6D
				786		
13FF	C0 87 021A			787	RTN6C B	PRINT
13F3	C6		13F3	788	DC	XL1'C6'
13F4	49		13F4	789	DC	IL1'73'
13F5	15C6		13F6	790	DC	AL2(ERROR6B)
13F7	A02E		13F8	791	DC	XL2'A02E'
13F9	C0 87 0222			792	B	HALT
13FD	A02E		13FE	793	DC	XL2'A02E'
				794		
13FF	3C 00 178A			795	RTN6B NVI	WRTDPC+2,0
1403	3C 09 1963			796	NVI	SNSID,I'09'
1407	C0 87 17A8			797	B	STRTRIO
140B	00		140B	798	DC	IL1'00'
140C	00		140C	799	DC	IL1'00'
140D	1788		140E	800	DC	AL2(WRTDPC)
140F	C0 87 1479			801	B	RTN6E
1413	C0 87 1417			802	B	***
1417	C0 87 193C			803	B	PRTSWS
141B	C0 87 021A			804	B	PRINT
141F	06		141F	805	DC	XL1'06'
1420	35		1420	806	DC	IL1'53'
1421	0CA1		1422	807	DC	AL2(ERROR9)
1423	C0 87 0222			808	B	HALT
1427	A009		1428	809	DC	XL2'A009'
				810		
1429	C0 87 1705			811	RTN6E B	TSTSEK
				812		
142D	3C 17 178B			813	NVI	WRTDPC+3,23
1431	3C 9C 1963			814	NVI	SNSID,I'9C'
1435	3C 70 0CE1			815	NVI	ERR1A,C'0'
1439	C0 87 17A8			816	B	STRTRIO
143D	02		143D	817	DC	XL1'02'
143E	01		143E	818	DC	IL1'01'
143F	1788		1440	819	DC	AL2(WRTDPC)
1441	C0 87 145B			820	B	RTN6F
1445	C0 87 1449			821	B	***
1449	C0 E7 193C			822	B	PRTSWS
144D	C0 87 021A			823	B	PRINT
1451	06		1451	824	DC	XL1'06'
1452	40		1452	825	DC	IL1'64'
1453	0CE1		1454	826	DC	AL2(ERR1A)
1455	C0 87 0222			827	B	HALT
1459	A09C		145A	828	DC	XL2'A09C'
				829		
145B	C0 87 0216			830	RTN6F B	LINK
				831		
				831		
145F	07		145F	832	RTN7 DC	XL1'07'
1460	00			833	DC	IL1'00'
1461	1507		1462	834	DC	AL2(RTN8)
1463	3C 00 0B12			835	NVI	SETSW,0
1467	C0 87 0216			836	B	LINK
				837		
146B	C5E5C440D6C640C3		149E	838	DC	CL52'END OF CYLINDER SENSE BIT NOT ON AFTER A VERIFY DATA'
1473	E813C9D5C4C5D940			838		
147B	E2C5D5E2C540C2C9			838		
1483	E340D5D6E340D6D5			838		
148B	40C1C6E3C5D940C1			838		
1493	40E5C5D9C9C6E840			838		
149B	C4C1E3C1			838		
149F	40E3D640E3C8C540		14BD	839	ERROR6A DC	CL31' TO THE LOGICAL END OF CYLINDER'
14A7	D3E6C7C9C3C1D340			839		
14AF	C5D5C440D6C640C3			839		
14B7	E8D3C9D5C4C5D9			839		
14BE	C140E3C9D640C6D6		14EB	840	DC	CL46'A TIO FOR ERROR DID NOT BRANCH AFTER REACHING'
14C6	D940C5D9D9D6D940			840		

A094 DISK WRITE ID TEST

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
14CF	C4C9C440D5D6E2340			840		
14D6	C2D9C1D5C3C840C'			840		
14DE	C6E3C5D940D9C5C1			840		
14E6	C3C8C9D5C740			840		
14EC	E3C8C540D3D6C7C9	1506	841	ERR06B DC	CL27'THE LOGICAL END OF CYLINDER'	
14F4	C3C1D340C5D5C440		841			
14FC	D6C640C3E8D3C9D5		841			
1504	C4C5D9		841			

A098 DISK WRITE ID TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1665	080F	1666	979	DC	AL2 (NOUNIT) MESSAGE ADDRESS
1667	38 20 0208		980	TBN	SWITCH, I'20' TEST SSW 2 ON
1668	C0 10 167F		981	BT	NOREND EXIT IF YES
166F	C0 87 021A		982	E	PRINT
1673	4519	1674	983	DC	XL2'4519'
1675	1739	1676	984	DC	AL2 (DODO)
1677	A0F8	1678	985	DC	XL2'A0F8'
1679	C0 87 0222		986	B	HALT
167D	A0F8	167E	987	DC	XL2'A0F8' HALT TO RETURN SWITCH
167F	C0 87 022A		988	NOREND B	LOAD TERMINATE SECTION
1683	00	1683	989	DC	XL1'0'
1684	C6C9D3C540E6D9C9	16A8	990	ERRO6A DC	CL43'FILE WRITE SWITCH FAILED TO INHIBIT WRITING'
168C	E3C540E2E6C9E3C3		990		
1694	C840C6C1C9D3C5C4		990		
169C	40E3D640C9D5C8C9		990		
16A4	C2C9E340E6D9C9E3		990		
16AC	C9D5C7		990		
16AF	D9D6E4E3C9D5C540	16D2	991	BYPAS6 DC	CL36'ROUTINE 8 BYPASSED WHILE SSW 2 IS ON'
16B7	F840C2E8D7C1E2E2		991		
16BF	C5C440E6C8C9D3C5		991		
16C7	40E2E2E640F240C9		991		
16CF	E240D6D5		991		
16D3	E3E4D9D540D6C6C6	16F5	992	DC	CL35'TURN OFF THE FILE WRITE SWITCH AND '
16DE	40E3C8C540C6C9D3		992		
16E3	C540E6D9C9E3C540		992		
16EB	E2E6C9E3C3C840C1		992		
16F3	D5C440		992		
16F6	E9C5E2C5E340E3C8	1704	993	RTN6SW DC	CL15'RESET THE HALT.'
16FE	C540C8C1D3E34B		993		

A098 DISK WRITE ID TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			995 *		COME HERE TO TEST FOR A GOOD SEEK *
			996		
1705	34 08 1720		997	TSTSEK ST	SEKEXIT+3,ARR SAVE RETURN ADDRESS
1709	C0 87 178E		998	SKTSTA B	SENSE TO SENSE DEVICE STATUS
170D	02	170D	999	DC	AL1(STAT01) BYTES 0 & 1.
			1000		
170E	38 10 17A5		1001	TBN	STATUS, X'10' TEST THE SEEK BUSY SENSE BIT
1712	C0 10 1709		1002	BT	SKTSTA IF ON DO ANOTHER SENSE
1716	38 01 17A4		1003	TBN	STATUS-1, X'01' TEST FOR SEEK CHECK
171A	F2 10 1D		1004	JT	SEEKER IF ON, GO TO SEEK ERROR PRINT
171D	C0 87 0000		1005	SEKEXIT B	** EXIT
1721	E3E4D9D540D6D540	1739	1006	DODO DC	CL25'TURN ON FILE WRITE SWITCH'
1729	C6C9D3C540E6D9C9		1006		
1731	E3C540E2E6C9E3C3		1006		
1739	C8		1006		
			1007		
			1008 *		COME HERE IF AN ERROR OCCURRED *
			1009 *		WHILE SEEKING THE CE TRACK *
173A	C0 87 021A		1010	SEEKER B	PRINT TO PRINT ERROR ON SEEK
173E	C6	173E	1011	DC	XL1'C6' FLAGS
173F	2A	173F	1012	DC	IL1'42' LENGTH
1740	1787	1741	1013	DC	AL2(SEEKER1) ADDRESS OF MESSAGE
1742	A03C	1743	1014	DC	XL2'A03C' MESSAGE IDENTIFICATION
			1015		
1744	3C 00 0B18		1016	MVI	PASS,0
1748	3C 00 0B12		1017	MVI	SETSW,0
174C	3C 00 189A		1018	MVI	PRSTPS,0
1750	C0 87 0222		1019	B	HALT SET TO CAUSE A RECALIBRATE
1754	A03C	1755	1020	DC	XL2'A03C' HALT ID
1756	C0 87 0000		1021	B	0
175A	0002	175B	1022	TWO DC	XL2'02'
175C	0C04	175D	1023	ONESEC DC	XL2'04'
175E	C5D9D9D6D940D6C3	1787	1024	SEEKER1 DC	CL42'ERROR OCCURRED WHILE SEEKING THE CE TRACK.'
1766	C3E4D9D9C5C440E6		1024		
176E	C8C9E3C540E2C5C5		1024		
1776	D2C9D5C740E3C8C5		1024		
177E	40C3C540E3D9C1C3		1024		
1786	D74B		1024		
1788	00	1788	1025	WRTDPC DC	XL1'00' FLAG
1789	00	1789	1026	DC	XL1'00' CYLINDER
178A	00	178A	1027	DC	XL1'00' TRACK & SECTOR
178B	00	178B	1028	DC	XL1'00' NO. OF SECTORS OR NO. OF TRACKS
178C	0001	178D	1029	ONE DC	XL2'01'
			1030		
			1031 *		SENSE I/O ROUTINE
178E	34 08 17A7		1032	SENSE ST	SNSXR2,ARR SAVE ADDRESS RECALL REGISTER
1792	35 01 17A7		1033	L	SNSXR2, XR1 LOAD XR1 WITH VALUE FROM ARR.
1796	18 03 179C 00		1034	MNM	SNS+1,0 (.XR1) MOVE IN FUNCTION CODE
179B	30 00 17A5		1035	SNS	STATUS,0 PERFORM SENSE
179F	D0 87 01		1036	B	1 (.XR1) EXIT
17A2	00C0	17A3	1037	SETIR2 DC	XL2'0'
17A4	0000	17A5	1038	STATUS DC	XL2'0'
17A6	0000	17A7	1039	SNSXR2 DC	XL2'0'
			1040 *		ERROR RECORDING TABLE
			17A8	1041	ETABLE EQU *

A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write ID test, including routines for printing device status, setting up control fields, and checking disk status.

A094 DISK WRITE ID TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk write ID test, including routines for shifting bits in control fields and checking disk status.

A094 DISK WRITE ID TEST

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
TSTERR	A	003	180P	1071	0065*
TSTSCN	A	003	1812	1072	0066*
TSTSEK	A	004	1705	0997	0133 0246 0363 0478 0595 0638 0678 0744 0811 0878 0949
TWO	A	002	175B	1022	1226 1260
TWOZR	A	002	0817	0098	0047
TYBOT	A	006	1800	1266	1261*
UDTPTR	A	002	0810	0091	0029 0032* 0033 0047* 0061*
UPIND1	A	004	0A2P	0033	0030
UPIND2	A	004	0A2B	0032	0045
UNITS	A	010	1B39	1276	1269
UNPACK	C	001	021E	1297	1162 1194
BTAB	C	001	0232	0092	0031
WAIT	A	004	17F7	1065	0054* 1129
WORK	A	001	1B4C	1278	0135* 0248* 0365* 0480* 0597* 0598 0598* 0599 0640* 0641 0641* 0680* 0681 0681* 0682 0701 0746* 0880* 0881 0881* 0882 0911* 0912 0912* 0931* 0932 0932* 0950 0967 1117 0116* 0117* 0122 0136* 0142 0153 0176 0186* 0187* 0191 0198 0209 0211* 0220* 0229* 0235 0250* 0255 0267 0289 0298* 0299* 0303 0310 0321 0323* 0344* 0345* 0352 0367* 0372 0384 0407 0417* 0418* 0422 0429 0441 0443* 0459* 0460* 0467 0482* 0487 0499 0522 0532* 0533* 0537 0544 0556 0558* 0577* 0578* 0584 0603* 0607 0620* 0621* 0627 0644* 0648 0660* 0661* 0667 0686* 0690 0727* 0728* 0733 0747* 0748* 0754 0766* 0767* 0771 0795* 0800 0813* 0819 0860* 0861* 0867 0886* 0890 0915* 0916* 0920 0938 0953* 0957 0031* 0032 0033* 0037 0041 0043 0044 0044* 0056 0060 0060* 0061 1033* 1034 1036 1063* 1121 1127* 1128* 1168* 1176 1186 1186* 1191 1198* 1224* 1230 1230* 1233 0599* 0600 0682* 0683 0882* 0883 0950* 0951 1046* 1048 1049 1050 1058 1068 1069 1070* 1071 1072 1073 1078 1081 1082* 1083 1088 1089 1094 1097 1099 1101 1102 1105 1107 1108 1169* 1175 1185 1185* 1199* 1225* 1226* 1227 1229* 1231 1232 1238 1238*
WRTDFC	A	001	1788	1025	0116* 0117* 0122 0136* 0142 0153 0176 0186* 0187* 0191 0198 0209 0211* 0220* 0229* 0235 0250* 0255 0267 0289 0298* 0299* 0303 0310 0321 0323* 0344* 0345* 0352 0367* 0372 0384 0407 0417* 0418* 0422 0429 0441 0443* 0459* 0460* 0467 0482* 0487 0499 0522 0532* 0533* 0537 0544 0556 0558* 0577* 0578* 0584 0603* 0607 0620* 0621* 0627 0644* 0648 0660* 0661* 0667 0686* 0690 0727* 0728* 0733 0747* 0748* 0754 0766* 0767* 0771 0795* 0800 0813* 0819 0860* 0861* 0867 0886* 0890 0915* 0916* 0920 0938 0953* 0957
XR1	C	001	0001	1283	0031* 0032 0033* 0037 0041 0043 0044 0044* 0056 0060 0060* 0061 1033* 1034 1036 1063* 1121 1127* 1128* 1168* 1176 1186 1186* 1191 1198* 1224* 1230 1230* 1233
XR2	C	001	0002	1284	0599* 0600 0682* 0683 0882* 0883 0950* 0951 1046* 1048 1049 1050 1058 1068 1069 1070* 1071 1072 1073 1078 1081 1082* 1083 1088 1089 1094 1097 1099 1101 1102 1105 1107 1108 1169* 1175 1185 1185* 1199* 1225* 1226* 1227 1229* 1231 1232 1238 1238*
XR2WK	A	002	18A5	1118	1081* 1082
ZROTO	A	006	1B12	1269	1267*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

A094 DISK WRITE ID TEST

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+-Y:YIG E RSD PDR E CEHB?E8 OH .AZ DOH*OP33*B1H ' %E@-DHO-DB<TE AB1 5 %XG| .DL- B -% *DOA0940001					
T+-Z5a/ P-E @YD V+ DBP*REAX60 |H AIP-E |HA @BGBS% @ %KC D.D XPOH* HDO- E=H.EC31B3C 2/16) 1QA0940002					
T+-DOB P9E%N| |H .<G-A ?HGAC3*B1G K E<R E%EB P:J- VB P*J-VB P=A- VB QDA-VB QD1- VB 7A8A0940003					
T+.,,E90P9E- PDB P9E- FERP9E- PEM P9*BGE88B|<%.D3- HE:P2U @BRO%LOB* BFUD-B5C* <BG /Y FF X 71QA0940004					
T+-%W<CO FI, /O 0) |LE+1E2;|S6<T A9*N O%PE5NCT1;.. T1*E H80 5) SW%+(EB>|I5*) 1CU 7L8A0940005					
T+- /B_I 1(XI9*N 9@.E1@XW6+SR2;| E6<XD6<SU5*|T2) \$ W6+|E8>(0=C9 E <8T4 B1. -EY(+ E BB% 6Z@E0940006					
T+->*D HO| URQOO E8U.D30 E8Y@ AS -OH*PD EBT /O> BOH*./@BGF3 /OH EATH<Y*BG SH-B*B GEOM H16A0940007					
T+-?P| SLCOP8% @XAVT|| <8*BGE:- B J;ROH*.3@BGB87 /1U@OH*BP-R C+G /OHSYIO**1;. @YD 6OH* ;TYA0940008					
T+-OR /,PH08%YAS /OHSYAS /1;+A 4 AE:MOY*HAD<BG /, PIG:BYC# /OHSYC8 8PA;H@/ 6OH*BP%Q 1CV4 %,8A0940009					
T+-1(YB\$ /OHSYBQ @ A;H| PS@BGE:- A 1;ROH*<O@BGCC< @H/VTOH*R|C30CXP /1DHE8T /1;P% @3@ 6ZDA0940010					
T+-2H/OHEAU4+3@B G SH-HT5*E8, -6H OC- PS/) OH*<G=| H1HCP6*PV2) SUBUC E6) X06;I 5%|C9 (X R1*E 89*A0940011					
T+-3C6+SH2) |EE+. E1) .I5*) @TE6< E6< Y4=|H1HCP6*P V2) SUBUC6) X06;I 5%|C9 (XR1*J 9XT I@H L@HA0940012					
T+-3=6<LO2) PGE<E 9_XI8@N 2*J 9+. I5*) 2<PA1DCX - +4C4 B1. -EY(+ E BB% E /Q< A;IB1< @-A* 834A0940013					
T+-49ST0 FI@BJV TOH*PD EBT /O4 DOH*(P<BGF3 /OH EATH<Y*BG SH-B*B GEOM @A< I0RQ30 PE8%)@UA0940014					
T+-54||D<8*BGE:- B J;ROH*(Q<BGCH@ /1U@OH*BP-R C+G /OHSYIO**1;. @YD 6OH*BP%Q,CS2-EXB G SH ED-A0940015					
T+-6?YAS /1;+A 4 AE:MOY*HAD<9G /, PIG:BYC# /OHSYC8 87A;H@/ 6OH*BP%Q 1CV6-1@BG SH-IT2 EBY = DA0940016					
T+-7D| PS@BGE:- A 1;ROH*(@<BGC*E @I1VTOH*R|C31CXP /1DHE8T /1;P% @331 C%7 /OHEAU4 +3@ 6,UA0940017					
T+-8V/OHSYB**7A; HOHDBE-8 EBYPP*B GCSCS1*|T5_V 0*S U5;|E6MCI5MCC5_P T6) \$L6<S11) |DE(P O84 %BQA0940018					
T+-9-8>|E5*-E1+. EO=|C6MCA1<LR1;. SE (P084CS8@PP5@P D6+|O6|PC6<G78@P R6<E 9_XI8@N 2*L DO;< Q@HA0940019					
T+-:S@MCA1<LR1;. SE+.T1) ~P1*J 0*S T1) V OMCW6*XT1HC I1+|H1HCP6*PV2) \$ U8UC6) X06;I 5%| C9(D JA*A0940020					
T+-#06*PDE+SH2)| EE<LO2) PGE<E 9*P R2*SYE<LAB@E 9+. I5*) 2<PA1DCI6+. EO=|O6MCI90< C%- % @-XA0940021					

A094 DISK WRITE ID TEST

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+AJDXBAR-4*0% JOHDEET-P -, D H OC PSEXLI PSTO HPIAABJVTON*PD EST /02-0H*ICXB GFLQ 08 A0940022
T+KOH*BP-Q5CBG /ORSY X /1*E1 SLC2*POC@E1;.11H <8*BGE:-B J;HON* 1%BGCL /1U@ON* BF-Q 5.0A0940023
T+G6 3/0H*BHD B *1-@PS*HAD<BG /, PHOBXYAS /OHXYAS /1;+A 4AE:HOY*H AD<BG /,F16:BYC@ /OH 8YNA0940024
T+*BHD +=EOPSPH ED<BG /,F<59) YBS /ORSYBQ@ A;H1 PS@BGE:-A 1;HON* 1%BGCL*Y@H/VTON* R1C0 :RQA0940025
T+*@-#EON*ES/; HOH*E7/,1C@E@ # (OH*BP-R(C% /OH SYBH*PA;H@HDBE-8 E8YPP*BGC:QD AD -15 J28A0940026
T+ / 8B1. -EY(1)-> .D*BA /Q8 -H@OA BE-0 E8U.D32 E8Y @BAS-1 URQ@BGE:- A;HOH*EK<BGDCS /1U 71YA0940027
T+ /A31<BG /YF(62 /OH*BHD IOH*PALO F40@XAVT1A*PS33 3C*G /1;Y -DPS<B GDG@ /1A%OB*R1<B G /Y *9@A0940028
T+ /B>AD <8*BG SH -XC7*E872-JC /OH E1S%+.H OOH*BHD OOH*PT-8(J;VPH 2-JC /OHE1SH+-D =OH* 6JUA0940029
T+ /CZ SH-1TT*E8, 2DAC /OHE1TD*PE MOH*BHD W1H PSTO E87 /1;Y <C<PS<B GD6@ /1CS1B*RO@B GFLQ 8B@A0940030
T+ /DU11<+1*BGFFY PS<BGF_8E30*11D +3*BG /YFL@1OH* BHD X1) OPSXBA /Q *A;HE57 /1C+A@ L(T@ 1D@A0940031
T+ /E- %KOHDC17 *B1G -EHO+ EBB% @ /Q8 -H@OA BETO F1@< A;IB1<@ A; H1 URQ@BGE:- A; HOH* 4Z*A0940032
T+ /FEDPT /1PVOH* R1<BG /YF(62/OH* BHD IOH*PAL3RGD% <"/1HGDTB /_<(H QY30KPO<@ A;.OH* PD H 894A0940033
T+ /GN A;HOH*J<B GD@S /1U@OH*BP-R AD?1 /ORSYAH@BAS -C PSEXLI PSTO IPO1 /1;Y PS<B GD;0 @E8A0940034
T+ /HEOH*J6*BGFL3 /OHEAT@Y*BG SH -B*BGEON@1/1.C1@ *K/1.1AHRQ30 E87 /1;Y -PS<BGDSL /1H *B@A0940035
T+ /I.D%BGFL3 /OH EAUDK@BG SH-DT@ F1@< A;IB1<@ A; H1 URQ@BGE:- A; HOH*KO<BGDU@ /1U @OH* HDTA0940036
T+ /HP /YF(62/OH* BHD IOH*PALO GM% <"/5HG@B /1<(H QY31BPO<@ A;.OH* PD D E8T /1HQOH* K/X 3:DA0940037
T+ /A/1U@OH*BP-R AD?1 /ORSYDH*6J5 .@YDEOH*BP*RB@30 -V<BG SH-V<BG /S R1*GD@ (SRE+SR2;1 E@<@ -S@A0940038
T+ /A@;1A@<PR6) S RK4CC2<EC4UCHO)1 T@<XDK4C4@UCI8UC R1*GD@4C1@UCI8UC H6*YT1H7E6) IO6HC H2<H H@HA0940039
T+ /<75MCA8=1E5 (~ T2) PGE+10E+.E4@P C84CE2;1H1) V @BT E@<S19@PDE (SRE (X E5 (SVO-.L1HCD2;. KA- 15 A0940040
T+ / (2PE@ %KOH@ HCL-D -, D HO1) U RQ00 E8U.D30 E8Y @ AS-OH*PD EBT /1(=OH*LS<BGFL3 /OH @EHA0940041
T+ /+_F-Q5CBG /OH SY X /1*E1 SLC2 E8Y@E1;.1IORQ33 OC*G /1;Y -DPS<B GD@T /1+HON*R1<B G /Y Q9HA0940042
T+ /1YAU <8*BG SH -IC2 E8Y@FA;.OH* PD DCE8T /11?OH* L4<BGE88B+B PZ-H @H@BG /,PH1K*YB3 /OH O,YA0940043

A094 DISK WRITE ID TEST

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+ /ETHD %@Y*EON* RFXRIZ@E-.%BG SH -.TO E8Y@BJVTON* PD EST /1E2OH* HE@BGFL3 /OHEATH <Y* E UA0940044
T+ /J;/ORSY X /1* E1A*PS32*POC@@ 3 /OH*PD HAEST /1J 8OH*HK*BGFL3 /OH EAU <8*BG SH-X<B G /Q 7@A0940045
T+ /KRAO WA30 B1. /OHO1) EDE (SFE<1 Y4@XN1<PRE+.ES;. E@<.1@4CH5>(5_H 0*ST1)V OHCV1) X I1> *@A0940046
T+ /LH@<LA@E B'R B@TEE (101@XC0) (1) PDE (SFE<1Y4@X H1<PROHCT2) R 1_5 B@<PR6) SR@<LI1DC H5>< 6LUA0940047
T+ /M1@<.R0) PC2DC A1>1E6MCR1*GC2<X H1@CT2<R 4*SG2*1 A44CE5*J 5XR 0=T L2) PD1) OH 1*1@E .D% 110A0940048
T+ /NH-EY(+B BB1H @<BG /YFIASKOH* OP30 F1@< A;IB1< @ A;H1 URQ@BGE:- A;HOH*NO@BGEHT /1U 8@A0940049
T+ /OP1<BG /YF(62 /OH*BHD IOH*PAL3 "GD%<"/1HGDTB /_ <(HOY30KPO<@ A; .OH*PD H E8T /1O ECH* HZOA0940050
T+ /P EOT /1U@OH* BP-RAE?1 /OHSYA. /OHEJLHPAHC8OH* BHDC81 *K03=GDY *K30KPO<@ A;.1 PS% *OHA0940051
T+ /P@/1;Y -PS<B GE;. /1PEOH*R1<B G /YF@J.3OH*BHD K(HY) K03=GHY) K30 IPO1 /1;Y PS<B GE/H 4J8A0940052
T+ /Q6OH*O <BGFL3 /OHEATH<Y*BG SH -B*BGEOPB /1<(H QY31BPO<@ A;.OH* PD D E8T /1RHON* O(X @TYA0940053
T+ /R1/1U@OH*BP-R AD?1 /ORSYDH*15 .@YDEOH*BP*Q,ED: -W@BG SH-W@BG /Y YF-X++B BB< EY% /OH H@A0940054
T+ /P@YUHR@E3W--<B G SH--<BG SY 1%X L1HC@6*YT1HCS9%X T0@ /1%GI4@PD@+1 O@<YH2<XB2: (9_X I8@U "/A0940055
T+ /SY5+-R5>LT2) P E@1 /O>TPO;.S1*J 9%TI4@N 8>.H@1I 2;I 5_PT9 (X@6 (S F1UCT2<H 1%XL1HC H6*U 6LJA0940056
T+ /S8@N 8>S1@1 H@<GN1DCP1;.E84C T2<N 2<GL84%4BA* -OH*PT-H@DA;VOA PBL-AE:L2DA7 /O 8-E .E.A0940057
T+ /1) 6) H 5_N 1%X L1HC@6*YT1HCS9%X T0@T /OHE1STP/: @1 .PCO B1H@ AS EOH*BHD @OH* B @ 3Y8A0940058
T+ /Q1) XR5_V 5%1 C9 (XR1*J 9%TI4@N 8%PE4%XH14CT2<H O@N 8*XA0*1. A (-PZ3HAE:* Q 1@ =/A0940059
T+ /LX 0 A;V4H* A (-PY3H BE:<@ AS) H <P*E % A-6 KOA@HDC+ - QI*H@B3%HE*H@BA/ K@Y* -9HA0940060
T+ /-+PCYHE*4:RA/ K?E OHDQPCPWFHD 1ZAST1 QD<HAP*Y 3Y CAY/SZ1->QIX* AP >< <QY.XA TH BE:< *1@A0940061
T+ / /TBF <R@E@H8H* D (-QW.4A -HAACO F1Y% JSV 3HBP@H % AS* 33*PI4' AS E@-DR1 DQH,XA ,J * 30 85YA0940062
T+ /SD ASS<E@OY+ -<FSFEK (DQW*H AI-HDD\$XA -O F1U QW2@ F1UA@Y*P>-D B. QW@D1 ASRPI? 2/OQ P1DA0940063
T+ /S? C@Y*HT CPIUX ASS *BG C" SL ""@ (DR+@BGE88 C+ -PZ1@C3*PH- 5 JU 7@A0940064
T+ /T:3QAP@ /A 71-@CD1HAD<BG /, F1J09YH /OHSYH /1;.B-<REC1 FJ. /OHE1/HRE@B+OH* BHD P@A0940065

8094 DISK WRITE ID TEST

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+/U5T4BG CT2) L	E5>L76<J7NE (X09+)	I5*N 9=-N5UCI5*L	E94CP9 ((S1;I 0XP	N8RPP6<.E1 SR1MC	T2) E J,-A0940066
T+/V01) SUB0 (-	R0%BGEB8BOH*BG-H	PZJX5; DR-XHAF-G	B /DBOH*BFKDAF-F	- B0 P00 GADSKO	8 A* 09DA0940067
T+/W.ZIHEB<BG /Y	AD/_ .16 R5"HBAB>H	B)HAD%BGPOE*-AV	=0YDS;H R-T6AF#	/1;+ 00G /8BE:H	R70H EDDA0940068
T+/XW 8 0-EE-4B	GFO- /OHE /4R70B	G CSB0GT9+I 0>T	T1;I 2)N 2<PK#4	..... (POE (S	P6D 330A0940069
T+/Y/EDA 6EA 6DA	EDCIS;1F6;PE5;1	I5_N 6*PQ1D7H2;-	S2)PG6<GD1 (V.6 (L	A6).26+LIS*LE5;(	00- 6/6A0940070
T+/Z*1*1KEDA 1KG	TOMCC2<PC0UA 6DA	6DA 5)B 6*PCS_X	D6<S09 (PE6DA 0*I	0*SH1<XT2) SH6<1	R1< 0,6A0940071
T+/DP4>.E1)I 0BT	E0'I 6EA 6DA 6+L	N0%GF1HA 6DA 6DA	6DA 6HA HA HA H	A (-E3THAF#85 /,	+(-H 5:HA0940072
T+/,KE54 /,+1	E30HBF_A5 6D% AD	4 BO P,YE; B0Z	D+- E335 Y,L2-6-	S -G /1DZOH*	DBA 8 DA0940073
T+/% (ND A -6HDBA	- 6BA; ((-E*3Q	HE544BAWE (-8B3Q	HE844BA%>C D8DE	C DSI C DSE6	C OKYA0940074
TH19P_4 6-	S+60 P_4PT-HBB-0	- S.0BGF1T /0	0-G20*15*7-8-	.....	..... =3<A0940075
FB5N*E7*=-DC*PH5	=*7H0P; | C	FX ASC R A	SO Q	.....	..... 13390501700 31472-DA0940076

----- LAST PAGE -----



AOA2 S C A N E Q U A L

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
0000		2	AOA	START	0
		3		DECK	4
0A00		4		ORG	X'CA00'
		5	*****		
		6	*		SECTION PREFACE
		7	*		
0A00	AOA2	0A01	8	DC	XL2'AOA2'
0A02	00	0A02	9	DC	XL1'00'
0A03	01	0A03	10	DC	XL1'01'
0A04	0000	0A05	11	DC	XL2'00'
0A06	0BF2	0A07	12	DC	AL2(RTN1)
0A08	1A7E	0A09	13	DC	AL2(ETABLE)
0A0A	AO1000	0A0C	14	DC	XL3'AO1000'
		15	*		
		16	*****		
		17			
		18	*		OPERATING INSTRUCTIONS
		19	*		
		20	*		1. SET SWITCH 15 TO BYPASS RUNNING ON THE REMOVABLE DISK
		21	*		2. SET SWITCH 16 TO BYPASS RUNNING ON THE FIXED DISK
		22	*		3. SET SWITCH 17 TO NEVER RUN ON DISK DRIVE 1
		23	*		4. SET SWITCH 1F TO NEVER RUN ON DISK DRIVE 2
		24			
0A0D	34 08 0A2B	25	SETDSK	ST	SETEXT+3,ARR
0A11	3C FF 0B09	26	HVI		SETSW,X'FF'
		27			
0A15	3D 00 0B07	28	CLI		UDTPTR,0
0A19	F2 01 08	29	JNE		OFIND1
0A1C	C2 01 0232	30	LA		UTAB,XR1
0A20	J4 01 0B07	31	UFIND2	ST	UDTPTR,XR1
0A24	35 01 0B07	32	UFIND1	L	UDTPTR,XR1
0A28	3C 00 0B08	33	HVI		REMVDS,0
0A2C	38 02 020B	34	TBN		SWITCH+3,X'02'
0A30	F2 10 06	35	JT		*+9
0A33	7D A0 00	36	CLI		0(,XR1),X'A0'
0A36	F2 81 2F	37	JE		SETA
0A39	38 01 020B	38	TBN		SWITCH+3,X'01'
0A3D	F2 10 06	39	JT		*+9
0A40	7D B0 00	40	CLI		0(,XR1),X'B0'
0A43	F2 81 2F	41	JE		SETB
0A46	78 10 01	42	TBN		1(,XR1),X'10'
0A49	D2 01 03	43	LA		3(,XR1),XR1
0A4C	C0 90 0A20	44	BF		UFIND2
0A50	C0 87 021A	45	B		PRINT
0A54	06	0A54	46	DC	XL1'06'
0A55	1A	0A55	47	DC	IL1'26'
0A56	0B05	0A57	48	DC	AL2(NOUNIT)
0A58	3C 00 0B09	49	HVI		SETSW,0
0A5C	0C 01 0B07 0B10	50	MVC		UDTPTR(2),TWOZR
0A62	C0 87 022A	51	B		LOAD
0A66	0040	0A67	52	DC	XL2'40'
		53			
0A68	08 00 1ACC 0B0B	54	SETA	HZZ	LDFCR+1,SPNDLA
0A6E	3C F1 0B3C	55	HVI		SPNMSG,C'1'
0A72	F2 87 14	56	J		SETBTH
		57			
0A75	08 00 1ACC 0B0C	58	SETB	HZZ	LDFCR+1,SPNDLB
0A7B	3C F2 0B3C	59	HVI		SPNMSG,C'2'
0A7F	78 01 02	60	TBN		2(,XR1),X'01'
0A82	F2 90 04	61	JF		SETBTH
0A85	3C FF 0B08	62	HVI		REMVDS,X'FF'
		63			
0A89	D2 01 03	64	SETBTH	LA	3(,XR1),XR1
0A8C	34 01 0B07	65	ST		UDTPTR,XR1
0A90	08 00 1AD0 1ACC	66	HZZ		LDFDR+1,LDFCR+1
0A96	08 00 1AD8 1ACC	67	HZZ		SIO+1,LDFCR+1
0A9C	08 00 1ADB 1ACC	68	HZZ		WAIT+1,LDFCR+1
0AA2	08 00 1AF2 1ACC	69	HZZ		TSTER+1,LDFCR+1

AOA2 S C A N E Q U A L

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
0AAB	08 00 1AF5 1ACC		70	HZZ	TSTSCN+1,LDFCR+1
0AAE	08 00 1A72 1ACC		71	HZZ	SNS+1,LDFCR+1
0AB4	08 00 1B2C 1ACC		72	HZZ	RLEFCR+1,LDFCR+1
0ABA	08 00 1B30 1ACC		73	HZZ	RSIO+1,LDFCR+1
0AC0	C0 87 1A64		74	B	SENSE
0AC4	02	0AC4	75	DC	XL1'02'
			76		
0AC5	3C CB 0B0A		77	HVI	TRACK#,203
0AC9	38 08 1A7B		78	TBN	STATUS,X'08'
0ACD	F2 90 04		79	JF	PRTSPN
0AD0	3C 67 0B0A		80	HVI	TRACK#,103
0AD4	C0 87 021A		81	PRTSPN B	PRINT
0AD8	01	0AD8	82	DC	XL1'01'
0AD9	22	0AD9	83	DC	IL1'34'
0ADA	0B5E	0ADB	84	DC	AL2(SECMMSG)
0ADC	C0 87 021A		85	B	PRINT
0AE0	06	0AE0	86	DC	XL1'06'
0AE1	18	0AE1	87	DC	IL1'24'
0AE2	0E3C	0AE3	88	DC	AL2(SPNMSG)
0AE4	3C 00 1B74		89	HVI	FRSTPS,0
0AEB	C0 87 0000		90	SETEXT B	*--
			91		
0A2C	C1D3D340E4D5C9E3	0B05	92	NOUPT DC	CL26'ALL UNITS HAVE BEEN TESTED'
0A74	E240C8C1E5C540C2		92		
0AFC	C5C5D540E3C5E2E3		92		
0B04	C5C4		92		
0B06	0000	0B07	93	UDTPTR DC	XL2'0'
		0232	94	UTAB EQU	X'232'
0B08	00	0B08	95	REMVDS DC	XL1'0'
0B09	00	0B09	96	SETSW DC	XL1'0'
0B0A	00	0B0A	97	TRACK# DC	XL1'00'
0B0B	00	0B0B	98	SPNDLA DC	XL1'A0'
0B0C	00	0B0C	99	SPNDLB DC	XL1'B0'
0B0D	00	0B0D	100	RUNRMV DC	XL1'0'
0B0E	00	0B0E	101	RUNFIX DC	XL1'0'
0B0F	0000	0B10	102	TWOZR DC	XL2'0'
0B11	00	0B11	103	PASS DC	XL1'0'
0B12	C9D5E5C1D3C9C440	0B24	104	INVPLG DC	CL19'INVALID SSW SETTING'
0B1A	E2E2E640E2C5E3E3		104		
0B22	C9D5C7		104		
0B25	D5D6E640E3C5E2E3	0B3C	105	SPNMSG DC	CL24'NOW TESTING DISK DRIVE X'
0B2D	C9D5C740C4C9E2D2		105		
0B35	40C4D9C9E2C540E7		105		
0B3D	C2C5C7C9D540E2C3	0B5E	106	SECMMSG DC	CL34'BEGIN SCAN EQUAL FUNCTION TEST AOA'
0B45	C1D540C5D8E4C1D3		106		
0B4D	40C6E4E5C3E3C9D6		106		
0B55	D540E3C5E2E340C1		106		
0B5D	F0C1		106		

AOA2 S C A N E Q U A L

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OB5F	34 08	OBDD	108	TSTSPM ST	TSTEXT+3,ARR
OB63	3D 00	OB11	109	CLI	PASS,0
OB67	F2 01	07	110	JNE	SETSPM
OB6A	3C FF	OB11	111	MVI	PASS,X'FF'
OB6E	F2 87	0C	112	J	TSTSW
OB71	0D 01	OB0E OB10	113	SETSPM CLC	RUNFIX(2),TWOZR
OB77	F2 81	64	114	JE	ZROCTR
OB7A	F2 87	3C	115	J	SETRMV
			116		
OB7D	38 06	020A	117	TSTSW TBM	SECTSW,X'06'
OB81	F2 90	18	118	JF	TSTRMV
OB84	C0 87	021A	119	B	PRINT
OB88	C6		120	DC	XL1'C6'
OB89	13		121	DC	IL1'19'
OB8A	0B24		122	DC	AL2(INVPLG)
OB8C	A0FA		123	DC	XL2'A0FA'
			124		
OB8E	C0 87	0222	125	B	HALT
OB92	A0FA		126	DC	XL2'A0FA'
OB94	C0 87	0212	127	B	TEST
OB98	C0 87	0B7D	128	B	TSTSW
			129		
OB9C	38 04	020A	130	TSTRMV TBM	SECTSW,X'04'
OBAA	F2 10	04	131	JT	TSTFIX
OBAA	3C FF	0B0D	132	MVI	RUNRMV,X'FF'
			133		
OBAA	38 02	020A	134	TSTFIX TBM	SECTSW,X'02'
OBAB	F2 10	0B	135	JT	SETRMV
OBAA	3D FF	0B08	136	CLI	REMVDS,X'FF'
OBBA	F2 81	04	137	JE	SETRMV
OBBA	3C FF	0B0E	138	MVI	RUNFIX,X'FF'
OBBA	3D 00	0B0D	139	SETRMV CLI	RUNRMV,0
OBBD	F2 81	0B	140	JE	FIXED
OBCC	3C 00	1B79	141	MVI	DISKTP,0
OBCC	3C 00	0B0D	142	MVI	RUNRMV,0
OBCC	F2 87	0F	143	J	TSTEXT
			144		
OBCC	3D 00	0B0E	145	FIXED CLI	RUNFIX,0
OBCC	F2 81	0C	146	JE	ZROCTR
OBDD	3C 08	1B79	147	MVI	DISKTP,X'08'
OBDD	3C 00	0B0E	148	MVI	RUNFIX,0
			149		
OBDA	C0 87	0000	150	TSTEXT B	*--*
			151		EXIT
OBDE	3D 08	0A03	152	ZROCTR CLI	X'0A03',08
OBEE	3C 09	0B11	153	MVI	PASS,0
OBEE	C0 01	0216	154	BNE	LINK
OBEE	3C 00	0B09	155	MVI	SETSW,0
OBEE	C0 87	0000	156	B	0
					RESET SWITCH

AOA2 S C A N E Q U A L

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			158	*	ROUTINE NO. 01, CHECK FUNCTION OF NO RECORD FOUND
			159	*	SENSE BIT, (BYTE 0, BIT 5)
			160	*	USING THE SCAN EQUAL COMMAND
			161		
			162	*	ROUTINE PREFACE
			163		
OBP2	01		164	RTN1 DC	XL1'01'
OBP3	00		165	DC	XL1'00'
OBP4	0D3A		166	DC	AL2(RTN2)
			167		
OBP6	3D 00	0B09	168	BEGIN CLI	SETSW,0
OBPA	C0 81	0A0D	169	BE	SETDSK
OBPE	C0 87	0B5F	170	RTN1A B	TSTSPM
OC02	3C 00	1A7A	171	MVI	STATUS-1,0
OC06	3C 09	1BEB	172	MVI	SNSID,09
OC0A	0C 00	1A60 OBOA	173	MVC	RDDFC+1(1),TRACK0
OC10	C0 87	1A93	174	B	STRTIO
OC14	70		175	DC	XL1'00'
OC15	00		176	DC	XL1'00'
OC16	1A5F		177	DC	AL2(RDDFC)
OC18	C0 87	0C32	178	B	RTN1A1
OC1C	C0 87	0C20	179	B	**4
OC20	C0 87	1BC1	180	B	PRTSWS
OC24	C0 87	021A	181	B	PRINT
OC28	06		182	DC	XL1'06'
OC29	35		183	DC	IL1'53'
OC2A	0CB8		184	DC	AL2(ERROR9)
OC2C	C0 87	0222	185	B	HALT
OC30	A009		186	DC	XL2'A009'
			187		HALT ID
OC32	C0 87	194F	188	RTN1A1 B	TSTSEK
OC36	3C FF	1A60	189	MVI	RDDFC+1,X'FF'
OC3A	0C 01	1A62 OB10	190	MVC	RDDFC+3(2),TWOZR
			191		
OC40	C0 87	1A93	192	B	STRTIO
OC44	03		193	DC	XL1'03'
OC45	00		194	DC	XL1'00'
OC46	1A5F		195	DC	AL2(RDDFC)
OC48	C0 87	0C54	196	B	RTN1A2
OC4C	C0 87	0C50	197	B	**4
OC50	C0 87	0C64	198	B	RTN1B
OC54	C0 87	021A	199	RTN1A2 B	PRINT
OC58	C6		200	DC	XL1'C6'
OC59	3C		201	DC	IL1'60'
OC5A	0CF4		202	DC	AL2(ERR1A)
OC5C	A050		203	DC	XL2'A050'
OC5E	C0 87	0222	204	B	HALT
OC62	A050		205	DC	XL2'A050'
			206		HALT ID
OC64	C0 87	1A64	207	RTN1B B	SENSE
OC68	02		208	DC	AL1(STAT01)
			209		
OC69	38 04	1A7A	210	TBM	STATUS-1,X'04'
			211	*	TEST BYTE 0, BIT 5 FOR ON
OC6D	F2 10	10	212	IT	RTN1C
			213		THIS IS 'NO RECORD FOUND'
OC70	C0 87	021A	214	B	PRINT
OC74	C6		215	DC	XL1'C6'
OC75	45		216	DC	IL1'69'
OC76	0D39		217	DC	AL2(ERR1B)
OC78	A051		218	DC	XL2'A051'
OC7A	C0 87	0222	219	B	HALT
OC7E	A051		220	DC	XL2'A051'
			221		HALT ID
OC80	C0 87	0BFE	222	RTN1C B	RTN1A
			223		ROUTINE EXIT
OC84	E3C8C540D7D9C5E5	OCB2	224	DC	CL47'THE PREVIOUS ERRORS OCCURRED WHILE SEEKING THE
OC8C	C9D6E4E240C5D9D9		224		

AOA2 SCAN EQUAL

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OC94	D6D9E240D6C3C3E4		224		
OC9C	D9D9C5C440E6C8C9		224		
OCA4	D3C540E2C5C5D2C9		224		
OCAC	D5C740E3C8C540		224		
OCB3	C3C540C3E8D3	OCB8	225	ERROR9 DC	CL06'CE CYL'
OCB9	E2C3C1D540C5D8E4	OCBC	226	DC	CL52'SCAN EQUAL USING A NON EXISTANT SECTOR ID DID NOT GI'
OCC1	C1D340E4E2C9D5C7		226		
OCC9	40C140D5D6D540C5		226		
ODC1	E7C9E2E3C1D5E340		226		
ODC9	E2C5C3E3D6D940C9		226		
OCE1	C440C4C9C440D5D6		226		
OCE9	E340C7C9		226		
OCED	E5C540C5D9D9D6D9	OCF4	227	ERR1A DC	CL08'VE ERROR'
OCF5	D5D640D9C5C34B40	OD28	228	DC	CL52'NO REC. FOUND NOT SET BY A SCAN EQUAL COMMAND USING '
OCFD	C6D6E4D5C440D5D6		228		
OD05	E340E2C5E340C2E8		228		
OD0D	40C140E2C3C1D540		228		
OD15	C5D8E4C1D340C3D6		228		
OD1D	D4D4C1D5C440E4E2		228		
OD25	C9D5C740		228		
OD29	C140E2C5C3E3D6D9	OD39	229	ERR1B DC	CL17'A SECTOR ID OF FP'
OD31	40C9C440D6C640C6		229		
OD39	C6		229		

AOA2 SCAN EQUAL

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			231 *		ROUTINE NO. 02, TEST SETTING OF THE SCAN FOUND
			232 *		CONDITION & BRANCHING ON A TIO
			233 *		USING A SCAN EQUAL CONDITION
			234		
OD3A	02	OD3A	235	RTN2 DC	XL1'02'
OD3B	00	OD3B	236	DC	XL1'00'
OD3C	0FEA	OD3D	237	DC	AL2(RTN3)
			238		ADDRESS OF NEXT ROUTINE PREFIX
OD3E	3D 00 0B09		239	CLI	SETSH,0
OD42	C0 81 0A0D		240	BE	SETDSK
OD46	C0 87 0B5F		241	RTN2A B	TSTSPN
OD4A	0C 00 1A5C	OBOA	242	MVC	WRTDFC+1(1),TRACK#
OD50	3C 00 1A5D		243	MVI	WRTDFC+2,0
OD54	3C 09 1BE8		244	MVI	SNSID,09
			245		SET SEEK ADDRESS TO CE TRACK
			246	B	SET FOR HEAD 0, SECTOR 0
OD58	C0 87 1A93		247	B	INSERT ID IN PRINT
OD5C	00	OD5C	247	B	TO SEEK CE TRACK
OD5D	00	OD5D	248	DC	FUNCTION CODE (CONTROL)
OD5E	1A5B	OD5F	249	DC	CONTROL CODE (SEEK)
OD60	C0 87 0D7A		250	B	CONTROL FIELD ADDRESS
OD64	C0 87 0D68		251	B	GOOD RETURN
OD68	C0 87 1BC1		252	B	
OD6C	C0 87 021A		253	B	TO DECODE ERROR
OD70	06	OD70	254	DC	TO PRINT
OD71	35	OD71	255	DC	FLAGS
OD72	0CB8	OD73	256	DC	LENGTH
OD74	C0 87 0222		257	B	MESSAGE ADDRESS
OD78	A009	OD79	258	DC	TO DCP HALT
			259	B	HALT ID
OD7A	C0 87 194F		260	RTN2A1 B	TSTSEK
			261		TO CHECK FOR A GOOD SEEK
OD7E	3C 00 1EC6		262	RTN2B MVI	WORK+255,0
OD82	0C FE 1EC5	1EC6	263	MVC	WORK+254(255),WORK+255
			264		SET WRITE FIELD
OD88	3C 12 1BE8		265	MVI	PUT MESSAGE ID IN PRINT
OD8C	3C 00 1A5E		266	MVI	SET TO WRITE ONE SECTOR
			267		
OD90	C2 01 1DC7		268	LA	WORK,XR1
OD94	34 01 1B7D		269	ST	DFDR,XR1
			270		SET WRITE DATA ADDRESS
OD98	C0 87 1A93		271	B	IN DATA CONTROL FIELD
OD9C	02	OD9C	272	B	TO I/O SUBROUTINE
OD9D	00	OD9D	273	DC	FUNCTION CODE (WRITE)
OD9E	1A5B	OD9F	274	DC	CONTROL CODE (DATA)
ODA0	C0 87 0DAC		275	DC	CONTROL FIELD ADDRESS
ODA4	C0 87 0DA8		276	B	GOOD RETURN
ODA8	C0 87 0E5C		277	B	
			278	B	ERROR RETURN
ODAC	3C 52 1BE8		279	RTN2B1 MVI	SNSID,X'52'
ODB0	3C 00 1A5E		280	MVI	WRTDFC+3,0
			281		PUT ID IN PRINT
ODB4	C0 87 1A93		282	B	SET TO SCAN EQUAL ON ONE SECTOR
ODB8	03	ODB8	283	B	TO SCAN EQUAL
ODB9	00	ODB9	284	DC	FUNCTION CODE (SCAN)
ODBA	1A5B	ODBB	285	DC	CONTROL CODE (EQUAL)
ODBC	C0 87 0DEC		286	DC	CONTROL FIELD ADDRESS
ODC0	C0 87 0DFC		287	B	RETURN FOR NO SCAN FOUND
			288	B	RETURN FOR SCAN FOUND
ODC4	C0 87 1D08		289	RTN2C B	SHIPT
ODC8	1A5B	ODC9	290	DC	AL2(WRTDFC)
ODCA	C0 87 1D59		291	B	ADDRESS OF SOURCE
ODCE	1D4D	ODCF	292	DC	TO CONVERT TO DECIMAL NUMBER
ODD0	0ECE	ODD1	293	DC	ADDRESS OF SOURCE
ODD2	3C 40 0ECC		294	DC	ADDRESS OF DESTINATION
ODD6	C0 87 1BC1		295	MVI	SET A BLANK IN PRINT IMAGE
ODDA	C0 87 021A		296	B	TO PRINT SENSE INFO.
ODDE	06	ODDE	297	B	TO PRINT THIRD LINE
ODDF	59	ODDF	298	DC	FLAGS
				DC	LENGTH

AOA2 S C A N E Q U A L

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains diagnostic data for scan equal error, including object codes like ODE0 OECE, ODE2 C0 87 0222, ODE6 A052, and their corresponding addresses and source statements.

AOA2 S C A N E Q U A L

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains diagnostic data for scan equal error, including object codes like OE96 40C1C6E3C5D940C4, OE9E D6C9D5C740C140E2, OEA6 C3C1D540, and their corresponding addresses and source statements.

IBH MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129638
PAGE 7

A0A2 S C A N E Q U A L

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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571 *      ROUTINE NO. 05, TEST SCAN EQUAL BY SCANNING MULTIPLE *
572 *      SECTORS WHERE 23 SECTORS HAVE BEEN *
573 *      WRITTEN WITH ZEROS, AND THE 24'TH SECTOR *
574 *      IS WRITTEN WITH ALL ZEROS WITH THE *
575 *      EXCEPTION OF ONE BYTE WHICH IS -AA- *
576
1352 05    1352 577 RTN5 DC XL1'05'      ROUTINE NUMBER
1353 00    1353 578      DC XL1'00'      ROUTINE FLAGS
1354 162E  1355 579      DC AL2(RTN6)    ADDRESS OF NEXT ROUTINE PREFIX
                    580
1356 3D 00 0B09 581      CLI SETSW,0      HAVE PARAMETERS BEEN ENTERED?
135A C0 81 0A0D 582      BE SETDSK      BRANCH IF NO
135E C0 87 0B5F 583 RTN5A B TSTSPN
                    584
1362 0C 00 1A5C 0B0A 585      MVC WRTDFC+1(1),TRACK# SET CYLINDER ADDRESS TO CE TRACK
1368 3C 00 1A5D 586      MVI WRTDFC+2,0 SET FOR HEAD 0, SECTOR 0
136C 3C 09 1BE8 587      MVI SNSID,09 INSERT ID IN PRINT
                    588
1370 C0 87 1A93 589      B STRTIO      TO SEEK CE TEACK
1374 00    1374 590      DC XL1'0'      FUNCTION CODE (CONTROL)
1375 00    1375 591      DC XL1'0'      CONTROL CODE (SEEK)
1376 1A5B  1377 592      DC AL2(WRTDFC) CONTROL FIELD ADDRESS
1378 C0 87 1392 593      B RTN5A1      GOOD RETURN
137C C0 87 1380 594      B **4
1380 C0 87 1BC1 595      B PRTSNS      TO DECODE ERROR
1384 C0 87 021A 596      B PRINT      TO PRINT
1388 06    1388 597      DC XL1'06'    FLAGS
1389 35    1389 598      DC IL1'53'    LENGTH
138A 0CB8  138B 599      DC AL2(ERROR9) MESSAGE ADDRESS
138C C0 87 0222 600      B HALT      TO DCP HALT
1390 A009  1391 601      DC XL2'A009'  HALT ID
                    602
1392 C0 87 194F 603 RTN5A1 B TSTSEK      TO CHECK FOR A GOOD SEEK
                    604
1396 3C 00 157E 605      MVI TSTSEC,0 SET TEST SECTOR NUMBER
139A C2 01 1DC7 606 RTN5B LA WORK,XR1 SET WRITE DATA ADDRESS
139E 34 01 1B7D 607      ST DPDR,XR1 IN DATA CONTROL FIELD
                    608
13A2 3C 00 1FC6 609      MVI WORK+511,0 SET
13A6 0C FF 1FC5 1FC6 610      MVC WORK+510(256),WORK+511 DATA
13AC 0C FE 1EC5 1EC6 611      MVC WORK+254(255),WORK+255 FIELD
13B2 3C 00 1A5D 612      MVI WRTDFC+2,0 SET TO START WRITE AT SECTOR 0
                    613
13B6 3C 00 1A5E 614 RTN5B1 MVI WRTDFC+3,0 SET TO WRITE ONE SECTOR
13BA C0 87 1A93 615      B STRTIO      TO I/O SUBROUTINE
13BE 02    13BE 616      DC XL1'02'    FUNCTION CODE (WRITE)
13BF 00    13BF 617      DC XL1'00'    CONTROL CODE (DATA)
13C0 1A5B  13C1 618      DC AL2(WRTDFC) CONTROL FIELD ADDRESS
13C2 C0 87 13CE 619      B RTN5B2      GOOD RETURN
13C6 C0 87 13CA 620      B **4
13CA C0 87 0E5C 621      B WRTER2      ERROR RETURN
                    622
13CE 3D 5C 1A5D 623 RTN5B2 CLI WRTDFC+2,X'5C' TEST FOR SECTOR 23
13D2 F2 81 0A 624      JE RTN5C      JUMP TO WRITE TEST SECTOR IF DONE
13D5 0E 00 1A5D 19C4 625      ALC WRTDFC+2(1),ONESEC NOT DONE,STEP TO NEXT SECTOR
13DB C0 87 13B6 626      B RTN5B1      TO WRITE NEXT SECTOR
                    627
13DF 3C AA 1F2B 628 RTN5C MVI READ+100,X'AA' SET TEST SECTOR WRITE FIELD
13E3 C2 01 1EC7 629      LA READ,XR1 SET DATA FIELD ADDRESS
13E7 34 01 1B7D 630      ST DPDR,XR1 IN DATA CONTROL FIELD
13EB 3C 00 1A5E 631      MVI WRTDFC+3,0 SET TO WRITE ONE SECTOR
13EF 0C 00 1A5D 157E 632      MVC WRTDFC+2(1),TSTSEC SET SECTOR NUMBER IN CONTROL PLD.
                    633
13F5 C0 87 1A93 634      B STRTIO      TO WRITE THE TEST SECTOR
13F9 02    13F9 635      DC XL1'02'    FUNCTION CODE (WRITE)
13FA 00    13FA 636      DC XL1'00'    CONTROL CODE (DATA)
13FB 1A5B  13FC 637      DC AL2(WRTDFC) CONTROL FIELD ADDRESS
13FD C0 87 1409 638      B RTN5D      GOOD RETURN
    
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DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0A-2
PAGE 7

IBH MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129638
PAGE 7A

A0A2 S C A N E Q U A L

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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1401 C0 87 1405 639      B **4
1405 C0 87 0E5C 640      B WRTER2      ERROR ON DATA WRITE
                    641
1409 3C 18 1A5E 642 RTN5D MVI WRTDFC+3,24 SET TO SCAN 24 SECTORS
140D 3C 00 1A5D 643      MVI WRTDFC+2,0 SET TO START SCAN AT SECTOR 0
1411 3C 52 1BE8 644      MVI SNSID,X'52' PUT ID IN PRINT
                    645
1415 C0 87 1A93 646      B STRTIO      TO SCAN 24 SECTORS
1419 03    1419 647      DC XL1'03'    FUNCTION CODE (SCAN)
141A 00    141A 648      DC XL1'00'    CONTROL CODE (EQUAL)
141B 1A5B  141C 649      DC AL2(WRTDFC) CONTROL FIELD ADDRESS
141D C0 87 143B 650      B RTN5D1      RETURN FOR NO SCAN FOUND, (NOT EXP.)
1421 C0 87 145D 651      B RTN5E      RETURN FOR SCAN FOUND, (EXPECTED)
                    652
1425 C0 87 1BC1 653      B PRTSNS      TO PRINT SENSE INFO.
1429 C0 87 021A 654      B PRINT      TO PRINT 3RD LINE
142D 06    142D 655      DC XL1'06'    FLAGS
142E 47    142E 656      DC IL1'71'    LENGTH
142F 1472  1430 657      DC AL2(ERROR5A) MESSAGE ADDRESS
1431 C0 87 0222 658      B HALT      TO DCP HALT
1435 A052  1436 659      DC XL2'A052'  HALT ID
1437 C0 87 145D 660      B RTN5E      PROCEED TO NEXT CHECK
                    661
143B C0 87 1D08 662 RTN5D1 B SHIFT      TO SHIFT BITS FROM SECTOR BYTE
143F 157C  1440 663      DC AL2(TSTSEC-2) ADDRESS OF DATA
1441 C0 87 1D59 664      B CVD      TO CONVERT TO DECIMAL
1445 1D4D  1446 665      DC AL2(CYLN0) ADDRESS OF SOURCE
1447 1530  1448 666      DC AL2(ERROR5B-10) ADDRESS OF DESTINATION
1449 3C 40 152E 667      MVI ERROR5B-12,C'
                    668
144D C0 87 021A 669      B PRINT      TO PRINT NO SCAN FOUND
1451 C6    1451 670      DC XL1'C6'    FLAGS
1452 48    1452 671      DC IL1'72'    LENGTH
1453 153A  1454 672      DC AL2(ERROR5B) MESSAGE ADDRESS
1455 A056  1456 673      DC XL2'A056'  MESSAGE IDENTIFICATION
1457 C0 87 0222 674      B HALT      TO DCP HALT
1458 A056  145C 675      DC XL2'A056'  HALT ID
                    676
145D 0D 00 1A5D 157E 677 RTN5E CLC WRTDFC+2(1),TSTSEC DID SCAN EQUAL OCCUR ON
                    679 *      EXPECTED SECTOR ?
1463 F2 81 34 679      JE RTN5F      JUMP IF YES
1466 C0 87 1D08 680      B SHIFT      TO SHIFT SECTOR BITS
146A 1A5B  146B 681      DC AL2(WRTDFC) CONTROL FIELD ADDRESS
146C C0 87 1D59 682      B CVD      TO CONVERT TO DECIMAL
1470 1D4D  1471 683      DC AL2(CYLN0) ADDRESS OF SOURCE
1472 155A  1473 684      DC AL2(ERROR5D) ADDRESS OF DESTINATION
1474 3C 40 1558 685      MVI ERROR5D-2,C'
                    686
1478 C0 87 1D08 687      B SHIFT      TO SHIFT BITS FOR EXPECTED
147C 157C  147D 688      DC AL2(TSTSEC-2) ADDRESS OF EXPECTED FIELD
147E C0 87 1D59 689      B CVD      TO CONVERT EXPECTED TO DECIMAL
1482 1D4D  1483 690      DC AL2(CYLN0) ADDRESS OF SOURCE
1484 157D  1485 691      DC AL2(ERROR5C) ADDRESS OF SOURCE
1486 3C 40 157B 692      MVI ERROR5C-2,C'
                    693
148A C0 87 021A 694      B PRINT      TO PRINT SCAN EQUAL ON INCORRECT
                    695 *      SECTOR
148E C6    148E 696      DC XL1'C6'    FLAGS
148F 43    148F 697      DC IL1'67'    LENGTH
1490 157D  1491 698      DC AL2(ERROR5C) MESSAGE ADDRESS
1492 A05C  1493 699      DC XL2'A05C'  MESSAGE IDENTIFICATION
1494 C0 87 0222 700      B HALT      TO DCP ERROR HALT
1498 A05C  1499 701      DC XL2'A05C'  HALT ID
                    702
149A 0E 00 157E 19C4 703 RTN5F ALC TSTSEC(1),ONESEC STEP TEST SECTOR NO. +1
14A0 3D 60 157E 704      CLI TSTSEC,X'60' HAVE ALL SECTORS BEEN USED ?
14A4 C0 81 135E 705 RTN5G BE RTN5A
14A8 C0 87 139A 706      B RTN5B      TO USE NEXT SECTOR IF NO
    
```

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0A-2
PAGE 7A

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129638
PAGE 8

AOA2 SCAN EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic error logs for AOA2 SCAN EQUAL, including error codes like 14AC, 14BC, 14CC, etc., and their corresponding statements.

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129638
PAGE 8A

AOA2 SCAN EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic error logs for AOA2 SCAN EQUAL, including error codes like 162E, 162F, 1630, etc., and their corresponding statements.

AOA2 SCAN EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic code entries for scan equal program, including error locations like 16C6, 16CA, 16CC, etc.

AOA2 SCAN EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic code entries for scan equal program, including error locations like 17BE, 17BF, 17C0, etc.

AOA2 SCAN EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for routine 08.

AOA2 SCAN EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for routine 977.

AOA2 S C A N E Q U A L

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic error messages and routines such as 'AL2(SEKER2) ADDRESS OF MESSAGE', 'SENSE I/O ROUTINE', and 'Q' CODE CONTROL CODE'.

AOA2 S C A N E Q U A L

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic error messages and routines such as 'START I/O SUBROUTINE', 'SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE DIRECTION', and 'COMPARE PRESENT ADDR. WITH NEW ONE'.

AOA2 S C A N E Q U A L

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1B73	00	1B73	1165	SCRCH DC	XL1'00'
1B74	00	1B74	1166	FRSTPS DC	XL1'00'
1B75	00	1B75	1167	LASTAD DC	XL1'00'
1B76	00	1B76	1168	DPC3SV DC	XL1'00'
1B77	00	1B77	1169	SAVSW DC	XL1'00'
1B78	0000	1B79	1170	DISKTP DC	XL2'0'
1B7A	0000	1B7B	1171	DPCR DC	AL2(*-*)
1B7C	1DC7	1B7D	1172	DFDR DC	AL2(WORK)
1B7E	0000	1B7F	1173	XR2WK DC	XL2'0'
1B80	FFFF	1B81	1174	NEG1 DC	XL2'FFFF'
1B82	0294	1B83	1175	SIXSIX DC	IL2'0660'
1B84	36 01 1B81		1176	BUSY A	NEG1,XR1
1B88	C0 84 1ADA		1177	BH	WAIT
1B8C	C0 87 1D59		1178	B	CVD
1B90	0A03	1B91	1179	DC	AL2(RPFK)
1B92	1BC0	1B93	1180	DC	AL2(TIMEOUT)
1B94	3C 40 1BEE		1181	HVI	TIMEOUT-2,C'
1B98	C0 87 021A		1182	B	PRINT
1B9C	C6	1B9C	1183	DC	IL1'C6'
1B9D	15	1B9D	1184	DC	IL1'21'
1B9E	1BC0	1B9F	1185	DC	AL2(TIMEOUT)
1BA0	A08E	1BA1	1186	DC	XL2'A08E'
1BA2	C0 87 0222		1187	THALT B	HALT
1BA6	A08E	1BA7	1188	DC	XL2'A08E'
1BA8	C0 87 0000		1189	B	0
1BAC	E3C9D4C5D6E4E340	1BC0	1190	TIMEOUT DC	CL21'TIMEOUT IN ROUTINE XI'
1BB4	C9D540D9D6E4E3C9		1190		
1BBC	D5C540E7E7		1190		
		0A03	1191	RPFK EQU	X'A03'

DECREMENT DELAY COUNTER
RETURN TO TIO IF NOT TIME OUT
TIME OUT OCCURED, CONVERT ROUT. NO.
CURRENT ROUTINE NO.
ADDRESS OF DESTINATION
TO PRINT TIMEOUT OCCURED
FLAGS
LENGTH
MESSAGE ADDRESS
MESSAGE ID
TO DCP ERROR HALT
HALT ID

AOA2 S C A N E Q U A L

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
			1193 *		SUBROUTINE TO PRINT THE CONTENTS OF DEVICE STATUS
			1194		
1BC1	34 08 1C40		1195	PRTSNS ST	PRTEXT+3,ARR
1BC5	C0 87 1A64		1196	B	SENSE
1BC9	02	1BC9	1197	DC	AL1(STAT01)
			1198		
1BCA	C0 87 021E		1199	B	UNPACK
1BCE	02	1BCE	1200	DC	XL1'02'
1BCF	1A7B	1BD0	1201	DC	AL2(STATUS)
1BD1	1C59	1BD2	1202	DC	AL2(HEXSTA-4)
			1203		
1BD3	3C 01 1C04		1204	HVI	STPSNS+1,01
1BD7	C2 01 1C6F		1205	LA	STATND,XR1
1BDB	C2 02 1D00		1206	LA	STHASK,XR2
			1207		
1BDF	C0 87 021A		1208	B	PRINT
1BE3	C1	1BE3	1209	DC	XL1'C1'
1BE4	01	1BE4	1210	DC	IL1'01'
1BE5	1C6F	1BE6	1211	DC	AL2(STATWD)
1BE7	A000	1BE8	1212	SNSID DC	XL2'A000'
1BE9	2C 00 1BF4 00		1213	MOVEBT HVC	TSTBT+1(1),0(,XR2)
1BEE	1C 11 1DC6 00		1214	HVC	STATPR(18),0(,XR1)
			1215		
1BF3	38 00 1A7A		1216	TSTBT TBN	STATUS-1,*-*
1BF7	C0 90 1C03		1217	BF	STPSNS
			1218		
1BFB	C0 87 021A		1219	B	PRINT
1BFF	01	1BFF	1220	DC	XL1'01'
1C00	12	1C00	1221	DC	IL1'18'
1C01	1DC6	1C02	1222	DC	AL2(STATPR)
			1223		
1C03	3D 01 1BF4		1224	STPSNS CLI	TSTBT+1,X'01'
1C07	F2 81 0A		1225	JE	SENSA
			1226		
1C0A	E2 02 01		1227	LA	1(,XR2),XR2
1C0D	D2 01 12		1228	SENSB LA	18(,XR1),XR1
1C10	C0 87 1BE9		1229	B	MOVEBT
			1230		
1C14	3D 80 1C04		1231	SENSA CLI	STPSNS+1,X'80'
1C18	F2 81 1A		1232	JE	PRTEXT
1C1B	3C 80 1C04		1233	EVI	STPSNS+1,X'80'
1C1F	C0 87 1A64		1234	B	SENSE
1C23	03	1C23	1235	DC	XL1'03'
1C24	C0 87 021E		1236	B	UNPACK
1C28	02	1C28	1237	DC	XL1'02'
1C29	1A7B	1C2A	1238	DC	AL2(STATUS)
1C2B	1C5D	1C2C	1239	DC	AL2(HEXSTA)
1C2D	C2 02 1D00		1240	LA	STHASK,XR2
1C31	C0 87 1C0D		1241	B	SENSB
			1242		
1C35	C0 87 021A		1243	PRTEXT B	PRINT
1C39	02	1C39	1244	DC	XL1'02'
1C3A	1D	1C3A	1245	DC	IL1'29'
1C3B	1C5D	1C3C	1246	DC	AL2(HEXSTA)
1C3D	C0 87 0000		1247	PRTEXT B	*-*
			1248		SUBROUTINE EXIT
1C41	E2E3C1E3E4E240C2	1C55	1249	DC	CL21'STATUS BYTES IN HEX, '
1C49	E8E3C5E240C9D540		1249		
1C51	C8C5E76B40		1249		
1C56	0000000000000000	1C5D	1250	HEXSTA DC	XL8'0'
1C5E	D5D640D6D7404040	1C6F	1251	STATWD DC	CL18'NO OP
1C66	4040404040404040		1251		
1C6E	4040		1251		
1C70	C9D5E3C5D9E5C5D5	1C81	1252	DC	CL18'INTERVENTION REQD.'
1C78	E3C9D6D540D9C5D8		1252		
1C80	C44B		1252		
1C82	D4C9E2E2C9D5C740	1C93	1253	DC	CL18'HISSING ADDR. MARK'
1C8A	C1C4C4D94B40D4C1		1253		

AOA2 S C A N E Q U A L

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
WRTDPC	A	001	1A5B	1063	0242* 0243* 0249 0266* 0274 0280* 0285 0290 0312 0322 0385* 0386* 0392 0409* 0417 0423* 0428 0433 0486* 0487* 0493 0510* 0518 0524* 0531 0585* 0586* 0592 0612* 0614* 0618 0623 0625* 0631* 0632* 0637 0642* 0643* 0649 0677 0681 0734* 0735* 0741 0757* 0765 0771* 0772* 0777 0810 0821 0850* 0851* 0856 0869* 0877 0883* 0887 0918* 0923 0936* 0942 0951* 0955
WRTER2	A	004	0E5C	0352	0277 0420 0521 0621 0640 0768 0880 0945
XR1	C	001	0001	1328	0030* 0031 0032* 0036 0140 0042 0043 0043* 0060 0064 0064* 0065 0268* 0269 0411* 0412 0512* 0513 0606* 0607 0629* 0630 0759* 0760 0871* 0872 0937* 0938 1076* 1077 1079 1115* 1176* 1205* 1214 1228 1228* 1267* 1273 1273* 1276
XR2	C	001	0002	1329	0333* 0334 0336 0336* 0337 0982* 0983 1100* 1102 1103 1104 1111 1120 1121 1122* 1123 1124 1125 1130 1133 1134* 1135 1140 1141 1146 1149 1151 1154 1155 1159 1162 1163 1206* 1213 1227 1227* 1240* 1268* 1269* 1270 1272* 1274 1275 1281 1281*
XR2WK	A	002	1B7F	1173	1133* 1134
ZROCTR	A	004	0BDE	0152	0114 0146
ZROTO	A	006	1D8D	1312	1310*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

AOA2 S C A N E Q U A L

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+-Y:YH & B"H E-D & CEHE>X0X I|& .A"HA<HA TH 4 &XG(ED.A30 BO- 8 -H.0/ F-E AYD ?+ D -1CA0A20001

T+-Z5 -72D R'X C 2-K'8D GK &| U Y -OH*BF-QEBON0 X IC D.A0%0H*BH-A B E3 X.1|D.1|H GE - 2/6A0A20002

T+-D0 A,<B0000-X a; DB0Z D|10.B(H A 3EABO*H A,&FXO H A,QFXOH A,&FXO H A,2FXOH A,5FXO H AY *3HA0A20003

T+-. ,*/,<B S.A, <B S<A,<OH*ER H @20XH+ -E;"HEAC1 XB0, /OHE KH.PXB G /YFF X0| S)<B G 83HA0A20004

T+-XW0|LE+LN2;| S6<TA9*M 0XPE5HC T1;.T1*E HB 0 CI5;PA40X DE+.S9UCS1;|T2)P G5)Q 92QA0A20005

T+/_9UCT1;.T2)P G6<LI8_I 1(XI9*M 90.E10XN0+.CO)N 1)TU0) (1>LNO=| I5_N 00PS84CA0<D 4B X 9H A0A20006

T+->7L4 B1G2 &* @*0XJ0Y+<CE D.C-X 00YEU0Y+0+ QBBH EF<BG /,PDXUY|, /OHSY|, /OHKOH* -L- 0C*0A0A20007

T+-7PA H0/ D|10 .CL-B -,2D X"0X H0YDD|10.CT4 B07 2-0X0 A_9| .C-H GC34 B0#2-00BA_ 9| 4Y8A0A20008

T+-OKB0# /0 |0- H 30 B1G EHO| .B*BG A 4:|0 .B*BAB-7 /0_-| E;TOIF=-< AZ-B0, /1Y L30A0A20009

T+-1(U0 FV* /00 20H* <H<BGF0G /OH EATH<><BG SH-B*B GFM00*1Z-C DEQ-X 00H*EU0< FV* /01 MOH* JIHA0A20010

T+-2HCEC /01UOH* BFXQ0C|K-K<BG SH -K<BGF#EB+ &E;?H ED<BG /,FJ&49YEG /OHSYEG /07=80T EE(* 0B A0A20011

T+-3C6*PV2) S08UC E6) X06;I 5X|C9(X R1*J 9XTI40N 8XP E4XN14CT2<N 00N 0=TL8X|A5HCE6+L A44 NZ A0A20012

T+-3=9+.I5*) OMC N5_N 1;-I8|A5;(8XPC8*\$RE<XD<CL I1DCN5>(10XV1MC E6) X06) P06(XE04_ 1_Q 3LDA0A20013

T+-499(PDE(PO84C S1;(0)/ OMCS00G N0<PQ9<GLE<|05(L A5*J 9+.I5*) OMC S1*|T5_V 2*J 5XR 1XQ 0-HA0A20014

T+-54 -|:T4 BOX -0Y(OH*.P00 FV0 .BTO FV40BJ?YOH* EU0 FV? /05:0H* (E<BGF0G /OHEATH <>< 14A0A20015

T+-6?/OHSY X /1V |1 ;1-3=GXM;1T0 KP=-0 AZ;0-D) 13E AF77 /1DL - E00B GC03 /06YOH*+PC1 KP=- 006A0A20016

T+-7D| EPXBGFZ< C AZ\$OH*(0<BGC-3 /14HFV? /15RGM4 +3T1 C3X /17A0H* BF-RRX# /OHSYE. /04 E9<A0A20017

T+-8V* <BG /,PHO ZYES /OHSYEQ"1Z ;0YD0H*BFXQ,C?W -N0BG SH-M34 FV7 2-JC /OHE1U<|) HA MOH* *0QA0A20018

T+-9- SH-N<HBG*; C2 JLS -D4 /Z 'CED0-JIF0YDHOH* +.XBG /,F+ 01YEP /OHSYEP /05F|AH S:< S,0A0A20019

T+-:S/17A0H*BF-R HC## /OHSYA. /05 F00TE0 (-R1;PI5>L S0<PR6) S08UCW1) X E0(-R1;.E5;(0*S T1)U 0-4A0A20020

T+-#00<LO2) PG0<E 8X;A5HCE6+LA44C C5_LM0)PDE+LS2)P G0<TE0*J 0F_8XP C8*\$RE+-Y8XPC8*\$ R0<< "DA0A20021

AOA2 S C A N E Q U A L

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+-@J5>LN8@PRE<X N6<|05;|R5_ (1% E4@J 5) \$T6+.T1)~ P1*LS0@GHE<\$I1)| DE+\$A8UCA4=|E6*P D6<D RK*A0A20022
T+-<1>|E6MCG2;P I5*) 0MCS0@GHE<P Q9<GLE<|05(LA5*L H1*GDEEA 8%PC8'\$ E6<.Y8@N 5XR 0'\$ N8*U 71 A0A20023
T+-G5_ (1%XE4@J 0@TA5*-E1DCA1>| E6MCAE (\$N1MCS1+| T5_V 8%|A5;|H1MC P6*PV2) \$U8UCE6) X 06;H 4QUA0A20024
T+-"BE(\$CO=LR6*P D6+\$H2)|E6<L02)P G6<E 9_XI8@N 1<G T0MCC5_LH0) PDE+L S2) PGE<TE0*J 2+. CO)M 4:YA0A20025
T+-"E<\$09(PDE(P 084CS1; (0) PDE(\$ E6<LE8@PC8@PDE<. Y6<E 8@X0 0 J;C4 BOX -EY(OH*.P00 FV0 RIEA0A20026
T+/@BOY@ AZ) | U \$:<BGFZ< AZ\$OH* EHXBGDAT /1?A0H* BF-Q5C.T /OHSY X /1V|| ;1-3=GXM ;1T0 8AYA0A20027
T+/@3D/7Y| EPXH AG**4 J_OH*EUOH FV? /1A*OH*EO<B GCV0@H/7Y| EPXB GPZ<C AZ\$OH*EX<B GDH0 ;.HA0A20028
T+/@OH*) BAZ\$OH*)OJ5(DP*@EAE5OH* \$0*BG /YPPAE7OH* BHDAKOH*E,<BG /, FHO*ZYES /OHSYES /1Y :C-A0A20029
T+/@ZR H8-AZ@/ EOH*BFXREDJ>-N@B G SH-N@BGC"\$S0@G N6<PQ9<GLE+.E5;. E6<.I86_L*.I84C 06<H 738A0A20030
T+/@DU:|E6|E)E4C N5>(5_M 0*\$T1) V 1(\$I5*) 0MCO5*N 8%PC8'\$RE+.CO)N 1)TU0)|T2<N 5'X E9*U 3,DA0A20031
T+/@E-5>LS6<PR6)\$ R8UCW2<PR1MCP6*P S1)PTE<GF8@PRE<L 02)PGE<E 8%|A5MC E6+LA44CC5@PR0;| I5_M ---A0A20032
T+/@EE+\$I8@/ 0)N 1)TU0) (0'\$N1<X T2) \$NA LMT4 BOX -EY(OH*.P00 FV0 .BTO FV4@BJ?YOH* EU0) 9DA0A20033
T+/@GN AZ\$OH*J<B GDES /1?A0H*BF-Q 5C.T /OHSY X /1V || ;1-3=GXM;1T0 KP=-@ AZ;0-D) 13E AF74 E. A0A20034
T+/@E0H*EUOH FV? /1GD0H*J9%BGCVO @OA?YC DEP-XE|18 ;H@BGFZ<C AZ\$OH* KH%BGD/, /1?A0H* BF-Q 38EA0A20035
T+/@I.P1HYOH*BHDA QOH*BFXRCD?K-O*B G SH-O*BGFW@B+H E;"HED<BG /,FPJ(JYE, /OHSYE, /1P D9@- 6.UA0A20036
T+/@HF1MCP6*PV2)\$ U8UCE6) X06;I 9XP R1MCP6*PS1) PTE<G P8@PRE<L02) PGE<E 8%|A5MCE6+LA44C W2<H KH%A0A20037
T+/@A6*N 8@TE6*N 2)N 5) \$T6<GN6<P Q9<GLE<|05*LI8@X 05;.CO)N 1_\$U5*J 0'\$N1<XT2) \$NE<L E8@H 6T%A0A20038
T+/@.80=|E1DCB:DC AE+|I5UCW2<PN6+| H1)YEE+\$A8UCN5>(0)N 1)TU0) (0'\$ N1<XT2) \$N8%|A5MC E6+E M08A0A20039
T+/@<70) (8%PN8XN 0XITE4A{0>TT1MC 1E<.I84COP0_ 5_N 0*\$T1) V 1(\$I5*) 0MCS0@GHE<PQ9<G LE+Q "K A0A20040
T+/@(22<PR1MCT2<P R1MCI8UCN5>(0)N 1)TU0)<E AQ>|E .B*BAB-7 /0_-C EP XH| EPLOIF=T /1Y JAYA0A20041
T+/@+_00 FV? /1+ KOH*L<BGF@G /OH EATH<><BG SH-B*B GFM@ AN=0-D) 13E AF74@ A*PC|@-1J" FC|8 ;YYA0A20042
T+/@|YGN;1T0 FV4 @ AZ;OH*EUOH FV? /1|+OH*L2%BGCVO 'PAZ) @YDRC- EPJX DOH*L_T2DG2?@ J# G (D 'T4A0A20043

AOA2 S C A N E Q U A L

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+/@TF74@ AZ;C EPJH=OH*EUOH FV? /16IOH*HA*BGCVO @PAZ;| EPL1KP=T /1DL 0 EO@BGE? /16 7ZXA0A20044
T+/@J;P*BGF@G /OH EAU*H@XBG SH-NXB GEE7 /14HEP3 /15 BGE4N<C1 EK@ /OH E1U-N+DA0OH*BHDA OCE '\$8A0A20045
T+/@KRFV4H-7HA<B GGE-EO@BGGHU) LJM E|D NO<B|GGE-N<B GGNU) LJM |D N;@B G /,F61M'YE3 /OH SYED 63HA0A20046
T+/@LHC-N-/XD|0 N-XBAD5@ /1+E8@T E6(-R1;PI5>LS6<P R6) \$R8UCW1) YEE(- R1;.E5; (0*\$T1) V 1(Q @KUA0A20047
T+/@H|2) PGE<E 8%| A5MCE6+LA44CO1UC 2'DCS1*|T5_XS8X| A5MCE6+LA44CN5>(8%PT6<GF8@PRE<E @?E @RQA0A20048
T+/@NH6+.E0=|06MC S0@GNEDCW2<PR1MC S1*|T5_V 5) R.&+ XE+\$A8UCE6+LA4=. CO)N 1)TU0) (5X| C9(U 0@-A0A20049
T+/@OE6*PDE<GTE+. E0=|06MCX96_ 8XT 09(|DE<TA9*N 5X| C9(XR1*J 0; (8XP C8'\$RE+X+.E0=| 06H PE<A0A20050
T+/@P 0'\$U5;|E6MC I5MCC5_PT6) \$LE<\$ I1)|DE (PO84CS8@P P5@PDE<|06) XE0=| L:DCA1>|E6MCAE+. CO)N 2\$@A0A20051
T+/@P#E<PQ9<GLE(- AB>(1) PDE(\$FE<| Y44?H1*GDEEA 8XP C8'\$RE<.Y8@N 5XR 0'\$N8'XO44CF2*P L1D J1HA0A20052
T+/@Q60@TA5*-E1DC A1>|E6MCAE|I 8XP C8'\$RE+.CO)N 1)TU0) (0; (1) PDE(\$ FE<|Y44X?A;|=E .B* "I+A0A20053
T+/@R1-EY(OH*.P00 FV0.BT3*FV4@BJ? YOH*EU0 FV? /1R >OH*OP<BGF@G /OH EATH<><BG SH-B*B GFM@ 00XA0A20054
T+/@EX| ;1-3=GXM ;1T0 FV#B J7G(D \$-BGFZ<B AZ\$OH* OX<BGEZT /09*|HY) 130AFV8@7AZ) OH* EU0< :HGA0A20055
T+/@SX AZ\$OH*O?<B GE,T /1\$<OH*BFXR JE7B-P*BG SH-P*B GFW@B+B E;"HED<B G /,FLJ;'YE /OH SYEB OZ@A0A20056
T+/@*SOH*RF/7G|E EP?HAD<BG /,POJP PVE| /OHSYE<'7AZ) @YDSOH*BFXROES6 -P@BG SH-P@BGET, AE+< 20 A0A20057
T+/@) 1;.T6<V/5UC 05MCE6) X06MCD2*J 5) \$TE<.RO) PC2DC A1>|E6MCA8=|E5(- T2) PGE+|0E+.CO)N 1) ;.DA0A20058
T+/@;Q9<GLE(-AB>(1) PDE(\$FE<|Y4@P N1DCO1UCC:((.E+. E5;.E6<.I84CN5>(8%PT6<GF8@PRE<G T8@N 9:-A0A20059
T+/@-L5(-T2) PGE+| 0E+.CO)N 1)TU0) (5@GS84CE5*J 5XR 0=TLK0* PFY' X IOHDHC*BGB5@< AZ *BOY @YEAOA20060
T+/@-+| EPLOIF=T /1DL EO@BGE" /1-XOH*\$O*BG /Y F(S28OH*BHD IOH* RL31NGXQ<*/@EGXQ @ AY 88YA0A20061
T+/@|P%HAG**4 J_ 'OH*EUOH FV? /1- XOH*QH<BGCVO@H/? Y| EPXBGFPZ<C AZ \$OH*QN%BGFPS /1? AAVO 7BHA0A20062
T+/@SDDP- /OHSYE. /1/WHOH*BFXQ,C=W -N%BG SH-N%BGE@Y H|"|E .B*BAB-7 /0_-| EPLOIF=T /1Y 1 DA0A20063
T+/@S*UO FV? /1S UOH*QU@BGF@G /OH EATH<><BG SH-B*B GFM@ A*PC|8;1J# F| EPXHAG**4 J_ 'OH* :Q@A0A20064
T+/@T:FZ<B AZ\$OH* Q4%BGF@G /09*|EH \$:C3*GXM<"J#DGXM @ AZ;OH*EU0< FV? /1UPOH*REXBGFP@D FPAD *E+A0A20065

AOA2 S C A N E Q U A L

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+/U5) 8BG SH-MXB GFS /OH E1S%|:EA 00H*BHD AOOH*Q)TE HPM85 /V+. DRO D + JV+P+. /1ZUZ 4 AFX% 900A0A20066

T+/VOP*C2-JC /OH E1S%R0E =OH*BHD =OH* C6HPQ1 /1Z U T-EPY? DAVL+ D E;?HEH<BGFZ<A JW DOH* KE*A0A20067

T+/W,FP1 /1V7CE R/6%K0-DG0H* <BGGNUR/JY20H* BFXDDP/>-|<BG /Y AE1Y20H*BF-QYFVY @ % 8D<A0A20068

T+/XWDLO B0U0 A_ 40H*BHD 00H* H AA#P1<GT0HC A1<LR1;.S6+\$A8UC S80PP50PDE+|0E<X NO'Q N *A0A20069

T+/Y/6) XE0={ 9*G L9<PE6) X06HC000| U6) XE1DCW2<XL1HC S1*PK2) PG6+|H1HC C1KCT6*GC4W?A6) X I9*M 1 4A0A20070

T+/Z*1DCA84CC: ((.E (POK4CX9=-R9 (M 8%PE4UCT1;.TE+. E0=|I5_N 0-C3E<\$ 06HCM5_XEE<XN1_R #B A0A20071

T+/DP LG HFX45 JZ'P <E+ 0 AZ#4H*A (- E;LM J2MA0A20072

T+/,K /Z9|)2- CF_ E6E D% J_ # 3%HF_-#BA%0+6- \$;-H6BCYHF_-:BA% 076 %YD?<EQ\$;3P UF74 J1YA0A20073

T+/% (0-DR2|+- <P SP8E*"1_70-D<T CF7E# 6H5 /Z98E <8E6H8H*D?E DA0-D D|) \$) B0AF70C (6H \$-20 J84A0A20074

T+/_H A_6 33"PF* ' A_40-DN| D\$).% A ,3" 30 F7M1Z/_ #0: TE AF7P2-KP 2/AF# 6H< A_3F7M ? AX 5R0A0A20075

T+/>C*0G2/1;: 6H % A_3 60 F7<\$)-H GA,0 "HGBYO 1_ 3.) \$) 6G /1, G** |" " Z6 :H0A0A20076

T+/>= (-D\$-*BDF_ /15RB-<\$0C1 F## /OHE1/M\$OH+OH* BHDB+OH* +|I5<P 09+(2) H 6) \$U80X N1M 7 0A0A20077

T+/799=*4BA1 OH* ER . /OH; /Z#GEU @ J0D0-D+\$0HBG6C /OHE0ED*\$: \$' *DJ7P C- FX, UAO JDU0A0A20078

T+/04 0BG /YAD/7 F|E\$' |HAB>HB) H AD%BGF=U'-ACD0YD E|H *A<BGFWE0H* BG-HE; 11) 0-H) <B GG 4) 8DA0A20079

T+/170H*BF-H) GE7 /0 8>|A8=LSE<. Y80PS6<XN6<TE96_ CNSUC 054A 6DA 6DA 6DA 6D 03QA0A20080

T+/2D2) PT1) XV1) P T2) \$NE (XE6<J.5<X S8%YN14CA1<LRK4C M0) XK1) TU2) -M1) P TE<|H1*|KEDA 1<G TOM 1D*A0A20081

T+/3V00TE0'I 6DA 6DA E (POE (XEO'S B1DCP5>LN1DA E+| KE<|05*LI80X05MC C2<PC4>.E1) I 00T EO'H @D8A0A20082

T+/4-6DA 6DA EDC U5;.A1%N 6DA 6DA 6DA 6DB 6B 6B 6 B L6HG05 J5<(6H) LCQBF=H4 /5<|) L*H JY A0A20083

T+/5\$ /5+) 6DA.) <- % A48AP- ?H 6ACY 6H4* 6A420YD G8-HA0H*) I0BG A -EHD A -EHD 6EAY 7H0A0A20084

T+/60Q36HGPY6BAX B (-)-C6HGQQ6BAZ T (-) D0A0GQ0 0 AGR0 0, GR 0 GN- 6-) _ @ GN-) D<A0A20085

TGJ64PW|2--YPH GE, /16LOH* |G 10?|4' -S7=|X0 "S A0A20086

EB"R*E7*=-DC"PH\$ =*7HEP| | C FX ASC R A SO Q 11410818700 819702EDA0A20087

LAST PAGE

AOB2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for AOB2 program, including start, section preface, operating instructions, and various tests.

AOB2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for AOB2 program, including various tests and status checks.

A0B2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for the 'SCAN LOW OR EQUAL' routine, including instructions like TSTSPM, CLI, JNE, MVI, J, ZROCTR, and SETRMV.

A0B2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for the 'SCAN LOW OR EQUAL' routine, including instructions like ROUTINE NO. 01, ROUTINE PREFACE, and various control and data handling instructions.

IBH MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129640
PAGE 3

AOB2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routines like TEST SETTING OF THE SCAN FOUND, ROUTINE NO. 02, and various control and data handling instructions.

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0B-2
PAGE 3

IBH MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129640
PAGE 3A

AOB2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routines like TEST SECTOR COUNTER FOR STEPPING, CHECK HEAD & SECTOR NO. AFTER SCAN IS COMPLETED, and various control and data handling instructions.

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0B-2
PAGE 3A

AOB2 SCAN LOW OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

Table with columns: ERR LOC OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include error codes like OE72, OE7A, OE7D, etc., and their corresponding statements such as 'CL50'SCAN FIELD WAS ALTERED AFTER GIVING A SCAN LOW OR ' and 'CL13'EQUAL COMMAND'.

AOB2 SCAN LOW OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

Table with columns: ERR LOC OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include error codes like OFC0, OFC1, OFC2, etc., and their corresponding statements such as 'ROUTINE NO. 03, TEST SETTING OF THE SCAN EQUAL SENSE BIT WITH A SCAN LOW OR EQUAL COMMAND USING AN EQUAL CONDITION' and 'ROUTINE NUMBER ROUTINE FLAGS ADDRESS OF NEXT ROUTINE PREFIX'.

AOB2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include error codes like 105A, 105E, 105F, 1063, etc., and their corresponding diagnostic statements.

AOB2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include error codes like 112B, 112C, 112D, etc., and their corresponding diagnostic statements.

A0B2 SCAN LOW OR EQUAL

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	
136B	4E	136B	585	DC	IL1'78'	LENGTH
136C	1436	136D	586	DC	AL2(ERR05A)	MESSAGE ADDRESS
136E	C0 87 0222		587	B	HALT	TO DCP HALT
1372	A062	1373	588	DC	XL2'A062'	HALT ID
1374	C0 87 139A		589	B	RTN5E	PROCEED TO NEXT CHECK
			590			
1378	C0 87 1C89		591	RTN5D1 B	SHIFT	TO SHIFT BITS IN SECTOR NO.
137C	14CC	137D	592	DC	AL2(TSTSEC-2)	ADDRESS OF SECTOR BYTE
137E	C0 87 1CDA		593	B	CVD	TO CONVERT TO DECIMAL
1382	1CCE	1383	594	DC	AL2(CYLNO)	ADDRESS OF SOURCE
1384	1480	1385	595	DC	AL2(ERR05B-10)	ADDRESS OF DESTINATION
1386	3C 40 147E		596	MVI	ERR05B-12,C'	
138A	C0 87 021A		597	B	PRINT	TO PRINT NO SCAN FOUND
138E	C6	138E	598	DC	XL1'C6'	FLAGS
138F	54	138F	599	DC	IL1'B4'	LENGTH
1390	148A	1391	600	DC	AL2(ERR05B)	MESSAGE ADDRESS
1392	A066	1393	601	DC	XL2'A066'	MESSAGE IDENTIFICATION
1394	C0 87 0222		602	B	HALT	TO DCP HALT
1398	A066	1399	603	DC	XL2'A066'	HALT ID
			604			
139A	0D 00 198E 14CE		605	RTN5E CLC	WRTDFC+2(1),TSTSEC	DID SCAN EQUAL OCCUR ON
			606	*		EXPECTED SECTOR ?
13A0	F2 81 34		607	JE	RTN5F	JUMP IF YES
13A3	C0 87 1C89		608	B	SHIFT	TO SHIFT SECTOR BITS
13A7	198C	13A8	609	DC	AL2(WRTDFC)	CONTROL FIELD ADDRESS
13A9	C0 87 1CDA		610	B	CVD	TO CONVERT TO DECIMAL
13AD	1CCE	13AE	611	DC	AL2(CYLNO)	ADDRESS OF SOURCE
13AF	14AA	13B0	612	DC	AL2(ERR05D)	ADDRESS OF DESTINATION
13E1	3C 40 14A8		613	MVI	ERR05D-2,C'	
			614			
13B5	C0 87 1C89		615	B	SHIFT	TO SHIFT BITS FOR EXPECTED
13B9	14CC	13BA	616	DC	AL2(TSTSEC-2)	ADDRESS OF EXPECTED FIELD
13BB	C0 87 1CDA		617	B	CVD	TO CONVERT EXPECTED TO DECIMAL
13BF	1CCE	13C0	618	DC	AL2(CYLNO)	ADDRESS OF SOURCE
13C1	14CD	13C2	619	DC	AL2(ERR05C)	DESTINATION ADDRESS
13C3	3C 40 14CB		620	MVI	ERR05C-2,C'	
			621			
13C7	C0 87 021A		622	B	PRINT	TO PRINT SCAN EQUAL ON INCORRECT
			623	*		SECTOR
13CB	C6	13CB	624	DC	XL1'C6'	FLAGS
13CC	43	13CC	625	DC	IL1'67'	LENGTH
13CD	14CD	13CE	626	DC	AL2(ERR05C)	MESSAGE ADDRESS
13CF	A06C	13D0	627	DC	XL2'A06C'	MESSAGE IDENTIFICATION
13D1	C0 87 0222		628	B	HALT	TO DCP ERROR HALT
13D5	A06C	13D6	629	DC	XL2'A06C'	HALT ID
			630			
13D7	0E 00 14CE 18F5		631	RTN5F ALC	TSTSEC(1),ONESEC	STEP TEST SECTOR NO. +1
13DD	3D 60 14CE		632	CLI	TSTSEC,X'60'	HAVE ALL SECTORS BEEN USED ?
13E1	C0 81 12C3		633	RTN5G BE	RTN5A	
13E5	C0 87 12D7		634	B	RTN5B	TO USE NEXT SECTOR IF NO
			635			
13E9	E3C8C540D7D9C5E5	141C	636	DC	CL52'THE PREVIOUS ERRORS WERE PRESENT AFTER DOING A SCAN'	
13F1	C9D6E4E240C5D9D9		636			
13F9	D6D9E240E6C5D9C5		636			
1401	40D7D9C5E2C5D5E3		636			
1409	40C1C6E3C5D940C4		636			
1411	D6C9D5C740C140E2		636			
1419	C3C1D540		636			
141D	D3D6E640D6D940C5	1436	637	ERR05A DC	CL26'LOW OR EQUAL OF 24 SECTORS'	
1425	D8E4C1D340D6C640		637			
142D	F2F440E2C5C3E3D6		637			
1435	D9E2		637			
1437	E2C3C1D540C5D8E4	1467	638	DC	CL49'SCAN EQUAL NOT SET AFTER A 24 SECTOR SCAN LOW OR'	
143F	C1D340D5D6E340E2		638			
1447	C5E340C1C6E3C5D9		638			
144F	40C140F2F440E2C5		638			
1457	C3E3D6D940E2C3C1		638			
145F	D540D3D6E640D6D9		638			

A0B2 SCAN LOW OR EQUAL

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT	
1467	40		638			
1468	C5D8E4C1D340E6C8	148A	639	ERR05B DC	CL35'EQUAL WHERE SECTOR NO. IX WAS EQUAL'	
1470	C5D9C540E2C5C3E3		639			
1478	D6D940D5D64B40E7		639			
1480	E740E6C1E240C5D8		639			
1488	E4C1D3		639			
148B	E2C2C1D540C5D8E4	14AA	640	ERR05D DC	CL32'SCAN EQUAL OCCURRED AT SECTOR IX'	
1493	C1D340D6C3C3E4D9		640			
149B	D9C5C440C1E340E2		640			
14A3	C5C3E3D6D940E7E7		640			
14AB	6B40E2C8D6E4D3C4	14CD	641	ERR05C DC	CL35', SHOULD HAVE OCCURRED AT SECTOR XI'	
14B3	40C8C1E5C540D6C3		641			
14BB	C3E4D9D9C5C440C1		641			
14C3	E340E2C5C3E3D6D9		641			
14CB	40E7E7		641			
14CE	00	14CE	642	TSTSEC DC	XL1'0'	
14CF	C8C5C1C4405040E2	1502	643	DC	CL52'HEAD & SECTOR BYTE OF CONTROL FIELD CHANGED AFTER A'	
14D7	C5C3E3D6D940C2E8		643			
14DF	E3C540D6C640C3D6		643			
14E7	D5E3D9E6D340C6C9		643			
14EF	C5D3C440C3C8C1D5		643			
14F7	C7C5C440C1C6E23C5		643			
14FF	D940C140		643			
1503	F240E2C5C3E3D6D9	152B	644	ERR06D DC	CL41'2 SECTOR SCAN LOW OR EQUAL AT END OF CYL.'	
150B	40E2C3C1D540D3D6		644			
1513	E640D6D940C5D8E4		644			
151B	C1D340C1E340C5D5		644			
1523	C440D6C640C3E8D3		644			
152B	4B		644			

A0B2 SCAN LOW OR EQUAL

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Rows include routine descriptions like 'ROUTINE NO. 06, CHECK FUNCTION OF END OF CYLINDER' and assembly code instructions.

A0B2 SCAN LOW OR EQUAL

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Rows include assembly code instructions and diagnostic messages like 'TO DCP HALT IDENTIFICATION'.

A0B2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include error codes 198C-1994 and 1995-1999, with statements like 'WRD DFC', 'RD DFC', 'SENSE I/O ROUTINE', 'STATUS DC', 'ERROR RECORDING TABLE', 'Q CODE', 'CONTROL CODE', 'STATUS BYTES', 'DISK CONTROL FIELD', 'CONTROL REGISTER ADDRESS', 'DATA REGISTER ADDRESS', 'CURRENT ROUTINE NO.'.

A0B2 SCAN LOW OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Rows include error codes 19C4-19C3 and 1A7C-1A84, with statements like 'START I/O SUBROUTINE', 'SETXR2, ARR', 'SAVE ADDRESS RECALL REGISTER', 'LOAD XR2 WITH VALUE FROM ARR.', 'ZERO SWITCH', 'SET FUNCTION CODE', 'SET CONTROL CODE IN SIO', 'SET DATA ADDRESS FOR DFCR', 'SET FOR REMOVABLE DISK', 'SET FOR REMOVABLE DISK', 'TEST FOR RUN ON LOWER DISK', 'JUMP IF NO', 'SET FOR FIXED DISK', 'SET FOR FIXED DISK', 'TEST FOR SEEK', 'IF YES, GO SET ADDRESS', 'LOAD CONTROL REGISTER', 'LOAD DATA REGISTER', 'LOAD DELAY VALUE IN XR1', 'START I/O OPERATION', 'TEST FOR BUSY', 'SENSE', 'DC', 'HVC', 'L', 'MVC', 'B', 'DC', 'MVC', 'HVC', 'CLI', 'JNE', 'MVC', 'SBF', 'L', 'TSTERR TIO', 'TSTSCN TIO', 'B', 'SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE DIRECTION (FORWARD OR REVERSE), TO SEEK', 'SETADR CLI', 'JNE', 'MVI', 'MVC', 'L', 'HVC', 'MVI', 'CLI', 'JNE', 'MVI', 'SEP', 'MVI', 'MVI', 'RLDFCR LIO', 'RSIO SIO', 'SETADA CLC', 'IS SWITCH ON?', 'IF NO, SKIP RESTORE', 'RESTORE N BYTE', 'TURN OFF THE FOR/ REV BIT', 'RESTORE PARAMETER POINTER', 'BRANCH IF ERROR', 'BRANCH IF SCAN FOUND', 'EXIT', 'IS THIS A RECALIBRATE?', 'IF NO, BYPASS SWITCH RESET', 'RESET RECALIBRATE SWITCH', 'SAVE ADDR. OF CTL. FLD. ADDR.', 'LOAD XR2 WITH CONTROL FLD. ADDR.', 'SAVE N BYTE IN CONTROL FIELD', 'SET SAVE SWITCH', 'IS THIS FIRST PASS', 'SKIP RECALIBRATE IF NO', 'SET FIRST PASS SWITCH', 'SET FWD/REV BIT TO REV.', 'SET MAXIMUM TRACK CROSSING', 'SET OLD ADDR TO 0', 'LOAD DATA CONTROL REGISTER', 'SEEK REVERSE', 'COMPARE PRESENT ADDR. WITH NEW ONE'.

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129640
PAGE 13

AOB2 SCAN LOW OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1C15 C5D8E4C9D7D4C5D5 1C26 1193 DC CL18'EQUIPMENT CHECK
1C1D E340C3C8C5C3D240 1193
1C25 4040 1193
1C27 C4C1E3C140C3C8C5 1C38 1194 DC CL18'DATA CHECK
1C2F C3D2404040404040 1194
1C37 4040 1194
1C39 D5D640D9C5C3D6D9 1C4A 1195 DC CL18'NO RECORD FOUND
1C41 C440C6D6E4D5C440 1195
1C49 4040 1195
1C4B E3D240C3D6D5C4C9 1C5C 1196 DC CL18'TK CONDITION CHECK
1C53 E3C9D6D540C3C8C5 1196
1C5B C3D2 1196
1C5D E2C5C5D240C3C8C5 1C6E 1197 DC CL18'SEEK CHECK
1C65 C3D2404040404040 1197
1C6D 4040 1197
1C6F E4D5E2C1C6C54040 1C80 1198 STATB2 DC CL18'UNSAFE
1C77 4040404040404040 1198
1C7F 4040 1198
1C81 80402010 1C81 1199 SHMASK EQU *
1C84 1200 DC XL4'80402010'
1C85 08040201 1C88 1201 DC XL4'08040201'
1202 * SUBROUTINE TO SHIFT BITS IN CONTROL FIELD
1203
1204 SHIFT ST SHFEXT+3,ARR STORE ADDRESS RECALL REGISTER
1205 L SHFEXT+3,XR1 LOAD EXIT ADDRESS IN XR1
1206 L SHFEXT+3,XR2 LOAD EXIT ADDRESS IN XR2
1207 A TWO,XR2 INCREASE BY 2
1208 ST SHFEXT+3,XR2 STORE FOR TRUE EXIT ADDRESS
1209 HVI CYLNO,0 ZERO WORK AREA
1210 LA SHFTBL,XR2 LOAD ADDRESS OF SHIFT TABLE IN XR2
1211 L 1(,XR1),XR1 LOAD CONTROL FIELD ADDRESS IN XR1
1212 MVCTBN MVC TBN+1(1),0(,XR2) INSERT CORRECT MASK FOR TEST BITS
1213 MVC SBN+1(1),5(,XR2) INSERT CORRECT BITS FOR SET BITS
1214 TBN TBN 2(,XR1),*-* TEST ONE BIT FOR ON
1215 JF **7 JUMP IF OFF
1216 SBN SBN CYLNO,*-* SET ONE BIT ON IN DECIMAL FIELD
1217 CLI TBN+1,X'40' TEST FOR LAST BIT
1218 JE SHFEXT JUMP TO EXIT IF ALL DONE
1219 LA 1(,XR2),XR2 NOT DONE, STEP XR2
1220 B MVCTBN TO TEST NEXT BIT
1221 SHFEXT B *-* EXIT
1222
1CCE 00 1CCE 1223 CYLNO DC XL1'0'
1224
1CCF 04 1CCF 1225 SHFTBL DC XL1'04'
1CD0 08 1CD0 1226 DC XL1'08'
1CD1 10 1CD1 1227 DC XL1'10'
1CD2 20 1CD2 1228 DC XL1'20'
1CD3 40 1CD3 1229 DC XL1'40'
1CD4 01 1CD4 1230 DC XL1'01'
1CD5 02 1CD5 1231 DC XL1'02'
1CD6 04 1CD6 1232 DC XL1'04'
1CD7 08 1CD7 1233 DC XL1'08'
1CD8 10 1CD8 1234 DC XL1'10'

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129640
PAGE 13A

AOB2 SCAN LOW OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1236 * SUBROUTINE TO CONVERT A NUMBER TO DECIMAL
1237
1CD9 00 1CD9 1238 HXBYT DC XL1'0'
1239 CVD A ONE,ARR ADD ONE TO GET FIRST PARAMETER
1240 ST FROM+5,ARR INSERT THE FROM ADDRESS
1241 A TWO,ARR ADD TWO TO GET THE SECOND PARAMETER
1242 ST TYBOT+5,ARR INSERT THE TO ADDR
1243 ST OTORZ+5,ARR
1244 A ONE,ARR ADD ONE FOR EXIT ADDRESS
1245 ST TIXE+3,ARR STORE EXIT ADDRESS
1246 FROM MVC PROBYT+5(2),*-*
1247 TYBOT MVC TOBYT+3(2),*-*
1248 OTORZ MVC ZROTO+3(2),*-*
1249 PROBYT MVC HIBYT(1),*-*
1250 ZROTO ZAZ *-*(3),UNITS(1) PUT BYTE IN WORK AREA
1251 DECGAN SLC HIBYT(1),ONE ZERO THE TO AREA
1252 JL TIXE DECREMENT THE HEX BYTE
1253 TOBYT AZ *-*(3),DECONE(1) JUMP IF BELOW 1
1254 B DECGAN INCREMENT THE DECIMAL COUNT
1255 TIXE B *-* EXIT
1256 DECCONE DC CL1'1'
1257 UNITS DC CL10'1234567890'
1258 STATPR DS CL18
1259 WORK EQU *
1260 DS CL256
1261 READ EQU *
1262 DS CL256
1263
0003 1264 H1 EQU X'03' HALT DISPLAY 1
0076 1265 H2 EQU X'76' HALT DISPLAY 2
0001 1266 XR1 EQU 01
0002 1267 XR2 EQU 02
0008 1268 ARR EQU 08
0002 1269 STAT01 EQU X'02'
0003 1270 STAT23 EQU X'03'
00A6 1271 CTRL EQU X'A6'
00A4 1272 DATA EQU X'A4'
0080 1273 BIT0 EQU X'80'
0040 1274 BIT1 EQU X'40'
0208 1275 SWITCH EQU X'208'
020A 1276 SECTSW EQU X'20A'
0212 1277 TEST EQU X'212'
0216 1278 LINK EQU X'216'
021A 1279 PRINT EQU X'21A'
021E 1280 UNPACK EQU X'21E'
0222 1281 HALT EQU X'222'
022A 1282 LOAD EQU X'22A'
003C 1283 HF EQU X'3C' HALT DISPLAY F
003F 1284 HA EQU X'3F' HALT DISPLAY A
0BFD 1285 END BEGIN

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0B-2
PAGE 13

DATE 13MAR70 06APR70 22MAY70 01AUG70
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PROG ID 0A0B-2
PAGE 13A

AOB2 S C A N L O W O R E Q U A L

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Rows include symbols like RTN4C1, RTN4D, RTN5, etc.

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0B-2
PAGE 15

AOB2 S C A N L O W O R E Q U A L

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Rows include symbols like SETSW, SETXR2, SHPEXT, etc.

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0B-2
PAGE 15A

A0B2 S C A N L O W O R E Q U A L

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
					0675 0682* 0683* 0688 0721 0733 0766* 0774* 0782 0788* 0792 0826*
WRTER2	A	004	ODD9	0323	0834* 0841 0850* 0854 0879* 0885
XR1	C	001	0001	1266	0247 0379 0467 0551 0569 0678 0785 0844
					0030* 0031 0032* 0036 0040 0042 0043 0043* 0060 0064 0064* 0065
					0238* 0239 0370* 0371 0458* 0459 0535* 0536 0558* 0559 0669* 0670
					0776* 0777 0835* 0836 0997* 0998 1000 1041* 1042 1043* 1049* 1050
XR2	C	001	0002	1267	1116* 1144* 1153 1167 1167* 1205* 1211 1211* 1214
					0304* 0305 0307 0307* 0308 0901* 0902 1022* 1024 1025 1026 1033
					1060 1061 1062* 1063 1064 1065 1070 1073 1074* 1075 1080 1081
					1086 1089 1091 1094 1095 1099 1102 1103 1145* 1152 1166 1166*
					1180* 1206* 1207* 1208 1210* 1212 1213 1219 1219*
XR2WK	A	002	1B01	1113	1073* 1074
ZROCTR	A	004	OBES	0152	0114 0146
ZROTO	A	006	1DOE	1250	1248*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

A0B2 S C A N L O W O R E Q U A L

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+-Y:Y.H E B'D R,: E CEHB>X%0% I|E .A"MHAB<HA TH 4 E%G(ED.A30 BO- 8 -H.2/ P-E" @YD ?+ D W 8A0B20001

T+-Z5 -?2D R'X C 2-K'8D GK E| U Y -OH*BF-QEBONH X IC D.A0%EOH*BH-A B R"EX. | | D. | | H GE - OZ-A0B20002

T+-D0 AX'B00022-X @; DB0Z D| | @.B(H A 3EAB0*H AYAP-4 H AYDF-4H AY_F-4 H AZ4F-4H AZ7F-4 H AU 6LMA0B20003

T+-,,Y1X'B E,/X 'B E"/X'OH*RV6H @20XH+ -R, | HEAC1 XBO, /OH E KU.R*B G /YFF X@| E'XB G * QA0B20004

T+-XW0 |L8+LN2;| S6<TA9*N 0%PE5MC T1;.T1*E HB 0 CI5;PA4@X DE+.S9UCS1;|T2)P G5)Q 9RQA0B20005

T+-/9UCT1;.T2)P G6<LI8_I 1(XI9*N 9@.E1@XNE+.CO)N 4'SWE(\$RE<PQ9<G L6<\$05*|T2)\$NE+| E8< L38A0B20006

T+->*E<G00T6HB=E ' XJ@-DG| | @.D-H GC 4AB08.D|HAR|H G|C-F -,2UAT /OH E1/<.IHC:OH*BHDC :OH* MH@A0B20007

T+-?P /. /O>D+ E BB?HEAC3"B048 -H H@/ .| -@.B|HAAC3 "B08' X(@YD. | E=30 B072/O@' X +@YD 3ZDA0B20008

T+-OKCC0HF?X@ X +OH* C4HB-<@ X JO DBETO BOX /O E <734 BOX -EY (OH*.RTO FE'X@ AW +OH* ECEA0B20009

T+-1(PA- /1S | | @ RUEOAPR<.D<BGF*E C JWE0H*(<@BGCC| /O1G0H*BFXRCC(: -Q<BG SH-Q<BGFPM B+ E R-@A0B20010

T+-2HF@?2DAC /OH E1U0|?:A/OH*BHDA /OH*LA; |H1MCP6*P V2) \$UBUCE6) X06;I 5%|C9(XR1*J 9XT I4@H 6YDA0B20011

T+-3CE+.E1).I5*) 8@TEE<|EE<|Y4=. CO)N 4'SWE(\$RE<P Q9<GLE+LS2) PGE<E 5)\$NE<PX2;.T0)P TE+H RL6A0B20012

T+-3=1*|T5_V 2*J 1<XD6<-I9*N 1)X R5_V &DA - |OC4 BOX -EY(OH*.RTO PQ# /1-POH*Q-CO GU* 9EEA0B20013

T+-49C|8;J/9G|AH SETO PQ"BJ5H(D E" @BGF*EB AW<OH* (H*BGCKP /O7R|PH SETO PQ" /1XD OD RT< NAUA0B20014

T+-54/05Z0H*(;*B GGHURT<BGG(Y*3-9 J|D +L@BGF4| /OH EAV@+H*BG SH-QXB GCPX /OHE15%|* :A WOH* =ZXA0B20015

T+-6? SH-RT7"PQ" 2-JC /OHE15%+-HA TOH*BHDAT|E RT?H AD<BG /,PE0*=YFL /OHSYFLB /SH?E a-D HEQA0B20016

T+-7DE+HB L&BFE8 (JW>F| -2-JL /O6 ,OH*BFXQ"C, >-R*B G SH-R*BGC+X@D/_ DOH*\$E@BG /YFK-' HOH* \$0HA0B20017

T+-8V SH-DXBGC+? T2<N 5'XE9*X09+I 1)XR5_XS6+>E6*N 5'XE8XPN84CA1>| E6MCD5XXN14CA6+. CO)H 7#UA0B20018

T+-9-E(109UC06HC E6+LA44CC5_LN1D_ 9+.I5*) 2<PA1DC O E4CS1*|T5_V 9=- S1*|T5_V 0'SU5;| E6M 89DA0B20019

T+-: \$2)N 0'SN8'X 044CF2*PL1DCN5>(8>|E5'-E1+.CO)N 1XIE4@J 9%SE<G L8@PR1*J 0*\$T1)V 1@U RQ A0B20020

T+-#09*XN14CA6+. CO)N 4'SWE(\$RE<P Q9<GLE<|O5(LA5*L H1*GD6EA 9XPC8'S RE<.Y8@N 5XR 0'S N8'U 2E A0B20021

A0B2 SCAN LOW OR EQUAL

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+/U50MCA1<LR1;. S2+S18UCS82PP50P DE+|06<XNG'SR6*P C84CVO|U1*PR6)S RE(\$C0=LR6*PDE+S H2)< \$EUA0B20066

T+/V01MCS1*PK2)P G2+|H1MCC1NCT6*G C4W7A6)X19*PD6<G T2<|Y44_5)R.8+- X9*YU5MCS1*PK2+! E8>< 08HA0B20067

T+/W.8+.E0=|I5_M 0-C3G<S06HCH5_X E2<XN1_B. A(-R,THAFEB Q 1WT C FE3E/OD L30A0B20068

T+/XW (-RDTMBFEY 2 A,9H <EH- % AY , KOAP?4C+0-EHT% HF,H SD8A0B20069

T+/Y/+8-E=*HCBY HFSY:BD2?E 0YF <EQE*LFUF?2< AW ?PSY< AWOPS%< JW =P?4< JX F?25 J, 'G < ;YHA0B20070

T+/Z*PS-CO-DR2)+ -<PSP05 /YNA 0 AF*HB,CHAF?4* 1W @ 0BGFMBBC DR%/W %0H*RV2<< JW4YEO < AD 7K8A0B20071

T+/DP00YC|-2E=-H ACHO 7,8>0DB(ER RD>F-C+PUB+BGA.4 A -HAACO F?Q% J% A 3MBFOD% A,8 33 *F?U P\$HA0B20072

T+/,K1E E'7HAELO 1F7E8 EH2*0<2 A, 7<EQE*-+- H4 J, 72YDV8Y2J)GDBC E'J,7.0 E'6G2/1: : EH O.HA0B20073

T+/%(E'ED) A, SF7-2/0E2 |2/0D < <E'KO F?A0H+ R* A5 H C**0HM(-DS 2B DYSO 8J*A0B20074

T+/_HON**6-YCF4H 2EA_0H*B7%QNF4H -TXBG SH-T2BG C T2)LE5>LT6<XN6(X 09+|I5*M 9=*45A? ADH* =B*A0B20075

T+/>CFRHHON*EG-H E,A?E| D5/*HAF"C B /2A0H*B7%DAF*B -BO F7Q GAD)JG 8 AW,2Z HCB*BF-D KGM* E34A0B20076

T+/>=|EDS)2HAB>H B)HAD%BG76%*-2> EBYDE|H S/*BGRH CON*BG-ER,AT;0-H *-BGF20 /OHE /4 57% R,EA0B20077

T+/?9/0 8>|AB=L S6<.Y82P56<XW<Y E96_ C N5DC0542 EDA EDA EDA EDCI5;|E6;P E5;< 9I<A0B20078

T+/002)SNE(XE6<J .5<X58WYN14CA?<L BK4CH0)XK1)T02)- H1)PT6<|H1*|KEDA 1<GT0NCC2<PC4UA ED ;TXA0B20079

T+/17EDA S (POE(X E0'SB1DC75>LW1DA E+|KE<|05*LI22Y 05HCC2<PC4>.E1)I 02T20'Y EDA EDA (L+S)J6A0B20080

T+/2D5;.L1XN EDA EDA EDA EDE EB EB EB LGHG<45 J3 ((CH*2LQB7|<4 /3 (| *3%HB5G<'5 ED E'AO =AUA0B20081

T+/3V40 % A29AP- THCACY C<S'6A2 3AYDGS-HA0H**2<2 G A -EHD A -6 HD 6BAWB (-**=30 HF|< J9HA0B20082

T+/4-(-) LGHG* 6BAWB(-)E-28G6* OAGK O2GDD O G(E G-)|22 G(DRV)HEB-G - 2T4A0B20083

TEA456EP /14HON* |0781|4*-S7=|X 0 474A0B20084

EN*5*E70=-DC*PES =*UM8F| | C XT LSC Y A SO Q 12040813700 81970285A0B20085

LAST PAGE

AOC2 SCAN HIGH OR EQUAL

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Rows include routine settings, scan parameters, and error handling instructions.

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT, and detailed error messages. Includes instructions for printing error flags, message addresses, and sector counter handling.

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic program details for error AOC2, including routine numbers and scan logic.

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic program details for error AOC2, including routine numbers and scan logic.

AOC2 SCAN HIGH OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routine NO. 05, including instructions like DC, CLC, B, HVI, and comments such as 'ROUTINE NO. 05, TEST SCAN HIGH OR EQUAL BY SCANNING MULTIPLE SECTORS...'.

AOC2 SCAN HIGH OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routine NO. 05, including instructions like DC, B, HVI, and comments such as 'MESSAGE ADDRESS TO DCP HALT', 'TO SHIPT BIT IN SECTOR NO.', 'DID SCAN EQUAL OCCUR ON EXPECTED SECTOR?'.

ROC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains error codes and descriptions for the 'SCAN HIGH OR EQUAL' program.

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains error codes and descriptions for the 'SCAN HIGH OR EQUAL' program, including routine details like 'ROUTINE NO. 06' and 'ROUTINE PREFACE'.

AOC2 SCAN HIGH OR EQUAL

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
		939			
		940 *			COME HERE IF AN ERROR OCCURED
		941 *			WHILE SPEKING THE CE TRACK
		942			
18C5	C0 87 1CE9	943	SEEKER	B	CVD
18C9	18C3	944		DC	AL2(IDP.LD-1)
18CB	1970	945		DC	AL2(ARIVED)
18CD	C0 87 021A	946		B	PRINT
18D1	C1	947		DC	IL1'C1'
18D2	2A	948		DC	IL1'42'
18D3	1959	949		DC	AL2(SEKER1)
18D5	A03C	950	SEEKID	DC	IL2'A03C'
		951			
18D7	C0 87 021A	952		B	PRINT
9DB	01	953		DC	IL1'01'
18DC	17	954		DC	IL1'23'
18DD	1970	955		DC	AL2(ARIVED)
		956			
18DF	C0 87 021A	957		B	PRINT
18E3	06	958		DC	IL1'06'
18E4	28	959		DC	IL1'40'
18E5	1998	960		DC	AL2(SEKER2)
		961			
18E7	3C 00 0B11	962	HVI		PASS,0
18EB	3C 00 0B09	963	HVI		SETSW,0
18EF	3C 00 1B05	964	HVI		FRSTPS,0
18F3	C0 87 0222	965		B	HALT
18F7	A03C	966		DC	IL2'A03C'
18F9	C0 87 0000	967		B	0
		968			
18FD	0000	969	WORK1	DC	AL2(*-*)
18FF	0002	970	TWO	DC	IL2'02'
1901	0004	971	ONESEC	DC	IL2'04'
1903	1E56	972	WORK2	DC	AL2(WORK+255)
		973			
1905	C4C1E3C140C1C4C4	974	DATPR1	DC	CL43'DATA ADDRESS WAS STEPPED TO INCORRECT VALUE'
190D	D9C5E2E240E6C1E2	974			
1915	40E2E3C5D7D7C5C4	974			
191D	40E3D640C9D5C3D6	974			
1925	D9D9C5C3E340E5C1	974			
192D	D3E4C5	974			
1930	C5D9D9D6D940D6C3	975	SEKER1	DC	CL42'ERROR OCCURRED WHILE SEEKING THE CE TRACK,'
1938	C3E4D9D9C5C440E6	975			
1940	C8C9D3C540E2C5C5	975			
1948	D2C9D5C740E3C8C5	975			
1950	40C3C540E3D9C1C3	975			
1958	D26B	975			
195A	C1D9D9C9E5C5C440	976	ARIVED	DC	CL23'ARRIVED AT CYL. NO. XXX'
1962	C1E340C3E8D34B40	976			
196A	D5D64B40E7E7E7	976			
1971	D9E4D540E2C5C5D2	977	SEKER2	DC	CL40'RUN SEEK TEST SECTION A03 FOR MORE INFO.'
1979	40E3C5E2E340E2C5	977			
1981	C3E3C9D6D540C1F0	977			
1989	F340C6D6D940D4D6	977			
1991	D9C540C9D5C6D64B	977			

AOC2 SCAN HIGH OR EQUAL

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1999	00	1999	979	WRTDFC	DC XL1'00'
199A	00	199A	980		DC XL1'00'
199B	00	199B	981		DC XL1'00'
199C	00	199C	982		DC XL1'00'
			983		
199D	00	199D	984	RDDFC	DC XL1'00'
199E	00	199E	985		DC XL1'00'
199F	00	199F	986		DC XL1'00'
19A0	00	19A0	987		DC XL1'00'
19A1	01	19A1	988	ONE	DC XL1'01'
			989		
			990	*****	
			991 *	SENSE I/O ROUTINE	
19A2	34 08 19BB	992	SENSE	ST	SNSXR2,ARR
19A6	35 01 19BB	993		L	SNSXR2,XR1
19AA	18 03 19B0 00	994		MNN	SNS+1,0(,XR1)
19AF	30 00 19B9	995	SNS	SNS	STATUS,0
19B3	D0 87 01	996		B	1(,XR1)
			997		
19B6	0000	19B7	998	SETXR2	DC XL2'0'
19B8	0000	19B9	999	STATUS	DC XL2'0'
19BA	0000	19BB	1000	SNSXR2	DC XL2'0'
19BC	1D57	19BD	1001	WORKAD	DC AL2(WORK)
			1002		
			1003 *	ERROR RECORDING TABLE	
19BE	00	19BE	1004	ETABLE	EQU *
19BF	00	19BE	1005	QCODE	DC XL1'0'
19C0	0000	19BF	1006	CCODE	DC XL1'0'
19C2	0000	19C1	1007	SNS01	DC XL2'0'
19C4	00000000	19C3	1008	SNS23	DC XL2'0'
19C8	00000000	19C7	1009	DCPI	DC XL4'0'
19CC	0000	19CB	1010	DCPF	DC XL4'0'
19CE	0000	19CD	1011	DFCRI	DC XL2'0'
19D0	0000	19CF	1012	DFPRI	DC XL2'0'
19D2	00	19D1	1013	DFDRF	DC XL2'0'
		19D2	1014	RODTHO	DC XL1'0'

AOC2 SCAN HIGH OR EQUAL

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

```

1016 * START I/O SUBROUTINE
1017
19D3 34 08 19B7 1018 STATIO ST SETXR2,ARR SAVE ADDRESS RECALL REGISTER.
19D7 35 02 19B7 1019 L SETXR2,XR2 LOAD XR2 WITH VALUE FROM ARR.
19D8 3C 00 1B08 1020 HVI SAVSW,00 ZERO SWITCH
19D9 28 03 1A39 00 1021 MNM SIO+1,0(,XR2) SET FUNCTION CODE
19E4 2C 00 1A3A 01 1022 HVC SIO+2(1),1(,XR2) SET CONTROL CODE IN SIO
19E9 2C 01 1B0C 03 1023 HVC DFCR(2),3(,XR2) SET DATA ADDRESS FOR DFCR
19EE 3B 08 1A39 1024 TSTTP SBP SIO+1,X'08' SET FOR REMOVABLE DISK
19F2 3B 08 1AC1 1025 SBP RSIO+1,X'08' SET FOR REMOVABLE DISK
19F6 39 08 1B0A 1026 TBF DISKTP,X'08' TEST FOR RUN ON LOWER DISK
19FA F2 10 08 1027 JT CKSEEK PROCEED
19FD 3A 08 1A39 1028 SETFIX SBN SIO+1,X'08' SET FOR FIXED DISK
1A01 3A 08 1AC1 1029 SBN RSIO+1,X'08' SET FOR FIXED DISK
1A05 BD 00 00 1030 CKSEEK CLI 0(,XR2),00 TEST FOR SEEK
1A08 F2 81 80 1031 JE SETADR IF YES, GO SET ADDRESS
1A0B 31 A6 1B0C 1032 LDFCR LIO DFCR,X'A6' LOAD CONTROL REGISTER
1A0F 31 A4 1B0E 1033 LDFDR LIO DFDR,X'A4' LOAD DATA REGISTER
1A13 0C 00 19BE 1A39 1034 HVC QCODE(1),SIO+1
1A19 0C 00 19BF 1A3A 1035 HVC CCODE(1),SIO+2
1A1F 0C 01 19CD 1B0C 1036 HVC DFCRI(2),DFCR
1A25 0C 01 19CF 1B0E 1037 HVC DFDRI(2),DFDR
1A2B 35 01 1B0C 1038 L DFCR,XR1
1A2F 1C 03 19C7 03 1039 HVC DCPI(4),3(,XR1)
1A34 C2 01 19C8 1040 LA 6600,XR1 LOAD DELAY VALUE IN XR1
1A38 F3 A0 00 1041 SIO SIO X'00',X'A0' START I/O OPERATION
1A3B C1 A2 1B15 1042 WAIT TIO BUSY,X'A2' TEST FOR BUSY
1A3F C0 87 19A2 1043 B SENSE
1A43 04 1A43 1044 DC XL1'04'
1A44 0C 01 19D1 19B9 1045 HVC DFDRF(2),STATUS
1A4A 35 01 1B0C 1046 L DFCR,XR1
1A4E 1C 03 19CB 03 1047 HVC DCFP(4),3(,XR1)
1A53 C0 87 19A2 1048 B SENSE
1A57 02 1A57 1049 DC XL1'02'
1A58 0C 01 19C1 19B9 1050 HVC SNS01(2),STATUS
1A5E C0 87 19A2 1051 B SENSE
1A62 03 1A62 1052 DC XL1'03'
1A63 0C 01 19C3 19B9 1053 HVC SNS23(2),STATUS
1A69 0C 00 19D2 0A03 1054 HVC ROUTNO(1),RPFY
1A6F 3D FF 1B08 1055 CLI SAVSW,X'FF' IS SWITCH ON?
1A73 F2 01 0C 1056 JNE TSTERR IF NO, SKIP RESTORE
1A76 8C 00 03 1B07 1057 HVC 3(1,XR2),DFC3SV RESTORE N BYTE
1A7B BB 01 02 1058 SBP 2(,XR2),01 TURN OFF THE FOR/ REV BIT
1A7E 35 02 19B7 1059 L SETXR2,XR2 RESTORE PARAMETER POINTER
1A82 E1 A0 0C 1060 TSTERR TIO 12(,XR2),X'A0' BRANCH IF ERROR
1A85 E1 A4 08 1061 TSTSCN TIO 8(,XR2),X'A4' BRANCH IF SCAN FOUND
1A88 E0 87 04 1062 B 4(,XR2) EXIT
1063
1064 * SUBROUTINE TO SET THE NUMBER OF TRACKS AND THE
1065 * DIRECTION (FORWARD OR REVERSE), TO SEEK
1066
1A8B BD 01 01 1067 SETADR CLI 1(,XR2),01 IS THIS A RECALIBRATE?
1A8E F2 01 04 1068 JNE **7 IF NO, BYPASS SWITCH RESET
1A91 3C 00 1B05 1069 HVI FRSTPS,0 RESET RECALIBRATE SWITCH
1A95 2C 01 1B10 03 1070 HVC XR2WK(2),3(,XR2) SAVE ADDR. OF CTL. PLD. ADDR.
1A9A 35 02 1B10 1071 L XR2WK,XR2 LOAD XR2 WITH CONTROL PLD. ADDR.
1A9E 2C 00 1B07 03 1072 HVC DFC3SV(1),3(,XR2) SAVE N BYTE IN CONTROL FIELD
1AA3 3C FF 1B08 1073 HVI SAVSW,X'FF' SET SAVE SWITCH
1AA7 3D 00 1B05 1074 CLI FRSTPS,00 IS THIS FIRST PASS
1AAB F2 01 15 1075 JNE SETADA SKIP RECALIBRATE IF NO
1AAE 3C 01 1B05 1076 HVI FRSTPS,01 SET FIRST PASS SWITCH
1AB2 BB 01 02 1077 SBP 2(,XR2),01 SET FWD/REV BIT TO REV.
1AB5 BC FF 03 1078 HVI 3(,XR2),255 SET MAXIMUM TRACK CROSSING
1AB8 3C 00 1B06 1079 HVI LASTAD,00 SET OLD ADDR TO 0
1ABC 31 A6 1B0C 1080 RLDPCR LIO DFCR,X'A6' LOAD DATA CONTROL REGISTER
1AC0 F3 A0 00 1081 RSIO SIO 00,X'A0' SEEK REVERSE
1082
1AC3 8D 00 01 1B06 1083 SETADA CLC 1(1,XR2),LASTAD COMPARE PRESENT ADDR. WITH NEW ONE

```

AOC2 SCAN HIGH OR EQUAL

ERR LOC OBJECT CODE

ADDR STMT SOURCE STATEMENT

```

1AC8 F2 81 25 1084 JE NOSEEK EQUAL, SEEK IS NOT NECESSARY
1ACB F2 84 11 1085 JH FWDSEK NEW ADDR. HIGHER, DO FORWARD SEEK
1ACE BB 01 02 1086 SBP 2(,XR2),01 NEW ADDR. LOWER, SET BIT FOR REV.
1AD1 0C 00 1B04 1B06 1087 HVC SCRCH(1),LASTAD PLACE LAST ADDR IN WORKAREA
1AD7 2F 00 1B04 01 1088 SLC SCRCH(1),1(,XR2) SUBTRACT NEW ADDR. FROM LAST ADDR.
1ADC F2 97 17 1089 J SETADB PROCEED
1090
1ADP BA 01 02 1091 FWDSEK SBN 2(,XR2),01 SET BIT ON FOR FORWARD SEEK
1AE2 2C 00 1B04 01 1092 HVC SCRCH(1),1(,XR2) PLACE NEW ADDR. IN WORKAREA
1AE7 0F 00 1B04 1B06 1093 SLC SCRCH(1),LASTAD SUBTRACT LAST ADDR. FROM NEW ADDR.
1AED F2 87 06 1094 J SETADB PROCEED
1095
1AF0 BC 00 03 1096 NOSEEK MVI 3(,XR2),0 SET NO. OF TRS. CROSSED TO ZERO.
1AF3 F2 97 0A 1097 J ADREXT TO EXIT
1098
1AF6 8C 00 03 1B04 1099 SETADB HVC 3(1,XR2),SCRCH SAVE IN NO. OF TRACKS CROSSED
1AFB 2C 00 1B06 01 1100 HVC LASTAD(1),1(,XR2) PLACE NEW ADDRESS
1B00 C0 87 1A0B 1101 ADREXT B LDPCR EXIT
1B04 00 1B04 1102 SCRCH DC XL1'00'
1B05 00 1B05 1103 FRSTPS DC XL1'00'
1B06 00 1B06 1104 LASTAD DC XL1'00'
1B07 00 1B07 1105 DFC3SV DC XL1'00'
1B08 00 1B08 1106 SAVSW DC XL1'00'
1B09 0000 1B0A 1107 DISKTP DC XL2'0'
1B0B 0000 1B0C 1108 DFCR DC AL2(*-*)
1B0D 1D57 1B0E 1109 DFDR DC AL2(WORK)
1B0F 0000 1B10 1110 XR2WK DC XL2'0'
1B11 FFFF 1B12 1111 NEG1 DC XL2'FFFF'
1B13 0294 1B14 1112 SIXSIX DC IL2'0660'
1B15 36 01 1B12 1113 BUSY A NEG1,XR1 DECREMENT DELAY COUNTER
1B19 C0 84 1A3B 1114 BH WAIT RETURN TO TIO IF NOT TIME OUT
1B1D C0 87 1CE9 1115 B CVD TIME OUT OCCURED, CONVERT ROUT. NO.
1B21 0A03 1B22 1116 DC AL2(RPFY) CURRENT ROUTINE NO.
1B23 1B51 1B24 1117 DC AL2(TIMOUT) ADDRESS OF DESTINATION
1B25 3C 40 1B4F 1118 HVI TIMOUT-2,C' TO PRINT TIMEOUT OCCURED
1B29 C0 87 021A 1119 B PRINT
1B2D C6 1B2D 1120 DC XL1'C6' FLAGS
1B2E 15 1B2E 1121 DC IL1'21' LENGTH
1B2F 1B51 1B30 1122 DC AL2(TIMOUT) MESSAGE ADDRESS
1B31 A08E 1B32 1123 DC XL2'A08E' MESSAGE ID
1B33 C0 87 0222 1124 THALT B HALT TO DCP ERROR HALT
1B37 A08E 1B38 1125 DC XL2'A08E' HALT ID
1B39 C0 87 0000 1126 B 0
1B3D E3C9D4C5D6E4E340 1B51 1127 TIMOUT DC CL21'TIMEOUT IN ROUTINE XI'
1B45 C9D540D9D6E4E3C9 1127
1B4D D5C540E7E7 1127
0A03 1128 RPFY EQU X'A03'

```

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for device status printing and bit checking.

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for data checks, unsafe operations, and bit shifting.

AOC2 SCAN HIGH OR EQUAL

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1232 * SUBROUTINE TO CONVERT A NUMBER TO DECIMAL
 1233
 1CE8 00 1CE8 1234 HXBYT DC XL1'0'
 1CE9 36 08 19A1 1235 CVD A ONE,ARR
 1CED 34 08 1D0A 1236 ST FROM+5,ARR
 1CF1 36 08 1900 1237 A TWO,ARR
 1CP5 34 08 1D10 1238 ST TYBOT+5,ARR
 1CF9 34 08 1D16 1239 ST OTORZ+5,ARR
 1CFD 36 08 19A1 1240 A ONE,ARR
 1D01 34 08 1D39 1241 ST TIXE+3,ARR
 1D05 0C 01 1D1C 0000 1242 FROM MVC PROBYT+5(2),*--*
 1D0B 0C 01 1D2F 0000 1243 TYBOT MVC TOBYT+3(2),*--*
 1D11 0C 01 1D2D 0000 1244 OTORZ MVC ZROTO+3(2),*--*
 1D17 0C 00 1CE8 0000 1245 PROBYT MVC HXBYT(1),*--*
 1D1D 04 20 0000 1D44 1246 ZROTO ZAZ *--*(3),UNITS(1)
 1D23 0F 00 1CE8 19A1 1247 DECGAN SLC HXBYT(1),ONE
 1D29 F2 82 0A 1248 JL TIXE
 1D2C 06 20 0000 1D3A 1249 TOBYT AZ *--*(3),DECONE(1)
 1D32 C0 87 1D23 1250 B DECGAN
 1D36 C0 87 0000 1251 TIXE B *--*
 1D3A F1 1D3A 1252 DECONE DC CL1'1'
 1D3B F1F2F3F4F5F6F7F8 1D44 1253 UNITS DC CL10'1234567890'
 1D43 F9F0 1253
 1D45 1D56 1254 STATPR DS CL18
 1D57 1D57 1255 WORK EQU *
 1E56 1256 DS CL256
 1E57 1257 READ EQU *
 1F57 1258 DS CL256
 1259
 0003 1260 H1 EQU X'03'
 0076 1261 H2 EQU X'76'
 0001 1262 XR1 EQU 01
 0002 1263 XR2 EQU 02
 0008 1264 ARR EQU 08
 0002 1265 STAT01 EQU X'02'
 0003 1266 STAT23 EQU X'03'
 00A6 1267 CTRL EQU X'A6'
 00A4 1268 DATA EQU X'A4'
 0080 1269 BIT0 EQU X'80'
 0040 1270 BIT1 EQU X'40'
 0208 1271 SWITCH EQU X'208'
 020A 1272 SECTSW EQU X'20A'
 0212 1273 TEST EQU X'212'
 0216 1274 LINK EQU X'216'
 021A 1275 PRINT EQU X'21A'
 021E 1276 UNPACK EQU X'21E'
 0222 1277 HALT EQU X'222'
 022A 1278 LOAD EQU X'22A'
 003C 1279 HF EQU X'3C'
 003F 1280 HA EQU X'3F'
 0BFE 1281 END BEGIN

ADD ONE TO GET FIRST PARAMETER
 INSERT THE FROM ADDRESS
 ADD TWO TO GET THE SECOND PARAMETER
 INSERT THE TO ADDR

ADD ONE FOR EXIT ADDRESS
 STORE EXIT ADDRESS

PUT BYTE IN WORK AREA
 ZERO THE TO AREA
 DECREMENT THE HEX BYTE
 JUMP IF BELOW 1
 INCREMENT THE DECIMAL COUNT

EXIT

HALT DISPLAY 1
 HALT DISPLAY 2

HALT DISPLAY F
 HALT DISPLAY A

AOC2 SCAN HIGH OR EQUAL

CROSS-REFERENCE

SYMBOL T LEN VALUE DEPN REFERENCES
 ADREXT A 004 1B00 1101 1097
 ARRIVED A 023 1970 0976 0945 0955
 ARR C 001 0008 1264 0025 0108 0873 0896 0918 0992 1018 1132 1200 1235* 1236 1237*
 1238 1239 1240* 1241
 AOC A 001 0000 0002
 BEGIN A 004 0BFE 0168 1281
 BIT0 C 001 0080 1269
 BIT1 C 001 0040 1270
 BUSY A 004 1B15 1113 1042
 CCODE A 001 19BF 1006 1035*
 CKSZEK A 003 1A05 1030 1027
 CTRL C 001 00A6 1267
 CVD A 004 1CE9 1235 0260 0381 0580 0598 0605 0943 1115
 CYLNO A 001 1CDD 1219 0261 0382 0581 0599 0606 1205* 1212*
 DATA C 001 00A4 1268 0901
 DATEXT A 004 1889 0913 0896* 0897 0899* 0904
 DATID1 A 002 1882 0910
 DATPR1 A 043 192F 0974 0909
 DCFP A 004 19CB 1010 1047*
 DCFI A 004 19C7 1009 1039*
 DECGAN A 006 1D23 1247 1250
 DECONE A 001 1D3A 1252 1249
 DPCR A 002 1B0C 1108 1023* 1032 1036 1038 1046 1050
 DPCRI A 002 19CD 1011 1036*
 DPC3SV A 001 1B07 1105 1057 1072*
 DFDR A 002 1B0E 1109 0237* 0358* 0446* 0524* 0546* 0665* 0772* 0831* 1033 1037
 DFDRF A 002 19D1 1013 1045*
 DFDRI A 002 19CF 1012 1037*
 DISKTP A 002 1B0A 1107 0141* 0147* 1026
 ERROR9 A 006 0C9C 0210 0887
 ERR02A A 044 0E54 0331 0262 0263* 0268
 ERR02B A 043 0E7F 0332 0286
 ERR02C A 013 1438 0632 0314
 ERR02D A 015 147B 0634 0297
 ERR02E A 025 14C5 0636 0324
 ERR02F A 043 14F0 0637 0276 0397 0802 0864
 ERR03A A 042 0FF2 0420 0383 0384* 0389 0794 0856
 ERR03B A 037 0F94 0418 0410
 ERR04A A 013 10DF 0497 0471
 ERR04B A 026 1129 0499 0478
 ERR04C A 047 1183 0501 0490
 ERR05A A 027 135F 0625 0573
 ERR05B A 035 13B4 0627 0582 0583* 0588
 ERR05C A 035 13F7 0629 0607 0638* 0614
 FRR05D A 032 13D4 0628 0600 0601*
 ERR06A A 037 165E 0742 0691
 ERR06B A 032 16B2 0744 0707
 ERR06C A 045 1713 0746 0722
 ERR06D A 041 11E0 0503 0734
 ERR1A A 016 0CE0 0212 0189
 ERR1B A 025 153D 0639 0204
 ETABLE A 001 19BE 1004 0013
 FIXED A 004 0BD3 0145 0140
 PROBYT A 006 1D17 1245 1242*
 FROM A 006 1D05 1242 1236*
 FRSTPS A 001 1B05 1103 0089* 0964* 1069* 1074 1076*
 FWDSEK A 003 1ADF 1091 1085
 HA C 001 003F 1280
 HALT C 001 0222 1277
 0125 0191 0206 0269 0278 0288 0299 0316 0326 0390 0399 0412
 0472 0480 0492 0574 0590 0616 0694 0710 0725 0737 0795 0804
 0857 0866 0888 0911 0965 1124
 1138 1175 1181
 HEX51A A 008 1BED 1184
 HF C 001 003C 1279
 HXBYT A 001 1CE8 1234 1245* 1247*
 H1 C 001 0003 1260
 H2 C 001 0076 1261

IBH MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129642
PAGE 14

AOC2 SCAN HIGH OR EQUAL

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Contains data rows for various symbols like IDFLD, INVPLG, LASTAD, LDFCR, etc.

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0AOC-2
PAGE 14

IBH MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129642
PAGE 14A

AOC2 SCAN HIGH OR EQUAL

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Contains data rows for various symbols like RTN4C1, RTN4D, RTN5, etc.

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0AOC-2
PAGE 14A

AOC2 S C A N H I G H O R E Q U A L

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
SETSW	A	001	0B09	0096	0026* 0049* 0155* 0168 0223 0343 0431 0514 0651 0758 0818 0963*
SETXR2	A	002	19E7	0998	1018* 1019 1059
SHPEXT	A	004	1CD9	1217	1200* 1201 1202 1204* 1214
SHFTBL	A	001	1CDE	1221	1206
SHIFT	A	004	1C98	1200	0258 0379 0578 0596 0603
SIO	A	003	1A38	1041	0067* 1021* 1022* 1024* 1028* 1034 1035
SIYSIX	A	002	1B18	1112	
SKTSTA	A	004	1891	0919	0923
SNS	A	004	19AF	0995	0071* 0994*
SNSID	A	002	1B79	1148	0234* 0247* 0319* 0355* 0368* 0443* 0456* 0560* 0782* 0840* 0875*
SNSXR2	A	002	19BB	1000	0306* 0307 0992* 0993
SNS01	A	002	19C1	1007	1050*
SNS23	A	002	19C3	1008	1053*
SPNDLA	A	001	0B0B	0098	0054
SPNDLB	A	001	0B0C	0099	0058
SPNMSG	A	024	0B3C	0105	0055* 0059* 0088
STATB2	A	018	1C8F	1193	
STATPR	A	018	1D56	1254	1150* 1158
STATUS	A	002	19B9	0999	0078 0171* 0197 0405 0485 0700 0903 0922 0925 0995* 1045 1050 1053 1137 1152 1174 1141 1147
STATWD	A	018	1BFF	1185	
STAT01	C	001	0002	1265	0195 0403 0484 0698 0920 1134
STAT23	C	001	0003	1266	
STRASK	A	001	1C90	1194	1142 1176
STPSNS	A	004	1B93	1160	1140* 1153 1167 1169*
STRTIO	A	004	19D3	1018	0179 0239 0251 0360 0372 0448 0460 0533 0550 0562 0667 0680 0774 0784 0833 0846 0877 0927
SWITCH	C	001	0208	1271	0034 0038
TBN	A	003	1CC1	1210	1208* 1213
TEST	C	001	0212	1273	0127
THALT	A	004	1B33	1124	
TIMOUT	A	021	1B51	1127	1117 1118* 1122
TIYE	A	004	1D36	1251	1241* 1248
TOBYT	A	006	1D2C	1249	1243*
TRACK	A	001	0B0A	0097	0077* 0080* 0874 0933
TSTBT	A	004	1B94	1152	1149* 1160
TSTDAT	A	004	1B58	0896	0713
TSTERR	A	003	1A82	1060	0069* 1056
TSTEXT	A	004	0BE2	0150	0108* 0143
TSTFIX	A	004	0BAF	0134	0131
TSTRMV	A	004	0BA4	0130	0118
TSTSCN	A	003	1A85	1061	0070*
TSTSEC	A	001	13F8	0630	0522* 0548 0579 0593 0604 0619* 0620
TSTSEK	A	004	188D	0918	0175 0229 0349 0437 0520 0658 0765 0825
TSTSPN	A	004	0B67	0108	0170 0225 0345 0433 0516 0654 0761 0821
TSTSW	A	004	0B85	0117	0112 0128
TSTTP	A	004	19EE	1024	
TWO	A	002	1900	0970	0899 1203 1237
TWOZR	A	002	0B10	0102	0050 0113 0177 0458
TYBOT	A	006	1D0B	1243	1238*
UDTPTR	A	002	0B07	0093	0028 0031* 0032 0050* 0065*
UFIND1	A	004	0A24	0032	0029
UFIND2	A	004	0A20	0031	0044
UNITS	A	010	1D44	1253	1246
UNPACK	C	001	021E	1276	1135 1172
UTAB	C	001	0232	0094	0030
WAIT	A	004	1A3B	1042	0868* 1114
WORK	A	001	1D57	1255	0231* 0232 0232* 0302 0351* 0352* 0353 0353* 0439* 0440 0440* 0441* 0457* 0526* 0527 0527* 0528* 0529 0529* 0660* 0661 0661* 0675* 0714 0767* 0768 0768* 0827* 0828 0828* 0841* 0842* 0843 0843* 0972 1001 1109
WORKAD	A	002	19BD	1001	0237 0358 0446 0546 0665 0772 0831
WORK1	A	002	18FE	0969	0898* 0903
WORK2	A	002	1904	0972	0307
WRTDFC	A	001	1999	0979	0172* 0226* 0235* 0242 0248* 0254 0259 0281 0291 0346* 0356* 0363 0369* 0375 0380 0434* 0444* 0451 0458* 0463 0517* 0530* 0532* 0536

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0C-2
PAGE 15

AOC2 S C A N H I G H O R E Q U A L

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
WRTER2	A	004	0DD9	0319	0541 0543* 0547* 0548* 0553 0558* 0559* 0565 0593 0597 0655* 0663* 0670 0677* 0678* 0683 0716 0728 0762* 0770* 0777 0783* 0787 0822*
XR1	C	001	0001	1262	0830* 0836 0845* 0849 0874* 0880 0245 0366 0454 0539 0556 0673 0780 0839 0030* 0031 0032* 0036 0040 0042 0043 0043* 0060 0064 0064* 0065 0523* 0524 0993* 0994 0996 1038* 1039 1040* 1046* 1047 1113* 1141*
XR2	C	001	0002	1263	1150 1164 1164* 1201* 1207 1207* 1210 0302* 0303 0305 0305* 0306 0897* 0898 1019* 1021 1022 1023 1030 1057 1058 1059* 1060 1061 1062 1067 1070 1071* 1072 1077 1078 1083 1086 1088 1091 1092 1096 1099 1100 1142* 1149 1163 1163* 1176* 1202* 1203* 1204 1206* 1208 1209 1215 1215*
X22WK	A	002	1B10	1110	1070* 1071
ZROCTR	A	004	0BE6	0152	0114 0146
ZROTO	A	006	1D1D	1246	1244*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

DATE 13MAR70 06APR70 22MAY70 01AUG70
EC NO. 571512 571516 571513 571531

PROG ID 0A0C-2
PAGE 15A

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129642
PAGE 17

AOC2 SCAN HIGH OR EQUAL

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

Main body of diagnostic program listings for AOC2, including object cards for various modules and components. Examples include: T+/ET1*J 0; (8%P C8\$RE+-X+.CO)W 1XIE4AJ 9XGS&G L8APR1*J 0*ST1)V 1QXV2)PGE<E 8%| A5H "DQAOC20044

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129642
PAGE 17A

AOC2 SCAN HIGH OR EQUAL

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

Main body of diagnostic program listings for AOC2 (Page 17A), including object cards for various modules and components. Examples include: T+/U5 B & ;N%LA8AE 0*LD6*P S8UCW0;I 8>|E5+- E1DCT5UCI5*|06)X EO=(9*GL9<PE6)X 06H EC4AOC20066



AOD2 DISK REVOLUTION TEST

```

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
0A00 2 DECK 4
3 AOD2 START X'A00'
4 *****
5 *
6 * SYSTEM/3 DISK REVOLUTION TEST *
7 * *****
8 *****
0A00 AOD2 0A01 9 DC XL2'AOD2' PROGRAM IDENTIFICATION
0A02 C001 0A03 10 DC XL2'0001' .FLAGS & CURRENT RTN NUMBER
0A04 C000 0A05 11 DC XL2'0' .RESERVED
0A06 OA10 0A07 12 DC AL2(RTN01) .ERROR RECORDING TABLE ADDR
0A08 FFFF 0A09 13 DC XL2'FFFF' .SECTION UDT ENTRIES
CACA A00000 0A0C 14 DISK1 DC XL3'A00000'
0A0D B01000 CA0F 15 DISK2 DC XL3'B01000'
16 *****
17 * ROUTINE 1 *****
18 *****
0A10 01 0A10 19 RTN01 DC XL1'01' .ROUTINE1
0A11 00 0A11 20 DC XL1'00'
0A12 0D5B 0A13 21 DC AL2(RTN02)
22 *****
0A14 38 02 020B 23 TESTA1 TBN SBYTE3,X'02' IS SSW 1E ON?
CA18 C0 10 0216 24 BT LINK IF SO B TO LINK TO RTN 2.
0A1C 38 20 0A0B 25 TBN DISK1-1,X'20' .TEST IF PRIMARY DISK IS
0A20 C0 90 0216 26 BF LINK ATTACHED. IF NOT, LINK TO
0A24 C0 87 021A 27 B PRINT ROUTINE 2.
0A28 01 CA2B 28 DC XL1'01'
0A29 0C 0A29 29 DC IL1'12'
0A2A 0DD7 0A2B 30 DC AL2(DISKA)
0A2C 3C 00 12EE 31 TESTB1 MVI RDIT+3,X'00' .REINIT TO X'00' TO READ
0A30 3C 80 0A90 32 MVI RETBR+1,X'80' .SET UP TO RETURN TO TESTB1
33 * .AFTER NTRDY OR RECAL MSG.
0A34 C1 A0 0A6C 34 TIO NTRDY1,X'A0'
0A38 31 A4 12E2 35 LIO DAR,X'A4'
0A3C 31 A6 12E4 36 LIO RECL,X'A6'
0A40 E3 A0 00 37 SIO X'00',X'A0' .SEEK TRK 0
0A43 C1 A2 0A43 38 SBUSY1 TIO SBUSY1,X'A2'
0A47 30 A2 0AC2 39 SEEKD1 SNS BITCHK,X'A2' .LOOP TILL SEEK BUSY DROPS
0A4B 38 10 0AC2 40 TBN BITCHK,X'10'
0A4F C0 10 0A47 41 BT SEEKD1
0A53 38 40 CAC2 42 TBN BITCHK,X'40'
0A57 F2 90 25 43 JF RECAL1
0A5A 31 A6 12E6 44 LIO RD,X'A6'
0A5E F3 A1 00 45 SIO X'00',X'A1' .READ SECTOR 0
0A61 C1 A2 0A61 46 RBUSY1 TIO RBUSY1,X'A2'
0A65 C1 A0 0A6C 47 TIO NTRDY1,X'A0'
0A69 F2 87 2B 48 J START1
49
50
0A6C C0 87 021A 51 NTRDY1 B PRINT
0A70 C6 0A70 52 DC XL1'C6'
0A71 17 0A71 53 DC IL1'23'
0A72 12E0 0A73 54 DC AL2(PNTRDY)
0A74 A0FE 0A75 55 DC XL2'A0FE'
0A76 C0 87 0222 56 B HALT
0A7A A0FE 0A7B 57 DC XL2'A0FE'
0A7C F2 87 10 58 J RETBR
59
0A7F C0 87 021A 60 RECAL1 B PRINT
0A83 C6 0A83 61 DC XL1'C6'
0A84 1B 0A84 62 DC IL1'27'
0A85 1309 0A86 63 DC AL2(CALDSK)
0A87 A005 0A88 64 DC XL2'A005'
0A89 C0 87 0222 65 E HALT
0A8D A005 0A8E 66 DC XL2'A005'
0A8F C0 80 0D5F 67 RETBR BC TESTA2,X'80' .IF NO-OP, RETURN TO TESTA1
0A93 C0 87 0A14 68 B TESTA1 ELSE RETURN TO TESTA1.
69

```

AOD2 DISK REVOLUTION TEST

```

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
0A97 70 USING START1,IR1 .SET UP BASE FOR IR1 & IR2
0A97 71 USING START1,IR2
0A97 C2 03 0A97 72 START1 LA START1,X'03' .INIT IR1 & IR2
CA9B 3C A3 0A9F 73 MVI CKDISK+1,X'A3'
0A9F 3C A3 0BA4 74 MVI SWDISK+1,X'A3'
75
75
0A93 AC 01 29 25 76 RETRY MVC KOUNT(,IR2),XD4FF(2,IR2) .NEED X'2800' PASSES THRU
0AA7 AF 01 29 27 77 LOOP1 ALC KOUNT(,XR2),X0001(2,IR2) LOOP FOR 100 REVOLUTIONS
0AAB F2 A0 41 78 JOL BADBIT OF DISC. IF NO BIT SENSED
0AAE B0 A3 2B 79 CKDISK SNS BITCHK(,XR2),X'A3' IN 100 REVOLUTIONS, ASSUME
0AB1 B8 08 2A 80 TBN BITCHK-1(,XR2),X'08' BAD INDEX BIT.
0AB4 C0 90 0AA7 81 BF LOOP1 .IF BIT PRESENT, PROCEED TO
0AB9 F2 87 48 82 J BITOK
0ABB D4FF 0ABC 83 XD4FF DC IL2'D4FF'
0ABD 0001 0ABE 84 X0001 DC XL2'0001'
0ABF 0000 0AC0 85 KOUNT DC XL2'0'
0AC1 0000 CAC2 86 BITCHK DC XL2'0'
0AC3 C9D5C4C5E740C2C9 0AFE 87 PPINT1 DC CL44'INDEX BIT HAS NOT APPEARED IN LAST 4 SECONDS'
0ACE E340C8C1E240D5D6 87
0AD3 E340C1D7D7C5C1D9 87
0ADF C5C440C9D54CD3C1 87
0AE3 F2E340F440E2C5C3 87
0AER E615C4E2 87
88
0AEP C0 87 021A 89 BADBIT B PRINT .PRINT OUT MESSAGE IN
0AF3 C6 0AF3 90 DC XL1'C6' PRINT1 ABOVE AND HALT
0AF4 2C CAF4 91 DC IL1'44'
0AF5 0AEE 0AF6 92 DC AL2(PRINT1)
0AF7 AC89 CAF8 93 DC XL2'A089'
0AF9 C0 87 0222 94 E HALT
0AFD A089 0AFE 95 DC XL2'A089'
0AFF C0 87 0AA3 96 B RETRY .IF HALT RESET,RE-TRY AGAIN
97
98
0P03 38 01 0208 99 BITOK TBN SBYTE0,X'01' .CHECK IF SSW7 IS ON. IF NOT,
0R07 F2 90 07 100 JF GOON GO ON WITH THE PROGRAM. IF YES,
0E0A 3C 00 0DF2 101 MVI WORK,X'00' SKIP PRINTOUT AND DEFAULT TO
0P0E F2 87 14 102 J SW7SKP TIMING 100 REVOLUTIONS.
103
104
0E11 C0 87 021A 105 GOON B PRINT
0R15 47 0B15 106 DC XL1'47'
0B16 2C 0B16 107 DC IL1'44'
0B17 0F01 CB18 108 DC AL2(TEST01)
0B19 A0F9 0B1A 109 DC XL2'A0F9'
110
111
0B1B C0 87 0222 111 B HALT
0B1F A0F9 0B20 112 DC XL2'A0F9'
113
114
0B21 30 00 0DF2 114 SNS WORK,X'00'
0B25 0C 01 0BF9 0BF7 115 SW7SKP MVC ETABL1,ATABLE1(2)
0B2B 0C 03 0ED5 0BF9 116 MVC TOTREV,DECFIL-4(4) .INITIALIZE FIELDS
0B31 0C 01 0C8F 0BF9 117 MVC DIVISR,DECFIL-4(2)
0B37 3D 0F 0DF2 118 CLI WORK,X'0F' .INVOKE DEFAULT IF > OF
0B3B F2 04 04 119 JNH SETNUM
0B3F 3C 00 0DF2 120 MVI WORK,X'00'
0B42 0E 01 0BF9 0F05 121 SETNUM ALC ETABL1,SWSET1(2) .DETERMINE HOW MANY
0B48 06 03 0ED5 0F09 122 AZ TOTREV(4),DO 100(4) REVOLUTIONS TO TIME
0B4E 06 01 0C8F 0F07 123 AZ DIVISR(2),DO 100-2(2)
0B54 3D 00 0DF2 124 CLI WORK,X'00'
0B59 F2 81 0A 125 JE NUMREV
0B5B 0F 00 0DF2 0BF3 126 SLC WORK,ONE(1)
0B61 C0 01 0B42 127 BNZ SETNUM
128
0R65 38 01 0208 129 NUMREV TBN SBYTE0,X'01' .CHECK IF SSW7 IS ON. IF NOT,

```


A0D2 DISK REVOLUTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

OCDB F2 02 39 265 JNL COMPLE
OCDB CO 87 021A 266 FSTPR1 B PRINT
OCDF C1 267 DC XL1'C1'
OCED 32 268 DC IL1'50'
OCF1 11C5 269 DC AL2 (EPST01)
OCE3 A096 270 DC XL2'A096'
OCES CO 87 021A 271 FSTPR2 B PRINT
OCE9 81 272 DC XL1'81'
OCEA 32 273 DC IL1'50'
OCFB 11F7 274 FSTPR2 DC AL2 (EPST02)
OCED 0D 01 OCEC 12C3 275 CLC FSTPR2 (2), AEFST5
OCF3 F2 81 0A 276 JE FSTPR3
OCF6 CE 01 OCEC 12C1 277 ALC FSTPR2 (2), X0032
OCFC CO 87 OCE5 278 B FSTPR2
OD00 CO 87 021A 279 FSTPR3 B PRINT
OD04 86 280 DC XL1'86'
OD05 32 281 DC IL1'50'
OD06 12BF 282 DC AL2 (EPST06)
OD08 OC 01 OCEC 12C5 283 HVC FSTPR2, AEFST2 (2)
284

OD0E CO 87 0222 285 FSTHLT B HALT
OD12 A096 286 DC XL2'A096'
287

OD14 OD 06 0E89 0EAA 288 COMPLE CLC MAXMS2 (7), MAXMSK-10
OD1A CO 04 0216 289 ENH LINK
OD1E CO 87 021A 290 SLOPR1 B PRINT
OD22 C1 291 DC XL1'C1'
OD23 32 292 DC IL1'50'
OD24 0F3B 293 DC AL2 (ESL001)
OD26 A095 294 DC XL2'A095'
OD28 CO 87 021A 295 SLOPR2 B PRINT
OD2C 81 296 DC XL1'81'
OD2D 32 297 DC IL1'50'
OD2E 0F6D 298 SLOPR2 DC AL2 (ESL002)
OD30 OD 01 0D2F 12C7 299 CLC SLOPR2 (2), AESL12
OD36 F2 81 0A 300 JE SLOPR3
OD39 0F 01 0D2F 12C1 301 ALC SLOPR2 (2), X0032
OD3F CC 87 0D28 302 B SLOPR2
OD43 CO 87 021A 303 SLOPR3 B PRINT
OD47 86 304 DC XL1'86'
OD48 32 305 DC IL1'50'
OD49 1193 306 DC AL2 (ESL013)
OD4B OC 01 0D2F 12C9 307 HVC SLOPR2, AESL02 (2)
308

OD51 CO 87 0222 309 SLOHLT B HALT
OD55 A095 310 DC XL2'A095'
311

OD57 CO 87 0216 312 B LINK
313
314
315

316 * ROUTINE PREFACE *****

317 *****
OD5B 02 318 RTN02 DC XL1'02'
OD5C 00 319 DC XL1'00'
OD5D FFFF 320 DC XL2'FFFF'
321

322 *****

323 * ROUTINE 2 *****

324 *****

325

OD5F 38 01 020B 326 TESTA2 TEN SBYTE3, X'01'

OD63 F2 10 07 327 JT **10

OD66 38 20 0A0E 328 RTN DISK2-1, X'20'

OD6A F2 10 05 329 JT RETRY2

OD6D CO 87 022A 330 B LOAD

THAN MIN TOLERANCE, THE
DISK IS SPINNING TO
FAST. PRINT OUT ERROR
MESSAGES TELLING OF
POSSIBLE DISK PROBLEMS.

.ERROR HALT -A096- DISK
SPEED GTR THAN 1530 RPM

.IF MAX REV TIME GREATER
THAN MAX TOLERANCE, THE
DISK IS SPINNING TO
SLOW. PRINT OUT ERROR
MESSAGES TELLING OF
POSSIBLE DISK PROBLEMS.

.ERROR HALT -A095- DISK
SPEED LESS THAN 1470 RPM

.LINK TO NEXT ROUT OR SECT

.ROUTINE 2

IS SSV IF ON?
IF YES, JUMP TO LOAD.
TEST IF SECONDARY DISK IS
ATTACHED. IF NOT, LOAD
NEXT DCP SECTION.

A0D2 DISK REVOLUTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

OD71 00 0D71 331 DC XL1'00'
OD72 CO 87 021A 332 BTRY2 B PRINT
OD76 01 0D76 333 DC XL1'01'
OD77 0C 0D77 334 DC IL1'12'
OD78 0DE3 0D79 335 DC AL2 (DISK)
OC7A 3C CO 12PE 336 TESTB2 MVI RDIT+3, X'00'
OD7E 3C 87 0A90 337 MVI RETBR+1, X'87'

338 *
OD82 C1 R0 0A6C 339 TIO WTRDY1, X'80'
OD86 31 R4 12E2 340 LIO DAR, X'B4'
OD8A 31 B6 12E4 341 LIO RECL, X'B6'
OD8E F3 R0 00 342 SIO X'00', X'80'
OC91 C1 R2 0D91 343 SBUSY2 TIO SBUSY2, X'B2'
OD95 30 B2 0AC2 344 SEEKD2 SNS BITCHK, X'B2'
OD99 3R 10 0AC2 345 IBN BITCHK, X'10'
OD9D CO 10 0D95 346 ET SEEKD2
ODA1 3R 40 0AC2 347 TEN BITCHK, X'40'
ODA5 CO 90 0A7F 348 BF RECAL1
ODA9 31 R6 12E6 349 LIO RD, X'B6'
ODAD F3 R1 00 350 SIO X'00', X'B1'
ODB0 C1 B2 0DB0 351 RBUSY2 TIO RBUSY2, X'B2'
OCEA C1 R0 0A6C 352 TIO WTRDY1, X'80'

353
0A97 354 USING START1, XR1
CA97 355 USING START1, XR2
356

357
OCEA C2 03 0A97 358 START2 LA START1, X'03'
OCEC 3C F3 0AAF 359 MVI CKDISK+1, X'B3'
ODCO 3C F3 0BA4 360 MVI SWDISK+1, X'B3'
OCCA CO 87 0AA3 361 B RETRY
362
363
364

.REINIT TO X'80' TO READ
.SET UP TO RETURN TO TESTB2
AFTER WTRDY OR RECAL MSG.

.SEEK TRK 0

.LOOP TILL SEEK BUSY DROPS

.READ SECTOR 0

AOD2 DISK REVOLUTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic error codes and descriptions such as 'INDEXING PULSE BELOW SPEC OR HISSING' and 'WRONG PULLEY. 50HZ PULLEY ON 60HZ MOTOR'.

AOD2 DISK REVOLUTION TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly-like instructions such as 'IR1 EQU X'01'', 'IR2 EQU X'02'', 'ARR EQU X'08'', etc.

...THESE BYTES USED TO KEEP

A0D2 DISK REVOLUTION TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
FFFF 491 END

A0D2 DISK REVOLUTION TEST

					CROSS-REFERENCE							
SYMBOL	T	LEN	VALUE	DEPN	REFERENCES							
AEFST2	A	002	12C5	0414	0283							
AEFST5	A	002	12C3	0413	0275							
AESL02	A	002	12C9	0416	0307							
AESL12	A	002	12C7	0415	0299							
AMAXPR	A	002	0CD1	0261								
AMEDPR	A	002	0CC9	0257								
AMINPR	A	002	0CC1	0253								
ARR	C	001	0008	0429								
ASTRT1	A	002	0DC9	0366								
ASTPT2	A	002	0DCB	0367								
ATABL1	A	002	0BF7	0181	0115							
A0D2	A	001	0A00	0003								
EADPIT	A	004	0AEP	0089	0078							
RITCHK	A	002	0AC2	0086	0039*	0040	0042	0079*	0060	0344*	0345	0347
RITOK	A	004	0BC3	0099	0082							
BUMP1	A	004	0B89	0146	0143	0144	0156					
CALDSK	A	027	1309	0425	0063							
CHKRIT	A	002	0BC4	0167	0152*	0153						
CKDISK	A	003	0AAE	0079	0073*	0359*						
COMPHI	A	006	0CD2	0264								
COMFLO	A	006	0D14	0288	0265							
CCONT	A	002	0BPS	0190								
CFU	C	001	0204	0442								
DAR	A	002	12E2	0418	0035	0340						
DECFIL	A	008	0BBD	0164	0116	0117	0204					
DEC01	A	001	0C8D	0238	0225	0236						
DISKA	A	012	0DD7	0368	0030							
DISKB	A	012	0DE3	0369	0335							
DISK1	A	003	0A0C	0014	0025							
DISK2	A	003	0A0P	0015	0328							
DIV	A	006	0C7A	0234	0237							
DIVIDE	A	006	0C71	0232								
DIVISR	A	002	0CRP	0239	0117*	0123*	0232	0234				
DRESET	A	001	0BED	0176	0189	0189*						
DUMMY	A	003	0BAF	0156	0155							
DO100	A	004	0F09	0390	0122	0123	0232					
D3040	A	004	0BC1	0165	0208							
EDIV	A	006	0C96	0241	0235							
EDIV1	A	006	0C90	0240	0233							
EDPASK	A	007	0DEA	0371	0241	0242	0243					
EPST01	A	050	11C5	0405	0269							
EPST02	A	050	11F7	0406	0274	0414						
EPST03	A	050	1229	0407								
EPST04	A	050	125B	0408								
EPST05	A	050	128D	0409	0413							
EPST06	A	050	128F	0410	0282							
EIGHT	A	002	0BF3	0179								
ESL001	A	050	0F3B	0391	0293							
ESL002	A	050	0F6D	0392	0298	0416						
ESL003	A	050	0F9F	0393								
ESL004	A	050	0FD1	0394								
ESL005	A	050	1003	0395								
ESL006	A	050	1035	0396								
ESL007	A	050	1067	0397								
ESL008	A	050	1099	0398								
ESL009	A	050	10CB	0399								
ESL010	A	050	10PD	0400								
ESL011	A	050	112F	0401								
ESL012	A	050	1161	0402	0415							
ESL013	A	050	1193	0403	0306							
ETAEL1	A	002	0BF9	0182	0115*	0121*	0148					
FRIN	C	001	0A07	0463								
FSTHLT	A	004	0D0E	0285								
FSTPR1	A	002	0CEC	0274	0275	0277*	0283*					
FSTPR1	A	004	0CDB	0266								
FSTPR2	A	004	0CE5	0271	0278							

A0D2 DISK REVOLUTION TEST

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
FSTPR3	A	004	0DC0	0279	0276
GOCALC	A	004	0EFA	0188	0189
GOON	A	004	0B11	0105	0100
GCON2	A	004	0B79	0137	0130
GOON3	A	004	0B81	0144	0136
HALT	C	001	0222	0453	0056 0065 0094 0111 0285 0309
IAR	C	001	0010	0430	
IAR0	C	001	0080	0434	
IAR1	C	001	0081	0435	
IAR2	C	001	0082	0436	
IAR3	C	001	0084	0437	
IAR4	C	001	0088	0438	
KONT2	A	006	0C36	0217	0212
KONT3	A	006	0C4E	0222	0219
KONT4	A	006	0C5D	0225	0221 0223
KOONT	A	002	0AC0	0085	0076* 0077*
LINK	C	001	0216	0450	0024 0026 0289 0312
LOAD	C	001	022A	0455	0330
LOOP1	A	004	0AA7	0077	0081
LOOP2	A	006	0C08	0204	0226
LOOP3	A	005	0C11	0206	0209
LPDATA	C	001	087C	0458	
LPMAG	C	001	0800	0457	
MAXMSK	A	043	0EP4	0384	0261 0288
MAXMS1	A	014	0E82	0382	
MAXMS2	A	007	0E89	0383	0243* 0246* 0288
MAXVAL	A	008	0BCD	0169	0214* 0222 0224* 0246
MEDMSK	A	043	0E74	0381	0257
MEDMS1	A	014	0E42	0379	
MEDMS2	A	007	0E49	0380	0242* 0245*
MEDVAL	A	008	0BEC	0175	0230* 0231 0231* 0236* 0240* 0245
MINMSK	A	043	0E34	0378	0253 0264
MINMS1	A	014	0E02	0376	
MINMS2	A	007	0E09	0377	0241* 0244* 0264
MINVAL	A	008	0BD5	0171	0213* 0218 0220* 0244
MTBDY1	A	004	0A6C	0051	0034 0047 0339 0352
NUMREV	A	004	0B65	0129	0125
ONCE	A	003	0C23	0212	0188* 0207 0215*
ONE	A	002	0EB3	0162	0126 0151 0206
PACK	C	001	0226	0454	
PNTRDY	A	023	12E0	0417	0054
PRINT	C	001	021A	0451	0027 0051 0060 0089 0105 0131 0137 0250 0254 0258 0266 0271
PRINT1	A	044	0AEE	0087	0279 0290 0295 0303 0332
PROGID	C	001	0A01	0460	0092
PSR	C	001	0004	0431	
P1AR	C	001	0020	0432	
P2IAR	C	001	0040	0433	
RBUSY1	A	004	0A61	0046	0046
RBUSY2	A	004	0DB0	0351	0351
RD	A	002	12E6	0420	0044 0349
RDIT	A	001	12EB	0423	0031* 0336* 0420
READIN	A	001	130A	0468	0418
RECAL1	A	004	0A7F	0060	0043 0348
RECL	A	002	12E4	0419	0036 0341
RETR	A	004	0A8F	0067	0032* 0058 0337*
RETRY	A	004	0AA3	0076	0096 0361
RETRY2	A	004	0D72	0332	0329
RNUM	C	001	0A03	0462	
RTN01	A	001	0A10	0019	0012
RTN02	A	001	0D5B	0318	0021
SAVIR1	A	002	0BEF	0177	0147* 0148
SAVIR2	A	002	0BF1	0178	
SBUSY1	A	004	0A43	0038	0038
SBUSY2	A	004	0D91	0343	0343
SBYTE0	C	001	0208	0443	0099 0129

A0D2 DISK REVOLUTION TEST

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SBYTE1	C	001	0209	0444	
SBYTE2	C	001	020A	0445	
SBYTE3	C	001	020B	0446	0023 0326
SBYTE4	C	001	020C	0447	
SBYTE5	C	001	020D	0448	
SEEK01	A	004	0A47	0039	0041
SEEK02	A	004	0D95	0344	0346
SEEK0	A	001	12E7	0421	0419
SETNUM	A	006	0R42	0121	0119 0127
SIZE	C	001	0203	0441	
SLOHLT	A	004	0D51	0309	
SLOPR1	A	002	0D2F	0298	0299 0301* 0307*
SLOPR1	A	004	0D1E	0290	
SLOPR2	A	004	0D28	0295	0302
SLOPR3	A	004	0D43	0303	0300
SMOD	C	001	0202	0440	
SPPLGS	C	001	0A02	0461	
SPT	C	001	0A00	0459	
SPUDT	C	001	0A0A	0465	
SRT	C	001	0200	0439	
START1	A	004	0A97	0072	0048 0070 0071 0072 0354 0355 0358 0366
START2	A	004	0DB8	0358	0367
SWDISK	A	003	0PA3	0152	0074* 0360*
SWSET1	A	002	0F05	0389	0121
SW7SKP	A	006	0B25	0115	0102
TABADR	C	001	0A09	0464	
TABLE1	A	001	140A	0470	0145 0181 0190
TEST	C	001	0212	0449	
TESTA1	A	004	0A14	0023	0068
TESTA2	A	004	0D5F	0326	0067
TESTE1	A	004	0A2C	0031	
TESTB2	A	004	0D7A	0336	
TEST01	A	044	0F01	0387	0108
TOTREV	A	004	0ED5	0386	0116* 0122* 0134 0140 0225*
TOTRE1	A	029	0ED1	0385	
TOTAL	A	012	0BE3	0173	0217* 0234* 0240
TSTEIT	A	004	0B9F	0151	0154
TWO	A	002	0FR5	0163	0146 0150
UNPACK	C	001	021E	0452	
UTAB	C	001	0232	0456	
WORK	A	008	0DF2	0374	0101* 0114* 0118 0120* 0124 0126* 0204* 0208* 0213 0214 0217 0218
YA090	A	002	0F03	0388	0220 0222 0224
ID4PP	A	002	0ABC	0083	0076
IR1	C	001	0001	0427	0070 0145* 0146* 0147 0150 0151 0190* 0205 0205* 0206 0354
IR2	C	001	0002	0428	0071 0076 0076 0077 0077 0079 0080 0143 0144* 0150 0151 0152
ICC01	A	002	0ABE	0084	0153 0154 0156 0355
ICC02	A	002	12C1	0412	0077
ICC05	A	002	0DF4	0375	0277 0301

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

A002 DISK REVOLUTION TEST

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+-Y:Y(H E B/C ... E D CNX 8 -H.OA BET--B-? U HOON*BF-D<<)* @ A.>|H NU<F-BW0 1ZAH -T-A0D20001
T+-Z58TPWD>LBY C AY-ZC<BH8OT-8B%. D ZG+D HO?HEILF WD>53Y&CAY-Z/OE HS|HGHOEG /,PE1. -Y|8 8YQA0D20002
T+-DOOH*PHIC=AT* EOH*BFXQSDON-A+B G SH-A+B CN* /OY NO-<HV32TB00AT0> U, DZIEBANK-2YDF 0Y2% 86MA0D20003
T+,,> -DOI HZ*H GR(I* D 2)P BI:.) OXITE<TABUC N5>(0)-P1*GR1*J 2)N 40GS84C46+. 20*Q 2. A0D20004
T+-1W5*LSOH*BFKQ %B>:-S*BG SH-S+B GBD<8 ENH0Z G| (07HGE<EG /ZG. @ AT|X /OHST|UD 7 2C D 78<A0D20005
T+_/B*U.'00CC_M .>80ACH2.>L4|C-. 2A 80 72C-D.=60 EA-<+580IA-D<T00 G|6 (07HAB-0 C-H .% 0. HA0D20006
T+>* E_E+ DBB|H 8C*BG /ZPHS#NY|X 2/OT /OHEASD+5+H BBBIB J6F(-D. LE AB=0 (677B*X -67 :S D *H-A0D20007
T+-?P K1> 8DD8H< 4> -:8I C0Y* 8H* ... D ?C00|C30|L 00*C40 C00|C 00|C00|C00|C00|C 00| LZ-A0D20008
T+-0K2|C02|C00|C 02|C02|C00|C00|C 00 B E Y C2 C8E<IO?X=7 B 36HC *(0-)*4-D BLOD 78DA0D20009
T+-1 (E>30YEHAUC (0-?A0H*CD-H D 0 GB*Q(0-06804(0T2 GCB6PJ07TC-H(A07 2B*82 -U<A0?OC-. 2/00 02*A0D20010
T+-2HCE*(0-?(0-8 FC *.3672A3 +562 (0 D<EC30B=0<A-? ,B=0 (62|CO-2-JQ G06?~CH*2AA<P* ? XCH4 ;.4A0D20011
T+-3COB*;<;?G0060 GB=0.700FC-U(:-0 PCUU(:-0PCYU(:-Y FC-U.5 YFCUU.0 Y PCYU.208G /YAS 8 40H* L DA0D20012
T+-3= /YAS 940H* BF-B C,8(A-8ICS, 2 TX /OHE0LBJ1EB 00H*BFYD2D*(63 XDX|2-6Y+ 63%DXG /00 0E8A0D20013
T+-499*BG /DF<H "C D<#A.20H*BHDB 0CEQ+SE:DO EBE8B G /,A<-0YIP /OH E-LH|SG4ACK0K1*H AB-8 9A A0D20014
T+-54 64?D8G /04 Y0H*BFYQ2DR<< 64 ?DX /OHSYIP /OH 0 -C**3-A -?2D * 8H Y+0/ EOH*BE-C /OH R.*A0D20015
T+-6?F-D<C;<@ A. >|H*RU<FOBWD1_A. S<SQK9|+0 <P2CRD 0%-,B+A H0% &CRH 86 ,BOI H-3F6D>S 3%6 P8HA0D20016
T+-7D0SH(X<POB03 B 0DP|.<H,323B:L /ODTBZ*(<LI8_I 1(XI9*N @*LI8_I 1(XI9*N @S -HD% -HB 15UA0D20017
T+-8V ()LI5HCR1;N 80X N1P9 DC M2)|L2;.E04A(5<X N6+|040PRO) PC1P9 @|< 1H A0D20018
T+-9=-M?0|A 5<X L40XS1*()0;PE6(X B9MCT2) LE-U 6(LI4*|I8XP C6D7H5_IH0) (8_ E1*6 KSDA0D20019
T+-:3EG9 @|LOK*C 00DCM2)|L2;.E057 NO;) 6*PVE+|I5<N =6 A 5<X L40XS1*(L)LA94C T5_< 9QDA0D20020
T+-+01)XA5*|E-UC 0|A.-=S06(LI4*| I8%PCP) PUS<.E6MC 01UCR1;PO4=LT2) \$ N8UCT2)LE1G9 EDA 6+H)8HA0D20021

A002 DISK REVOLUTION TEST

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+-0J1)|FO=(88T E6(PUS<.E6MCO1UC R1;PO4=LT2)SN0UC T5UCB1MCT2)LE1HB 6 <T00-COPE1*PE1 5<D P#0A0D20022
T+-<90CR1;N 80X N1NCA0_SV1HCM0;) 8*SL1)XA5*|E<| 49+.E1DCB:GZ PE1 *PE1 6DC1PHCS40X P503).<A0D20023
T+-=65*) 0XPL84A EDA EDA EDA EDA EDA EDA EDA EDA PE1*PE1 6DC2PHC W5_XN6<.E0)XI5+ S&D 4:<A0D20024
T+-PEGIA 6IA 6DA 6DA 6DA 6DA 6DA PE1*PE1 6DA 6DC2K*E)E(LO8*5 REBA EDA EDA EDA 6D *J<A0D20025
T+-*EDA EDA EDA 6EA EDA PE1*PE1 6DA 6DC2K*I)E<X D40PRE(-U0*|E:DA EDA EDA EDA EDA 6D 3LQA0D20026
T+ / REBA 6EA PE1 *PE1 6DA 6DC2K*(J6(|A:+.HO*STE (~ U4*|E:DA EDA EDA EDA EDA *PE0 KCA0D20027
T+ /A3PE1 6DA 6DC 2K*J)E+.P2)PD40N 5=LL40PYE DA EDA EDA EDA EDA EDA *PE1*PDA 6| ()<6 *66A0D20028
T+ /B>1*EEO=|I9*N 5(ST5_V EDA EDA EDA EDA EDA EDA EDA *PE1*PDA 6|J)6+8R5_PG6 (~ 04* < 890A0D20029
T+ /CZ1;/.6|802+V 5=LL48PYE(SH6|P 02+V 5(ST5_V*PE1 *PDA EDA 6|J.0N5 '-CH: MCP9(|L1:/ -U * 6A0D20030
T+ /D02H?50-) LWA K*CO2UCI5*|REDA *PE1*PDA EDA 6|J .0V5 ?CH: MCP9(| L1;/ -UC1K*.60DA +0D 686A0D20031
T+ /E-K*CO2UCI5*| HEIA=PE1*PDA 6|N)6+8R5_PG6(LO8*5 REFA *?CH: MCP9(| 06MCO5MC50<I2E (~ 09% 4B A0D20032
T+ /PE6MA*PE1*PDA 6|R)6<XN1<PX2)P G6(-04=.E6<.24*5 WE+.P1*(5_V 5<X S8IXN14A 6E1*PE1 *E(6 *6YA0D20033
T+ /GN2)N 6*PVE+| I5<N CNE15>R 5<X N6+|040PRO) PC1MC CO;LS1*J 0>/:6E1 *PE1*EDA 0N5 9_X 05** 0C0A0D20034
T+ /RE6(-04*|E:D_ '-CH: MCP9(|L1:/ 5_N ?CH: MCP9(| 06N1*PE1*EDA EDA 0N?1PHCS0<T2E (~ 04* < 62 A0D20035
T+ /I.1; / -UC1K*P 1*4A+QDA.0|C26<X 800/ 6E1*PE1*EDA EDA 0N?2PHCS0<T 2E(-04*|E:DA=6|E .07Q J2*A0D20036
T+ /HF0DA+OLA.0|C 26<XN00/ 6E1*PE1 *EDA 0V5 9_X05*). 5(ST5_V QDC50<T 2E(LO8*5R6(SH6|S 02+U 6A0A0D20037
T+ /A6(-09XPRGE1 *PE1*EDA 055 2)P D1;~I5*) 5=LL8%N 8*SG6(|05*) 5_V 8>|U0*I 5_N 6DA CH HXYA0D20038
T+ /0YHJ*1E/C67 D2;.KE (PO84CR1*G D:DC06MCE6)X06J< HD>*K:0 |@ 1<X54UCN5>(00G LK4% ;2-A0D20039
TCAKIE(XE02GLK4C D2;.KRO

* SELECT THE NUM BER OF REVOLUTIO NS TO BE TIMED O N THE TWO RIGHTM OST ADDRESS SWIT CHES*8CHA0D20042
* WHEN HALT -P9- DISPIAYED. RESE T HALT AFTER SEL ECTING THE NUMBE R OF REVOLUTIONS TO *8DA0D20043

38304

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129648
PAGE 9

1A0D2 DISK REVOLUTION TEST

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
* BE TIMED. THE	DEFAULT IS TIMIN	G 100 REVOLUTION	S.		*4C8A0D20044
*****	*****	*****	*****	*****	*****P6A0D20045
* DATA I NU	MBER I APPROXIM	ATE TIME * DAT	A I NUMBER	I APPROXIMATE T	IME *P6C8A0D20046
* SWITCH I OF	REV I TO COMP	LETE THE * SWI	TCH I OF REV	I TO COMPLETE T	HE *P6D8A0D20047
* ENTRY I TE	STED I	CALCU LATION	* ENT BY I TESTED	I CALCULATION	*P6E8A0D20048
-----	-----	-----	-----	-----	-----P6F8A0D20049
* 00-01 I	100 I	12 SEC * 0	9 I 900	I 1 MIN 43 SE	C *P6A8A0D20050
* 02 I	200 I	25 SEC * 0	A I 1000	I 1 MIN 55 SE	C *710A0D20051
* 03 I	300 I	36 SEC * 0	B I 1100	I 2 MIN 06 SE	C *7C8A0D20052
* 04 I	400 I	48 SEC * 0	C I 1200	I 2 MIN 17 SE	C *410A0D20053
* 05 I	500 I	59 SEC * 0	D I 1300	I 2 MIN 28 SE	C *6L0A0D20054
* 06 I	600 I 1 MIN	10 SEC * 0	E I 1400	I 2 MIN 39 SE	C *R88A0D20055
* 07 I	700 I 1 MIN	21 SEC * 0	F I 1500	I 2 MIN 50 SE	C *S88A0D20056
* 08 I	800 I 1 MIN	32 SEC * 10-	PF I DEFAULT -	ONLY TIME 100 R	EV *6.0A0D20057
*****	*****	*****	*****	*****	*****P YA0D20058
E***E7+--DC*PHS	=*7H6P I C	FX ASC R A	SO Q	09110501700	4057238HA0D20059

----- LAST PAGE -----



B033 5444 IPL TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
0000 0A00 2 DECK 4
3 DISK START 0
4 ORG X'A00'

B033 5444 IPL TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
0A60 31 A4 15CD 70 LIO READ,X'A4' LOAD DATA ADDRESS REGISTER.
0A64 F3 A1 00 71 RDSIO SIO X'00',X'A1' READ DATA FROM SECTOR 00.
0A67 C1 A2 0A67 72 TIO *,X'A2' LOOP TILL BUSY DROPS.
0A68 C1 A0 0A68 73 TIO NTRDYA,X'A0' BRANCH OUT IF DISK DRIVE-1 NOT READY

B033 5444 IPL TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OC5A F2 90 18 138 JF NEXT JUMP IF NOT.
OC5D OC 0E 10F3 0F5D 139 HVC DHOP(15),STIPL SET UP DISK ID.
OC63 C0 87 021A 140 B PRINT PRINT DUMP OPTION.
...
OCDF 0F 00 15C7 15D3 205 SLG TERP(1),N001 DECREMENT LOOP COUNT.

B033 5444 IPL TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OD15 C0 84 0CE1 206 BP LPY LOOP TILL COUNT RUNS OUT.
OD19 C0 87 021A 207 B PRINT SPACE UP PAPER.
OD1D 16 0E1D 208 DC XL1'16'
...
OD78 F2 90 14 255 JF DHP JUMP IF NOT.
OD7B C0 87 021A 257 B PRINT PRINT SPINDLE NOT READY.
OD7F C6 0D7F 258 DC XL1'C6' ID -A09E-.
...
OD78 F2 90 14 255 JF DHP JUMP IF NOT.

B033 5444 IPL TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
1016	C1D3C9C2D9C1E3C5		359	
101E	40C3C8C5C3D24B		359	
1025	C9E7D340C4C1E3C1	1049	360	CKIPL DC CL37'IPL DATA CHECK FOR THE'
102D	40C3C8C5C3D240C6		360	
1035	D6D940E3C8C54040		360	
103D	4040404040404040		360	
1045	4040404040		360	
104A	E2E3C1E3E4E240C3	1056	361	STSK DC CL13'STATUS CHECK.'
1052	C8C5C3D24B		361	
1057	C4C9E2D240C4D9C9	106B	362	BUSY DC CL21'DISK DRIVE 1 IS BUSY.'
105F	E5C54CF140C9E240		362	
1067	C2E4E2E84B		362	
106C	4040404040404040	10B1	363	DC CL70' IPL DATA'
1074	40404040C9D7D340		363	
107C	C4C1E3C1404C4040		363	
1084	4040404040404040		363	
108C	4040404040404040		363	
1094	4040404040404040		363	
109C	4040404040404040		363	
10A4	4040404040404040		363	
10AC	404040404040		363	
10B2	D9C5C1C440C4C1E3	10EA	364	HDM DC CL9'READ DATA'
10BA	C1		364	
10BB	C4C9E2D240C4D9C9	10D1	365	SPDNR DC CL23'DISK DRIVE 1 NOT READY.'
10C3	E5C540F140D5D6E3		365	
10CB	40D9C5C1C4E84B		365	
10D2	C4C1E3C140C4E4D4	10F3	366	DHOP DC CL34'DATA DUMP OPTION --'
10DA	D740D6D7E3C9D6D5		366	
10F2	4C60404040404040		366	
10EA	4040404040404040		366	
10F2	4040		366	
10F4	C9D7D340C4C1E3C1	1118	367	OKIPL DC CL37'IPL DATA IS OK FOR THE'
10FC	40C9E240D6D240C6		367	
1104	D6D940E3C8C54040		367	
110C	4040404040404040		367	
1114	4040404040		367	
1119	C9D7D340C4C1E3C1	114C	368	NIPL DC CL52'IPL DATA WAS NOT TRANSFERRED FROM THE'
1121	40E6C1E240D5D6E3		368	
1129	40E3E9C1D5E2C6C5		368	
1131	D9E9C5C440C6D9D6		368	
1139	E440E3C8C5404040		368	
1141	4040404040404040		368	
1149	40404040		368	
114D	F5F4F4F440C4C9E2	115F	369	IPLHD DC CL19'5444 DISK IPL TEST.'
1155	D240C9D7D340E3C5		369	
115D	E2E34B		369	
			370	*****
			371	* RESERVED AREAS *
			372	*****
1160	125F	373	READIN EQU *	
1260	135F	374	DS CL256	READ FIELD STORAGE.
1360	145F	375	CODE DS CL256	EXPECTED IPL PROGRAM FORMAT.
1460	155F	376	DCP DS CL256	DCP CORE STORAGE.
1560	158A	377	CHECK DS CL256	
15BB 40	158B	378	PRT DS CL91	PRINT AREA.
	15BB	379	DC XL1'40'	
	15BC	380	CWTRL EQU *	
15BC 0000000	15BF	381	DC XL4'00000000'	DISK CONTROL FIELD.
15C0 00	15C0	382	STSBY0 DC XL1'00'	STATUS BYTES
15C1 00	15C1	383	STSBY1 DC XL1'00'	
15C2 00	15C2	384	STSBY2 DC XL1'00'	
15C3 00	15C3	385	STSBY3 DC XL1'00'	
15C4 00000000	15C7	386	TEMP DC XL4'00000000'	WORK STORAGE.
	15C8	387	HIDL EQU *	
15C8 00320132	15CB	388	DC XL4'00320132'	SEEK TO TRACK 50 CONTROL FIELD.
		389	*****	
		390	* CONSTANTS *	
		391	*****	

B033 5444 IPL TEST

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
15CC	1160	15CD	392	READ DC AL2(READIN)
15CE	15BC	15CP	393	CCN DC AL2(CWTRL)
15D0	FFFC	15D1	394	NEG4 DC XL2'FFFC'
15D2	0001	15D3	395	H001 DC IL2'1'
15D4	15C8	15D5	396	OUT DC AL2(HIDL)
15D6	C087	15D7	397	DC XL2'C087'
15E8	0DFC	15D9	398	BRECH DC AL2(IDIOT)
		399	*****	
		400	*	EQUATES *
		401	*****	
0008	402	ARR	EQU	X'08'
C001	403	XR1	EQU	X'01'
0002	404	XR2	EQU	X'02'
021E	405	UNPACK	EQU	X'21E'
021A	406	PRINT	EQU	X'21A'
0222	407	HALT	EQU	X'222'
0216	408	LINK	EQU	X'0216'
020B	409	SBYTE3	EQU	X'020B'
0010	410	SSW1B	EQU	X'10'
0A21	411	END		BEGIN

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129646
PAGE 5

B033 5444 IPL TEST

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
ARR	C	001	C008	0402	0246* 0247 0293
AUDT	A	003	0A0C	0020	
BEGIN	A	004	0A21	0054	0167 0219 0291 0308 0411
BRNCH	A	002	15D9	0398	0108
BSYCK	A	004	0D28	0212	0058
BTS0	A	001	0E0C	0312	0271
ETS3	A	001	0E24	0329	
BT00	A	005	0E2E	0337	0328
BT01	A	021	0E43	0338	0326
BT02	A	017	0E54	0339	0324
BT03	A	015	0E63	0340	0322
BT04	A	010	0E6D	0341	0320
BT05	A	015	0E7C	0342	0318
BT06	A	021	0E91	0343	0316
BT07	A	010	0E9B	0344	0314
BT30	A	006	0EA1	0345	0333
BT35	A	013	0EAE	0346	0331
BUSY	A	021	106B	0362	0215
CAL	A	031	1024	0359	0163
CCW	A	002	15CP	0393	0060 0069
CHECK	A	256	155P	0377	0109* 0119
CKIPL	A	037	1049	0360	0170* 0172* 0178
CNTRL	A	001	15BC	0380	0056* 0068* 0393
CODE	A	256	135P	0375	0117* 0118* 0185
CRMES	A	002	0A96	0C88	0084*
CYLCK	A	004	0C89	0160	0066
LCP	A	256	145P	0376	0102* 0103* 0125 0126 0173 0174 0306 0307
DISK	A	001	C000	0003	
DNOP	A	034	10F3	0366	0139* 0143
DHP	A	004	0D8P	0266	0251 0253 0255
FIX	A	014	0FF7	0357	0081 0172
HALT	C	001	0222	0407	0110 0165 0209 0217 0226 0262 0289
HDM	A	009	10BA	0364	0184
IDIOT	A	006	0DFC	0306	0398
ILHLT	A	002	0D23	0210	0145* 0180*
INST	A	035	0ED1	0348	0082
IPLHD	A	019	115P	0369	0049
LINK	C	001	0216	0408	0151
LPY	A	004	0CE1	0188	0206
MIDL	A	001	15C8	0387	0396
NEG4	A	002	15D1	0394	0246
NEXT	A	004	0C75	0150	0138 0211 0228
NIPL	A	052	114C	0368	0220* 0224
NOPE	A	004	0C9D	0168	0122 0124
WOPS	A	006	0D3C	0220	0120
NTRDYA	A	004	0D56	0246	0057 0067 0073
NITMS	A	004	0A8D	0084	0091
NO01	A	002	15D3	0395	0090 0205
CKIPL	A	037	1118	0367	0132* 0136
OUT	A	002	15D5	0396	0100
OUT1	A	002	0CEB	0191	0188*
OUT2	A	002	0C98	0196	0193*
PRINT	C	001	021A	0406	0046 0085 0093 0133 0140 0160 0175 0181 0198 0207 0212 0221 0257 0266 0287 0295
PRT	A	091	15BA	0378	0045 0045* 0192 0197 0201 0202 0202*
PRTHD	A	004	0CCD	0181	0146
PRTSTS	A	004	0D27	0293	0274 0280 0283 0286
RDNXT	A	004	0A29	0056	0154
RDSIO	A	003	0A64	0C71	0054* 0077 0150 0152* 0168
RDY	A	004	0D8B	0264	0247*
READ	A	002	15CD	0372	0059 0070 0099
READIN	A	001	1160	0373	0121 0123 0186 0392
RNV	A	014	1005	0358	0079 0170
BTN01	A	001	0A0D	0042	0018
SBYTE3	C	001	020B	0409	0127 0137
SK00	A	003	0A3D	0061	0055* 0153*

DATE 13MAR70 06APR70 22MAY70 01OCT70 29OCT71
EC NO. 571512 571516 571513 571540 571601

PROG ID 0B03-3
PAGE 5

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129646
PAGE 5A

B033 5444 IPL TEST

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEPN	REFERENCES
SMSIT	A	004	0A40	0062	0064
SPDNR	A	023	10D1	0365	0260
SPT	A	004	0DF8	0299	0293* 0294*
SSW1B	C	001	0010	0410	0127 0137
STIPL	A	035	0F5D	0352	0079* 0081* 0132 0139 0220
STMUP	A	006	0AD6	0108	0112
STSBY0	A	001	15C0	0382	0250 0252 0273
STSBY1	A	001	15C1	0383	0062* 0063 0065 0248*
STSBY2	A	001	15C2	0384	0254 0279 0282 0285
STSBY3	A	001	15C3	0385	0249*
STSCK	A	013	1056	0361	0269
TEMP	A	004	15C7	0386	0083* 0090* 0187* 0205*
TSTC	A	004	0DA1	0273	0272* 0276 0276* 0277 0278
UNPACK	C	001	021E	0405	0189 0194
UP	A	001	0C52	0134	0129* 0131*
XR1	C	001	0001	0403	0082* 0084 0089 0089* 0185* 0188 0203 0203* 0271* 0275 0275* 0281
XR2	C	001	0002	0404	0281* 0284 0284* 0294 0186* 0193 0204 0204*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

DATE 13MAR70 06APR70 22MAY70 01OCT70 29OCT71
EC NO. 571512 571516 571513 571540 571601

PROG ID 0B03-3
PAGE 5A

B033 5444 IPL TEST

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+-Y:XC< 8 B-4 HA6 F "aCO/O :EST /OHEJ/<JP:C -+0-HRLXHBTS*10 *OE (NXPSCK-1ZAP (<EQ 328B0330001

T+-Z5E**3Y OY/P A+A NO* EBU 8EAP AOI <S*P-CNQD AO *EQN33PUE*73Y6C AY-ZI0E (HT-HBEP 2D U O: B0330002

T+-D0C 4|PJ EBY* FC 4|P6*70-D+4LO IE**4 EDQOH*BF-H T CK K<| APGE)! /D(OH*BF/QIZAP (<EQ N2DB0330003

T+-E)P3Y <-1J ~|a<-1|~ Gaa"OC *C|8 "C"~ -01 = G8 -00C <H663 *ENa "aBG SH-#<B GB_Q 5S8B0330004

T+-O:CGALPOC*CGA K70A"C-ANPOC*OHD (| 5" |AKPA ACI4 (-0A"D" "E2)CGA *1J-CGA -1|~+A BB*H *68B0330005

T+-15D *aA-1KAY* D| H<H-0+DJ-|P*B G/Y IJDQ+A BB*H EF 0+D|<|P*BG /Z BH/C3Y+8aa-4TOH* <3L- 1HYB0330006

T+-20B ZVOA BETY HBVM:B Y=OH*HH*B G//,PG1 UY # /OH SY # /OY/+ -HB-H EBEO (DDU6A-HGA-0 (DDU =B4B0330007

T+-3,C**<-OC*EEB <-0A"D" /OH EOSE EKEB;|I8(HaBG /D BL1B:0-DK\$AHBDOa aDAPG (D<:aBG /8 6 " " *04B0330008

T+-4WEQH4 -380H* BG/ " AC:OH*BF-E \$E\$Y<O/O:ES?K JC S / | APGE)! / 3 /OH*BF/\$ /OHSY C /00 E,HB0330009

T+-5/)*BG /,FEJA ,YIT /OHSYIT /OY /C 4JL ')OH*BF*Q 4DM2-XaBG SH-XaB GCGH&BAPJ (- (TTB SE*D 3T B0330010

T+-6*CH<N03/ E* C 2UBH9?1P aZ \$+Q0 NO?HEE<BG //,PE1C JY| # /OHSY| # /0 OH*BF*H (DEE-VaH AC-8 6-UB0330011

T+-7P| D(YT- E* C D 7X4-DCC- (Y-6 S|E (YX ACED8AAP B0A (9*HA 3-HE*. D 7X4-DC+H NOX &C; * 8I-B0330012

T+-8KOH*BF/\$ /OH SYI- /OY/(-(=10 BC-* OH*BFYD " C /0 CGA *1J-CGA -1|~OH*HHSY+W1H +U6a 6.-B0330013

T+-9(CXOHCW4;CW< JCV&MCUC<ECS8(CD8 FCDG5MCO5aXW.P B9*PH8aXO5HCR1) T U2) XE1 (PO6<GD1(X EB>H 9, aB0330014

T+-:HE (LA6) .E6*P Q9<XP5<P984CC2<P C4XLA8aE 0aTE0. NSUCR1*|06*J 1_S U5*LT6*GC4UCC5_P D2;< 606B0330015

T+-8C2) \$H6<|H1*| K8XPE4UCC2<PC4>L N6XGF1*TE0*J 8XP T8'|I5*~D5UCT2<N 1_SL4*SHQ) PG6+P E6;- 9L0B0330016

T+-8-E<|A6*PP9(| L:DA-EDC1K4CS1:(1<X55*|A:DCR5_1 11) V 8*B 6) SL44C 16DA 6|I.6+|U6) W 5_H 7KUB0330017

T+-a96<GD1 (XE8>I 0'SB5aGB1HCS8'S P6DA 6| (.6+.EB4C C5_PS5_|E6+.N2:| C2<PS6+|06|CO8|A 6D 6A*B0330018

T+-46|J.E+.EB4C 15' (6>|Y8a|H6+| O6DA 6DA 6DA 6DA 6DA 'H_1(B 5*X 01'IA5DCL5XG6DA 6D '-<B0330019

T+-?6DA 6DA 6DA 6DA '0) (T1) V 8XGR6+|06PC00'C OQDA 6DA 6DA 6DA 6DC7K4CT9 (XN6 (\$ F1U 7:QB0330020

T+-D0*LD6*PS8UC C5_LP0) IEE+.T5_) 6DC8K4CD5UCP6) \$ G6*GH6+.T0) IT6DA 6DA 6DA 6DA 6<Q) SHB0330021

B033 5444 IPL TEST

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+ / V2;-E1DCD2;. KEDA 6 (XES (\$V0*. L1HCD2;.K1<X54UC D6*IV1HC16 (XEO8C L2*.80;|BE<|E1*| KKBU :QH80330022

T+/A-5' (1<GT0HC C2<PC4UCP5_V 8aT E6DA 6DA 6DA 6DA 6DA 8>|AB-L56<| H1*|KKBLI8_I 1(X I9*H 4H80330023

T+/B86|E 2;X 0>L S:D_ 6IA 6DA 6DA 6DCIS' (1<GT0HA 6DA 6DA 6DA 6DA 6DA 6DA 6DA 6DA 6D "-.0B0330024

T+/CO6DA 6DA 6DA 6DA 6DA 6DA 6DA 6 (XEO*J 1<GT0*L I6_I 1(XI9*H 8BC H5>(6*PA1* /-.1<G TOH) HB80330025

T+/DJ1+LH54C05=| I5_N CCA 6DA 6DA 6DA 6DA 6DCIS' (1<GT0HCIBUC04UC P5_V 8aT E6DA 6DA 6D JB8B0330026

T+/E<6DA 6DA 6<X P44CDO;|A6+SA8UC H5>(8'XA5;.P1) X H1*J 1_XO5DCT2<H 6DA 6DA 6DA 6DA 6D 8S-B0330027

TD/E-'-L4'DCD2;. K6<XP4ACT1;.TKO K 8B0330028

TG/PR6 2 LHJQAO a""0 JPHOH*(" 1-B0330029

EBSE+E7*=-DC*PHS =*7H6P| | C P5 ASC 8 A 50 Q 15470501701 02171E8-B0330030

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for 'DISK FRIENDS TEST' including sections like 'PROGRAM NOTES' and 'ROUTINE 01'.

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for 'DISK FRIENDS TEST' including sections like 'CHECK SWITCH 1 FOR A CORRECT SETTING' and 'MOD 3 ERROR MESSAGE'.

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk diagnostics, including jump, decrement, and seek instructions.

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk diagnostics, including data switches, sector numbers, and capacity checks.

8044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk diagnostics, including seek, read, and write operations.

8044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk diagnostics, including seek, read, and write operations.

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk diagnostics, including instructions like ST, SNS, HVI, CKOUT, and comments such as 'SAVE NOT READY RETURN ADDRESS.' and 'SUBROUTINE SENSES THE CORRESPONDING DRIVE'S STATUS BYTES...'

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk diagnostics, including instructions like R, DC, HVC, B, and comments such as 'PRINT THIS COMMAND ID.', 'CLEAR PRINT FIELD.', and 'SUBROUTINE INTERPRETS SENSE SWITCH SETTINGS...'

8044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code and comments for the left page.

8044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code and comments for the right page.

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for error codes 184F through 1949, including source statements like 'UNDEFINED.', 'DRIVE 1 - RMVBL - HD 0', and 'DISK COMMANDS TABLE.'

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains diagnostic data for error codes 19A4 through 1B3B, including source statements like 'UNDEFINED.', 'DRIVE 1 - RMVBL - HD 0', and 'DISK COMMANDS TABLE.'

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains error codes and descriptions for the B044 program.

B044 DISK FRIENDS TEST

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains error codes and descriptions for the B044 program, including a large asterisked section.

B044 DISK FRIENDS TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1506 * SETUDT *
1507 *****
1508 SUBROUTINE ANALYZES THE UNIT DEFINITION
1509 TABLE AND SETS THE FLAG BYTE ACCORDINGLY.
1510 *
1511 UDT FLAG BYTE 'UDT' IS AS FOLLOWS-
1512 *
1513 BIT MEANING
1514 *
1515 0 SPINDLE -1- DEFINED.
1516 *
1517 1 SPINDLE -2- DEFINED.
1518 *
1519 2 SPINDLE -1- HAS HALF CAPACITY.
1520 *
1521 3 SPINDLE -2- HAS HALF CAPACITY
1522 *
1523 *****
1524 *****
1525 * PROGRAM NOTE
1526 *****
1527 * THIS SUBROUTINE IS RUN ONCE AND THEN IT IS DESTROYED. AFTER
1528 * THE FLAG BYTE IS DEFINED, THIS SUBROUTINE BECOMES PART OF
1529 * THE DISK READ/WRITE AREA.
1530 *****
1531 SETUDT TBN AUDT-1,X'20' SPINDLE -A- DEFINED ?
1532 JF **7 JUMP IF NOT.
1533 SBN UDT,X'80' TURN ON SPINDLE -A- FLAG.
1534 TBN BU DT-1,X'20' SPINDLE -B- DEFINED TO DCP ?
1535 JF **7 JUMP IF NOT.
1536 SBN UDT,X'40' SET SPINDLE -B- FLAG BIT.
1537 TBF UDT,X'CO' ANY FLAG BITS SET ?
1538 JT ERUDT GO PRINT MESSAGE IF NOT.
1539 TBN AUDT,CAP2 100 CYLINDER FIT ON ?
1540 JF **7 JUMP IF NOT.
1541 SBN UDT,X'20' SET SPINDL -A- HALF CAPACITY FLAG.
1542 TBN UDT,X'40' SPINDLE -B- DEFINED ?
1543 JF PARE JUMP IF NOT.
1544 TBN BU DT,CAP2 100 CYLINDER BIT ON ?
1545 JF **7 JUMP IF NOT.
1546 SBN UDT,X'10' SET SPINDL -B- HALF CAPACITY FLAG.
1547 *****
1548 * PRINT PROGRAM TITLE AND INFORMATION FOR THE CE.
1549 *****
1550 PARE MVC PRT(91),PRT+1 CLEAR PRINT FIELD.
1551 MVC PRT-59(21),HDE04 BRING IN TITLE.
1552 B PRINT PRINT THE TITLE.
1553 DC XL1'01'
1554 DC IL1'91'
1555 DC AL2(PRT)
1556 MNZ TEMP,SIZE-1 ISOLATE CORE SIZE.
1557 LA MAXSCT,XR1 LOAD TABLE ADDRESS.
1558 A TEMP,XR1 INCREMENT POINTER TO CORRS TO CORE.
1559 CLI 0(,XR1),X'FF' THIS AN INVALID SELECTION ?
1560 JNE NOSO JUMP IF NOT.
1561 HVI MAX,X'02' SET MAX SECTORS FOR READING TO 2.
1562 J **9
1563 NOSO MVC MAX(1),0(,XR1) STORE MAX NUMBER OF SECTORS TO READ.
1564 B UNPACK UNPACK MAXIMUM NUMBER.
1565 DC IL1'1'
1566 DC AL2(MAX)
1567 DC AL2(HDSUB)
1568 MVC KCED-8(2),HDSUB SAVE FOR LATER REFERENCING.
1569 B UNPACK UNPACK ADDRESS FOR PRINTING.
1570 DC IL1'2'
1571 DC AL2(ADRO1)
1572 DC AL2(ALTPAT-27)
1573 HVI TEMP,203 PRESET CE TRACK ID.

1FC3 38 20 0A0F
1EC7 F2 90 04
1ECA 3A 80 17FA
1ECE 39 20 0A0E
1ED2 F2 90 04
1ED5 3A 40 17FA
1ED9 39 C0 17FA
1EDD F2 10 E3
1EE0 38 02 0A0C
1EE4 F2 90 04
1EE7 3A 20 17FA
1EEB 38 40 17FA
1EEF F2 90 0B
1EF2 38 02 0A0F
1EF6 F2 90 04
1EF9 3A 10 17FA
1EPD 0C 5A 19A3 19A4
1F03 0C 14 1968 1EB4
1F09 C0 87 021A
1F0D 01
1F0E 5B
1F0F 19A3
1F11 08 02 17F1 0202
1F17 C2 01 18EB
1F1B 36 01 17F1
1F1F 7D FF 00
1F22 F2 01 07
1F25 3C 02 180C
1F29 F2 87 05
1F2C 1C 00 180C 00
1F31 C0 87 021E
1F35 01
1F36 180C
1F38 1E1B
1F3A 0C 01 1D5D 1E1B
1F40 C0 87 021E
1F44 02
1F45 17E9
1F47 1E31
1F49 3C CB 17F1
1F35 1565
1F37 1566
1F39 1567
1568
1569
1F44 1570
1F46 1571
1F48 1572
1573

B044 DISK FRIENDS TEST

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1F4D 38 20 17FA 1574 TBN UDT,X'20'
1F51 F2 90 04 1575 JF **7
1F54 3C 67 17F1 1576 HVI TEMP,203
1F58 C0 87 021E 1577 B UNPACK
1F5C 01 1578 DC IL1'1'
1F5D 17F1 1579 DC AL2(TEMP)
1F5F 1E5E 1580 DC AL2(CELOC)
1F61 C0 87 021E 1581 B UNPACK
1F65 02 1582 DC IL1'2'
1F66 17EB 1583 DC AL2(ADRO2)
1F68 1E7B 1584 DC AL2(STERT)
1F6A C0 87 021E 1585 B UNPACK
1F6E 02 1586 DC IL1'2'
1F6F 17ED 1587 DC AL2(ADRO3)
1F71 1E9F 1588 DC AL2(STRFID)
1F73 3C 60 197B 1589 HVI PRT-40,C'-
1F77 0C 31 197A 197B 1590 HVC PRT-41(50),PRT-40
1F7D C0 87 021A 1591 B PRINT
1F81 01 1592 DC XL1'01'
1F82 5B 1593 DC IL1'91'
1F83 19A3 1594 DC AL2(PRT)
1F85 C0 87 021A 1595 B PRINT
1F89 01 1596 DC XL1'01'
1F8A 31 1597 DC IL1'49'
1F8B 1E1B 1598 DC AL2(HDSUB)
1F8D C0 87 021A 1599 B PRINT
1F91 01 1600 DC XL1'01'
1F92 12 1601 DC IL1'18'
1F93 1E5E 1602 DC AL2(CELOC)
1F95 C0 87 021A 1603 B PRINT
1F99 01 1604 DC XL1'01'
1F9A 31 1605 DC IL1'49'
1F9B 1E4C 1606 DC AL2(ALTPAT)
1F9D C0 87 021A 1607 B PRINT
1FA1 01 1608 DC XL1'01'
1FA2 1D 1609 DC IL1'29'
1FA3 1E7B 1610 DC AL2(STERT)
1FA5 C0 87 021A 1611 B PRINT
1FA9 01 1612 DC XL1'01'
1FAA 24 1613 DC IL1'36'
1FAB 1E9F 1614 DC AL2(STRFID)
1FAD C0 87 021A 1615 B PRINT
1FB1 04 1616 DC XL1'04'
1FB2 5B 1617 DC IL1'91'
1FB3 19A3 1618 DC AL2(PRT)
1FD5 3C 00 1948 1619 HVI SCK+1,X'00'
1FB9 C0 01 0A17 17D7 1620 HVC BEGIN+3(2),BYPAS
1FBF 0C 87 0A14 1621 B BEGIN
1FC3 C0 87 021A 1622 ERUDT B PRINT
1FC7 C6 1623 DC XL1'C6'
1FC8 0E 1624 DC IL1'14'
1FC9 1EC2 1625 DC AL2(UDTCK)
1FCB A0EA 1626 DC XL2'A0EA'
1FCD C0 87 0222 1627 B HALT
1FD1 A0EA 1628 DC XL2'A0EA'
1FD3 C0 87 1EC3 1629 B SETUDT
1630 *****
1631 * EQUATES *
1632 *****
0008 1633 ARR EQU X'08'
0222 1634 HALT EQU X'222'
0216 1635 LINK EQU X'216'
021A 1636 PRINT EQU X'21A'
0212 1637 TEST EQU X'212'
021E 1638 UNPACK EQU X'21E'
0001 1639 XR1 EQU X'01'
0002 1640 XR2 EQU X'02'
1EEA 1641 FIL EQU READIN+255

BOOK DISK FRIENDS TEST

ERR LOC OBJECT CODE ADDR STRT SOURCE STATEMENT

17E1 1642 N000 EQU H0000
020A 1643 SBYTE2 EQU X'020A'
020B 1644 SBYTE3 EQU X'020B'

1667 *****
1668 * COMMENT CARDS *
1669 *****

1670 TREP
1671 TREP
1672 TREP
1673 TREP
1674 TREP
1675 TREP
1676 TREP
1677 TREP
1678 TREP
1679 TREP
1680 TREP
1681 TREP
1682 TREP
1683 TREP
1684 TREP
1685 TREP
1686 TREP
1687 TREP
1688 TREP
1689 TREP
1690 TREP
1691 TREP
0A14 1692 END BEGIN

BOOK DISK FRIENDS TEST

CROSS-REFERENCE

SYMBOL T LEN VALUE DEFN REFERENCES

ADD22 A 004 14AC 0978 0980
ADD6 A 004 1481 0969 0471
ADR01 A 002 17E9 1268 1571
ADR02 A 002 17EB 1269 1543
ADR03 A 002 17ED 1270 1547
ALTPAT A 049 1E4C 1498 1572 1606
ARR C 001 0008 1633 0416* 0817 0922* 0823 0849 0927 0952* 0953 0955* 0956 1230

B044 DISK FRIENDS TEST

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
XR2	C	001	0002	1640	0614* 0617* 0618 0619 0620 0626* 0902 0903* 0907 0907* 0913 0913*
					0928 0957 0968* 0969* 0972 0976* 0978* 0982 0983 0984 0999* 1106*
					1108* 1109 1557* 1558* 1559 1563
					0063* 0075 0076 0081 0084 0089 0093 0095 0097 0099 0126 0130*
					0131 0133 0135* 0137 0139* 0140 0141 0144 0146 0149 0151* 0153
					0155 0157 0160 0162 0165 0167 0167* 0170 0170* 0171 0171* 0188
					0191 0197 0199 0212 0223 0224 0226 0228 0229 0232 0235 0236
					0236* 0257 0271 0290 0292 0294 0296 0298 0310 0351 0351* 0357
					0372 0377* 0378 0386 0386* 0387 0389 0425* 0490* 0502 0504 0506
					0506* 0512 0521 0533 0545 0547 0553 0559 0563 0563* 0569 0696
					0703 0705 0705* 0741* 0754 0756 0758 0758* 0766 0769 0770 0790
					0792 0792* 0872 0874* 0875 0878 0880* 0922 1015 1044 1046 1048
					1076* 1081 1082 1084 1094 1137* 1138 1140 1142 1166 1233 1245
					YAO	A	003	0B4F	0165	0161
YEP1	A	003	0B1D	0149	0145
YIMY	A	006	10FF	0654	0652 0656
YVAM	A	007	1AAC	1450	0206

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70 28APR71
 EC NO. 571512 571516 571513 571531 571540 571565

PROG ID 0B04-4
 PAGE 17

B044 DISK FRIENDS TEST

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+-Y:KDE E B/C	**A P C:?	/18CO-HQ3 1EP<	RZ 18PH*PK OAE*ND	PA*9G /ZPH1KGY*	A- 33HB0440001
T+-Z5F*BG SH-B.	** K4AE=DAOHD(-.X	0 < 8C149 A-1H H	P3E *R/-10HE<M14	GF*G2 E+2 PQCOC	D 4 *QR0440002
T+-DOA.-H |HEA#U	G <BEC6EY 1-E C4	EF P2-T486A-:2Z	S1S*QA-HR.3-AR-	2URT /OHE1SDSDDC	YOH* -R80440003
T+., SH-a*BGBU.	/OHE1/<SDDCWOH*	BHDCWOH*HE,X- |H	EYTAHE*G2-R46 /-	K*SDAF*22 5A9 E.	ZUGH)LUB0440004
T+-KH (-HP1?HG-,7	" |HAJ3QBE'H* A-	1 K8 E*DCIJ-P@-H	DG.-A |HEBSUAA|H	EE-HGA,-AA|HE+CO	BEAY)S R0440005
T+/_/AY.)> D @/	P> DD@Z V> DD@/	-OH*.H*-A |HEBS-	A ?HSD?HGA,-A ?H	59:4R ?HGF>HR >H	R % ** JI<B0440006
T+-->/OHE1/S)Z:C	YOH*BHD CYOH*HE T4	DF P2/ *: J-E@Y*	D+-BQF,X- |HE TO	E*DY /-1 C@HE*G	2 EY KL B0440007
T+--?P+H QF?HEE|H	GX.S |HEFS4P *B	DCJ3 /04=OH*BF*Q	VFD2-:<BGCJH9D C	2D J<AA4*G+12/0Q	<AA4 2C<B0440008
T+-OK|J390H*BF-Q	9GL7 /OHSY+=0 **	** 12-K=(** <QC|H	D<SO E*DA> D @/	PC- P@J+.- P@<	*A* EH-B0440009
T+-1(a-HDH.3" >H	B *BGCL*/OHE--4	):?HGD@BG /DBHA5	V@Y*HON*BFYH>GRI	/O?FH <QAG *AJ-	E@YH N,QP0440010
T+-2HEL-6E",2U *	@P017@Y*R|<K<)"H	GDT--E",2U *@R01	7@Y*DI<K<)*4 *-H	DDL4AF P2-J-*/-	E@YD ;E@B0440011
T+-3CDL4EF P2-EY	*A/-E@YDC@Y:T?EQ	A@Y6F?6<A@YJB?M%	A@Y6F?MQA@Y66>H	@/ G+D QF?HGACD	*FAY *S*B0440012
T+-3=+< QF?HE*@B	G /,PF17BY+S98 C	2U *#EA-E@Y*D+8	QF?HG*BG /,F<A?	?Y+ /OHSY+ /OZ	B|JD @Y4B0440013
T+-49F5T2/06@@/_	0OH*BF*QHF6K-:<B	G SH-:<BGBUH<AJ>	IF>L2/0Q<AJ>IF?	/OHE1S*SECCZOH*	BHD ** JZNB0440014
T+-54:-HG<;HB T-	ACO#2D *@B55>@Y*	|1+H(\$TEBE*ND(J-	1E=22-J<(J-1E=-	2-E, /OHSY+ /OZ	BOH* NS@B0440015
T+-6? /YDCA,NT D	AE=G /OHE U EA@H	BF<O% 06Q @BGECS	***** OH*BF-ESP<	<O/WTFELS -H(6D	PA-H 94RB0440016
T+-7D-5>)*OC -66	XOH*(TC1*FOU<(JH	HFQU<B1V2F*U< 1V	(PT" /OHEAVRYO1	E*E<PZ<BG SH-9@B	G /Q PQOB0440017
T+-8V - J8@BG /Z	ED/YRYHH<O/WTFEL	B /TH+O@QFT*-PAY	8 J-E@ZAE+ 8OP*H	8B@F-D P2/9L /O8	R+O% KIQB0440018
T+-9-FA,AY/*O<EQ	P*3FUE*X3Y *OY/-	I+A QB* 8CT*8EA-	I@ZARC DQ A-3* H	QF?HE-T-DFA,2D ?	A*AH 8Z@B0440019
T+-:S4|HGA<BGCV9	*AA-E@SHPGLF6P**	1_A-9@* <.HQBL-	E* X D 9@+D QB-H	8B60A* HP@*HG|L3	2P>8 E HB0440020
T+-#O<.<Q9*HGBC3	1F>8OY1-.C *S+J,	>OH*BF*QRPOB-CTX	*F T UA (Y+Q@QB*E	8D6T /OHSY * /O8	GO-H *KH0440021

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70 28APR71
 EC NO. 571512 571516 571513 571531 571540 571565

PROG ID 0B04-4
 PAGE 17A

B044 DISK FRIENDS TEST

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+ 08 6H8Z Q1EORS60"FO-RS*B G/YAO1WTCEYRY1W UC <QEZ-OC DQFJ- :TEDAE=G -JG+?~@ @-D KHHB0440022

B044 DISK FRIENDS TEST

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+/STD' J10+ 6 Q8* 8EBPK 8<@+/8 (+H Q87HEBC0*E 7 /12V+0EQP*BG /Y UT-ELEBL /OH5Y1- /GA 3DEB0440044

B044 DISK FRIENDS TEST

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:6+.E84C05=I I5_PSE<XNE+.W2:; C2<PSE4CR1;.E84C H0) |T5_-T2) \$NE&DA E<|O5(LA5*J E&A ED 088B0440066
T+/YR6DA EDA E<L R2;PE&DA EDCD2;. K&DA E<TEO*J EDA 4*SCO;|I5_PE9&P C9+(I5*) O'SH5<G N1+H 08-B0440067
T+/ZM6+.U5(LAG;T I8>.U1*J EDCC2<P C4>.0&|C0&|A EDC O&|C0&|CT5>|A4=. R1*GD&<LAR&GR1*G DE+< \$54B0440068
T+/D|6*GC4UCI1(K E0*J 1<X1A'P0&| I0*XE0*J 9*PR2*\$ Y9_XI&AN 1<GT0;\$ R2;|E&<X0&GN&<(\$ N4=- 09-B0440069
T+/H&ETA9*N @0_ 5_PEQ+|I5<N 8&P E4UC05=|I5_PD6*X V1MCX&<P0&4CR1*G D:<PN1ECO1UCT0*. L1;< 8\$-B0440070
T+/X&EO*.L1MCF2) | L1*LT6*GC4UA @|C S1*|T5_V @|CD6*X V1MCX&<(XE0&GL2*. R0;|E&<|H1*|K0'S R1H 7HMB0440071
T+/ 2) LA1&N QDC C5_LN0) PDE+-X9=- X9&CC5_PT6) \$L&<\$ I1) |DE+-X9=-X9=- X1(XI9*N 94CS&G T9+H 6RHB0440072
T+/#&<|H1*|K&M 2) PI&XA4=-.W2:; C2DCX&<XSE<XNE<P R6) \$R&>\$I&@|H1;I 0674&+|05UCL0) X G1H 88<B0440073
T+/>61_\$R&<|H1MA EDA EDCP2;-E1DC D2;.K&<(\$F&<LR2;P F&<I 5) \$T&<LE1&X N1*LD6*XV1MCX&<. U8>- 8-0B0440074
T+/?1&+|05UCL5_P G0&GN5) \$T&+LS1MC T6*GC4>I *PC6&<(\$ R&<|L7Q|LB&<(\$N&<(X E5(\$V0*.L1MCD2;. K1<D LBMB0440075
T+/0%8&E 1+LM5&| 05;|R5_(1&XE4&J 6*PA1DA-E+-X9=- X9=-X6*PA1DCI1DC C2<PC4V_ 1;-P1*| T1&< :AYB0440076
T+/1X&+~X&<GC&=L A44CX9&LR2;PE&+) 2;I 0>LS:<LR2;P E&+) 1<XDS (P0&4C G5UCB9+.Y5)R-5_- I5;< 0*HB0440077
T+/2S1) XV1) PT2) \$ NE (X&6+LI6*PD5) R 0*LD6*PS&UCH0) X K1) XE6+LI5'LE5; (0&TE0'.D0;|A&<| H1*<*Y B0440078
T+/3) 4_PO&<(XEO'\$ R1DCP5>LN1+|R0*| K&<|05*LI&X05MC C2<PC4>.E1) I 0&T E0'.U5;. A1&PH1*G DE+H 7&QB0440079
T+/4Q1;|T4&XN1'X E0*J &|C0&+.E0=| 06;.W6*XT1MCO&DC S1*|T5_XS9+.E&+. W2;|C2<PSE6|(,DC T5U 2,UB0440080
T+/5L8&PL1*|T&<T E94CN9(LB1) V 5&R 8&PC8*\$R&UCT5UA EDA E<|A5H&N5> (8_-E0&XF;DC&5_X E&<< H3 B0440081
T+/6+2<GN&<TE94C X&4CS1*|T5_X&8>| A6;|I5*) 8&PC8*\$ R&<(-L9+I 5;LN0&P R&<XSE<-R1*GT1)V 8&- @YHB0440082
T+/7T0) N |TH1*G DE+.E4&PC&X05MC C2<PC4&|A5) P0&4C I5;|E6) LI94CO5=| I5_PSE|E,0) XN9+. L1(U N.4B0440083
T+/8D2;PE&+) EDC F2;-E1DA E<TDE+~ CO) PN5>(9+..E&<|C 05<GX2) LU5DCN9(L B1)V 5&R 8&PC8*\$ R&U) RDB0440084
T+/89R 6*PA1FG W6*XT1MCIBUCH1;) 9=-D0;|A&<.Y&@N Q<\$FQDCA&4CX9=- X&<-F5*PRO;|E&UC W6+U 8DEB0440085
T+/9:8&N 1<GT0&C F2*PL1<|EF+|R0*| K&<XSE<TE94CX9=- W2;|C2DC05=|I5_P SE+.T5_XE1DCA&4C X9=* \$Z&B0440086
T+/:59'XE0*J/9_X I&@N 1<GT0&MCF2*P L1DCS&@GR8=I 0;(9=-X9*P4'|J 1<X S4UCP6+XE5*J 8&P S8&E *24B0440087

B044 DISK FRIENDS TEST

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+/#02;.KE+LD84C C2<PC4T--B-?2U E :-A-:+B HC?H&ACZ E*Y90A-:0/CT+ H HC|HEACY-E*YREA- :@Z 2-9R0440088
T+/&B3-BB-"2U E :DA-:CEBYRY1WUCA& REA:40H*9F-ESFE< H /-1 -.R JS&(-D P&P7* |HAA30&F 3 2/0M KCDB0440089
T+/WG" QC C /OH : J-<G/X< J5)G/? /OH; /-ZGTD&21- 1+3 P=2HEACIX&G /OH; J-<GV& /OH ; /* PR R0440090
T+//:19&0H*BG-H P&J:-|P R;001PPY R;@BG /YAO1WTOH* BF-D1G/? /OHP JH :P&BC /YA<JQ<OH* BF-D P18B0440091
T(A"OGJ9&0H*BF-D UGZ" /OHEAE*RY30 PM-< EYPE"- /OY WOH*PF&C+G&H-:&R S SH-:&R&G&K< ***** 3:<R0440092
***** 00*80440093
* CONS OLE SWITCH OPTIO NS * OKR0440094
* SWITCH 1 I SWITCH 2 I SWITCHES 3 + 4 * MS5B0440095
* 1 - ISSUE A SE EK I 1 - DRIVE 1 - PH VBL - HD 0 I * E54B0440096
* 2 - READ DATA FROM SECTOR I 2 - DRIVE 1 - PH VBL - HD 1 I X - SPECIFY, IN * 6R6B0440097
* 3 - READ TRACK ID I 3 - DRIVE 1 - PI XED - HD 2 I HEX , TRACK * *YQB0440098
* 4 - READ DIAGN OSTIC I 4 - DRIVE 1 - PI XED - HD 3 I OR SECTOR ID. * 0T&B0440099
* 5 - READ VERIF Y I 5 - DRIVE 2 - RH VBL - HD 0 I * 5: B0440100
* 6 - WRITE DATA ON SECTOR I 6 - DRIVE 2 - RH VBL - HD 1 I * 1 -B0440101
* 7 - WRITE ID O N TRACK I 7 - DRIVE 2 - PI XED - HD 2 I * R3<B0440102
* 8 - DO MULTI-S ECTOR READ I 8 - DRIVE 2 - PI XED - HD 3 I * RE&B0440103
* 9 - DO MULTI-S ECTOR WRITE I * OR&B0440104
* A - ONE-TIME S ECK I * 9I&B0440105
* SET SWITCHES TO -0000- TO INDICA TE END OF OPTION S * JQ4B0440106
***** E-HB0440107
* SENSE SWITCHES, WHEN SET, DICTAT E THE FOLLOWING * 928B0440108
* 17 - THE DISK SIO AND ITS CONT ROL FIELD ARE PR INTED BEFORE BEI NG EXECUTED. * R,4&B0440109

8044 DISK FRIENDS TEST

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

* 18 - THE PROGRAM READS THE CONTROL SWITCHES AS A DELAY AFTER EACH COMMAND. LS8B0440110

* 19 - AFTER A READ COMMAND IS EXECUTED, THE DATA IS PRINTED IN HEX. S/4B0440111

* 1A - PROGRAM HALTS -E4- AFTER EXECUTING ALL STORED COMMANDS. OENB0440112

* 1C - PROGRAM WILL NOT CLEAR THE READ/WRITE FIELD BEFORE ISSUING A COMMAND. K8B0440113

***** E09B0440114

EB/J*E7*=-DC*PH\$ =*7MEF1 | C P% ASC R A S0 Q 15050501700 617718EUB0440115

----- LAST PAGE -----

DATE 13MAR70 06APR70 22MAY70 01AUG70 01OCT70 28APR71 PROG ID OB04-4
EC NO. 571512 571516 571513 571531 571540 571565 PAGE 20

AOP6 DISK SYSTEM TEST MODULE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
2 DECK 1
3 DISK START 0
4 ORG X'AOO'
5 *****
6 * 7/17/72 LAST UPDATE *
7 *****
8 * DISK SYSTEM TEST MODULE *
9 *****
10 * SECTION PREFACE *
11 *****
12 DC XL2'AOP6' PROGRAM ID AND REVISION LEVEL
13 DC XL1'00' SECTION FLAGS
14 DC XL1'01' CURRENT ROUTINE NUMBER
15 DC XL2'0000' RESERVED
16 DC AL2(RTN01) FIRST ROUTINE ADDRESS
17 DC AL2(ERTAB) ERROR TABLE ADDRESS
18 AUDT DC XL3'A04000' SECTION PREFACE UNIT DEF. TABLE
19 BUDT DC XL3'B01000' SECTION PREFACE UNIT DEF.
20 *****
21 * PROGRAM NOTES *
22 *****
23 * WARNING - DO NOT ALTER PROGRAM WITHOUT CAREFULLY STUDYING HOW *
24 * ***** IT RUNS. TO CONSERVE CORE, FUNNY THINGS ARE DONE. *
25 * -BE CAREFUL- *
26 * *
27 * TO CONSERVE CORE, PROGRAM PARTS -RTN01- -CHPAR- -BUSY- -HALF- *
28 * NEED BE RUN ONLY ONCE. THEREFORE THEY WILL BECOME PART OF THE *
29 * READ IN AREA. NOTE, A BRANCH TO -GOOF- OR BUSY- INSTRUCTION *
30 * IS PLACED WHERE -BEGIN- IS. THIS WILL BRANCH OVER THE READ *
31 * IN AREA. *
32 *****
33 * *
34 * *
35 *****
36 * RTN01 *
37 *****
38 * PROGRAM SENSES STATUS BYTES OF *
39 * THE SPINDLES AND CHECKS FOR ANY *
40 * ERROR CONDITIONS. *
41 *****
42 DC XL1'00' PAD
43 RTN01 DC XL1'01' ROUTINE NUMBER
44 DC XL1'00' NO MANUAL INTERVENTION REQUIRED
45 DC XL2'FFFF' LAST ROUTINE
46 BEGIN SNS STAT1,X'A2' SENSE STATUS BYTES 0,1,2,3, FOR
47 SNS STAT3,X'A3' SPINDLE -1-.
48 B CKST GO ANALYZE THE BYTES.
49 TBN BUDT-1,X'20' SPINDLE -2- DEFINED?
50 JF HALF JUMP IF NOT.
51 SBN HLTID-1,X'10' SET UP FOR DRIVE 2.
52 SNS STAT1,X'B2' SENSE STATUS BYTES 0,1,2,3 FOR
53 SNS STAT3,X'B3' SPINDLE -2-.
54 B CKST GO ANALYZE THE BYTES.
55 J HALF GO CHECK DISK CAPACITIES.
56 * CHECK THE STATUS BYTES FOR THE SPINDLE(S). *
57 CKST ST STAC+3,ARR STORE THE RETURN ADDRESS.
58 TBN STAT1,X'10' SEEK BUSY BIT STUCK ON?
59 STCK BF *- BRANCH BACK IF OFF.
60 B ERROR LOG ERROR - SEEK BUSY CHECK.
61 DC XL1'01' *ID -01-.
62 *****
63 * HALF *
64 *****
65 * DETERMINE WHETHER OR NOT THE *
66 * DISKS ARE FULL OR HALF CAPACITY *
67 * AND MODIFY THE COMMANDS TABLE *
68 * ACCORDINGLY. *
69 HALF TBN AUDT,CAP2 HALF CAP DISK?

AOP6 DISK SYSTEM TEST MODULE

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
70 JF SET100 JUMP IF NOT
71 SBN FLAG,X'10' SET HALF CAP FLAG.
72 J LOKB
73 SET100 HVI TEMP,100 MODIFY INCR FOR FULL CAP.
74 HXY LA CHNDS,XR1 SET POINTER TO COMMANDS TABLE.
75 ALC 4(1,XR1),TEMP MODIFY THE COMMANDS TABLE TO CORRS
76 ALC 6(1,XR1),TEMP TO A FULL CAPACITY DISK (ADD 100).
77 ALC 8(1,XR1),TEMP
78 ALC 12(1,XR1),TEMP
79 ALC 16(1,XR1),TEMP
80 ALC 22(1,XR1),TEMP
81 LOKB TBN BUDT-1,X'20' SPINDLE -2- DEFINED?
82 JT *-10 JUMP IF NOT.
83 HVI JRP+2,X'00' MODIFY JUMP COMMAND IN 'SIO'
84 J BBSY
85 TBN BUDT,CAP2 HALF CAPACITY DISK?
86 JF BSY JUMP IF NOT.
87 SBN FLAG,X'20' SET SPINDLE -2- HALF CAP. FLAG BIT.
88 J BSY
89 *****
90 * BSY *
91 *****
92 * *
93 * PROGRAM CHECKS TO BE SURE THAT *
94 * THE SPINDLES ARE NOT INITIALLY *
95 * BSY. *
96 BSY B ERROR LOG ERROR - BUSY CHECK.
97 DC XL1'02' *ID -02-
98 BSY SBF HLTID-1,X'10' SET UP FOR DRIVE 1.
99 TIO BSY,X'A2' BRANCH IF SPINDLE -1- IS BUSY.
100 TBN BUDT-1,X'20' SPINDLE -2- DEFINED?
101 JF CHPAR JUMP IF NOT.
102 SBN HLTID-1,X'10' SET UP FOR DRIVE 2.
103 TIO BSY,X'B2' BRANCH IF SPINDLE -2- IS BUSY.
104 *****
105 * CHPAR *
106 *****
107 * PROGRAM LOADS AND SENSES THE DISK *
108 * REGISTERS. A CHECK IS MADE TO *
109 * ENSURE THAT THE LOADED DATA COM- *
110 * PARES WITH THE SENSED DATA. *
111 *****
112 CHPAR SBF HLTID-1,X'10' SET UP FOR DRIVE 1.
113 LA PATRN,XR1 LOAD TEST PATTERN ADDRESS.
114 LIO1 LIO 0(,XR1),X'A4' LOAD DATA ADDRESS REGISTER.
115 LIO 0(,XR1),X'A6' LOAD CONTROL REGISTER.
116 SNS STAT1,X'A4' SENSE DATA ADDRESS REGISTER.
117 SNS STAT3,X'A6' SENSE CONTROL REGISTER.
118 CLC 0(2,XR1),STAT1 DATA ADDRESS REGISTER AS EXPECTED?
119 JNE HSTK JUMP IF NOT.
120 CLC 0(2,XR1),STAT3 CONTROL REGISTER AS EXPECTED?
121 JNE HSTK JUMP IF NOT.
122 CLI 0(,XR1),X'A8' LAST TEST PATTERN?
123 JE DAPLG JUMP IF SO.
124 LA 1(,XR1),XR1 INCREMENT TEST POINTER.
125 B LIO1 GO TEST NEXT PATTERN.
126 DAPLG TBN BUDT-1,X'20' SPINDLE -2- DEFINED?
127 JF CLIT JUMP IF NOT.
128 TBN LIO1+1,X'10' SPINDLE -2- REGISTERS CHECKED?
129 JT CLIT JUMP IF SO.
130 SBN LIO1+1,X'10' SET UP THE LIO'S AND SNS'S FOR
131 SBN LIO1+4,X'10' SPINDLE -2- ADDRESSING.
132 SBN LIO1+7,X'10'
133 SBN LIO1+11,X'10'
134 SBN HLTID-1,X'10' SET UP FOR DRIVE 2.
135 B CHPAR+4 GO DO SPINDLE -2- LIO AND SNS.
136 CLIT HVC 6(10,XR1),7(,XR1) CLEAR CONTROL FIELDS.
137 HVC BEGIN+3(4),BRCH2 STORE NEW BRANCH ADDRESS.

AOP6 DISK SYSTEM TEST MODULE

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk system test, including error handling and spindle control logic.

AOP6 DISK SYSTEM TEST MODULE

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AOP6 DISK SYSTEM TEST MODULE

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk system test module.

Table with columns: DATE, EC NO., and various alphanumeric codes.

AOP6 DISK SYSTEM TEST MODULE

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk system test module (continued).

Table with columns: DATE, EC NO., and various alphanumeric codes.

AOP6 DISK SYSTEM TEST MODULE

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic test instructions and data points for disk system testing.

AOP6 DISK SYSTEM TEST MODULE

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains diagnostic test instructions and data points for disk system testing, including error handling and status checks.

AOP6 DISK SYSTEM TEST MODULE

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code and comments for the disk system test module.

AOP6 DISK SYSTEM TEST MODULE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Contains cross-reference information for symbols used in the program.

AOP6 DISK SYSTEM TEST MODULE

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEPN, REFERENCES. Lists various symbols like LIOA, LIOB, LIO1, LOKB, LOP4, LSTAD, LSTMR, MODJ, MSTK, NTRDY, NOO1, OOPS, PATER, RDWHT, READ, REG, RMVBL, RTFO1, SEKBOS, SET, SETR, SET100, SIO, SIOB, SKIP, SKIPIT, SKTIM, SNSB, SNSIT, STAT0, STAT1, STAT2, STAT3, STCK, STHDA, SYS, TEMP, TINVAL, TIO, TIOA, TIOB, TIOID, TIOIT, TSTID, UNPACK, UNPK1, UNPK2, VER, WHATA, WHATB, WORK, XFER, XIT, XR1, XR2 and their corresponding reference numbers.

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

AOP6 DISK SYSTEM TEST MODULE

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<6Y1YIQ & ' B/D +DEA ' . & ' ' A ' ' " <H H+X3BTC DG /OY #+B HC?HEICY&C=< OX--<.< ' ' B@,IB ' *P UG9C@AOP60001
T<6ZTC DG /OY#BY* J (-HJT-6CZ' U ' ' OH+|H-D8 -Y<@Z' G+ / +V-HGIT1UCY. B 682L- ' ' .2XUGJ- &C HA) -4AOP60002
T<6DNA :BL- PCYI + ' ' -+U8 C :BL- 6CYI+ AQ+-T--B-# 2D +@ ' ' 64BY+L+ B HC'H&CCY .KQ~P1Q JC *B=LYAOP60003
T<6,GH :NBY+EOH* |H-H8D 'TOEHHC- -B-#2U -:-D 'TOSH HXC&C=|B &:S+EE ' *EQ <H& HKH/GJQ KC-UBQSHAOP60004
T<-, :CZ@0Z-:/L&D ' CZ'2 HV (& +Y-H A&P6Y |HAA'HA *B GBX 8H Y+@Z -+A ' HO-H&PCYE ' ' _ISH KB-MA9R AOP60005
T.-XZB&D:D ,D+ / H13Y6BXX:D 'TOH+ H?EOIA-+< OYQB2- /03+OH+|H-| /03 *COD ' ' BOXH1@)EJD (B&HAELEAOP60006
T< _EB2*HD-HDA*B GC4<H0H*(OYACKH 8D 6X@/ KOEH.HC- -B-#2U X# 64V@Y* DOSH.H ' ' OEHK;E1< |B-<A6JDAOP60007
T<6><?~> OHD<7CU GC&32DH48 06X0A (PT-6CE32D '+OZ : /@Y+D<.6+Y&4ACDD +/7HA (& .KXHAU HD&YF6ADAOP60008
T.O>@ &:/CYT2-KX (&:/CY, 2-HH' : O@YDO+A (, |H&A3B SCZ'2/060X-:-0H* (YXBG ' ' .KUSF16 (B06E1,HAOP60009
T< ?_C4<I+ H (< 6CJY ('005B1T2-H 8H Y+@Z <T6H CU. 2-67 /04E16H 'CUS ' ' 64E+ ' ' 7H2Q-E1 ' +B-QAR1XAOZ60010
T.-0* &:D&Z |C~> .F OYOH (PXBGC4< <C~>.P OXOH (PXB GB#& /0'CE-0AE2* (PT- .KXNH/8EPA< |BOUBPT ACP60011
T.-1.D 6X&Z G<.H +X-HGACBSCZ@BD : -@Z LOH*(0-@AB2* HD*BDCA3 /0'CA00 CCD* ' ' >HKH/G1X HD UBKH-AOP60012
T.&19CZUBD 6X@/ IC ' +Y0:U@Y+PC ' +X-:UC <+I6: X+@& +X&- CHU (, - CHH (, ' ' _B2*VHJ45E1H +C MA*K4AOP60013
T.-2IB ' <-66X06 <53FNCXJ3Y6D< &X ICH# /07BB ' <D-6 XCOD.IOYJ@Y6EZH* |60- .KQUS@8EE/6 (B&HC7S AOP60014
T<63E0EH<U&OCC-Q (X- ' ' :VCZ? 2-NY (:T C2 MD (:S C2 HT /0' CA<BGC4< <KOTP/< JB6+C)BHAOP60015
T<64<CXHBCTH: 64 V+ D(H-H&A3XACKX 2/2-: 64Z+ D(<?H 6A3XACL.2/1Q: 64 2+ D+ /|H <BOVG/Y LC -D6-4AOP60016
T.O4@D * : &:D@Y* D+OD+ / 3*B1-<(K0 C'E0C+1 (,CYHC'E0 X-:B T> CZ-<-6 SCZD< E8XHB<-P1Q KD OZEB&AOP60017
T<65> ' :OCD<@D 6 U+1 (DC-6CE32UBB <-6SCZK8 &|2DAK 8 -|2U 88< :NA/ G+~ +V-H <BURE1 <B &B+IUAOP60018
T< 6~UD&< :OCDH :D 6U+ / (D OACYH +- .6S 'HAA-OACYH +/C-QCE32U *8 EY |@/AX06 XIKD-EJ< |B0+E;LMAOP60019
T<07L ' ' <EQ+~TF UCY.3 ' ' 8D 6X&Z C8-HDC D.I05;OH* .(T&HC)&'Y Y @YD DOH*HBXBG ' ' VHJ4 \$D&YFJ/XAOP60020
T< 8D CBSCZ@OY0: /@Y+H.C.H+X3B3CDD 9?--:;@Z G+Q +Y|H 6A*BGC4<EC <('--: +OH*|60 0.BIVG/* LCO-D&50AOP60021

AOP6 DISK SYSTEM TEST MODULE

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<-87AKBGC*H8D 6	X2/ 1+B HCKB6C(0	4 64VBY++-D(1;H	BA.7<BAC(3/04	E C*YF+A BOYG/*	LCO-D5TKAOP60022
T+-92R:AI BSR0	YF+ HDH E--B -	Y69AA: |E B/J-D	7YDQ H<B D-120	YK- EH Z 6P-10	BYDO :IOAOP60023
T< :T KO-1 6I|8	+W-:OB/U X1B1U	<H 0ZOH+AD (58	(8 DVHVD	/G/XPEJK	JCSX13-BAOP60024
T+-8; B B|P	4|J 4*SG-A3E0|	T6+.T0;|U8OCB:+|	E8UA 8XIO-A) 2*J	S|A 6|E 6|I 6|I	6D 7B6AOP60025
T+-2R5 / 6 (H E4	.K4 K4 K4 K4	K4 SD SD -A)	.K4 SD SD SD	.SD .SDA.K4A.K8	PK4X 2Y8AOP60026
T|0JK4 K4 K4	K4 K4 SD SD	.K4A.K4A.K4A	.K4A K4 K4SD	T+A (Y|ESACYEC=<	(3 X)LDAOP60027
T.6* (-1000 C=6	00C70|E600C1H	1.K8G /8BC=6|P00	JC28|ET4DC=L2-3D	*A- B-UR/8*EJK	IC6*CBLSAOP60028
T< =0C=L2-NY8D *	T2/ <HH+X3BICDG	2/0-0X--<. <+Y10	DCY.B 6::0-H|6TE	AC#U4 ->HSQSG/Y	LCO-ALD0AOP60029
T<6*SC#7 /OH; 6	CK 6GS < :	BB/G 6=,OH*BG-H	(,63_C D|.-B |D	1.<BG SH .KUXH2D	EE/6A0HHAOP60030
TF--Y 86 ::;0A	HE+HBCTH --:R TX	GCE3 /06T		F/Q	JCSUEJ OHAOP60031
EB/M*E7*--DC*PH5	=7H5F| | C	FX ASC R A SO Q			10520501700 821725:BAOP60032

LAST PAGE

DATE	06APR70	22MAY70	01AUG70	01OCT70	28APR71	15MAR72	17JUL72	PROG ID	QA OF-6
EC NO.	571516	571513	571531	571540	571565	571591	571634	PAGE	7



FF53 C E D I S K I N I T I A L I Z E R

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

0000      2 *      DATE OF LAST REVISION OR UPDATE,09-29-70
          3 PFS   START 0
          4      DECK 4
          5 *****
          6 *      SYSTEM/3 CE DISK INITIALIZER *
          7 *
0A00      8      ORG   X'0A00'
          9
0A00     10 INIT  EQU   *
          11 *****
          12 *
          13 *      SECTION PREFACE *
          14 *
0A00 FF53 0A01 15      DC   XL2'FF53'
0A02 00   0A02 16      DC   XL1'00'          SECTION FLAGS
0A03 01   0A03 17      DC   XL1'01'          ROUTINE NO.
0A04 C000 0A05 18      DC   XL2'00'          RESERVED
0A06 0A0D 0A07 19      EC   AL2(INITA)      ADDRESS OF FIRST ROUTINE PREFIX
0A08 0000 0A09 20      DC   AL2(*-*)        ADDRESS OF ERROR RECORDING TABLE
0A0A A01000 0A0C 21      DC   XL3'A01000'     SPUT
          22 *
          23 *****
          24
          25 *****
          26 *
          27 *      ROUTINE PREFACE *
          28
0A0D 01   0A0D 29 INITA DC   XL1'01'          ROUTINE NO.
0A0E 00   0A0E 30      DC   XL1'00'          ROUTINE FLAGS
0A0F 0CE9 0A10 31      DC   AL2(RTN02)      ADDRESS OF NEXT ROUTINE
          32 *
          33 *****

```

FF53 C E D I S K I N I T I A L I Z E R

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

          35 *      OPERATING INSTRUCTIONS
          36 *
          37 *      AT THE FIRST HALT, SET THE FOLLOWING SWITCHES,
          38 *
          39 *      1. SET SWITCH 10 TO RUN ON THE REMOVABLE DISK -OR-
          40 *      2. SET SWITCH 11 TO RUN ON THE FIXED DISK
          41 *
          42 *      3. SET SWITCH 12 TO RUN ON DISK DRIVE 1
          43 *      4. SET SWITCH 13 TO RUN ON DISK DRIVE 2
          44 *      5. SET SWITCH 14 TO INITILIZE ALL CYLINDERS IF THE REMOVABLE
          45 *      DISK HAS BEEN SELECTED.
          46 *      6. SET SWITCH 16 TO MAKE 5 PASSES ON EACH WRITE AND VERIFY
          47
0A11 C0 87 0F31 48      B      INITAA          SETUP FOR INITIALIZATION
          49 *      SET INITIAL VALUES PRIOR TO BEGINNING DISK INITIALIZATION
0A15 3C 00 1772 50 INITAB MVI  WRTDFC,00          SET FLAG BYTE TO 00.
0A19 3C 00 1773 51      MVI  WRTDFC+1,00        SET CYLINDER NUMBER TO 00.
0A1D 3C 00 1774 52      MVI  WRTDFC+2,00        SET HEAD AND SECTOR TO 00.
          53 *      TEST ONE TRACK WITH DATA PATTERN 55
          54
0A21 3C 55 177A 55 PROCED MVI  WORK,A'55'          SET DATA PATTERN IN WRITE AREA
0A25 3C 17 1775 56 INITAC MVI  WRTDFC+3,23        SET NO. OF SECTORS TO EQUAL 24
0A29 3B 7F 1774 57      SBP  WRTDFC+2,X'7F'        SET SECTOR BITS TO ZERO
0A2D 3C 00 177B 58      MVI  ERRPLG,0          ZERO FLAG
0A31 3C 08 0F30 59      MVI  RETRY,8          SET SEEK RETRY COUNTER
          60
0A35 C0 87 166D 61 INITAD B      STRTIO          TO I/O SUBROUTINE TO SEEK
0A39 00      62      DC   XL1'00'          FUNCTION CODE
0A3A 00      63      DC   XL1'00'          CONTROL CODE
0A3B 1772    64      DC   AL2(WRTDFC)      CONTROL FIELD ADDRESS
0A3D C0 87 14EC 65      B      SEEKER          ERROR RETURN
          66
0A41 38 40 020A 67      TBN  SECTSW,X'40'        TEST FOR RUNNING ON FIXED
0A45 F2 10 44   68      JT   INITBB          JUMP IF YES
0A48 3C 08 1075 69      MVI  DISKTP,X'08'        SET FOR FIXED DISK
0A4C C0 87 166D 70      B      STRTIO          TO READ ID
0A50 01      71      DC   XL1'01'        FUNCTION CODE, (READ)
0A51 01      72      DC   XL1'01'        CONTROL CODE, (ID)
0A52 1776    73      DC   AL2(RDDFC)      CONTROL FIELD ADDRESS
0A54 C0 87 0CC4 74      B      READER          ERROR RETURN
          75
0A58 0D 00 1773 1777 76      CLC  WRTDFC+1(1),RDDFC+1    COMPARE ACTUAL ADDRESS WITH EXPECTED
0A5E F2 81 27   77      JE  INITBB-4          JUMP IF SEEKED TO CORRECT ADDRESS
          78
0A61 39 03 1776 79      TBF  RDDFC,X'03'        CHECK BOTH FLAGS OFF
0A65 F2 10 03   80      JT   **+6          IF OFF, RETRY COMMAND
0A68 F2 87 1D   81      J   INITBB-4          OTHERWISE CONTINUE
          82
0A6B 3D 00 0F30 83      CLI  RETRY,0          CHECK RETRY COUNTER
0A6F F2 81 CC   84      JE  IDERR          JUMP IF 8 RETRIES HAVE BEEN MADE
          85
0A72 C0 87 166D 86      B      STRTIO          TO RECALIBRATE
0A76 00      87      DC   XL1'0'          FUNCTION CODE, (CONTROL)
0A77 01      88      DC   XL1'1'        CONTROL CODE, (RECALIBRATE)
0A78 1772    89      DC   AL2(WRTDFC)      CONTROL FIELD ADDRESS
0A7A C0 87 0A7E 90      B      **+4
          91
0A7E 0F 00 0F30 176D 92      SLC  RETRY(1),ONE      DECREMENT RETRY COUNTER
0A84 C0 87 0A35 93      B      INITAD          GO SEEK AGAIN
0A88 3C 00 1075 94      MVI  DISKTP,0          SET FOR REMOVABLE
0A8C C0 87 166D 95 INITBB B      STRTIO          TO I/O SUBROUTINE TO WRITE ID.
0A90 02      96      DC   XL1'02'        FUNCTION CODE
0A91 01      97      DC   XL1'01'        CONTROL CODE
0A92 1772    98      DC   AL2(WRTDFC)      CONTROL FIELD ADDRESS
0A94 C0 87 1272 99      B      STEP12          ERROR RETURN,
          100
0A98 3D 00 177B 101     CLI  ERRPLG,0          WAS THERE ANY ERROR?
0A9C F2 01 48   102     JNE  INITAF          JUMP IF YES

```


FF53 CE DISK INITIALIZER

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk initialization including instructions like TBN SWITCH, JT INITAP, LA TBLREV, etc.

FF53 CE DISK INITIALIZER

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk initialization including instructions like ROUTINE PREFIX, RTN02, XL1'02', etc.

PF53 CE DISK INITIALIZER

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk initialization, including instructions like MVI, MVC, J, PRINT, and comments such as 'GO READ CONSOLE SWITCHES' and 'SET TO RUN ON REMOVABLE DISK'.

PF53 CE DISK INITIALIZER

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk initialization, including instructions like MZZ, MVI, TBP, JT, PRINT, and comments such as 'SET FOR CURRENT SPINDLE' and 'IF SSW 14 IS ON, SETUP FOR EXTRA WARNING MESSAGE'.

FP53 CE DISK INITIALIZER

EPR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1174 D2 578
1175 D9C5D4D6E5C1C2D3 1182 579 RMDISK DC CL14'REMOVABLE DISK'
117E C540C4C9E2D2 579
1183 C6C9E7C5C440C4C9 1190 580 FIDISK DC CL14'FIXED DISK
118B E2D240404040 580
1191 C3C1E4E3C9D6D560 1183 581 DC CL35'CAUTION--THIS PROGRAM WILL DESTROY '
1199 60F3C8C9E240D7D9 581
11A1 D6C7D9C1D440E6C9 581
11A9 D3E340C4C5E2E3D9 581
11B1 D6E840 581
11B4 C1D3D340D7D9C5E5 11CE 582 MSGCAT DC CL27'ALL PREVIOUSLY WRITTEN DATA'
11BC C9D6E4E2D3E840E6 582
11C4 D9C9E3E3C5D540C4 582
11CC C1E3C1 582
11CF E2C5D5E2C540E2E6 11F9 583 DC CL43'SENSE SWITCH 14 IS ON--ALL TRACKS INCLUDING'
11D7 C9E3C3C840F1F440 583
11DF C9E240D6D56060C1 583
11E7 D3D340E3D9C1C3D2 583
11EF E240C9D5C3D3E4C4 583
11F7 C9D5C7 583
11FA 40C1D3C9C7D5D4C5 121E 584 MSGALL DC CL37' ALIGNMENT TRACKS WILL BE INITIALIZED'
1202 D5E340E3D9C1C3D2 584
120A E240E6C9D3D340C2 584
1212 C540C9D5C9E3C9C1 584
121A I3C9E9C5C4 584
121F 1168 1220 585 MOD2 DC AL2(DSKPRT)
1221 1174 1222 586 MOD3 DC AL2(CETRN)
587
587
588 * AN ERROR WAS ENCOUNTERED DURING A VERIFY DATA OPERATION,
589 * THE DEVICE STATUS WILL BE ANALYZED AND THE OPERATION
590 * MAY BE REPEATED TEN TIMES.
591
1223 34 08 126F 592 STEP10 ST S10EXT+3,ARR SAVE EXIT ADDRESS
1227 C0 87 1657 593 B SENSE TO SENSE SUBROUTINE
122B 02 122B 594 DC XL1'02' ASK FOR DEVICE STATUS BYTES 0 + 1.
122C 39 28 176A 595 TBF STATUS-1,X'28' TEST FOR MISSING ADDRESS MARKER,
596 * OR DATA CHECK.
1230 F2 10 39 597 JT S10EXT JUMP IF NONE OF THESE ARE ON.
598
1233 3D 00 1271 599 CLI ERCONT,00 TEST FOR FIRST ENTRY
1237 F2 01 04 600 JNE **7 JUMP IF NO
123A 3C 0A 1271 601 HVI ERCONT,10 IF YES LOAD ERROR COUNTER TO 10
602
123E C0 87 166D 603 S10A B STRTIO TO I/O SUBROUTINE
1242 01 1242 604 DC XL1'01' FUNCTION CODE, (READ)
1243 03 1243 605 DC XL1'03' CONTROL CODE, (VERIFY)
1244 1772 1245 606 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
1246 C0 87 1257 607 B S10C ERROR RETURN
124A 0F 00 1271 176D 608 S10B SLC ERCONT(1),ONE SUBTRACT ONE FROM COUNTER
1250 F2 81 19 609 JZ S10EXT TO EXIT IF 10TH TIME
1253 C0 87 123E 610 B S10A OTHERWISE LOOP AGAIN
611
1257 C0 87 1657 612 S10C B SENSE TO SENSE SUBROUTINE
125B 02 125B 613 DC XL1'02' ASK FOR DEVICE STATUS BYTES 0 + 1
125C 39 28 176A 614 TBF STATUS-1,X'28' TEST FOR MISSING ADDRESS MARKER,
615 * OR DATA CHECK.
1260 C0 10 124A 616 BT S10B BRANCH IF NONE OF THESE ARE ON
1264 C0 87 1272 617 B STEP12 AT LEAST ONE WAS ON, GO ASSGN
618 * AN ALTERNATE TRACK
1268 3C 00 1271 619 HVI ERCONT,00 ZERO ERROR COUNTER
126C C0 87 0000 *-* EXIT
1270 0000 1271 621 ERCONT DC XL2'00'

FP53 CE DISK INITIALIZER

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
623 * AN ERROR WAS ENCOUNTERED DURING A WRITE ID OR,
624 * A MISSING ADDRESS MARKER, OR
625 * DATA CHECK WAS DETECTED DURING A VERIFY DATA OPERATION
626 * THE NEXT AVAILABLE ALTERNATE TRACK WILL BE ASSIGNED
627 * FOR USE IN PLACE OF THE DEFECTIVE TRACK AND THE DEFECTIVE
628 * TRACK WILL BE FLAGGED TO PREVENT SUBSEQUENT USE
629
630 * DETERMINE IF DEFECTIVE TRACK IS AN ALTERNATE
631
632 STEP12 ST ST12EX+3,ARR SAVE EXIT ADDRESS.
633 L TABADR,XR2 LOAD ADDRESS OF ALT. CYL. TABLE.
634 ST BUFFER1,XR2 SAVE IN BUFFER.
635 ST12A L BUFFER1,XR2 LOAD XR2 FROM THIS BUFFER.
636 CLC 0(1,XR2),WRTDPC+1 COMPARE CURRENT CYLINDER.
637 BE ST12E DEFECTIVE TRACK IS AN ALTERNATE.
638 CLC BUFFER1(2),BUFFER2 TEST FOR FINISHED COMPARING.
639 JE ST12B YES.
640 SLC BUFFER1(2),ONE NO, REDUCE COUNT.
641 B ST12A AND REPEAT.
642
643 ST12B MVC WRTSAV(4),WRTDPC+3 SAVE PARAMETERS FROM INITIALIZATION
644 HVI WRTDPC+1,01 SET CYLINDER NUMBER TO 01.
645 HVI WRTDPC+2,00 SET HEAD AND SECTOR TO 00.
646
647 ST12C MVC ALTSAV(4),WRTDPC+3 SAVE ADDRESS OF ALTERNATE TRACK
648 B STRTIO TO I/O SUBROUTINE TO SEEK
649 * ALTERNATE TRACK
12B6 00 12B6 650 DC XL1'00' FUNCTION CODE
12B7 00 12B7 651 DC XL1'00' CONTROL CODE
12B8 1772 12B9 652 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
12BA C0 87 14EC 653 B SEEKER ERROR RETURN
654
655 B STRTIO TO I/O SUBROUTINE TO READ ID
656 * ON ALTERNATE TRACK
12C2 01 12C2 657 DC XL1'01' FUNCTION CODE
12C3 01 12C3 658 DC XL1'01' CONTROL CODE
12C4 1776 12C5 659 DC AL2(RDDFC) CONTROL FIELD ADDRESS
12C6 C0 87 12CA 660 B **4 ERROR RETURN
661
12CA 3D 01 1776 662 CLI REDFC,01 DOES THE F BYTE = 01, (ASSIGNED)?
12CE F2 81 DA 663 JE ST12CA YES, UPDATE TO NEXT ONE
12D1 0C 03 1775 149B 664 MVC WRTDPC+3(4),WRTSAV RESTORE ADDRESS OF DEFECTIVE TRACK
665
12D7 C0 87 166D 666 B STRTIO TO I/O SUBROUTINE TO SEEK DEFECTIVE
12DB 00 12DB 667 DC XL1'00' FUNCTION CODE
12DC 00 12DC 668 DC XL1'00' CONTROL CODE
12DD 1772 12DE 669 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
12DF C0 87 14EC 670 B SEEKER ERROR RETURN
671
12E3 0C 02 1775 149F 672 HVC WRTDPC+3(3),ALTSAV PLACE ADDRESS OF ALTERNATE IN DPC
12E9 3C 02 1772 673 HVI WRTDPC,02 SET FLAG TO 02, (DEFECTIVE)
12ED 3B 7F 1774 674 SBF WRTDPC+2,X'7F' TURN OFF ALL SECTOR BITS
12F1 3C 17 1775 675 HVI WRTDPC+3,23 SET TO WRITE ONE TRACK
676
12F5 C0 87 166D 677 B STRTIO TO I/O SUBROUTINE TO WRITE ID ON
678 * DEFECTIVE TRACK
12F9 02 12F9 679 DC XL1'02' FUNCTION CODE
12FA 01 12FA 680 DC XL1'01' CONTROL CODE
12FB 1772 12FC 681 DC AL2(WRTDPC) CONTROL FIELD ADDRESS
12FD C0 87 1301 682 B **4 ERROR RETURN
683
1301 C0 87 166D 684 B STRTIO TO I/O SUBROUTINE TO READ ID
1305 01 1305 685 DC XL1'01' FUNCTION CODE
1306 01 1306 686 DC XL1'01' CONTROL CODE
1307 1776 1308 687 DC AL2(RDDFC) CONTROL FIELD ADDRESS
1309 C0 87 1397 688 B S12D ERROR RETURN
689
130D 0C 03 1775 149F 690 HVC WRTDPC+3(4),ALTSAV SET DPCR TO ADDRESS OF ALTERNATE TK.

PF53 C E D I S K I N I T I A L I Z E R

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk initialization, including instructions like STRTIO, DC, B, MVC, and comments such as 'TO I/O SUBROUTINE TO SEEK ALT. TK.' and 'RESTORE ORIGINAL PARAMETERS'.

PF53 C E D I S K I N I T I A L I Z E R

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk initialization, including instructions like DC, B, MVC, and comments such as 'CL44'NO ALTERNATE TRACKS LEFT, PROGRAM TERMINATED'' and 'SET FLAG TO INDICATE A DEFECTIVE TK.'.

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129658
PAGE 10

PF53 C E D I S K I N I T I A L I Z E R

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

```

17E6 C0 87 0000      1031 TIXE B      *-*
17EA F1              17EA 1032 DECONC DC CL1'1'
17EB F1F2F3F4F5F6F7F8 17F4 1033 UNITS DC CL10'1234567890'
17F3 F9F0           1033
17F5               17F5 1034 LIST EQU *
181C 1035          181C 1035 DS CL40
006F 1036 H0      006F 1036 H0 EQU X'6F'
0003 1037 H1      0003 1037 H1 EQU X'03'
0076 1038 H2      0076 1038 H2 EQU X'76'
0057 1039 H3      0057 1039 H3 EQU X'57'
001B 1040 H4      001B 1040 H4 EQU X'1B'
005C 1041 H5      005C 1041 H5 EQU X'5C'
007D 1042 H6      007D 1042 H6 EQU X'7D'
0007 1043 H7      0007 1043 H7 EQU 07
007F 1044 H8      007F 1044 H8 EQU X'7F'
005F 1045 H9      005F 1045 H9 EQU X'5F'
003F 1046 HA      003F 1046 HA EQU X'3F'
0079 1047 HB      0079 1047 HB EQU X'79'
006C 1048 HC      006C 1048 HC EQU X'6C'
0073 1049 HD      0073 1049 HD EQU X'73'
007C 1050 HE      007C 1050 HE EQU X'7C'
003C 1051 HF      003C 1051 HF EQU X'3C'
003B 1052 HH      003B 1052 HH EQU X'3B'
0001 1053 XR1     0001 1053 XR1 EQU 1
0002 1054 XR2     0002 1054 XR2 EQU 2
0008 1055 ARR     0008 1055 ARR EQU 08
020A 1056 SECISW EQU X'20A'
020A 1057 SWITCH EQU X'20A'
0212 1058 TEST    EQU X'212'
0216 1059 LINK    EQU X'216'
021A 1060 PRINT   EQU X'21A'
022A 1061 LOAD    EQU X'22A'
021E 1062 UNFACK EQU X'21E'
0222 1063 HALT    EQU X'222'
0A03 1064 CRTNO   EQU X'0A03'
FFFF 1065        FFFF 1065 END
    
```

```

EXIT
HALT DISPLAY 0
HALT DISPLAY 1
HALT DISPLAY 2
HALT DISPLAY 3
HALT DISPLAY 4
HALT DISPLAY 5
HALT DISPLAY 6
HALT DISPLAY 8
HALT DISPLAY 9
HALT DISPLAY A
HALT DISPLAY B
HALT DISPLAY C
HALT DISPLAY D
HALT DISPLAY E
HALT DISPLAY F
HALT DISPLAY H
    
```

DATE 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571516 571513 571531 571540

PROG ID OFF5-3
PAGE 10

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5129658
PAGE 10A

PF53 C E D I S K I N I T I A L I Z E R

CROSS-REFERENCE

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SYMBOL T LEN VALUE DEFN REFERENCES
ADREXT A 004 175A 0977 0946* 0973
ALTLST A 002 0F29 0453 0183* 0265 0270*
ALTPRT A 045 1497 0770 0718 0722* 0724* 0734
ALTSAV A 004 149F 0772 0647* 0672 0690 0717 0720 0749
ARR C 001 0008 1055 0411 0464 0592 0632 0807 0873 0900 0909 0946 1015* 1016 1017*
1018 1019 1020* 1021
0634* 0635 0638 0640*
BUFFR1 A 002 1771 0996 0634* 0635 0638 0640*
BUFFR2 A 002 14A4 0774 0638
BUSY C 001 00A2 0984 0927
CETRK A 009 117* 0578 0586
CHKPRT A 004 1541 0836 C830
CHKRTY A 001 15D1 0892 080* 0829 0831* 0856* 0861
CKCYL A 005 0B12 0145 0151
CKCYL A 005 0C46 0239 0245
CONTUE A 004 0F59 0474 0469
COUNT A 001 176E 0994 0125 0127* 0128* 0467*
CRTNO C 001 0A03 1064 0468 0869
CTLREG C 001 00A6 0986 0924* 0956*
CVD A 004 1799 1015 0706 0716 0787
0144
CYLTL A 001 0883 0170 1030
DECGAN A 006 17D3 1027 1029
DECONC A 001 17EA 1032 1029
DEFECT A 037 146A 0769 0708 0712* 0714* 0729 0789 0791* 0794* 0799
0937
DPCR A 002 1767 0990 0913* 0924 0956
DFC3SV A 001 1763 0982 0914* 0930
DFDR A 002 1769 0991 0925
DISKTP A 001 1075 0569 0069* 0094* 0331* 0356* 0507* 0510* 0917
DSKPRT A 014 116B 0577 0508* 0511* 0585
ENDSET A 004 1071 0567 0464* 0565
ENDSTP A 004 0E29 0440 0411* 0415 0425
END16 A 004 0AE3 0129 0124
EQUCHK A 004 152A 0829 0813 0843
ERCONT A 002 1271 0621 0416 0418* 0424* 0439* 0599 0601* 0608* 0619*
ERRFLG A 001 177B 1008 0058* 0101 0111 0320* 0737*
0821
ERROR2 A 044 1411 0767 0761
ERROR3 A 042 0E8A 0448 0219
ERROR4 A 048 0E8A 0449 0275
ERROR5 A 052 1445 0768 0743
ERROR6 A 032 1604 0894 0839
ERROR7 A 032 1624 0895 0848
ERROR8 A 050 1656 0896 0866
ERROR9 A J42 0E60 0447 0289
EXITER A C04 15C1 0886 0883
EXITOK A 004 15C8 0888 0884
EXISAV A 002 15D0 0891 0873* 0886 0888
FF5 A 001 0000 0003
FIVE A 001 176F 0995 0127
PROBYT A 006 17C7 1025 1022*
FROM A 006 17B5 1022 1016*
FRSTPS A 001 1761 0980 0465* 0949* 0950 0952*
FWDSEK A 004 1734 0967 0961
FXDISK A 014 1190 0580 0511
HA C 001 003F 1046
HALT C 001 0222 1063 0163 0221 0254 0277 0291 0380 0393 0403 0437 0490 0503 0522
0558 0745 0763 0823 0841 0850
HB C 001 0079 1047
HC C 001 006C 1048
HD C 001 0073 1049
HE C 001 007C 1050
HF C 001 003C 1051
HH C 001 003E 1052
HXBYT A 001 1798 1014 1025* 1027*
HO C 001 006F 1036
H1 C 001 0003 1037
    
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DATE 06APR70 22MAY70 01AUG70 01OCT70
EC NO. 571516 571513 571531 571540

PROG ID OFF5-3
PAGE 10A

PF53 C E D I S K I N I T I A L I Z E R

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Lists symbols like H2, H3, H4, H5, H6, H7, H8, H9, IDERMG, IDERR, IDRR, INIT, INITA, INITAA, INITAB, INITAC, INITAD, INITAE, INITAF, INITAG, INITAH, INITAI, INITAJ, INITAK, INITAL, INITAM, INITAN, INITAO, INITAP, INITAQ, INITBA, INITPB, INIT13, INIT14, INIT22, INVREQ, LASTAD, LDPCR, LDPCR, LDPCR, LINK, LIST, LOAD, LOWER, LSTADR, LSTAV, MOD1, MOD2, MOD3, MOD4, MOD5, MOD6, MSGALL, MSGCAT, MSGVRF, MSGWID, MSG01, NODISK, NOSEEK, NOSPND, NTRDY, ONE, OTORZ, PRINT.

PF53 C E D I S K I N I T I A L I Z E R

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Lists symbols like PROCED, PROC1, PRTER4, RDDFC, READER, READPT, RESEK, RETRY, RLFPCR, RMDISK, RSIO, RTW02, RUMPR1, SAVXR1, SCRCH, SECTSW, SEEKER, SEKEX, SPKRTY, SENSE, SETA, SETADA, SETADB, SETADR, SETB, SETBTH, SETDSK, SETFIX, SETPXT, SETRMV, SETSPL, SETXR2, SIO, SIO1, SIO2, SIO3, SNS, SNSXR2, SPNDLA, SPNDLB, STATUS, STEPCE, STEPCE1, STEPCE3, STEP10, STEP12, STPPTR, STRTIO, STRTMS, ST12A, ST12B, ST12C, ST12CA, ST12CB, ST12E, ST12EX, SWITCH, S10A, S10B, S10C, S10EX, S12D, TABADR.

PF53 C E D I S K I N I T I A L I Z E R

CROSS-REFERENCE

Table with columns: SYMBOL, T, LEN, VALUE, DEFN, REFERENCES. Rows include TABL12, TBLND, TBLNE, TBLREV, TEST, TIXE, TOEYT, TRACK#, TSTERR, TWO, TYEOT, UNITS, UNPACK, UPPER, WATT, WORK, WRTDFC, WRTSAV, XR1, XR2, XIX, ZROTO.

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

PF53 C E D I S K I N I T I A L I Z E R

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

Object card listing containing assembly code and comments across multiple lines, including symbols like T+, T-, T+, T-, etc.

FF53 C E D I S K I N I T I A L I Z E R

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+--BJE+\$R2;|E6<X DE<|O5(LA5*LE6) X OENCO0A|U6)XE1DC W2<X1MCD5%IN14C AE+PE6*XP:DCD0;| AE<< ES-FF530022

FF53 C E D I S K I N I T I A L I Z E R

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+ /ET0) | T1) XN0; | E6+ | R0* | K8UCL1*\$ TE4CP6) \$G6*GHE+| E6) LI5*GT1*LE6) X 06MCW2<XL1MCR1*G D2) M 3C6FF530044

LAST PAGE



FP67 DISK EDITOR

FP67 DISK EDITOR

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
      2          DECK 4
      3 *****
      4 *          SYSTEM/3 DIAGNOSTIC DISK EDITOR
      5 *
0000 6 PF6      START 0
0A00 7          ORG  X'0A00'
0010 8 EDIT    EQU  *
      9 IAR    EQU  16
      10 *****
      11 *          SECTION PREFACE
      12 *
0A00 13         DC  XL2'PF67'
0A02 14         DC  XL1'00'
0A03 15 ONE     DC  XL1'01'
0A04 16         DC  XL2'00'
0A06 17         DC  AL2(EDITA)
0A08 18         DC  AL2(*-*)
0A0A 19         DC  XL3'P00000'
0A0B 20 SWMPCU EQU *-2
0A0F 21         DC  XL3'100000'
0A0E 22 SW5471 EQU *-2
0A10 23         DC  XL3'A01000'
      24 *
      25 *****
0A13 26 AA08    ST  EXIT,ARR
0A17 27         LA  READIN,IR2
0A1A 28 READAD EQU *-1
      29         MVC 95(96,IR2),96(,IR2)  ZERO READIN AREA
      30         L  ENTRY, IAR
0A24 31 STATUS DC  XL2'00'
0A26 32 INDKLM DC XL2'0C00'
0A28 33 NUMONE DC CL2'01'
      34 *          SUBROUTINE TO SET WORKFIELD TO 'PF'
      35
0A29 36 SETWOK ST SETEXT+3,ARR  SAVE EXIT ADDRESS
0A2D 37         LA  WORK,IR2    LOAD WORKAREA ADDRESS IN IR2
0A31 38         MVI 255(,IR2),X'PF'  SET WORKAREA
0A34 39         MVC 254(255,IR2),255(,IR2)
0A38 40 SETEXT B  *-*          EXIT
      41
0A3C 42 STRTMS DC CL23'SELECT DISK AND SPINDLE'
0A44 42
0A4C 42
0A53 43 NODISK DC CL16'NO DISK SELECTED'
0A5B 43
0A63 44 NOSPND DC CL19'NO SPINDLE SELECTED'
0A6B 44
0A73 44
0A76 45 OLD    DC  CL3'OLD'
0A7A 46 FIGCON DC CL2'CO'
0A7D 47 IPLC   DC  CL3'IPL'
0A7F 48 CNMPCN DC CL2'CH'
0A80 49         ORG  EDIT+128
0A80 50 READIN EQU *
51 * THE FOLLOWING ROUTINE IS ENTERED THE FIRST TIME AN ATTEMPT IS MADE TO
52 * READ DATA FROM CARDS OR THE KEYBOARD. THIS ROUTINE FIRST CHANGES
53 * INSTR. AA07 SO THAT IT BRANCHES TO AA06. IF SSW 14 IS OFF THE
54 * ROUTINE BRANCHES BACK TO AA07 AND PROCEEDS. IF SSW 14 IS ON,
55 * ( READ IN FROM ), THE READ ROUTINE IS MOVED IN OVER THE
56 * CARD READ ROUTINE, AND A BRANCH BACK TO AA07 IS PERFORMED. THIS
57 * WHOLE ROUTINE IS DESTROYED THE FIRST TIME A READ IN IS DONE.
      58
0A80 59         CLI  SYSTEM,C'B'
0A84 60         JNE  AA07X
0A87 61         CLI  X'235',X'E8'  5213 ?
0A8B 62         JNE  LD5203
0A8E 63         B    LOAD
0A92 64         DC  XL1'04'

```

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
0A93 65         DC  XL2'DFPD'
0A95 66         J   AA07XX
0A98 67 LD5203 B   LOAD
0A9C 68         DC  XL1'04'
0A9E 69         DC  XL2'DFPC'
      70 AA07XX TBN SWITCH,X'08'  TEST SSW 14
      71         BF  AA07X      RETURN IF OFF
      72         MVC MSG-NEXTR+96(MSG-NEXTR+1),MSG  MOVE IN  READ ROUTINE
      73 AA07X  B   CHRFAS
      74         B   SEEK      TO SEEK SUBROUTINE
      75         DC  AL2(WRTDFC)  CONTROL FIELD ADDRESS
0A96 76         MVC AA07+3(2),AAA08  RESTORE ADDR OF AA08 IN MAIN PROGRAM
      77         B   AA07      RETURN TO MAIN PROGRAM
0A9E 78 AAA08 DC  AL2(AA08)
0AEO 79         ORG  READIN+96
0AEO 80 THREBK DC  CL4'

```

PF67 DISK EDITOR

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains assembly code for routine preface, operating instructions, and disk editing logic.

53345

PF67 DISK EDITOR

Table with columns: ERR LOC OBJECT CODE, ADDR STMT SOURCE STATEMENT. Contains assembly code for disk editing logic, including tests for switches and data.

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routine 03, testing scan equal sense bit.

AOC2 SCAN HIGH OR EQUAL

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for routine 03, testing scan equal sense bit (continued).

PP67 DISK EDITOR

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk editing operations.

533357

PP67 DISK EDITOR

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk editing operations.

PF67 DISK EDITOR

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	CONTROL FIELD ADDRESS
1139	1A42	113A	625	DC	AL2(RDDFC)
113B	ED 0C 01		626	CLI	1(,XR2),12
113E	C0 82 1129		627	BL	C3B3
1142	C0 87 021A		628	B	PRINT
1146	C6	1146	629	DC	XL1'C6'
1147	25	1147	630	DC	IL1'37'
1148	1B40	1149	631	DC	AL2(ERROR6)
114A	AOE6	114B	632	DC	XL2'AOE6'
114C	C0 87 0222		633	B	HALT
1150	AOE6	1151	634	DC	XL2'AOE6'
1152	C0 87 0B8D		635	B	EDITAA
			636		
1156	C2 01 1B51		637	LA	WORK,IR1
115A	0C 01 1A40 1A44		638	MVC	WRTDFC+2(2),RDDFC+2
1160	4C 1F 1F 1A69		639	MVC	31(,XR1),PNEC(5+4+1+1+2) NONE ACT,0, ID,DHY,SYSPLG,PNEC
1165	4C 00 09 1A52		640	MVC	9(1,IR1),SAVID
116A	4C 00 08 1A6B		641	MVC	8(1,IR1),SECCT
116F	C0 87 175D		642	B	WRITE
1173	C0 87 0B8D		643	B	EDITAA
			644		

533101

PF67 DISK EDITOR

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT	CONTROL FIELD ADDRESS
			646 *	ROUTINE TO ADD REPLACE CARDS TO PROGRAMS	
			647 *	PRESENTLY RESIDING ON THE CE DISK	
			648		
1177	2C 02 1A51 06		649	REPPGM MVC	SAVID-1(3),6(,XR2)
117C	3C 00 1A6B		650	MVI	SECCT,0
1180	0C 04 1A3C 1A3D		651	MVC	LODFLG(5),LODFLG+1
1186	8D 02 06 1A2E		652	CLC	6(3,XR2),DCP
118B	F2 81 39		653	JE	REPDCP
118E	C0 87 177F		654	B	SCANA
1192	11A7	1193	655	DC	AL2(REPPGC)
1194	1196	1195	656	DC	AL2(REPPGB)
1196	0C 02 1B44 1A51		657	REPPGB MVC	MSG02-12(3),SAVID-1
119C	C0 87 021A		658	B	PRINT
11A0	06	11A0	659	DC	XL1'06'
11A1	17	11A1	660	DC	IL1'23'
11A2	1B50	11A3	661	DC	AL2(MSG02)
11A4	F2 E7 69		662	J	REPEXT
		11A7	663	REPPGC EQU	*
11A7	C2 01 1B51		664	LA	WORK,IR1
11AB	1C 1F 1A69 1F		665	MVC	PNEC(32),31(,XR1)
11B0	1C 00 1A52 09		666	MVC	SAVID(1),9(,XR1)
11B5	0C 00 1A69 0A87		667	MVC	PNEC(1),READIN+7
11BB	1C 01 1A44 04		668	MVC	RDDFC+2(2),4(,XR1)
11C0	3C FF 1A3B		669	MVI	TSTFLG,X'FF'
11C4	F2 E7 0A		670	J	REPPDY
11C7	0C 01 1A44 1A7C		671	REPDCP MVC	RDDFC+2(2),DCPSEC
11C9	3C FF 1A38		672	MVI	DCPFLG,X'FF'
11D1	0C 01 1215 1A44		673	REPPDF MVC	SAV0(2),RDDFC+2
11D7	C0 87 10A9		674	B	CHKPAS
11DB	0C 01 1A44 1215		675	MVC	RDDFC+2(2),SAV0
		11E1	676	REPPGD EQU	*
11E1	C0 87 1737		677	B	READ
11E5	C0 87 175D		678	B	WRITE
11E9	3D C5 1B51		679	CLI	WORK,C'E'
11ED	C0 81 0C54		680	BE	ADRPLB
11F1	0E 00 1A6B 0A03		681	ALC	SECCT(1),ONE
11F7	C0 87 190C		682	B	STPFLD
11FB	1A3E	11FC	683	DC	AL2(WRTDFC)
11FD	8D 00 01 1033		684	CLC	1(,XR2),TRACK#
1202	C0 84 1142		685	BH	C3F3
1206	C0 87 190C		686	B	STPFLD
120A	1A42	120B	687	DC	AL2(RDDFC)
120C	C0 87 11E1		688	B	REPPGD
			689		
1210	C0 87 0B8D		690	REPEXT B	EDITAA
1214	0000	1215	691	SAV0 DC	XL2'0'

PF67 DISK EDITOR

EPR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
		693	*	ROUTINE TO INSERT // CHAIN RECORD IN DCP
1216	C0 87 10A9	694	CHNING B	CHKPAS
121A	0C 01 1A44 1A7C	695	MVC	RDDFC+2(2),DCPSEC
1220	C0 87 1737	696	R11 B	READ
1224	7D C5 00	697	CLI	0(,XR1),C'E' FIND
1227	F2 81 1E	698	JE	FS1 A END, COMMENT OR // CHAIN RECORD
122A	7D 5C 00	699	CLI	0(,XR1),C'*
122D	F2 81 18	700	JE	FS1
1230	7D 61 00	701	CLI	0(,XR1),C'/'
1233	F2 81 0C	702	JE	FS
1236	C0 87 175D	703	B	WRITE
123A	C0 87 1291	704	B	STEPX
123E	C0 87 1220	705	B	R11
		706	*	
1242	C0 87 190C	707	PS B	STPFLD IF // CHAIN RECORD IS FOUND THEN
1246	1A42	1247 708	DC	AL2(RDDFC) INCREMENT TO NEXT RECORD
1248	C2 02 0A80	709	PS1 LA	READIN,XR2
124C	C0 87 0E6A	710	B	SETCHN GO BUILD // CHAIN RECORD FORM INPUT
1250	C0 87 175D	711	B	WRITE WRITE CHAIN RECORD ON DISK
1254	C0 87 190C	712	B	STPFLD
1258	1A3E	1259 713	DC	AL2(WRTDFC)
125A	C0 87 1275	714	B	RDWRT WRITE REMAINING DCP TO WORKSPACE
		715	*	
125E	C0 87 10A9	716	B	CHKPAS REWRITE DCP BACK FROM WORKSPACE
1262	0C 01 1A44 1A4E	717	MVC	RDDFC+2(2),PASOLD
1268	0C 01 1A40 1A7C	718	MVC	WRTDFC+2(2),DCPSEC
126E	C0 87 1275	719	RAGNY B	RDWRT
1272	F2 87 30	720	J	FIGDCP GO CHECK NEXT CONFIG RECORD
		721	*	
1275	34 08 1290	722	RDWRT ST	RDY,ARR
1279	C0 87 1737	723	RAGN B	READ
127D	C0 87 175D	724	B	WRITE
1281	C0 87 1291	725	B	STEPX
1285	3D C5 1B51	726	CLI	WORK,C'E'
1289	C0 01 1279	727	BNE	RAGN
128D	C0 87 00C0	728	B	*--
		1290 729	RDY EQU	*--1
		730	*	
1291	34 08 12A4	731	STEPX ST	STEPX,ARR
1295	C0 87 190C	732	B	STPFLD
1299	1A42	129A 733	DC	AL2(RDDFC)
129B	C0 87 190C	734	B	STPFLD
129F	1A3E	12A0 735	DC	AL2(WRTDFC)
12A1	C0 87 0000	736	B	*--
		12A4 737	STEPX EQU	*--1
		738	*	
12A5	C0 87 0A13	739	*	ROUTINE TO CHANGE CPU,UDT, // CHAIN RECORDS IN DCP
12A9	8D 07 07 0EB4	740	FIGDCP B	AA08 TO READ THE NEXT CARD
12AE	C0 81 1216	741	CLC	7(8,XR2),CHAIN TEST FOR AN // CHAIN
12B2	BD C5 00	742	BE	CHNING EXIT IF YES
12B5	C0 81 0B8D	743	CLI	0(,XR2),C'E' TEST FOR AN 'E'
12B9	BE C3 00	744	BE	EDITAA EXIT IF YES
12BC	F2 81 15	745	CLI	0(,XR2),C'C' TEST FOR A 'C' (CPU CARD)
12BF	BD E4 00	746	JE	MVCK JUMP IF YES, INSERT A NEW CPU CARD
12C2	C0 01 12A5	747	CLI	0(,XR2),C'U' TEST FOR AN 'U' (UDT CARD)
12C6	BD 40 03	748	BNE	FIGDCP BRANCH IF NO
12C9	F2 81 08	749	CLI	3(,XR2),C' TEST COLUMN # FOR A BLANK
		750	JE	MVCK JUMP IF YES, REPLACE ALL UDT CARDS
		751	*	
		752	*	IF NOT BLANK, THIS UDT IS AN ADDITIONAL ONE, SO ADD IT
12CC	3C FF 1A74	753	ADDRP MVI	DATCD,I'FF' SET FLAG TO BYPASS NEXT READ
12D0	C0 87 11C7	754	B	REPDCP GO TO ROUTINE TO ADD THIS UDT CARD
		755	*	
12D4	0C 01 1A44 1A7C	12D4 756	MVCK EQU	* SET UP CHARACTER TO SCAN FOR
12DA	2C C0 12E4 C0	757	MVC	RDDFC+2(2),DCPSEC SET CONTROL FIELD FOR DCP
		758	MVC	CK+1(1),0(,XR2) MOVE SCAN CHAR
12DF	C0 87 1737	12DF 759	XT EQU	* TO SEEK THE CYLINDER FOR DCP
		760	B	READ SET THE NUMBER OF SECTORS TO SCAN

PF67 DISK EDITOR

FRF LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
12E3	7D C0 00	761	CK	CLI 0(,XR1),*--
12E6	F2 81 11	762	JE	CONFB TO SCAN EQUAL
12E9	C0 87 190C	763	B	STPFLD
12ED	1A42	12EE 764	DC	AL2(RDDFC)
12EF	BD 08 01	765	CLI	1(,XR2),8 CHECK FOR CYL 8
12F2	C0 82 12DF	766	BL	IT
12F6	C0 87 12CC	767	B	ADDRP
		768	*	COME HERE WHEN DESIRED CARD TYPE HAS BEEN FOUND
		769	*	
12FA	0C 02 1A40 1A44	770	CONFB MVC	WRTDFC+2(3),RDDFC+2 SET UP READ CONTROL FIELD
1300	0C 5F 1B80 0ADF	771	MVC	WORK+95(96),READIN+95 MOVE NEW CARD DATA TO WRITEFIELD
1306	C0 87 175D	772	B	WRITE TO WRITE THIS CARD
		773	*	
130A	0C 00 1321 12E4	774	MVC	CK+1(1),CK+1 SET UP TO TEST FOR CORRECT TYPE
		775	*	OF CARD AND THEN ELIMINATE
		776	*	ALL REMAINING CPU OR UDT CARDS.
		777	*	
1310	C0 87 190C	778	STEPWR B	STPFLD STEP THE WRITE CONTROL FIELD
1314	1A3E	1315 779	DC	AL2(WRTDFC)
		780	*	
1316	C0 87 190C	781	STEPWR B	STPFLD STEP THE READ CONTROL FIELD
131A	1A42	131B 782	DC	AL2(RDDFC)
131C	C0 87 1737	783	B	READ TO READ ONE SECTOR
		784	*	
1320	7D C0 00	785	CK1 CLI	0(,XR1),*-- CHECK FOR ANY MORE UDT OR CPU CARDS.
1323	C0 81 1316	786	BE	STEPWR BRANCH IF ONE IS FOUND
1327	C0 87 175D	787	B	WRITE TO WRITE ONE SECTOR
		788	*	
132B	3D C5 1B51	789	CLI	WORK,C'E' CHECK FOR END OF PROGRAM
132F	C0 81 12A5	790	BE	FIGDCP BRANCH WHEN IT IS REACHED
1333	C0 87 1310	791	B	STEPWR TO MOVE ANOTHER SECTOR

FP67 DISK EDITOR

Table with columns: ERR, LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk editor operations like READS1, READB, WRITE1, etc.

533373

FP67 DISK EDITOR

Table with columns: ERR, LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk editor operations like DELETED, LIST, etc.

PP67 DISK EDITOR

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
16C0	170F		16C1	1053	DC	AL2(SHSG)
16C2	CJ 87 C98D			1054	B	EDITAA
				1055		
16C6	D5E64E4D26C640D7	16E4	1056	VHSG	DC	CL31*NO. OF PGH. ENTRIES LEFT IS XXX'
16CE	C7D44B40C5D5E3D3		1056			
16D6	C9C5E24D3C5C6E3		1056			
16DE	4CC9E24E7E7E7		1056			
		16E4	1057	VTOC*	EQU	*-1
16E5	6B40F2D7C1C3C540	170F	1058	SHSG	DC	CL43*, SPACE AVAILAABLE FOR PGMS. IS XXX SECTORS*
16EE	C1E5C1C9E3C1C2D3		1058			
16F5	C540C6D6D940D7C7		1058			
16FD	D4E24B4CC9E24CE7		1058			
17C5	E7E7E74CE2C5C3E3		1058			
17CD	D6D9E2		1058			
		1707	1059	SPACE*	EQU	*-9
		CA27	1060	DZERO	EQU	NUMONE-1

PP67 DISK EDITOR

ERR	LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
				1062 *		SUBROUTINE TO EXECUTE A SEEK
				1063		
1710	34 08 1736		1064	SEEK	ST	SEEKEX+3,ARR SAVE RETURN ADDRESS
1718	35 01 1736		1065	L		SEEKEX+3,IR1 PUT ADDRESS IN IR1
1719	02 01 1736 1A7A		1066	ALC		SEEKEX+3(2),TWO STEP EXIT ADDRESS PAST PARAMETER
171E	1C 01 172A 01		1067	HVC		SEEKCT(2),1(,IR1) MOVE PARAMETER TO SUBROUTINE
1723	CC 87 17D2		1068	B		STRTIO TO SEEK
1727	00		1069	DC		XL1'0' FUNCTION CODE, (CONTROL)
1728	00		1070	DC		XL1'0' CONTROL CODE, (SEEK)
1729	0000		1071	SEEKCT	DC	AL2(*-*) CONTROL FIELD ADDRESS
172B	CC 87 1CD2		1072	B		DSKERR FOR ERROR
172F	CC 87 1733		1073	B		**& FILLER
1733	CC 87 0000		1074	SEEKEX	B	*-& EXIT
			1075			
			1076 *			SUBROUTINE TO READ DATA ON ONE SECTOR
			1077			
1737	34 08 175C		1078	READ	ST	READEX+3,ARR SAVE RETURN ADDRESS
173B	3C 00 1A45		1079	HVI		RDDPFC+3,0 SET TO READ ONE SECTOR
173F	CC 87 1710		1080	B		SEEK
1743	1A42		1081	DC		AL2(RDDPFC)
1745	CC 87 17D2	1744	1082	B		STRTIO TO READ ONE SECTOR
1749	01	1749	1083	DC		XL1'01' FUNCTION CODE, (READ)
174A	00	174A	1084	DC		XL1'0' CONTROL CODE, (DATA)
174E	1A42	174C	1085	DC		AL2(RDDPFC) CONTROL FIELD ADDRESS
174D	CC 87 1CD2		1086	B		DSKERR ERROR RETURN
1751	CC 87 1755		1087	B		**& FILLER
1755	C2 01 1B51		1088	LA		WORK,IR1 LOAD WORKAREA ADDRESS IN IR1
1759	CC 87 0000		1089	READEX	B	*-& RETURN
			1090			
			1091 *			SUBROUTINE TO WRITE DATA ON ONE SECTOR
			1092			
175D	34 08 177E		1093	WRITE	ST	WRITEX+3,ARR SAVE RETURN ADDRESS
1761	3C 00 1A41		1094	HVI		WRTDPC+3,0 SET TO WRITE ONE SECTOR
1765	CC 87 1710		1095	B		SEEK
1769	1A3E	176A	1096	DC		AL2(WRTDPC)
176E	CC 87 17D2		1097	B		STRTIO TO WRITE ONE SECTOR
176F	02	176F	1098	DC		XL1'02' FUNCTION CODE, (WRITE)
1770	00	1770	1099	DC		XL1'0' CONTROL CODE, (DATA)
1771	1A3E	1772	1100	DC		AL2(WRTDPC) CONTROL FIELD ADDRESS
1773	CC 87 1CD2		1101	B		DSKERR ERROR RETURN
1777	CC 87 1773		1102	B		**& FILLER
177B	CC 87 0000		1103	WRITEX	B	*-& EXIT
			1104			
			1105			
			1106 *			SUBROUTINE TO SCAN ONE CYLINDER BEGINNING WITH
			1107 *			CYLINDER 8, AND ENDING WITH CYLINDER 11.
			1108			
177F	34 08 17B0		1109	SCAN	ST	NOSCAN+3,ARR SAVE ADDRESS RECALL REGISTER
1783	35 01 17B0		1110	L		NOSCAN+3,IR1 LOAD ARR VALUE INTO IR1
1787	1C 01 17A3 01		1111	HVC		SCNFND+3(2),1(,IR1) INSERT ADDRESS FOR A SCAN FOUND
178C	1C 01 17B0 03		1112	HVC		NOSCAN+3(2),3(,IR1) INSERT ADDRESS FOR NO SCAN FOUND
			1113			
1791	DC 01 1A34 1A37		1114	HVC		RDDPFC+2(2),IDICYL SET CYLINDER NO. TO 08
			1115 *			SECTOR NO. TO 00
1797	CC 87 1737	1797	1116	SETCYL	EQU	*
			1117	B		READ
			1118 *			
179B	4D 02 02 1A8C		1119	CLC		2(3,IR1),ACTCON
17A0	F2 01 17		1120	JNE		NOSCAN
17A3	4D 02 07 1A51		1121	CLC		7(3,IR1),SAVID-1
17A9	CC 87 0000		1122	SCNFND	BE	*-&
17AC	CC 87 190C		1123	B		STPFLO STEP TO NEXT SECTOR NO.
17B0	1A42	17B1	1124	DC		AL2(RDDPFC) CONTROL FIELD ADDRESS
17B2	3D 0C 1A43		1125	CLI		RDDPFC+1,12 TEST FOR LAST INDEX CYL.
17B6	CC 01 1797		1126	BNE		SETCYL BRANCH TO SEEK IF NOT DONE
17B8	CC 87 0000		1127	NOSCAN	B	*-& EXIT FOR NO SCAN FOUND

53377

PP67 DISK EDITOR

Table with columns: ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for SENSE IO SUBROUTINE, START I/O SUBROUTINE, and various disk control operations.

PP67 DISK EDITOR

Table with columns: ADDR, STMT, SOURCE, STATEMENT. Continuation of assembly code for disk control operations, including track and head management.

533781

PP67 DISK EDITOR

Table with columns: ADDR, STMT, SOURCE STATEMENT. Contains assembly code for PP67 DISK EDITOR, including subroutines for control field and program identification.

633385

PP67 DISK EDITOR

Table with columns: ADDR, STMT, SOURCE STATEMENT. Contains assembly code for PP67 DISK EDITOR, including subroutines for control field and program identification.

PF67 DISK EDITOR

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1A8A PFFC 1A8B 1393 WEG4 DC XL2*PFFC*
1A8C 0000 1A8D 1394 SAVR1 DC XL2*0*
1A8E C0 1A8E 1395 PSTCD DC XL1*00*
1A8F A0 1A8F 1396 SPNDLA DC XL1*A0*
1A90 B0 1A90 1397 SPNDLB DC XL1*B0*
1A91 C00000 1A93 1398 OLDADR DC XL3*00*
1A94 00 1A94 1399 NOVCTR DC XL1*00*
1A95 0A9A 1A96 1400 READ4 DC AL2(READIN+26)
1A97 0AD5 1A98 1401 READ85 DC AL2(READIN+85)
1A99 1B54 1A9A 1402 WORK3 DC AL2(WORK+3)
1A9B 1C50 1A9C 1403 WOK191 DC AL2(WORK+255)
1A9D 0000 1A9E 1404 WTKTPT DC AL2(*-*)
1A9F 0000 1AA0 1405 WRIPTR DC AL2(*-*)
1AA1 0000 1AA2 1406 RTXTPT DC AL2(*-*)
1AA3 0000 1AA4 1407 RRIPTR DC AL2(*-*)
1AA5 00 1AA5 1408 WKRICT DC XL1*00*
1AA6 0000 1AA7 1409 SCRACH DC XL2*0*
1AA8 C4C5 1AA9 1410 DELCON DC CL2*DE*
1AAA F06B6B40 1AAD 1411 DATCRD DC CL4*0,,*
1AAE FFFFFFFF 1AB1 1412 LASTNO DC XL4*FFFFFFF*
1AB2 D4C5 1AB3 1413 HECARD DC CL2*HE*
1AB4 D7D5 1AB5 1414 PNKOW DC CL2*PH*
1AB6 C3C8 1AB7 1415 CHGCON DC CL2*CH*
1416
1AB8 D4C9E2E2C9D5C740 1AC7 1417 ERROR1 DC CL16*MISSING CTL. CD.*
1AC0 C3E3D34B40C3C44B 1417
1AC8 40C9D540C5D9D9D6 1AD0 1418 ERROR2 DC CL9* IN ERROR*
1AD0 D9 1418
1AD1 E2C5D84B40C5D9D9 1ADC 1419 DC CL12*SEQ. ERROR,*
1AD9 D6E96B40 1419
1ADD D5C5E7E340C3C1D9 1AP8 1420 ERROR3 DC CL28*NEXT CARD SHOULD BE NO. XXXX*
1AE5 C440E2C8D6E4D3C4 1420
1AED 40C2C540D5D64B40 1420
1AF5 E7E7E7 1420
1AF9 E7D9D6C7D9C1D440 1B1B 1421 ERROR4 DC CL35*PROGRAM ID ERROR, ID SHOULD BE XXXX*
1E01 C9C440C5D9D9D6D9 1421
1B09 6B40C9C440E2C8D6 1421
1B11 E4D3C440C2C540E7 1421
1B19 E7E7E7 1421
1B1C D5D640E2D7C1C3C5 1B40 1422 ERROR6 DC CL37*NO SPACE AVAILABLE TO ADD NEW PROGRAM*
1B24 40C1E5C1C9D3C1C2 1422
1B2C D3C540E3D640C1C4 1422
1B34 C440E5C5E640D7D9 1422
1B3C D6C7E9C1D4 1422
1B41 40E7E7E740D5D6E3 1B50 1423 MSG02 DC CL16* XXX NOT ON DISK*
1B49 40D6D540C4C9E2D2 1423
1B51 1424 WORK EQU *

NOTE: READ4 AND READ85 MUST BE KEPT TOGETHER
NOTE: WORK3 AND WOK191 MUST BE KEPT TOGETHER

PF67 DISK EDITOR

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1426 * THE FOLLOWING TAPE READ ROUTINE RESIDES IN THE DISK WORK AREA.
1427 * IF IT IS TO BE USED, IT IS MOVED INTO THE CARD READ ROUTINE BEFORE
1428 * THE DISK WORK AREA IS USED. WHEN THE DISK WORK AREA IS USED THE
1429 * FIRST TIME, THIS ROUTINE IS OBLITERATED.
1430
1431 * -- EDITOR TAPE READ ROUTINE -- *
1432
1432
1432
0880 1433 USING RDARE,1
1B57 1434 USING NEXTR+6,2
1435 NEXTR LA RDARE,1 LOAD BASE REGISTERS
1436 LA X'0066',2 *
1437 ST RTN+3(,XR2),ARR STORE RETURN ADDRESS
1438 LIO SETOFF+1(,XR2),X'10' TURN OFF TAPE STOP LIGHT
1439
1440 SETDLY NVI DELAY1+1(,XR2),0 RESET DELAY COUNTS
1441 NVI DELAY2+1(,XR2),0
1442 SLC RDEND(99,XR1),RDEND(,XR1) CLEAR THE READIN AREA
1443
1444 * -- GAP DETECTION --
1445
1446 RESET SLC RDARE(1,XR1),RDARE(,XR1) RESET COUNTER TO ZERO
1447 COUNT TIO RESET(,XR2),X'E2' TEST FOR A BIT
1448 ALC RDARE(1,XR1),INCR(,XR2) ADD 1 TO COUNTER
1449 NVC RLARE+3(3,XR1),RDARE+3(,XR1) DELAY
1450 BNOL COUNT(,XR2) REPEAT TILL OVERFLOW OCCURS
1451 * THE ABOVE STEPS GUARANTEE BLANK TAPE FOR ABOUT 8.5 MILLISECONDS TO
1452 * ASSURE READING CANNOT START IN THE MIDDLE OF A RECORD.
1453
1454 * -- FIND THE FIRST BIT --
1455
1456 TSTCLK TIO CLK1(,XR2),X'E2' TEST FOR 1ST CLOCK BIT
1457 B TSTCLK(,XR2) REPEAT IF NONE
1458 CLK1 CLI DELAY1+1(,XR2),0 CHECK FOR 1ST PASS
1459 BNE DELAY1(,XR2)
1460
1461 * -- SET VARIABLE DELAY --
1462
1463 TSTUP TIO ADD(,XR2),X'E2' TEST FOR BIT STILL UP
1464 TSTDN TIO SHIFT(,XR2),X'E2' TEST FOR BIT STILL DOWN
1465 ALC DELAY2+1(1,XR2),SIX(,XR2) ADD SIX TO DELAY
1466 BNOL TSTDN(,XR2) BRANCH BACK IF NO OVERFLOW
1467 NVI DELAY2+1(,XR2),X'FF' INSERT MAXIMUM COUNT
1468 B SHIFT(,XR2)
1469 ADD ALC DELAY1+1(1,XR2),NINE(,XR2) ADD NINE TO DELAY
1470 BNOL TSTUP(,XR2) BRANCH BACK IF NO OVERFLOW
1471 NVI DELAY1+1(,XR2),X'FF' SET MAXIMUM COUNT
1472 B TSTUP(,XR2)
1473
1474 * -- READ THE TAPE --
1475
1476 DELAY1 NVC RDEND(*-*,XR1),RDEND(,XR1) VARIABLE DELAY (780-1180 NS)
1477 DELAY2 NVC RDEND(*-*,XR1),RDEND(,XR1)
1478 SBN RDEND(,XR1),X'01' SET THE BIT ON
1479 TIO TSTEND(,XR2),X'E2' TEST FOR A DATA BIT ON
1480 SETOFF SBF RDEND(,XR1),X'01' NO DATA BIT, SET OFF
1481 TSTEND BOL DONE(,XR2) RETURN TO READ THE NEXT BIT
1482 SHIFT ALC RDEND(99,XR1),RDEND(,XR1) SHIFP THE DATA LEFT
1483 NVC RDARE+119(19,XR1),RDARE+119(,XR1) ADDITIONAL DELAY
1484 B TSTCLK(,XR2) LOOK FOR THE NEXT BIT
1485
1486 * -- CHECK RECORD --
1487

FP67 DISK EDITOR

Table with columns: PRF LOC, OBJCT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk editor program, including instructions like MVI, ALC, CLI, BNE, etc.

533393

FP67 DISK EDITOR

Table with columns: PRF LOC, OBJCT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk editor program, including instructions like MVI, ALC, CLI, BNE, etc.

FP67 DISK EDITOR

FP67 LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

CC01 1602 XR1 EQU 01
CC02 1603 XR2 EQU 02
CC08 1604 ARR EQU X'08'
CC20 1605 PIAB EQU X'20'
CC2A 1606 SWITCH EQU X'20A'
CC212 1607 TEST EQU X'212'
CC216 1608 LINK EQU X'216'
CC21A 1609 PRINT EQU X'21A'
CC200 1610 SYSTEM EQU 512
CC226 1611 PACK EQU X'226'
CC22A 1612 LOAD EQU X'22A'
CC1B52 1613 WORKNN EQU WORK+1
CC1B54 1614 WKADDR EQU WORK+3
CC1A97 1615 READNN EQU READIN+23
CC1A99 1616 RDADDR EQU READIN+25
CC1A07 1617 SPUDT EQU X'A07'
CC22F 1618 UTAB EQU X'22F'
CC222 1619 HALT EQU X'222'
CC211 1620 RPFY EQU X'211'
CC1A03 1621 RWJH EQU X'A03'
CC1A07 1622 PRFB EQU X'A07'
CC080 1623 BIT0 EQU X'80'
CC080 1624 BIT1 EQU X'80'
CC020 1625 BIT2 EQU X'20'
CC010 1626 BIT3 EQU X'10'
CC001 1627 SSW07 EQU 01
CC208 1628 SBYTE0 EQU X'208'
CC1A02 1629 SPPLGS EQU X'A02'
CC1A2 1630 BUSY EQU X'A2'
CC1A6 1631 CTLREG EQU X'A6'
CC1A0 1632 STRDY EQU X'A0'
CC03 1633 H1 EQU X'03'
CC03F 1634 HA EQU X'3F'
CC03B 1635 H2 EQU X'3B'

SECTION PREFACE UNIT TABLE-3
FIRST BYTE OF UDT TABLE-3

ADDRESS OF FIRST RTW PREFIX

SECTION PREFIX FLAGS
EQUATE FOR B LEVEL
EQUATE FOR B LEVEL
EQUATE FOR B LEVEL
HALT DISPLAY 1
HALT DISPLAY A
HALT DISPLAY B

FP67 DISK EDITOR

FP67 LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

1CD2 34 08 1E07 1637 DSKERR ST DSKEXT+3,ARR
1CD6 35 02 1E07 1638 L DSKEXT+3,XR2
1CDA 36 02 1E5F 1639 A WEGPIV,XR2
1CDE 2C 01 1D63 00 1640 MVC CTLAD(2),0(,XR2)
1CE3 C0 87 17BE 1641 B SENSE
1CE7 02 1CE7 1642 IC XL1'02'
1CE8 C2 01 0A23 1643 LA STATUS-1,XR1
1CEC 78 10 00 1644 TBN 0(,XR1),X'10'
1CEP F2 10 47 1645 JT ACTN02
1CF2 78 40 C0 1646 TBN 0(,XR1),X'40'
1CF5 F2 10 2E 1647 JT ACTN12
1CF8 78 04 C0 1648 TBN 0(,XR1),X'04'
1CFB F2 10 52 1649 JT ACTN04
1CFE 78 20 00 1650 TBN 0(,XR1),X'20'
1D01 C0 10 1E3F 1651 BT ACTN11
1D05 78 02 00 1652 TBN 0(,XR1),X'02'
1D08 F2 10 6A 1653 JT ACTN06
1D0B 78 08 00 1654 TBN 0(,XR1),X'08'
1D0E CC 10 1E3F 1655 BT ACTN11
1D12 78 01 00 1656 TBN 0(,XR1),X'01'
1D15 C0 10 1E1E 1657 BT ACTN10
1D19 3C 00 189D 1658 DSKHLT MVI ERPLG,0
1D1D C0 87 0222 1659 B HALT
1D21 AOFF 1D22 1660 DC XL2'AOFF'
1D23 F2 87 21 1661 J STEP
1D26 C0 87 021A 1662 ACTN12 B PRINT
1D2A C6 1D2A 1663 DC XL1'C6'
1D2B 0E 1D2B 1664 DC IL1'11'
1D2C 1E6C 1D2C 1665 DC AL2(INVTRQ)
1D2E AOFF 1D2E 1666 DC XL2'AOFF'
1D30 C0 87 0222 1667 B HALT
1D3A AOFF 1D35 1668 DC XL2'AOFF'
1D36 F2 67 0E 1669 J STEP
1D39 3D 00 1E59 1670 ACTN02 CLI RETRY,0
1D3D CC 81 1D19 1671 BE DSKHLT
1D41 0E 00 1E59 0AE7 1672 ALC RETRY(1),MINUS1
1D47 0E 01 1E07 1E61 1673 STEP ALC DSKEXT+3(2),TWLVE
1D4D F2 67 BA 1674 J DSKEXT
1675
1D50 C0 87 17D2 1676 ACTN04 B STRTIO
1D54 01 1D54 1677 DC XL1'01'
1D55 01 1D55 1678 DC XL1'01'
1D56 1E5A 1D57 1679 DC AL2(CBKID)
1D58 C0 67 1D5C 1680 B **4
1D5C C0 87 1D60 1681 B **4
1D63 1682 CTLAD EQU **3
1D60 C2 02 C0C0 1683 LA *-3,XR2
1D64 2D C0 1E5B 01 1684 CLC CHKID+1(1),1(,XR2)
1D69 F2 81 9C 1685 JE ACTN07
1D6C BD 01 00 1686 CLI 0(,XR2),X'01'
1D6F F2 81 14 1687 JE ACTN6B
1D72 F2 87 A1 1688 J ACTN09
1D75 3E 02 1D63 1689 ACTN06 L CTLAD,XR2
1D79 BD C0 00 1690 CLI 0(,XR2),0
1D7C F2 81 0D 1691 JE ACTN6C
1D7F BD 01 00 1692 CLI 0(,XR2),X'01'
1D82 C0 01 1D39 1693 BNE ACTN02
1D8E EC C0 00 1694 ACTN6B MVI 0(,XR2),0
1D89 F2 87 B3 1695 J ACTN11
1D8C CC 87 17D2 1696 ACTN6C B STRTIO
1D90 01 1D90 1697 IC XL1'01'
1D91 01 1D91 1698 DC XL1'01'
1D92 1E5A 1D93 1699 DC AL2(CBKID)
1D94 CC 67 1D98 1700 B **4
1D98 C0 87 1D9C 1701 B **4
1D9C C2 01 1E5A 1702 LA CHKID,XR1
1DA0 7D 02 C0 1703 CLI 0(,XR1),02
1DA3 F2 01 BA 1704 JNE ACT6C2

SAVE EXIT ADDRESS
LOAD VALUE FROM ARR IN XR2
REDUCE BY FIVE
MOVE CONTROL FIELD ADDRESS
TO GET DEVICE STATUS
BYTES 0 & 1
LOAD XR1 AS POINTER TO SENSE DATA
TEST FOR EQUIPMENT CHECK
JUMP IF ON
TEST FOR INTERVENTION REQ.
JUMP IF ON
TEST FOR NO RECORD FOUND
JUMP IF ON
TEST FOR MISSING ADDRESS MARK
BRANCH IF ON
TEST FOR TRACK CONDITION CHECK
JUMP IF ON
TEST FOR DATA CHECK
BRANCH IF ON
TEST FOR SEEK CHECK
BRANCH IF ON
RESET ERROR FLAG
TO DCP ERROR HALT
HALT ID
TO EXIT
TO PRINT INTERVENTION REQD.
FLAGS
LENGTH
ADDRESS OF LAST PRINT CHARACTER
MESSAGE IDENTIFICATION
TO DCP ERROR HALT
HALT ID
TO EXIT
HAS RETRY COUNT BEEN EXHAUSTED?
IF YES, GO HALT.
REDUCE COUNTER BY 1.
DECREMENT RETURN ADDRESS BY 12
TO EXIT
TO READ ID
FUNCTION CODE
CONTROL CODE
READ CONTROL FIELD
ERROR ON READ ID
PLACE CONTROL FIELD ADDRESS IN XR2
COMPARE ACTUAL ID AND EXPECTED ID
JUMP IF EQUAL
NOT EQUAL, CHECK FOR ALT. TR.
JUMP IF THIS TRACK IS AN ALTERNATE
TO TEST FOR TRACK CONDITION CF.
LOAD XR2 WITH CONTROL FIELD ADDRESS
CHECK FLAG BYTE OF ORIGINAL OPERAT.
JUMP IF THIS TRACK IS GOOD.
CHECK FLAG BYTE FOR ALTERNATE
BRANCH IF THIS IS NOT AN ALTERNATE
SET FLAG BYTE OF ORIGINAL OP TO 0.
TO ACTION 11.
TO READ ID
FUNCTION CODE
CONTROL CODE
READ CONTROL FIELD
LOAD ADDRESS OF ALTERNATE CTL. FLD.
TEST FOR DEFECTIVE TRACK
JUMP IF NO

533397

PP67 DISK EDITOR

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk editing operations like SET BIT FOR ALTERNATE CONTROL FLD., TO SEEK THE ALTERNATE TRACK, etc.

PP67 DISK EDITOR

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk editing operations like I/O OVERLAY AREA, NO-OP, LOAD OVERLAY, etc.

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1FAA	C4C5D940D5D6E340	1838			
1FB2	D9C5C1C4E840D6D9	1838			
1FBA	40C5D9D9D6D9	1838			
		1F72 1839	STATUX	EQU	TSTM
1FC0	71 54 42	1840	D1442	LIO	TEXT+3(,XR1),X'54'
1FC3	DO 87 D8	1841		B	RD1442(,XR1)
1FC6	BD 40 4C	1842		CLI	76(,XR2),C' '
1FC9	DO 81 3F	1843		BE	TEXT(,XR1)
1FCC	71 54 D7	1844		LIO	BUF14(,XR1),X'54'
1FCF	DO 87 D8	1845		B	RD1442(,XR1)
1FD2	OC 13 0ADP 2F13	1846		HVC	READIN+95(20),X'2F00'+19
1FDB	DO 87 3F	1847		B	TEXT(,XR1)
1FDB	2F00	1FDC 1848	BUF14	DC	XL2*2F00'
1FDD	74 08 FD	1849			
1FE0	D1 50 86	1850	RD1442	ST	X1442(,XR1),.RR
1FE3	F3 51 00	1851	DX14	TIO	ERR(,XR1),X'50'
1FE6	D1 52 E1	1852		SIO	X'00',X'51'
1FE9	70 53 6D	1853		TIO	*(,XR1),X'52'
1FEC	79 93 6D	1854		SNS	STATUX(,XR1),X'53'
1FEF	CO 10 C000	1855		TBP	STATUX(,XR1),X'93'
1FF3	DO 87 DB	1856		BT	*--*
		1FF2 1857	X1442	EQU	*--1
		1858		B	DX14(,XR1)
		0AE8 1859		END	SETDSK

TEST FOR A 96 BYTE RECORD
 IF SO THEN READ SECOND
 CARD AND MOVE 20 BYTES
 TO MAKE A 96 BYTE RECORD

TEST FOR NOT READY OR ERROR
 READ CARD INTO I/O AREA.
 WAIT
 SENSE DEVICE STATUS
 TEST FOR READ OR FEED CHEC

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
AAA08	A	002	0AC2	0078	0076
AA07X	A	004	0BA1	0169	0076* 0077 0178 0229 0921 0972
AA07Y	A	004	0AAD	0073	0060 0071
AA08	A	004	0A9P	0070	0066
AA19	A	003	0A13	0026	0078 0258 0414 0740
AA20	A	003	19AC	1233	1241
AA29	A	004	18C*	1244	1256
ACTCON	A	003	1A4C	1366	0621 0801 0840 1021 1119
ACTN02	A	004	1D39	1670	1645 1693 1760
ACTN04	A	004	1D50	1676	1649
ACTN06	A	004	1D75	1689	1553 1743
ACTN07	A	004	1E08	1738	1685
ACTN09	A	004	1E16	1742	1688
ACTN10	A	006	1E1E	1744	1657
ACTN11	A	004	1E3F	1754	1651 1655 1695 1739 1741
ACTN12	A	004	1D26	1662	1647
ACTN13	A	004	1E55	1760	1757
ACTN6B	A	003	1D86	1694	1687
ACTN6C	A	004	1D8C	1696	1691
ACT6C2	A	004	1DEA	1728	1704
ADD	A	004	1B9A	1469	1463
ADDCHK	A	004	1BCC	1490	1489* 1491* 1492 1493
ADDRP	A	004	12CC	0753	0767
ADDTST	A	001	0BEC	0204	0182
ADREXT	A	003	1896	1212	1193
ADRPLA	A	001	0DB3	0345	0274
ADRPLF	A	006	0C54	0243	0531 0680
ADRPLC	A	004	103D	0532	0525
ADRPLD	A	004	0F83	0479	0494
ADRPLE	A	006	0C68	0248	0481 0507 0513
ADRPLF	A	006	0FAC	0491	0488
ADRPLG	A	004	0F39	0460	0251 0447
ADRPLH	A	006	0FC2	0496	0294
ADRPL1	A	001	0C50	0241	0232
ADRPL2	A	005	0EB5	0429	0393 0395
ADRPL3	A	004	0C84	0258	0356 0404 0442
ADRPL4	A	006	0E3F	0392	0347
ADRPL5	A	004	0EP2	0444	0438 0440
ADRPL6	A	006	0E50	0396	0333
ADRPL7	A	001	101B	0521	0343 0425 0453 0459 0503 0510 0516
ADRPL8	A	004	0D8A	0335	0302 0330
ADRPL9	A	004	0EC8	0433	0497
ALTOP	A	001	1DDC	1722	1714*
ARR	C	001	0008	1604	0026 0036 0406 0576 0722 0731 0853 1064 1078 1093 1109 1131
A10ADR	A	002	1E2B	1748	1744*
A6CADR	A	002	1DFB	1733	1729*
BPA07	A	004	0C41	0229	0198
EHALT	A	004	0B7D	0154	0151
BIT0	C	001	0080	1623	1565
BIT1	C	001	0040	1624	1581
BIT2	C	001	0020	1625	1575 1790 1792
BIT3	C	001	0010	1626	1576 1579
BUF14	A	002	1FDC	1848	1844
BUP	A	006	1A35	1346	1323 1325 1327
BUPPLG	A	001	1A3A	1351	0277 0435 0496 1338*
PUPREC	A	004	0FE7	0505	0436
BUPSET	A	003	1A19	1338	1324 1326 1328
BUSY	C	001	00A2	1630	1156
CPASIX	A	001	10D7	0588	0576*
CHAIN	A	008	0EB4	0427	0305 0741
CHGCOW	A	002	1AB7	1415	0218
CHKPAS	A	004	10A9	0576	0073 0242 0532 0674 0694 0716 1043
CHKGEM	A	001	1C33	1549	1488* 1490* 1494
CHKID	A	001	1E5A	1763	1679 1684 1699 1702 1709 1717 1723
CHKREP	A	002	0CCE	0282	0254 0276 0278

CROSS-REFERENCE

Table with columns: SYMBOL, LEN, VALUE, DEFN, REFERENCES. Contains cross-referencing data for various symbols like BTRCAL, BTRXPT, IEXIT, XR1, XR2, XR2WK, IT, I1442.

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

OBJECT CARD LISTING

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

Table with columns: CL 1 THROUGH 16, CL 17 THROUGH 32, CL 33 THROUGH 48, CL 49 THROUGH 64, CL 65 THROUGH 80, CL 81 THROUGH 96. Contains object card listings for various symbols.

533721

PF67 DISK EDITOR

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+-@E+BAD 'Y :0RD|937*FTT2 JK '1Z_@YD<|@HWH< ACH@'1Z_| 'HVT3 'FKH(J_HFX.2-L\$ B JY 0,@PF670022

533/25

PF67 DISK EDITOR

OBJECT CARD LISTING

CL 1 THROUGH 16 CL 17 THROUGH 32 CL 33 THROUGH 48 CL 49 THROUGH 64 CL 65 THROUGH 80 CL 61 THROUGH 96
T+/@P@H*RCAPZP@O A@-HDOH*P(44B /Z <@-D;L@HGBXT -J|)OH*PP*BGF@O@|,4 <*BAB@7 /1|)OH* H@' 'EZ@PF670044

633429

FF67 DISK EDITOR

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+/UZ -D (-DESLO BFI%4 /S-CEDQY Y EO HQ3%BG 4BAV ((6HRL6JAFN4E; ,H B Q8A /ZB>F BOA RG*H \$J4FF670066

T+/VU JV+X6 A |H AAQB EYC4-DA(D ETE4AFY4RH0 AFK7 /O A NPJ4/IKU% RNT6HFFB J;=O A P65- ;8DFF670067

T+/W- DVCO ARE5- PD(Q 9CO >85- WHI /O (-R50H BBYB'16C2 6*3*1Z >@Y**7;< @-D9C6D EX/Y ; HFF670068

T+/XEW7HAA-8APZ8 ESKO P*APF O.-D EX/*< JIJFZ8+ JD ;B-< J DSE00AF1< EY-0 <BG C B JU HJ8FF670069

T+/YN6G6HM50DRFO) VZ0AYDZX&ERP-H ANI4AON72-KF) NV RAYDEX6IEN*HAPR4 BOV*2-J/2*6|2/1H 2*6 5I-FF670070

T+/ZEAY*|-|'SAY* I-|'|@Y*C-|'UOH* <SP1%G01|CE@<S F0- <GCB0 8Q8FF670071

T+/D. A BAOL 6YXGSC- G B0H |* **0 H *FF670072

T+/,P Y. BZYH5J_NGE <LE@F_ ,6|*****H1)-W00T H2;.S2)PG6<|T44_ 026 1K FF670073

T+/%AK4CI5MCE6)X 06;.E6D_ 1)XR5_V ,6(PE9=(0@GR1DC S2(\$U4@J 0XN 5)R .6+-I9=-P6)SG6*G H6<U 2T<FF670074

T+/%@1DCE6)X060_ 2*J 8XT09(|D6<. EE+-I9=-H5UCS5@G C1MCA9*GI4@GB4@H 8'R 0*LD6(PE9UC P6)Q 2JUFF670075

T+/_71'XA5DCI9=) 5)ITE(\$N6<LI8_ B &S 0-H R,6H,.D &P#0 H50 NH'SQWI - 8;HKS- P50 B 0< 8-<FF670076

T+/>28B 08;HDBH* U7&AJ8 E68;IC8;I U,-AN7)-<#3*H;B GRH8 H) *-HCB@*5G -/3A* FISP ASQXY AQ>D PL*FF670077

T+/?_8WE# 0.-YF* ;QWISPR7)=BGI.2 A7.0 ;18 7 B> G/ -70E88 E5I6C*Q; A,-HG+=BGOR0 7OB @/8% =-XFF670078

T+/?Y*JI--OD @-D I-0IA@YDCXJE-0H* .0%>BG /YCD&E 0AG- >0;.8H*H5EA -7; DBP@ Q(59**WA > F :2XFF670079

TG/1G7; EU.1D>>B G% A-IT0)-EE(X E0'SR1DCC2<PC4- 2/<FF670080

T+/2. D <E MBP@ 8- YB@/ *0-HHA@H A S*S -|K &(_ @-DNX B Z-C &F :H P8D G U UK@Y* H;A 98HFF670081

T+/3P *BEBJW96 G D U>@C%COH*I.-0 AB(YB.@BG /ZGC-U *0 9 EHH+6-A*-H 6 " #|3HCB-** Y C A0 =66FF670082

T+/4A OHJ @BG /. 6/064BA8G(6H;A3Q BGV@% J5T <BGE#8 BO-DHH7-6 |H6J7/ |HE.X-D |H6HX- - < :86FF670083

T+/4@ADA8"; H @/A D; - 0A ;|7-A < &G/8@ AS)OH*BHDC *@Y*/OH*BF%Q.GW2 -"XBG SH-?"HGCT4 GVV *LHFF670084

T+/570HD)P68 GVV H908AG-*;Q-HG<B GE*HA J9E0H*)P<B GGOCB - .6 ;00G 2-R2' 6C2-JL2/:D 5 /4 8EDFF670085

T+/62Q#4 |HACS4 A < AGLW@ C2/#| /1-K ED;O%BGGR T /16*0-D;OX4B |H AJG0A <BGE'H A9 EOH* KBYFF670086

T+/7_GSP /169 (6H ;A3QBGHDX J7*AKO AG;Q1 (6H)Q@HAGVZ % -<COH*P4- GV, /17TOH*)9*HGFT0 FHD E. FF670087

FF67 DISK EDITOR

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+/RYC D)=15TOH* P4- C /18 OH* ;A<BG 8H YT@/ 0+ -HH*HEHL-BBS| DA55C D;H15TOH* P4- 5EYFF670088

T+/9T 6 OH*;<<B GGT65 /EG78 OHD ;ACMBGO+@ <'*1S)@YDH|@QXLO&GVX /149 C*=" 42)H EAUFF670089

TBA9%8'XVK4CR1)/ 5IEFF670090

T+/@EG>E C-H -, 2UA,2A0? /OHDA(Y|H*;<BCH B<P5@ H7*HG|@HAGOH 6H H@/ H+H BB*HEDL- -B-% EK6FF670091

I+/'N@/AN+B HC7H 6W7MB6D1-P6C3FDG 3DAE0D0586 F72UAE 8HF7&DBC3D GB -D (J ;87-H5) B6.P- D5) ER4FF670092

T+/-6DBB* A%*J/ @1SA8-HA) I_-;A _4HD*4H*D CJ@HR 1'H.3@ECJ@P)0@65 9/W7&DC*6/694BI3 /OH *E8FF670093

T+/'P%Q;G#=-<B G SB-#<BG CCO)X DE(XE0*LE6MCH5){ 6*PA1+ / 5_V 1)X H5_V1ND.6/'S'ED3 6-L@ KSDFF670094

THJ*5*NLP4H-QCA< H72@L4H* *.0A4B+7 JMH53H&CJH>EOM65 9U67 D 4H-\$ RHFF670095

EP>/*E7*=-DC*PHS =*7H6F| | C F% ASC R A SO Q 05231012710 60172:B0FF670096

----- LAST PAGE -----



BOAO CYLINDER ZERO RECOVERY PROGRAM

```

ERR LOC OBJECT CODE   ADDR STMT SOURCE STATEMENT
2          DECK 4
3 GETIT START X'0A00'
4
5 *****
6 *
7 * SECTION PREFACE
8 *
9 *****
0A00 BOAO          0A01 10 DC XL2'BOAO'
0A02 00          0A02 11 DC XL1'00' SECTION FLAGS
0A03 00          0A03 12 DC XL1'00' CURRENT ROUTINE
0A04 0000        0A05 13 DC XL2'0000'
0A06 0BFC        0A07 14 DC AL2(PT01) ADDRESS OF FIRST ROUTINE
0A08 0000        0A09 15 DC XL2'0000' ERROR RECORDING
0A0A 004000      0A0C 16 DC XL3'A04000' UNIT DEFINITION TABLE
0A0D 001000      0A0F 17 DC XL3'B01000'
18 *****
19 * THIS ROUTINE IS WRITTEN ON CYL/SEC 03DC BY ROUTINE 1 (RT01)
20 *
21 * THIS ROUTINE:
22 * 1. IS CALLED IN WITH THE 22 BYTE MANUAL ROUTINE AT 'SMPROG'.
23 * 2. IS CALLED INTO, AND RUNS AT X'0000'.
24 * 3. IS WRITTEN ON CYL/SEC 03DC BY ROUTINE 01 (RT01).
25 * MANUAL ROUTINE 'SMPROG'.
26 *****
0B00          0B00 27 ORG X'0B00'
0B00 D0 87 B1    0B00 28 BASE EQU *
0B03 0000        0B04 29 USING BASE,1
0B05 0000        0B06 30 B MOVE(,1)
0B07 0000        0B08 31 SNSA2 DC XL2'0000'
0B09 00000000    0B0C 32 SNSA3 DC XL2'0000'
0B0D 0000        0B0E 33 SVAPR DC XL2'0000'
0B0F 0000        0B0F 34 RCF DC XL4'00000000'
0B10 0000        0B0F 35 DREG DC XL2'0000'
36
37 *****
38 * THIS READ DISK INST OVERLAYS THE INSTRUCTION THAT BRINGS IN
39 * THIS SECTOR
40 *****
0B0F F3 A1 00    0B0F 41 SIO 0,RD
42 *****
43 *
44 * MOD 10 HALT MODEL 6 HALT
45 *
46 * BOOTSTRAP SECTOR HAS
47 * LOADED CORRECTLY FROM
48 * AA
49 * (A C 1 3 )
50 *
51 *
52 *****
0B12 F0 50 50    0B12 53 HPL X'50',X'50'
0B15 C2 01 0000 0B15 54 RESTOR LA 0,1
55 *****
56 *****
57 * NO MOTION SEEK TO SET HEAD 1
58 *****
0B19 71 A6 F0    0B19 59 LIO REDCF(,1),CTRL
0B1C 5C 03 0C D4 0B1C 60 MVC RCF(4,1),SRNH1(,1)
0B20 F3 A0 00    0B1C 61 SIO 0,SK
62 *****
63 *****
64 * READ CYLINDER 3, HEAD 1
65 *****
0B23 5C 03 0C D8 0B23 66 MVC RCF(4,1),R3H1(,1)
0B27 71 A4 F2    0B23 67 LIO DATADD(,1),DAT
0B2A F3 A1 00    0B23 68 SIO 0,RD
0B2D D1 A0 A2    0B23 69 TIO ERR(,1),TSTERR

```

BOAO CYLINDER ZERO RECOVERY PROGRAM

```

ERR LOC OBJECT CODE   ADDR STMT SOURCE STATEMENT
70
71 *****
72 * SEEK TO CYLINDER 0, HEAD 1
73 *****
0B30 5C 01 0C D4 0B30 74 MVC RCF(2,1),SR3H1(,1)
0B34 F3 A0 00    0B30 75 SIO 0,SK
76 *****
77 *****
78 * MAKE SURE ACCESS IS ON CYL 0 BEFORE WRITING THE ID
79 *****
0B37 70 A2 04    0B37 80 SNS SNSA2(,1),A2
0B3A 78 40 04    0B37 81 TRN SNSA2(,1),CYLO
0B3D D0 90 A2    0B37 82 BF ERR(,1)
83 *****
84 *****
85 * WRITE ID ON CYLINDER 0, HEAD 1
86 *****
0B40 5C 03 0C DF 0B40 87 MVC RCF(4,1),WIDOR1(,1)
0B44 F3 A2 01    0B40 88 SIO ID,WR
0B47 D1 A0 A2    0B40 89 TIO ERR(,1),TSTERR
90 *****
91 *****
92 * WRITE ON CYLINDER 0, HEAD 1
93 *****
0B4A 5C 03 0C DE 0B4A 94 MVC RCF(4,1),WOH1(,1)
0B4F 71 A4 F2    0B4A 95 LIO DATADD(,1),DAT
0B51 F3 A2 00    0B4A 96 SIO 0,WR
0B54 D1 A0 A2    0B4A 97 TIO ERR(,1),TSTERR
98 *****
99 *****
100 * SEEK TO CYLINDER 3, HEAD 0
101 *****
0B57 5C 01 0C E0 0B57 102 MVC RCF(2,1),SP3HO(,1)
0B5B F3 A0 00    0B57 103 SIO 0,SK
104 *****
105 *****
106 * READ CYLINDER 3, HEAD 0
107 *****
0B5F 5C 03 0C E4 0B5F 108 MVC RCF(4,1),R3HO(,1)
0B62 71 A4 F2    0B5F 109 LIO DATADD(,1),DAT
0B65 F3 A1 00    0B5F 110 SIO 0,RD
0B68 D1 A0 A2    0B5F 111 TIO ERR(,1),TSTERR
112 *****
113 *****
114 * SEEK TO CYLINDER 0, HEAD 0
115 *****
0B6B 5C 01 0C P6 0B6B 116 MVC RCF(2,1),SR3HO(,1)
0B6F F3 A0 00    0B6B 117 SIO 0,SK
118 *****
119 *****
120 * MAKE SURE ACCESS IS ON CYL 0 BEFORE WRITING THE ID
121 *****
0B72 70 A2 04    0B72 122 SNS SNSA2(,1),A2
0B75 78 40 08    0B72 123 TRN SNSA2(,1),CYLO
0B78 D0 90 A2    0B72 124 BF ERR(,1)
125 *****
126 *****
127 * WRITE ID ON CYLINDER 0, HEAD 0
128 *****
0B7B 5C 03 0C E4 0B7B 129 MVC RCF(4,1),WIDORO(,1)
0B7F F3 A2 01    0B7B 130 SIO ID,WR
0B82 D1 A0 A2    0B7B 131 TIO ERR(,1),TSTERR
132 *****
133 *****
134 * WRITE CYLINDER 0, HEAD 0
135 *****
0B85 5C 03 0C FA 0B85 136 MVC RCF(4,1),WOHO(,1)
0B89 71 A4 F2    0B85 137 LIO DATADD(,1),DAT

```

BOAO CYLINDER ZERO RECOVERY PROGRAM

```

PRR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
OBBC P3 A2 00           138      SIO  0,WR
ORBP D1 A0 A2           139      TIO  ERR(,1),TSTERR
140
141 *****
142 * VERIFY CYLINDER 0, HEAD 0 AND HEAD 1 *
143 *****
OB92 5C 03 0C PE       144      MVC  RCF(4,1),VOH0H1(,1)
OB96 P3 A1 03           145      SIO  VER,PD
OR99 D1 A0 A2           146      TIO  ERR(,1),TSTERR
147
148 *****
149 *
150 *      MOD 10 HALT      MODEL 6 HALT
151 *
152 *
153 *
154 *      *      *
155 *      *      *      ( B 2 )
156 *
157 *****
OB9C P0 20 20           158 GOOD HPL X'20',X'20'      OK HALT - CYL 0 HAS BEEN RESTORED
OB9F D0 87 9C           159      B    GOOD(,1)
160
161 *****
162 * ERROR ROUTINE - STORES ERROR INFORMATION STARTING AT X'0003' *
163 *
164 * 0000 - 0002 RESTART FRANCH
165 * 0003 - 0004 DISK SENSE BYTES 0 AND 1
166 * 0005 - 0006 DISK SENSE BYTES 2 AND 3
167 * 0007 - 0008 ARR - VALUE INDICATES WHICH ROUTINE FAILED
168 * 0013 - PROCESS CHECK - TURN ON I/O OVERLAP SW AND
169 *      MAKE SURE THE CARRIAGE IS AT CYL 0 WHEN YOU
170 *      START.
171 *
172 * 0030 - NO MOTION SK, OR RD CYLINDER 3, HEAD 1
173 * 0040 - NOT AT CYLINDER 0 AFTER SEEK TO CYL 0, HEAD 1
174 * 004A - WRITE ID ON CYLINDER 0, HEAD 1
175 * 0057 - WRITE DATA ON CYLINDER 0, HEAD 1
176 * 006B - SEEK TO OR READ CYLINDER 0, HEAD 0
177 * 007B - NOT AT CYLINDER 0 AFTER SEEK TO CYL 0, HEAD 0
178 * 0085 - WRITE ID ON CYLINDER 0, HEAD 0
179 * 0092 - WRITE DATA ON CYLINDER 0, HEAD 0
180 * 009C - READ VERIFY ON CYLINDER 0, HEAD 0 AND HPAD 1
181 * 0009 - 000C LAST USED DISK CONTROL FIELD
182 * 000D - 000E DATA REGISTER CONTENTS AT TIME OF ERROR
183 *
184 *****
OBAA 70 A2 04           185 ERR  SNS  SNSA2(,1),A2
OBAA 70 A3 06           186      SNS  SNSA3(,1),A3      SAVE STATUS 263
OBAA 74 08 09           187      ST   SVARR(,1),ARR      SAVE ADDRESS RECAL REGISTER
OBAA 70 A4 0E           188      SWS  DREG(,1),A4
189
190 *****
191 *
192 *      MOD 10 HALT      MODEL 6 HALT
193 *
194 *
195 *
196 *
197 *      *      *
198 *      *      *      DD      DISK ERROR - CHECK ARR
199 *      *      *      (AB D12 4 )      TABLE IN USERS GUIDE.
200 *****
OBAE P0 6A 6A           201      RPL  X'68',X'68'
OBA1 5C 15 15 00       202 MOVE MVC RESTOR(X'16',1),END(,1) RESTORE ORIGINAL BOOT STRAP
203
204 *****
205 *

```

BOAO CYLINDER ZERO RECOVERY PROGRAM

```

PRR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
206 *      MOD 10 HALT      MODEL 6 HALT
207 *
208 *
209 *      88      MANUAL ROUTINE HAS BEEN
210 *      RESTORED TO 0000
211 *
212 *      *** ***      (A 1 )      TO RESTART HIT SYSTEM
213 *      AND START
214 *****
OB95 P0 40 40           215 ERHLT2 HPL X'40',X'40'      PRR HLT 2 - BOOT IS RESTORED
OB98 D0 87 85           216      B    ERHLT2(,1)
217
218 *****
219 * IF BB3 HAS BEEN RUN WHEN CYLINDER 0 WAS INTACT, THIS SMALL PROGRAM *
220 * CAN BE KEYED INTO X'0000', AND THEN EXECUTED TO RESTORE CYLINDER 0 *
221 *****
OBPA 222 SMPROG EQU *
223      LIO  7,CTRL      0000 31 A6 0007 * LOAD THIS 22 BYTE
OBPA 31 A6 0007         224      LIO  X'12',DAT      0004 71 A8 0012 * PROGRAM TO RESTORE
OBPA 31 A4 0012         225      SIO  0,SK      0008 P3 A0 00 * A DESTROYED CYL 0
ORC3 P3 A0 00           226      MVT  X'0014',X'DC'  000A 3C DC 0014 * ON A 5406 CE DIAG
ORCA P3 A1 00           227      STO  0,RD      000F P3 A1 00 * DISK PACK. PROG
ORCD 0003A103         228 END    DC  XL4'0003A103'  0012 0002B102 * XXX MUST HAVE BEEN
229
230 *****
231 * DISK CONTROL FIELD TABLE
232 *****
OBDA 00008000         233 SRNH1 DC  XL4'00008000'
OBDA 0003A017         234 R3H1 DC  XL4'0003A017'
OBDA 8003             235 SR3H1 DC  XL2'8003'
ORDE 236 WIDOH1 EQU  **3
OBDE 237 WOH1 DC  XL4'00008017'
ORDE 0103            238 SP3H0 DC  XL2'0103'
ORDE 0003C017        239 R3H0 DC  XL4'0003C017'
ORDE 0003            240 SR3H0 DC  XL2'0003'
ORDE 241 WIDOH0 EQU  **3
ORDE 242 WOH0 DC  XL4'00000017'
ORDE 243 VOH0H1 DC  XL4'0000002F'
ORDE 0008            244 REDCP DC  AL2(RCF-X'B03')
ORDE 0100            245 DATADD DC XL2'0100'
246
247 *****
248 *      ROUTINE 01 - THIS ROUTINE TRANSFERS CYL0 TO CYL3 WHEN THE CE *
249 *      PACK IS IN GOOD CONDITION, SO THAT THE PACK CAN BE *
250 *      RESTORED IF CYL 0 IS DESTROYED AT SOME LATER TIME.*
251 *****
OBFC 252 ORG  X'BFC'
OBFC 01              253 RTJ1 DC  XL1'01'
OBFC 02              254      DC  XL1'00'
OBFC 00A7            255      DC  AL2(PT02)
256
OBCC 257 SAVEIT EQU *
OBCC 258 USING SAVEIT,1
OBCC 259 LA    SAVEIT,1
260
261 *****
262 *      RECALIBRATE
263 *****
OBCC 71 A6 PA        264      LIO  COMON(,1),CTRL
OBCC 5C 01 PE C0    265      MVC  DCF(2,1),RECAL(,1)
OBCC P3 A0 00       266      SIO  0,SK
267
268 *****
269 * RD CYL 0, 1ST 16 SECTORS, UPPER HEAD
270 *****
OBCC 5C 03 PE C4    271      MVC  DCF(4,1),ROOOPU(,1)
OBCC 71 A4 PD       272      LIO  DATA(,1),DAT
OBCC P3 A1 00       273      SIO  0,RD

```

BOAO CYLINDER ZERO RECOVERY PROGRAM

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
OC18 D1 A2 18           274      TIO  *(,1),BUSY
OC18 D1 A0 P3           275      TIO  ERROR(,1),TSTERR
276
277 *****
278 * SEEK TO CYL 3, UPPER HEAD
279 *****
OC1E 5C 01 BE C6       280      MVC  DCF(2,1),SF3U(,1)
OC22 P3 A0 00           281      SIO  0,SK
282
283 *****
284 * WR CYL 3, 1ST 16 SECTORS, UPPER HEAD
285 *****
OC25 5C 03 BE CA       286      MVC  DCF(4,1),W300FU(,1)
OC29 71 A4 P0           287      LIO  DATA(,1),DAT
OC2C P3 A2 00           288      SIO  0,WR
OC2F D1 A2 7F           289      TIO  *(,1),BUSY
OC32 D1 A0 P3           290      TIO  ERROR(,1),TSTERR
291
292 *****
293 * SEEK TO CYL 0, UPPER HEAD
294 *****
OC35 5C 01 BE CC       295      MVC  DCF(2,1),SR3U(,1)
OC39 P3 A0 00           296      SIO  0,SK
297
298 *****
299 * RD CYL 0, 2ND 16 SECTORS, UPPER HEAD
300 *****
OC3C 5C 03 BE D0       301      MVC  DCF(4,1),R040FU(,1)
OC40 71 A4 P0           302      LIO  DATA(,1),DAT
OC43 P3 A1 00           303      SIO  0,WR
OC46 D1 A2 46           304      TIO  *(,1),BUSY
OC49 D1 A0 P3           305      TIO  ERROR(,1),TSTERR
306
307 *****
308 * SEEK TO CYL 3, UPPER HEAD
309 *****
OC4C 5C 01 BE C6       310      MVC  DCF(2,1),SF3U(,1)
OC50 P3 A0 00           311      SIO  0,SK
312
313 *****
314 * WR CYL 3, 2ND 16 SECTORS, UPPER HEAD
315 *****
OC53 5C 03 BE D4       316      MVC  DCF(4,1),W340FU(,1)
OC57 71 A4 P0           317      LIO  DATA(,1),DAT
OC5A P3 A2 00           318      SIO  0,WR
OC5D D1 A2 5D           319      TIO  *(,1),BUSY
OC60 D1 A0 P3           320      TIO  ERROR(,1),TSTERR
321
322 *****
323 * SEEK TO CYL 0, LOWER HEAD
324 *****
OC63 5C 01 BE D6       325      MVC  DCF(2,1),SR3L(,1)
OC67 P3 A0 00           326      SIO  0,SK
327
328 *****
329 * RD CYL 0, 3RD 16 SECTORS, LOWER HEAD
330 *****
OC6A 5C 03 BE DC       331      MVC  DCF(4,1),R040FL(,1)
OC6E 71 A4 P0           332      LIO  DATA(,1),DAT
OC71 P3 A1 00           333      SIO  0,WR
OC74 D1 A2 74           334      TIO  *(,1),BUSY
OC77 D1 A0 P3           335      TIO  ERROR(,1),TSTERR
336
337 *****
338 * SEEK TO CYL 3, LOWER HEAD
339 *****
OC7A 5C 01 BE D8       340      MVC  DCF(2,1),SF3L(,1)
OC7E P3 A0 00           341      SIO  0,SK

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BOAO CYLINDER ZERO RECOVERY PROGRAM

```

ERR LOC OBJECT CODE      ADDR STMT SOURCE STATEMENT
342
343 *****
344 * WR CYL 3, 3RD 16 SECTORS, LOWER HEAD
345 *****
OC81 5C 03 BE P0       346      MVC  DCF(4,1),W3A0PL(,1)
OC85 71 A4 P0           347      LIO  DATA(,1),DAT
OC88 P3 A2 00           348      SIO  0,WR
OC8B D1 A2 8B           349      TIO  *(,1),BUSY
OC8F D1 A0 P3           350      TIO  ERROR(,1),TSTERR
351
352 *****
353 * WR BOOTSTRAP PROGRAM ON SECTOR 'DC', CYL 3
354 *****
OC91 5C 03 BE P4       355      MVC  DCF(4,1),W3DCOL(,1)
OC95 71 A4 PE           356      LIO  SAVDAT(,1),DAT
OC98 P3 A2 00           357      SIO  0,WR
OC9B D1 A2 9B           358      TIO  *(,1),BUSY
OC9E D1 A0 P3           359      TIO  ERROR(,1),TSTERR
360
361 *****
362 * NO MOTION SEEK TO SET UPPER HEAD
363 *****
OCA1 5C 03 BE EC       364      MVC  DCF(4,1),W3KU(,1)
OCA5 P3 A0 00           365      SIO  0,SK
366
367 *****
368 * VER CYL 3, ALL SECTORS, UPPER AND LOWER HEADS
369 *****
OCA8 5C 03 BE E4       370      MVC  DCF(4,1),V3UL(,1)
OCAE P3 A1 03           371      SIO  VER,RD
OCAP D1 A2 AP           372      TIO  *(,1),BUSY
OCB2 D1 A0 P3           373      TIO  ERROR(,1),TSTERR
OCB5 C0 87 0216        374      B    LINK
375
376 *****
377 *
378 * CONTROL WOPDS FOR 'SAVIT'
379 *
380 *****
OCBA 381 COMMON DC     AL2(*+2)
OCBE 382 DCF DC        XL4'00000000'
OCC0 383 RECAL DC     XL2'00FF'
OCC4 384 R000FU DC     XL4'0000000F'
OCC6 385 SF3U DC      XL2'0103'
OCCA 386 W300FU DC     XL4'0003000F'
OCC8 387 SR3U DC      XL2'0003'
OCCD 388 R040FU DC     XL4'0000400F'
OCD4 389 W340FU DC     XL4'0003400F'
OCD5 390 SR3L DC      XL2'8003'
OCD8 391 SF3L DC      XL2'8103'
OCD9 392 R0A0PL DC     XL4'0000A00F'
OCD0 393 W3A0PL DC     XL4'0003A00F'
OCE1 394 V3UL DC      XL4'0003002F'
OCE5 395 W3DCOL DC     XL4'0003DC00'
OCE9 396 WSKU DC      XL4'00000000'
OCEC 397 SAVDAT DC    AL2(BASE)
OCEP 398 DATA DC     AL2(WORK)
OCF1 399 HELP DC      XL2'0000'
400
401 *****
402 * ERROR PRINT ROUTINE
403 *****
OCF3 74 08 P2           404      ERROR ST  HELP(,1),ARP
OCF6 C0 87 021E        405      B    UNPACK
OCFA 406 DC          XL1'02'
OCFB 407 DC          AL2(HELP)
OCFD 408 DC          AL2(DSKERR)
OCFF C0 87 021A        409      B    PRINT

```

'WORK' MUST BE LESS THAN 1'1000'.

BOAO CYLINDER ZERO RECOVERY PROGRAM

Table with columns: ERP LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for cylinder zero recovery, including routines for disk errors and manual program restoration.

BOAO CYLINDER ZERO RECOVERY PROGRAM

Table with columns: ERP LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Continuation of assembly code for cylinder zero recovery, including routines for manual program restoration and various control operations.

BOAO CYLINDER ZERO RECOVERY PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
ARR	C	001	0008	0474	0187 0404
A2	C	001	00A2	0474	0080 0122 0185
A3	C	001	00A3	0472	0186
A4	C	001	00A4	0470	0138
A6	C	001	00A6	0471	
BASE	A	001	0B00	0028	0029 0397
BUSY	C	001	00A2	0488	0274 0289 0304 0319 0334 0349 0358 0372
CARD	A	032	0DA6	0422	
COMMON	A	002	0CPA	0381	0264
CTRL	C	001	00A6	0484	0059* 0223* 0264*
CYLC	C	001	0040	0486	0081 0123
DAT	C	001	00A4	0485	0067* 0095* 0109* 0137* 0224* 0272* 0287* 0302* 0317* 0332* 0347* 0356*
DAT* A	A	002	0CF0	0398	0272 0287 0302 0317 0332 0347
DAT* ADD	A	002	0RF2	0245	0067 0095 0109 0137
DCF	A	004	0CRF	0382	0265* 0271* 0280* 0286* 0295* 0301* 0310* 0316* 0325* 0331* 0340* 0346* 0355* 0364* 0370*
DFEG	A	002	0B0F	0035	0198*
DSFFPR	A	051	0D44	0417	0408 0412
END	A	004	0BD0	0228	0202
FRHLT2	A	003	0RB5	0215	0216
FRP	A	003	0BA2	0185	0069 0082 0089 0097 0111 0124 0131 0139 0146
FRROR	A	003	0CF3	0404	0275 0290 0305 0320 0335 0350 0359 0371
GETIT	A	001	0A00	0003	
GOOD	A	003	0B9C	0158	0159
HALT	C	001	0222	0480	0414
HFLP	A	002	0CF2	0399	0404* 0407
ID	C	001	0001	0476	0098 0130
LINE1	A	037	0F0F	0461	0435
LINE2	A	024	0F23	0462	0439
LINE3	A	024	0F38	0463	0443
LINE4	A	022	0F51	0464	0447
LINE5	A	024	0F69	0465	0451
LINE6	A	022	0F7F	0466	0455
LINE7	A	022	0F95	0467	0459
LINK	C	001	0216	0487	0374 0460
MOV	A	004	0FB1	0202	0030
NSFN	A	004	0CEC	0396	0364
PRINT	C	001	021A	0479	0409 0432 0436 0440 0444 0448 0452 0456
PPTMSG	A	004	0DAB	0432	
PUNCAD	A	002	0D46	0418	
PUNCR	A	001	0D47	0419	0418
PCF	A	004	0B0C	0034	0060* 0066* 0074* 0097* 0094* 0102* 0108* 0116* 0129* 0136* 0144* 0244
PD	C	001	00A1	0482	0041 0068 0110 0 45 0227 0273 0303 0333 0371
PECAL	A	002	0CC0	0383	0265
RFDCP	A	002	0BFO	0244	0059
RESTOR	A	004	0B15	0054	0202*
PT01	A	001	0BFC	0253	0014
PT02	A	001	0DA7	0428	0255
POAOFL	A	004	0CDC	0392	0331
POAOFU	A	004	0CC4	0384	0271
POAOFU	A	004	0CD0	0388	0301
R3H0	A	004	0BFB	0239	0108
R3H1	A	004	0BDB	0234	0066
SAVDAT	A	002	0CFE	0397	0356
SAVEIT	A	001	0C00	0257	0258 0259 0416 0489
SP3H0	A	002	0BFO	0238	0102
SP3L	A	002	0CD9	0391	0340
SP3U	A	002	0CC6	0385	0280 0310
SK	C	001	00A0	0463	0061 0075 0103 0117 0225 0266 0281 0296 0311 0326 0341 0365
SMPPROG	A	001	0B88	0222	
SNSA2	A	002	0B04	0031	0080* 0081 0122* 0123 0185*
SNSA3	A	002	0B06	0032	0186*
SP3H1	A	004	0BDB	0233	0060
SP3H0	A	002	0BFB	0240	0116
SP3H1	A	002	0BDA	0235	0074
SP3L	A	002	0CD6	0390	0325

BOAO CYLINDER ZERO RECOVERY PROGRAM

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SP3U	A	002	0CC6	0387	0295
SVAPR	A	002	0B08	0033	0187*
TSTPR	C	001	00A0	0481	0069 0089 0097 0111 0131 0139 0146 0275 0290 0305 0320 0335 0350 0359 0373
UNPACK	C	001	021E	0478	0405
VEP	C	001	0003	0475	0145 0371
VCHOR1	A	004	0BFF	0243	0144
VROL	A	004	0CF4	0394	0370
WIDOR0	A	001	0BFA	0241	0129
WIDOR1	A	001	0BDE	0236	0087
WORK	A	001	0E96	0468	0398
WP	C	001	00A2	0477	0088 0096 0130 0138 0288 0318 0348 0357
WPH0	A	004	0BFA	0242	0136
WPH1	A	004	0BDE	0237	0094
W3AOFL	A	004	0CF0	0393	0306
W3DCOL	A	004	0CF8	0395	0355
W3OFP0	A	004	0CCA	0396	0286
W3OFP1	A	004	0CF4	0389	0316

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0


```

ERR LOC OBJECT CODE   ADDR STMT SOURCE STATEMENT
2          DECK 4
3 BOB1  START X'A00'
4 *****
5 *
6 *      DISK ADJUSTMENT PROGRAM
7 *
8 *****
9
10 *****
11 *      SECTION PREFACE
12 *****
13          DC      XL2'BOB1'      PROGRAM ID AND REVISION LEVEL
14          DC      XL1'00'      SECTION FLAGS
15          DC      XL1'00'      CURRENT ROUTINE LEVEL
16          DC      XL2'0000'
17          DC      AL2(RT01)      ADDRESS OF FIRST ROUTINE
18          DC      XL2'0000'      ERROR RECORDING TABLE
19 AO      DC      XL3'A04000'    UNIT DEFINITION TABLE
20 BO      DC      XL3'B01000'
21
22 *****
23 *      ROUTINE 01 - DO CLUTCH ADJUST MEASUREMENTS USING 1 TRACK SEEKS *
24 *****
25 RT01    DC      XL1'01'      ROUTINE NUMBER
26          DC      XL1'00'
27          DC      AL2(RT02)
28
29 BEGIN   MVC      HI(15),HI1    MV IN ROUTINE 1 PARAMETERS
30          B        BEGIN3      GO RUN PROGRAM
31          TBN      SBYTES,SSW2F TEST NEXT ROUTINE SWITCH (SSW 2F)
32          BF       BEGIN1      BRANCH TO REPEAT ROUTINE IF NO
33          B        LINK        GO TO NEXT ROUTINE
34
35 *****
36 *      ROUTINE 02 - DO CLUTCH ADJUST MEASUREMENTS USING 2 TRACK SEEKS *
37 *****
38 RT02    DC      XL1'02'
39          DC      XL1'00'
40          DC      AL2(RT03)
41
42          MVC      HI(15),HI2    MOVE IN ROUTINE 2 PARAMETERS
43          B        BEGIN3      GO RUN PROGRAM FOR 2 TRACK SEEKS
44          TBN      SBYTES,SSW2F TEST NEXT ROUTINE SW (SSW 2F)
45          BF       BEGIN1      BRANCH TO REPEAT ROUTINE IF NO
46          B        LINK        GO TO NEXT ROUTINE IF YES
47
48 *****
49 *      ROUTINE 03 - DO CLUTCH ADJUST MEASUREMENTS USING 3 TRACK SEEKS *
50 *****
51 RT03    DC      XL1'03'
52          DC      XL1'00'
53          DC      AL2(RT04)
54
55          MVC      HI(15),HI3    MOVE IN ROUTINE 3 PARAMETERS
56          B        BEGIN3      GO RUN PROGRAM FOR 3 TRACK SEEKS
57          TBN      SBYTES,SSW2F TEST NEXT ROUTINE SW (SSW 2F)
58          BF       BEGIN1      BRANCH TO REPEAT ROUTINE IF NO
59          TBN      SBYTES,SSW2E DO REST OF THE ROUTINES
60          BT       LINK        GO TO NEXT ROUTINE
61          B        LOAD        TERMINATE PROGRAM OR LOOP ON SECTION
62          DC      XL1'00'      NORMAL TERMINATE
63
64 *****
65 *      ROUTINE 04 - DO CLUTCH ADJUST MEASUREMENTS USING 4 TRACK SEEKS *
66 *****
67 RT04    DC      XL1'04'
68          DC      XL1'00'
69          DC      AL2(RT05)

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ERR LOC OBJECT CODE   ADDR STMT SOURCE STATEMENT
70          MVC      HI(15),HI4    MOVE IN ROUTINE 4 PARAMETERS
71          B        BEGIN3      GO RUN PROGRAM FOR 4 TRACK SEEKS
72          TBN      SBYTES,SSW2F TEST NEXT ROUTINE SW (SSW 2F)
73          BF       BEGIN1      BRANCH TO REPEAT ROUTINE IF NO
74          B        LINK        GO TO NEXT ROUTINE IF YES
75
76 *****
77 *      ROUTINE 05 - DO CLUTCH ADJUST MEASUREMENTS USING 5 TRACK SEEKS *
78 *****
79 RT05    DC      XL1'05'
80          DC      XL1'00'
81          DC      AL2(RT06)
82
83          MVC      HI(15),HI5    MOVE IN ROUTINE 5 PARAMETERS
84          B        BEGIN3      GO RUN PROGRAM FOR 5 TRACK SEEKS
85          TBN      SBYTES,SSW2F GO TO NEXT ROUTINE?
86          BF       BEGIN1      BRANCH TO REPEAT ROUTINE
87          B        LINK        GO TO NEXT ROUTINE
88
89 *****
90 *      ROUTINE 06 - DO CLUTCH ADJUST MEASUREMENTS USING 6 TRACK SEEKS *
91 *****
92 RT06    DC      XL1'06'
93          DC      XL1'00'
94          DC      AL2(RT07)
95
96          MVC      HI(15),HI6    MOVE IN ROUTINE 6 PARAMETERS
97          B        BEGIN3      GO RUN PROGRAM FOR 6 TRACK SEEKS
98          TBN      SBYTES,SSW2F GO TO NEXT ROUTINE?
99          BF       BEGIN1      BRANCH TO REPEAT ROUTINE
100         B        LOAD        GO TO TERMINATE OR RESTART
101         DC      XL1'00'      NORMAL TERMINATE
102
103 *****
104 *****
105 **      THE CODING FROM THIS POINT UNTIL YOU REACH ROUTINE 07 IS USED **
106 **      ONLY BY THE FRICTION CLUTCH ADJUSTMENT ROUTINES (01 THRU 06) **
107 **
108 **      THE SUBROUTINES AND CONSTANTS WHICH FOLLOW ROUTINE 06 COULD **
109 **      BE USED BY ANY OF THE ROUTINES 01 THRU 06. **
110 **
111 **      REMEMBER - NORMAL MODE OF OPERATION IS TO ENTER A ROUTINE AND **
112 **      STAY THERE. ENTRY TO ROUTINES IS THRU THE CONSOLE SWITCHES **
113 **      SET TO F2XX JUST AS IT IS WITH ANY OTHER DIAGNOSTIC **
114 **
115 *****
116 *****
117 *****
118 *      ROUTINES 1 THRU 6 USE THE FOLLOWING LIMITS AND PARAMETERS *
119 *      EACH ROUTINE LOADS ITS OWN GROUP OF LIMITS INTO 'HI' FOR USE BY THE *
120 *      MAIN PROGRAM *
121 *****
122
123          DC      XL1'00'
124 FWD5N1  DC      XL2'0101'      *** 1 MUST BE TOGETHER IN THIS ORDER
125 REVSN1  DC      XL2'0001'      *** 2
126 TRK101  DC      XL1'67'      *** 3
127 TRK201  DC      XL1'CB'      *** 4
128 CYC101  DC      CL3'103'      *** 5
129 CYC201  DC      CL3'203'      *** 6
130 L01     DC      XL1'28'      *** 7
131 VAR1    DC      XL1'09'      *** 8
132 HI1     DC      XL1'57'      *** 9
133
134          DC      XL1'00'
135 FWD5N2  DC      XL2'01C2'      *** 1 MUST BE TOGETHER IN THIS ORDER
136 REVSN2  DC      XL2'0002'      *** 2
137 TRK102  DC      XL1'66'      *** 3

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BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OACC	CA	OACC	138	TRK202 DC	XL1'CA'
OACD	FOF5F1	OACF	139	CYC102 DC	CL3'051'
OADO	F1FOF1	OAD2	140	CYC202 DC	CL3'101'
OAD3	4A	OAD3	141	LD2 DC	XL1'4A'
OAD4	09	OAD4	142	VAR2 DC	XL1'09'
OAD5	76	OAD5	143	HI2 DC	XL1'76'
			144		
OAD6	00	OAD6	145	DC	XL1'00'
OAD7	0103	OADB	146	FWDSN3 DC	XL2'0103'
OAD9	0003	OAOA	147	REVSND DC	XL2'0003'
OADB	66	OADB	148	TRK103 DC	XL1'66'
OADC	C9	OADC	149	TRK203 DC	XL1'09'
OADD	FOF3F4	OADF	150	CYC103 DC	CL3'034'
OAE0	FOF6F7	OAE2	151	CYC203 DC	CL3'067'
OAE3	69	OAE3	152	LO3 DC	XL1'69'
OAE4	09	OAE4	153	VAR3 DC	XL1'09'
OAE5	95	OAE5	154	HI3 DC	XL1'95'
			155		
OAE6	00	OAE6	156	DC	XL1'00'
OAE7	0104	OAE8	157	FWDSN4 DC	XL2'0104'
OAE9	0004	OAEA	158	REVSND DC	XL2'0004'
OAEB	64	OAE8	159	TRK104 DC	XL1'64'
OAEC	C8	OAEC	160	TRK204 DC	XL1'C8'
OAEF	FOF2F5	OAEF	161	CYC104 DC	CL3'025'
OAF0	FOF5F0	OAF2	162	CYC204 DC	CL3'050'
OAF3	88	OAF3	163	LO4 DC	XL1'88'
OAF4	09	OAF4	164	VAR4 DC	XL1'09'
OAF5	84	OAF5	165	HI4 DC	XL1'84'
			166		
OAF6	00	OAF6	167	DC	XL1'00'
OAF7	0105	OAF8	168	FWDSN5 DC	XL2'0105'
OAF9	0005	OAF8	169	REVSND DC	XL2'0005'
OAFB	64	OAFB	170	TRK105 DC	XL1'64'
O AFC	C8	O AFC	171	TRK205 DC	XL1'C8'
O AFF	FOF2F0	O AFF	172	CYC105 DC	CL3'020'
OB00	FOF4F0	OB02	173	CYC205 DC	CL3'040'
OB03	A7	OB03	174	LO5 DC	XL1'A7'
OB04	09	OB04	175	VAR5 DC	XL1'09'
OB05	03	OB05	176	HI5 DC	XL1'03'
			177		
OB06	00	OB06	178	DC	XL1'00'
OB07	0106	OB08	179	FWDSN6 DC	XL2'0106'
OB09	0006	OB0A	180	REVSND DC	XL2'0006'
OB0B	66	OB0B	181	TRK106 DC	XL1'66'
OB0C	C6	OB0C	182	TRK206 DC	XL1'C6'
OB0D	FOF1F7	OB0F	183	CYC106 DC	CL3'017'
OB10	FOF3F3	OB12	184	CYC206 DC	CL3'033'
OB13	C6	OB13	185	LO6 DC	XL1'C6'
OB14	09	OB14	186	VAR6 DC	XL1'09'
OB15	F2	OB15	187	HI6 DC	XL1'F2'
			188		
			189	***** PROGRAM LIMITS TABLE - EACH ROUTINE LOADS ITS LIMITS HERE *****	
			190	*****	
OB16	0101	OB17	191	FWDSN DC	XL2'0101'
OB18	0001	OB19	192	REVSND DC	XL2'0001'
OB1A	67	OB1A	193	TRK100 DC	XL1'67'
OB1B	C8	OB1B	194	TRK200 DC	XL1'C8'
OB1C	F1FOF3	OB1E	195	CYC100 DC	CL3'103'
OB1F	F2FOF3	OB21	196	CYC200 DC	CL3'203'
OB22	Z8	OB22	197	LO DC	XL1'Z8'
OB23	08	OB23	198	VAR DC	XL1'08'
OB24	57	OB24	199	HI DC	XL1'57'
OB25	FOF0F0	OB27	200	RYTCYC DC	CL3'000'
			201		
			202	*****	
			203	***** PROGRAM SETUP AND TEST FOR SWITCH CONTROLLED OPTIONS *****	
			204	*****	
OB28	34 08 0F75	OB27	205	BEGIN3 ST	LNKRET+3,ARR
					STORE RETURN TO LINKAGE ADDRESS

BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
OB2C	CO 97 18A9		206	BEGIN1 BC	SETDA,X'97'
OB30	3C 03 1A54		207	MVI	SNPONT,X'03'
OB34	CO 87 0222		208	BGHALT B	MALT
OB38	A000	OB39	209	HLCOD DC	XL2'A000'
OB3A	CO 87 1768		210	B	CLPRTA
OB3E	38 04 020D		211	TBN	SBYTE5,SSW2D
OB42	F2 10 C3		212	JT	PRTRTN
OB45	CO 87 18A9		213	B	SETDA
OB49	CO 87 164D		214	GO B	RECAL
OB4D	OC 01 1A66	OB17	215	MVC	SKDCE(2),FWDSN
OB53	OC 00 0BFE	1A4F	216	MVC	EXPTRK+1(1),TRACK#
OB59	38 10 020C		217	TBN	SBYTE4,SSW23
OB5D	F2 10 0F		218	JT	START1
OB60	38 08 020C		219	TBN	SBYTE4,SSW24
OB64	F2 9C 0B		220	JF	START1
OB67	CO 87 162F		221	B	LACER
OB6B	CO 87 0F50		222	B	RVDONLY
			223		
			224	*****	
			225	* BASIC CLUTCH ADJUSTMENT MEASUREMENT ROUTINE *	
			226	*****	
OB6F	CO 87 16F5		227	START1 B	CLRTBL
OB73	38 FE 1AAA		228	SBF	BITSW,X'FE'
OB77	C2 01 1E00		229	LA	CYCTBL,XR1
OB7B	C1 A0 1056		230	TIO1 TIO	CNDCHK,X'AD'
OB7F	CO 87 0B8A		231	B	CLBCTR
OB83	3A 80 1AAA		232	SBN	BITSW,BIT0
OB87	F2 87 7E		233	J	PRTRTN
OB8A	3C 00 1A55		234	CLBCTR MVI	BCTR,X'CO'
OB8E	3C FF 1A58		235	MVI	RDIDIN,X'FF'
OB92	06 20 1A62	1A6D	236	AZ	SIOCY(3),B001(1)
OB98	31 A6 1A6C		237	LIO1 LIO	SKOCAD,X'A6'
OB9C	F3 A0 00		238	SIO1 SIO	X'00',X'AD'
OB9F	31 A6 1A6A		239	LIO2 LIO	IDADDR,X'A6'
OBA3	F3 A1 01		240	SIO2 SIO	X'01',X'A1'
OBA6	CO 87 0BAA		241	LOOP B	PPIK
OBA8	0D 0A OBA6	OBA6	242	PPIK CLC	LOOP(11),LOOP
OB80	0E 00 1A55	1A6F	243	ALC	BCTR(1),B001
OB86	30 A3 1A53		244	SNS2	SNS2A3,X'A3'
OB8A	39 04 1A52		245	TBF	SNS2A3-1,X'04'
OB8E	F2 90 0F		246	JF	STORE
OB91	3D FD 1A55		247	CLI	BCTR,X'FD'
OB95	F2 81 04		248	JE	EXCAP
OB9C	CO 87 0BA6		249	B	LOOP
OBCC	3A 02 1AAA		250	EXCAP SBN	BITSW,BIT6
OBDO	0D 02 1A62	1A83	251	STORE CLC	SIOCY(3),MAXSID
OBDC	F2 81 2F		252	JE	PRTRTN
OB09	D2 01 01		253	LA	1(XR1),XR1
OBDC	4C 00 00 1A55		254	MVC	0(1,XR1),BCTR
OB01	0C 00 0BEA	1A55	255	MVC	MVDIST+3(1),BCTR
OB07	0E 00 1F00	1A6F	256	MVDIST ALC	DISTBL(1),B001
OB0D	C1 A2 0BED		257	TIO2 TIO	TIO2,X'A2'
OB0F	D2 02 00		258	LA	0(1,XR1),XR2
OB04	36 02 1A4A		259	A	BMI00,XR2
OB08	8C 00 00 1A57		260	MVC	0(1,XR2),RDIDIN-1
OB0D	3D 00 1A57		261	EXPTRK CLI	RDIDIN-1,0
OC01	F2 81 04		262	JE	PRTRTN
OC04	CO 87 0B7B		263	B	TIO1,X'00'
			264	*****	
			265	* PRINT RESULTS OF FWD OR REV PASS - WE GET HERE 4 WAYS. *	
			266	* 1. EXPECTED CYLINDER IS REACHED. *	
			267	* 2. DISK ERROR (EXCEPT CONDITION CHECK) OR NOT READY *	
			268	* WHILE MEASUREMENTS ARE BEING TAKEN. *	
			269	* 3. THERE HAVE BEEN 204 MEASUREMENT CYCLES AND THE *	
			270	* EXPECTED CYLINDER HAS NOT BEEN REACHED. *	
			271	* 4. SENSE SWITCH 2D IS ON *	
			272	*****	
OC08	CO 87 1719		273	PRTRTN B	UPKSTS
					GO UNPACK STATUS

BOB1 5444 DISK ADJUSTMENT UTILITY

BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OC0C CO 87 0F76 274 B ERRST GO TO TEST FOR ERROR
OC10 CO 1F 0C3C 275 MVI SETUP1+2,X'1F' * SET FOR DISTRIBUTION
OC14 OC 01 0C76 OC3D 276 MVC SETUP2+3(2),SETUP1+3 * PRINT OUT
OC1A 3C FF 0C76 277 MVI SETUP2+3,X'FF' * ON THIS RUN
OC1E 3B 01 1AAA 278 SBF BITSW,X'01' RESET PER CYCLE SWITCH
OC22 38 80 020D 279 TBN SBYTE5,SSW28 * BYPASS PER CYCLE MODE IF
OC26 F2 10 0B 280 JT CLERIT * RUNNING IN SNAPSHOT MODE
OC29 38 80 G20C 281 TBN SBYTE4,SSW20 SSW 20 ON?
OC2D F2 90 04 282 JF CLERIT JUMP IF NOT
OC30 3A 01 1AAA 283 SBN BITSW,X'01' TURN ON PER CYCLE SWITCH
OC34 07 06 1A5F 1A5F 284 CLERIT SZ DCTR1(7),DCTR1(7) CLEAR BOTH DECIMAL COUNTERS
OC3A C2 01 1F00 285 SETUP1 LA DISTBL,XR1 TBL ADDR TO XR1. PROG CHANGES Q BYT
286
287 *****
288 * FIND BINERY & DECIMAL VALUE MINUS 1 OF FIRST ENTRY IN *
289 * DISTRIBUTION TABLE *
290 *****
OC3E 7D 00 00 291 FNDST CLI 0(,XR1),0 THIS TABLE POSITION ZERO?
OC41 F2 01 21 292 JNE STSTRT JUMP IF NOT
OC44 D2 01 01 293 LA 1(,XR1),XR1 XR1+1
OC47 06 30 1A5F 1A6D 294 AZ DCTR1(4),D001(1) DECIMAL CTR +1
OC4D 0D 02 1A5F 1A86 295 CLC DCTR1(3),TOMUCH TABLE EMPTY?
OC53 CO 01 0C3E 296 BNE FNDST GO BACK TO FIND START
OC57 CO 87 021A 297 PRINT B PRINT SAMPLE TABLE EMPTY MESSAGE
OC5B C6 298 DC XL1'C6'
OC5C 1C 299 DC IL1'28'
OC5D 1C95 300 DC AL2(NOSMPL)
OC5F A000 301 DC XL2'A000'
OC61 CO 87 0B34 302 B BGHALT GO TO PROG RESTART
OC65 36 01 1A75 303 STSTRT A BMO1,XR1 XR1-1
OC69 07 30 1A5F 1A6D 304 SZ DCTR1(4),D001(1) DECIMAL CTR-1
OC6F 34 01 1A7D 305 ST BSTART,XR1 STORE 1ST TABLE ENTRY ADDR-1
306
307 *****
308 * FIND BINERY VALVE +2 OF END OF DIST TABLE *
309 *****
OC73 C2 01 1FFF 310 SETUP2 LA X'1FFF',XR1 TBL END ADDR TO XR1 PROG ALTERS Q BY
OC77 7D 00 00 311 FNDEND CLI 0(,XR1),0 IS THIS ENTRY ZERO
OC7A F2 01 0B 312 JNE STEND JUMP IF NO
OC7D 36 01 1A75 313 A BMO1,XR1 XR1-1
OC81 CO 87 0C77 314 B FNDEND GO BACK TO FIND END
OC85 36 01 1A71 315 STEND A B002,XR1 XR1+2
OC89 34 01 1A80 316 ST BEND,XR1 STORE LAST TBL ADDR +2
OC8D CO 87 176B 317 B CLPRTA CLEAR PRINT AREA
318
319 *****
320 * SET LO, VAR, HI, ERROR BITS IF NECESSARY *
321 *****
OC91 3B 78 1AAA 322 SBF BITSW,X'78' CLEAR ERROR BITS
OC95 3C 87 0E62 323 MVI UPBR+1,X'87' TURN ON UP BRANCH
OC99 3D 1E 0C75 324 CLI SETUP2+2,X'1E' IS THIS PER CYCLE MODE
OC9D CO 81 0DB9 325 BE LOIS BRANCH IF YES
OCA1 OC 00 1A7E 1A7D 326 MVC SVBSTR(1),BSTART SAVE TABLE START ADDR FROM 1ST PASS
OCA7 OF 00 1A7E 1A71 327 SLC SVBSTR(1),B002 ADJUST SAVED START ADDRESS
OCAD OC 00 1AA8 1A80 328 MVC WORK(1),BEND FETCH TABLE END ADDRESS
OCB3 OF 00 1AAB 1A71 329 SLC WORK(1),B002 CORRECT DIFFERENCE
OCB9 OD 00 1AAB 0B24 330 CLC WORK(1),HI LOOK FOR TOO HI
OCBF F2 04 04 331 JNH VARCK BRANCH IF OK
OCC2 3A 20 1AAA 332 SBN BITSW,BIT2 SET TOO LATE BIT
OCC6 OF 00 1AAB 1A7D 333 VARCK SLC WORK(1),BSTART FIND VARIATION - EARLIEST TO LATEST
OCCC OD 00 0B23 1AAB 334 CLC VAR(1),WORK IS TIME VARIATION TOO MUCH
OCD2 F2 02 04 335 JNL LOCK BRANCH IF OK
OCD5 3A 08 1AAA 336 SBN BITSW,BIT4 SET TOO MUCH VARIATION BIT
OCD9 OD 00 1A7D 0B22 337 LOCK CLC BSTART(1),LO LOOK FOR TOO LOW TIME
OCDF F2 02 04 338 JNL TRUK BRANCH IF NOT TOO MUCH
OCE2 3A 40 1AAA 339 SBN BITSW,BIT1 SET TOO EARLY BIT
340 *****
341 * PRINT TWO LINE HEADING FOR DISTRIBUTION BAR GRAPH *

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OCE6 3A 80 0D2A 342 *****
OCEA 3A 80 0DB1 343 TRUK SBN PRTL1,BITO MAKE HEADING AN ERROR LINE
OCEE 3A 80 054C 344 SBN PRTL2,BITO MAKE DETAIL AN ERROR LINE
OCF2 3A 80 1032 345 SBN PRTL3,BITO MAKE GRAPH AN ERROR LINE
OCF6 39 EE 1AAA 346 SBN PRTL4,BITO MAKE SPACE AN ERROR LINE
OCFA F2 90 29 347 TBF BITSW,X'EE' ARE ANY ERROR BITS SET?
OCFD 3B 80 0D2A 348 JF SIRK JUMP IF NOT
OD01 3B 80 0DB1 349 SBF PRTL1,BITO MAKE HEADING NON ERROR LINE
OD05 3B 80 0E66 350 SBF PRTL2,BITO MAKE DETAIL NON ERROR LINE
OD09 3B 80 1032 351 SBF PRTL3,BITO MAKE GRAPH NON ERROR LINE
OD0D 3B 80 020B 352 SBF PRTL4,BITO MAKE SPACE NON ERROR LINE
OD11 F2 90 12 353 TBN SBYTE0,SSW04 IS SSW 4 ON?
OD14 C2 01 0F00 354 JF SIRK JUMP IF NO ERRORS
OD18 OD FF 0CD9 0CD9 355 LA '0F00',XR1 SET DELAY VALUE
OD1E 36 01 1A75 356 KRIS CLC LOCK(256),LOCK DELAY TO SIMULATE PTR DELAY
OD22 CO 01 0D18 357 A BMO1,XR1 DECREMENT LOOP CONTROL
OD26 CO 87 021A 358 BNZ KRIS GO BACK IF DELAY NOT FINISHED
OD2A 41 359 SIRK B PRINT PRINT HEADING
OD2B 55 360 PRTL1 DC XL1'41' BIT 0 MAY BE ALTERED BY THE PROGRAM
OD2C 1C5C 361 DC IL1'85'
OD2E A01A 362 DC AL2(HEAD+12)
OD30 OC 06 1CA3 1EFA 363 FRSTLN DC XL2'A01A'
OD36 3B 01 1A65 364 MVC PRTA+8(7),FWD MOVE IN FORWARD MESSAGE
OD3A F2 10 06 365 TBN SKDCF-1,X'01' WAS THIS OPERATION FORWARD
OD3D OC 06 1CA3 1EF3 366 JT LRAK JUMP IF IT WAS
OD43 OC 02 1CAC 1A62 367 MVC PRTA+8(7),REV SET REVERSE MESSAGE
OD49 0B 03 1CB5 1A66 368 LRAK MVC PRTA+17(3),SIOPY SET # OF SID'S MESSAGE
OD4F 3A F0 1CB5 369 MNN PRTA+26,SKDCF SET # OF TRACKS
OD53 OC 04 1CBB 1C9A 370 SBN PRTA+26,X'F0' MAKE PRINTABLE NUMBER
OD59 OC 01 1CC2 1C07 371 MVC PRTA+32(5),TRACK MOVE IN THE WORD 'TRACK'
OD5F OC 08 1CCD 1C0E 372 MVC PRTA+39(2),DISK MOVE IN DRIVE USED
OD65 CO 87 177D 373 MVC PRTA+50(9),MS SET MILLISEC MESSAGE
OD69 0B22 374 B CNVBTD GO CONVERT LO TO DECIMAL
OD6A 375 DC AL2(LO)
OD6B OC 02 1CF4 1A5B 376 MVC PRTA+89(3),DCTR2 STORE DECIMAL LO
OD71 CO 87 177D 377 B CNVBTD GO CONVERT VAR TO DECIMAL
OD75 0B23 378 DC AL2(VAR)
OD77 OC 02 1CF7 1A5B 379 MVC PRTA+92(3),DCTR2 STORE DECIMAL VARIATION
OD7D CO 87 177D 380 B CNVBTD GO CONVERT HI TO DECIMAL
OD81 0B24 381 DC AL2(HI)
OD83 OC 02 1CFA 1A5B 382 MVC PRTA+95(3),DCTR2 STORE DECIMAL HI
OD89 OC 12 1CE3 1AA4 383 MVC PRTA+72(19),EDIT2 BRING IN LIMITS EDIT WORD
OD8F DA 12 1CE3 1CFA 384 ED PRTA+72(19),PRTA+95 EDIT LIMITS INTO PRINT AREA
OD95 JC 0A 1CEF 1C6B 385 MVC PRTA+84(11),STSMG MOVE IN STATUS
OD9B 0B 01 1CD1 1A47 386 ITC PRTA+54(2),BLNK INSERT BLANKS IN LO LIMIT
ODA1 0B 01 1CD6 1A47 387 ITC PRTA+59(2),BLNK INSERT BLANKS IN VAR LIMIT
ODA7 0B 01 1CDC 1A47 388 ITC PRTA+65(2),BLNK INSERT BLANKS IN HI LIMIT
ODAD CO 87 021A 389 B PRINT PRINT DETAILS UNDER HEADING
ODB1 02 390 PRTL2 DC XL1'02' BIT 0 MAY BE ALTERED BY THE PROGRAM
ODB2 54 391 DC IL1'84'
ODB3 1CEF 392 DC AL2(PRTA+84)
ODB5 CO 87 176B 393 B CLPRTA CLEAR PRINT AREA
394
395 *****
396 * BAR GRAPH SET UP AND PRINT ROUTINE *
397 *****
ODB9 35 01 1A7D 398 LOIS L BSTART,XR1 POINT XR1 TO START OF TABLE
ODBD 1C 00 0DEE 00 399 MORPRT MVC PROP+1(1),0(,XR1) PUT TBL VALUE IN 'MAKE GRAPH' INST
ODC2 CO 87 177D 400 B CNVBTD CONVERT TABLE VALUE TO DECIMAL
ODC6 0DEE 401 DC AL2(PROP+1)
ODC8 3D 1E 0C75 402 CLI SETUP2+2,X'1E' IS THIS PER CYCLE MODE
ODCF F2 01 09 403 JNE TUOLNG JUMP IF NOT
ODDF F2 82 78 404 SLC PROP+1(1),SVBSTR SHORTEN GRAPH LINE IF IN PER CYCLE
ODD8 3D 52 0DEE 405 JM PASTPR SKIP GRAPH LINE IF NOTHING TO PRINT
ODDE F2 04 04 406 TOOLNG CLI PROP+1,X'52' IS GRAPH LINE TOO LONG FOR PRT AREA
ODDF 3C 52 0DEE 407 JNH GRAPH JUMP IF NOT
ODE3 3C 09 0E4D 408 MVI PROP+1,X'52' SET MAXIMUM GRAPH LINE LENGTH
409 GRAPH MVI PRTLNG,X'09' SET PRT LENGTH FOR NUMBERS ONLY

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BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
ODE7 OE 00 OE4D ODEE 410 ALC PRTLNG(1),PROP+1 ADD GRAPH LENGTH TO PRINT LENGTH
ODED OB 00 1CA4 1A48 411 PROP ITC PRTA+9(1),SPLAT PUT GRAPH LINE IN PRINT AREA
ODF3 3C 40 1CA4 412 MVI PRTA+9,X'40' REMOVE EXTRA GRAPH CHARACTER
ODF7 34 08 OE4F 413 ST PRTADD,ARR SET PRINT PARAMETER
ODFB OF 01 OE4F 1A6F 414 SLC PRTADD(2),8001 ADJUST PRINT PARAMETER
415 *****
416 * SET UP PRINT LINE LABELS *
417 *****
OE01 OC 02 1C9E 1A5F 418 MVC PRTA+03(3),DCTR1 MV IN LINE VALUE
OE07 OC 03 1CA3 1A95 419 MVC PRTA+08(4),EDIT1 SET EDIT WORD
OE0D OA 03 1CA3 1A58 420 ED PRTA+08(4),DCTR2 EDIT GRAPH VALUE
OE13 OB 02 1C9C 1A47 421 ITC PRTA+1(3),BLNK INSERT BLANKS INTO LINE VALUE
OE19 OB 03 1CA0 1A47 422 ITC PRTA+5(4),BLNK INSERT BLANKS IN GRAPH LINE
OE1F 3D 1E OC3C 423 CLI SETUP+2,X'1E' IS THIS PASS PER CYCLE?
OE23 F2 81 22 424 JE ALLSET JUMP IF YES
OE26 3C 40 1CA0 425 MVI PRTA+05,X'40' CLEAR PREV SETUP
OE2A OC 03 1C9F 1A95 426 MVC PRTA+04(4),EDIT1 MV IN EDIT WD
OE30 OA 03 1C9F 1A5F 427 ED PRTA+04(4),DCTR1 EDIT LINE VALUE
OE36 OC 02 1CA3 1A58 428 MVC PRTA+8(3),DCTR2 MOVE IN GRAPH VALJE
OE3C OB 01 1C9C 1A47 429 ITC PRTA+01(2),BLNK INSERT BLANKS IN LINE VALUE
OE42 OB 02 1CA1 1A47 430 ITC PRTA+6(3),BLNK INSERT BLANKS IN GRAPH VALUE
OE48 CO 87 021A 431 ALLSET B PRINT GRAPH LINE
OE4C 01 432 PRTL3 DC XL1'01' BIT 0 MAY BE ALTERED BY THE PROGRAM
OE4D 00 433 PRTLNG DC XL1'00' THIS BYTE IS CHANGED BY THE PROGRAM
OE4E 0000 434 PRTADD DC XL2'0000' THESE BYTES ARE CHGED BY THE PROGRAM
OE50 CO 87 176B 435 PASTPR B CLPRTA CLEAR PRINT AREA
436 *****
437 *****
438 * CHECK FOR DIPS AND SKIPS ERROR AND SET BIT IF NECESSARY *
439 *****
OE54 O6 30 1A5F 1A6D 440 AZ DCTR1(4),D001(1) ADD ONE TO LINE VALUE
OE5A 3D 1E OC75 441 CLI SETUP2+2,X'1E' IS THIS PER CYCLE MODE?
OE5E F2 81 1D 442 JE ENDCK BRANCH IF YES
OE61 F2 87 0E 443 UPBR J CKUP Q CODE IS ALTERED BY THE PROGRAM
OE64 5D 00 01 00 444 CLC 1(1,XR1),0(,XR1) CHECK FOR DECREASE IN TIME
OE68 F2 04 13 445 JNH ENDCK BRANCH IF DECREASE
OE6B 3A 10 1AAA 446 SBN BITSW,BIT3 SET DIPS BIT
OE6F F2 87 0C 447 J ENDCK
OE72 5D 0C 01 00 448 CKUP CLC 1(1,XR1),0(,XR1) CHECK FOR INCREASE IN TIME
OE76 CO 02 OE7E 449 BNL ENDCK BRANCH IF INCREASE
OE7A 3C 07 OE62 450 MVI UPBR+1,X'07' TURN OFF UP BRANCH
OE7E D2 01 01 451 ENDCK LA 1(,XR1),XR1 INCREMENT TABLE POINTER
OE81 34 01 1A4C 452 ST SVXR1,XR1 SAVE XR1
OE85 0D 01 1A4C 1A80 453 CLC SVXR1(2),BEND TBL START = TBL END?
OE8B CO 01 0DBD 454 BNE MORPRT GO SET UP MORE LINES
OE8F CO 87 021A 455 B PRINT GO TO SPACE ONLY
OE93 11 456 DC XL1'11'
457 *****
458 *****
459 * CHECK ERROR BITS IN BITSW AND PRINT APPROPRIATE ERROR MESSAGES *
460 *****
OE94 39 EE 1AAA 461 TBF BITSW,X'EE' TST FOR ALL ERR EXCEPT DIPS & SKIPS
OE98 F2 10 73 462 JT SPACE SKIP ERROR PRINT IF NONE
OE9B CO 87 021A 463 B PRINT
OE9F C1 464 DC XL1'C1'
OEAO 01 465 DC IL1'01'
OEAl 1A47 466 DC AL2(BLNK)
OEAS AD00 467 ERRCOD DC XL2'A000'
OEAS 38 80 1AAA 468 TSTBTO TBN BITSW,BIT0 TEST FOR ERROR BIT 0
OEAS F2 90 C8 469 JF TSTB1 GO TO NEXT TEST
OEAC CO 87 021A 470 B PRINT
OEBO 81 471 DC XL1'81'
OEB1 21 472 DC IL1'33'
OEB2 1ACB 473 DC AL2(BIT00)
OEB4 38 40 1AAA 474 TSTBT1 TBN BITSW,BIT1 TEST FOR ERROR BIT 1
OEB8 F2 90 08 475 JF TSTB2 GO TO NEXT TEST
OEBB CO 87 021A 476 B PRINT
OEBF 81 477 DC XL1'81'

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
OEC0 29 478 DC IL1'41'
OEC1 1AF4 479 DC AL2(BIT01)
OEC3 38 20 1AAA 480 TSTBT2 TBN BITSW,BIT2 TEST FOR ERROR BIT 2
OEC7 F2 90 08 481 JF TSTB3 GO TO NEXT TEST
OECA CO 87 021A 482 B PRINT
OECE 81 483 DC XL1'81'
OECF 2A 484 DC IL1'42'
OEDO 1B1E 485 DC AL2(BIT02)
OED2 38 10 1AAA 486 TSTBT3 TBN BITSW,BIT3 TEST FOR ERROR BIT 3
OED6 F2 90 08 487 JF TSTB4 GO TO NEXT TEST
OED9 CO 87 021A 488 B PRINT
OEDO 81 489 DC XL1'81'
OEDE 16 490 DC IL1'22'
OEDF 1B34 491 DC AL2(BIT03)
OEE1 38 08 1AAA 492 TSTBT4 TBN BITSW,BIT4 TEST FOR ERROR BIT 4
OEE5 F2 90 08 493 JF TSTB5 GO TO NEXT TEST
OEE8 CO 87 021A 494 B PRINT
OEEC 81 495 DC XL1'81'
OEED 2E 496 DC IL1'46'
OEEF 1B62 497 DC AL2(BIT04)
OEF0 38 04 1AAA 498 TSTBT5 TBN BITSW,BIT5 TEST FOR ERROR BIT 5
OEF4 F2 90 08 499 JF TSTB6 GO TO NEXT TEST
OEF7 CO 87 021A 500 B PRINT
OEF8 81 501 DC XL1'81'
OEF9 2C 502 DC IL1'44'
OEFD 1B8E 503 DC AL2(BIT05)
OEEF 38 02 1AAA 504 TSTBT6 TBN BITSW,BIT6 TEST FOR ERROR BIT 6
OEF3 F2 90 08 505 JF SPACE GO TO SPACE 4 LINES
OEF6 CO 87 021A 506 B PRINT
OFOA 01 507 DC XL1'81'
OFOB 23 508 DC IL1'35'
OFOC 1B81 509 DC AL2(BIT06)
OFOE CO 87 021A 510 SPACE B PRINT SPACE 4 LINES
OF12 14 511 DC XL1'14'
512 *****
513 *****
514 * MEASUREMENT AND PRINTOUT CYCLE CONTROL *
515 *****
OF13 38 01 1AAA 516 TBN BITSW,X'01' IS PER CYCLE SW ON?
OF17 38 01 1AAA 517 SBF BITSW,X'01' RESET PER CYCLE SWITCH
OF18 F2 90 12 518 JF NOPRCY JUMP IF SW WAS NOT ON
OF1E 3C 1E OC3C 519 MVI SETUP+2,X'1E' * SET FOR PER
OF22 OC 01 OC76 520 MVC SETUP2+3(2),SETUP1+3 * CYCLE PRINTOUT
OF23 3C CC OC76 521 MVI SETUP2+3,X'CC' * ON THIS RUN
OF2C CO 87 0C34 522 B CLERIT GO TO SET UP PER CYCLE PRINT OUT
OF30 38 04 020D 523 NOPRCY TBN SBYTE5,SSW2D TEST FOR REPEAT PRINT
OF34 CO 10 0B34 524 BT BGMHALT GO TO BEGINNING IF ON
OF38 38 01 1A65 525 TBN SKDCF-1,X'01' FWD SEEKING JUST COMPLETED?
OF3C F2 90 1F 526 JF TST28 GO TEST FOR SNAPSHOT MODE
OF3F 38 08 020C 527 TBN SBYTE4,SSW24 TEST FOR REVERSE ONLY
OF43 F2 10 0A 528 JT RVONLY
OF46 38 10 020C 529 TBN SBYTE4,SSW23 TEST FOR FORWARD ONLY
OF4A F2 90 03 530 JF RVONLY
OF4D F2 87 0E 531 J TST28
OF50 OC 01 1A66 0B19 532 RVONLY MVC SKDCF(2),REVSN GO TEST FOR SNAPSHOT MODE
OF56 3C 00 0BFE 533 MVI EXPTRK+1,X'00' SET EXPECTED END ID FOR REV
OF5A CO 87 0B6F 534 B START1 GO BACK TO RUN REVERSE
535 *****
OF5E 38 80 020D 536 TST28 TBN SBYTE5,SSW28 IS SNAPSHOT MODE IN USE
OF62 F2 90 0D 537 JF LNKRET GO BACK TO USING ROUTINE
OF65 OF 00 1A54 1A6F 538 SLC SNPCNT(1),8001 REDUCE SNAPSHOT COUNT
OF6B F2 81 04 539 JZ LNKRET GO TO CALLING ROUTINE IF ZERO
OF6E CO 87 0B49 540 B GO GO DO ANOTHER MEASUREMENT
541 *****
542 *****
543 * LINK RETURN (LNKRET) BRANCH ADDRESS COMES FROM THE STORE ARR *
544 * INSTRUCTION AT 'BEGIN3', SETTING THE LINK BACK TO EACH OF THE *
545 * ROUTINES 1 THRU 7. *

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
546 *****
547 LNKRET B 0 RETURN TO CALLING ROUTINE
548
549 *****
550 * TEST FOR ERROR WHEN NORMAL PRINT OUT IS CALLED FOR. *
551 * THERE ARE TWO CAUSES FOR ADDITIONAL ERROR TABLE PRINT OUT. *
552 * 1. ANY STATUS ERROR OR NOT READY WHILE MAKING MEASUREMENTS. *
553 * 2. INCORRECT NUMBER OF SID CYCLES HAD BEEN TAKEN WHEN THE *
554 * PRINT OUT ROUTINE WAS CALLED FOR. *
555 *
556 * NOTE: CORRECT NUMBER OF SID CYCLES IS DETERMINED BY THE NUMBER *
557 * OF TRACKS PER SEEK. (SEE 'CYL100' OR 'CYL200') *
558 *****
559 EARTST ST EERRTS+3,ARR SET RETURN
560 ST SVXR1,XR1 SAVE XR1
561 ST SVXR2,XR2 SAVE XR2
562 TI05 TIO UNPKID,X'A0' BR ON ERROR OR NOT READY
563 CLC RYTCYC(3),SIOCY ARE CYCLES TAKEN CORRECT?
564 JE QUKEND BR TO END IF EQUAL
565 SBN BITSW,BIT5 SET INCORRECT I/O CYCLES BIT
566 *****
567 * PRINT OUT ID TABLE CN ERROR*
568 *****
569 UNPKID CLC DISTBL+254(255),DISTBL+255 ARE ANY MEASUREMENTS RECORDED?
570 BE NOSAMP BRANCH TO NO SMPL ERROR PRINT IF NO
571 B PRINT GO PRINT HEADING
572 DC XL1'C2'
573 DC IL1'17'
574 DC AL2(IDMSG)
575 DC XL2'A000'
576 LA 0,XR1 LD ID TABLE ADDRESS
577 ORG *-2
578 DC AL2(IDTBL+1)
579 LA 0,XR2 LD PRINT AREA ADDRESS
580 ORG *-2
581 DC AL2(PRTA+10)
582 MVI OLD,X'00' SET OLD ID TO 00
583 TBN SKOCF-1,X'01' LOOK FOR FORWARD DIRECTION
584 JT LNSTRT
585 MVC OLD(1),TRACK# SET STARTING TRACK
586 LNSTRT ST PACKED,XR1 SET PACKED ADDRESS
587 ST UNPKED,XR2 SET UNPACKED ADDRESS
588 CLC UNPKED(2),HIPRT IS THIS END OF PRINT AREA
589 JNL PRTALN GO PRINT A LINE OF ID'S
590 CLI O(,XR1),X'FF' LOOK FOR END OF RD ID'S
591 JE PRTALN GO PRINT LAST LINE OF ID'S
592 B UNPACK UNPACK AN ID INTO THE PRINT AREA
593 DC XL1'01'
594 PACKED DC XL2'0000' THIS CONSTANT ALTERED BY PROGRAM
595 UNPKED DC XL2'0000' THIS CONSTANT ALTERED BY PROGRAM
596 TBN SKOCF-1,X'01' WAS THIS A FORWARD SEEK?
597 JT FWDYES JUMP IF IT WAS
598 SLC OLD(1),SKOCF SET OLD ID FOR REVERSE
599 J COMPID
600 FWDYES ALC OLD(1),SKOCF SET OLD ID FOR FORWARD
601 COMPID CLC OLD(1),O(,XR1) OLD ID +/- LAST SEEK = THIS ID?
602 MVC OLD(1),O(,XR1) MOVE THIS ID TO OLD ID
603 JE XRINCR
604 MVI 1(,XR2),X'5C' SET BAD SEEK FLAG
605 SBN BITSW1,BIT7 TURN ON FOOTNOTE CONTROL
606 XRINCR LA 1(,XR1),XR1 INCREMENT ID TABLE POINTER
607 LA 4(,XR2),XR2 INCREMENT PRINT AREA POINTER
608 B LNSTRT
609 PRTALN LA 0,XR2 RESTART PRINT LINE POINTER
610 ORG *-2
611 DC AL2(PRTA+6)
612 B PRINT PRINT A LINE OF ID'S
613 DC XL1'81'

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1010 42 DC IL1'66'
101E 1CDE DC AL2(PRTA+67)
1020 CO 87 176B B CLPRTA
1024 7D FF 00 B CLPRTA
1027 F2 81 04 B CLPRTA
102A CO 87 OFCO B CLPRTA
102E CO 87 021A B CLPRTA
1032 11 B CLPRTA
1033 CO 87 1752 B CLPRTA
1037 38 01 1AA9 B CLPRTA
103B F2 90 0C B CLPRTA
103E 38 01 1AA9 B CLPRTA
1042 CO 87 021A B CLPRTA
1046 82 DC XL1'82'
1047 33 DC IL1'51'
1048 JDIFF DC AL2(NOTE)
104A 35 01 1A4C L SVXR1,XR1 RESTORE XR1
104E 35 02 1A4E L SVXR2,XR2 RESTORE XR2
1052 CO 87 0000 B EERRTS B RETURN
632 EERRTS B *-
633 *****
634 * ALLOW TEST TO CONTINUE WITH CONDITION CHECK IF NO OTHER ERROR *
635 *****
636 CNDCHK ST ECNDCH+3,ARR STORE RETURN
637 ST SVXR1,XR1 SAVE XR1
638 L ECNDCH+3,XR1 GET RETURN ADDRESS
639 LA 4(,XR1),XR1 INCREMENT RETURN BY 4
640 ST ECNDCH+3,XR1 STORE BAD RETURN
641 L SVXR1,XR1 RESTORE XR1
642 B UPKSTS GO TO GET & UNPACK STATUS
643 TBF SNSOA1-1,X'FD' *ANY BESIDES COND CHK?
644 TBF SNSOA1,X'24' *ANY BESIDES COND CHK?
645 TBF SNS2A3-1,X'80' *ANY BESIDES COND CHK?
646 ECNDCH BT *- GOOD RETURN
647 EECNDC B 0 GO TO BAD RETURN
648
649
650 *****
651 * ROUTINE 07 - PRINTS OUT STATUS AND READ ID OF CURRENT CARR LOC *
652 *****
653 RT07 DC XL1'07'
654 DC XL1'00'
655 DC AL2(RT08)
656
657 ROUTN7 B HALTR GO TO GENERAL ROUTINE HALT
658 B PRINT PRINT HEADING
659 DC XL1'41'
660 DC IL1'01'
661 EC AL2(BLNK)
662 DC XL2'A000'
663 B UPKSTS UNPACK STATUS INTO MESSAGE
664 B PRTSTS PRINT OUT THE STATUS BYTES
665 B READID READ CYL ID OF CURRENT CARR LOCATION
666 B PRTID PRINT THE ID FIELD JUST READ
667 B ROUTN7 RETURN TO START OF ROUTINE
668 *****
669 * ROUTINE 8 QUICK SEEK CHECK - SEEK BETWEEN 100 & 101 - CHK EACH *
670 * ID FOR EXPECTED TRACK *
671 *****
672 RT08 DC XL1'08'
673 DC XL1'00'
674 DC AL2(RT09)
675 QSKCHK B RECAL RECALIBRATE CARRIAGE
676 MVI X'A03',X'C8' SET CURRENT ROUTINE TO 08
677 USING FRSTSK,XR2
678 USING FRSTSK,XR1
679 BASE LA FRSTSK,XR1 LOAD BASE REGISTER WITH BASE VALUE
680 MVC ENOTOK+3(2,XR1),QCHKAD(,XR1) SET ERR RETURN FOR THIS RTN
681 L R0IDIN,XR2 PUT CYL/SEC FROM ID FLD IN XR2

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Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk adjustment utility.

523/15

Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE, STATEMENT. Contains assembly code for disk adjustment utility.

8081 5444 DISK ADJUSTMENT UTILITY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
1236	F3 A1 03	816	SIO11	SIO VER, RD VERIFY INSTRUCTION
1239	D1 A2 12	817	TIO10	TIO *(,XR1),BUSY WAIT FOR VERIFY
123C	D1 A0 28	818	TIO11	TIO SCNBAD(,XR1),TSTERR BRANCH IF ERROR
123F	7D 00 F0	819	LIMIT	CLI COMDCF+1(,XR1),0 WAS THIS THE LAST TRACK
1242	C0 81 132E	820	BE	SCGCOO JUMP WHEN SCANS ARE COMPLETE
1246	4E 00 F0 1A6F	821	ADCYL	ALC COMDCF+1(1,XR1),B001 MAKE NEXT CYLINDER NUMBER
124B	C0 87 1220	822	B	MORSCN GO TAKE ANOTHER SCAN
823				
824				*****
825	*			SCAN ERROR PRINT ROUTINE *
826	*****			*****
124F		827	SCNBAD	EQU * CLEAR PRINT AREA
124F	C0 87 176B	828	B	CLPRTA Q BYTE CHANGED BY PROGRAM
1253	F0 87 15	829	HDSW	J CHARLY SET FIRST TIME SW TO RUN
1256	7C 87 2D	830	MVI	HDSW+1(,XR1),X'87' GO PRINT FIRST HEADING
1259	C0 87 021A	831	B	PRINT
125D	C1	1250	832	DC XL1'C1' GO UNPACK STATUS
125E	08	125E	833	DC IL1'08' SET STATUS IN MSG
125F	1369	1260	834	DC AL2(SCMS) GO READ ID FLD INTO 'RDIDIN'
1261	A000	1262	835	DC XL2'A000' SET EXP CYL IN MSG
1263	C0 87 021A	836	B	PRINT
1267	82	1267	837	DC XL1'82' UNPACK DCF INTO MESSAGE
1268	4B	1268	838	DC IL1'75' UNPACK DCF INTO MESSAGE
1269	13B4	126A	839	DC AL2(SCMS1A) UNPACK DCF INTO MESSAGE
		1C9B	840	USING PRTA, XR2
126B	C2 02 1C9B	841	CHARLY	LA PRTA, XR2
126F	C0 87 1719	842	B	UPKSTS
1273	8C 0A 2A 1C6B	843	MVC	PRTA+42(11,XR2),STMSG SET ACT CYL IN MSG
1278	C0 87 16D3	844	B	READID UNPACK RD ID FIELD
127C	C0 87 177D	845	E	CNVBTD
1280	1317	1281	846	DC AL2(COMDCF+1)
1282	8C 0L 03 1A5B	847	MVC	PRTA+3(3,XR2),DCTR2 SET EXP CYL IN MSG
1287	C0 87 177D	848	B	CNVBTD
128B	1A57	128C	849	DC AL2(RDIDIN-1)
128D	8C 02 08 1A5B	850	MVC	PRTA+8(3,XR2),DCTR2 SET ACT CYL IN MSG
1292	C0 87 021E	851	B	UNPACK UNPACK DCF INTO MESSAGE
1296	04	1296	852	DC XL1'04'
1297	1319	1298	853	DC AL2(COMDCF+3)
1299	1CAD	129A	854	DC AL2(PRTA+18)
129B	C0 87 021E	855	B	UNPACK GO UNPACK RD ID FIELD
129F	03	129F	856	DC XL1'03'
12A0	1A58	12A1	857	DC AL2(RDIDIN)
12A2	1C86	12A3	858	DC AL2(PRTA+27)
12A4	31 A6 132B	859	LIO19	LIO NOMOAD, CTRL
12A8	F3 A0 00	860	SIO17	SIO 0, SK NO MOTICN SEEK TO SET HEAD TO 0 OR 2
12AB	71 A4 EA	861	LIO15	LIO DA, AD(,XR1), DAT LOAD DATA REGISTER
12AE	71 A6 EE	862	LIO16	LIO VDCFAD(,XR1), CTRL LOAD CONTROL REGISTER
12B1	1C 00 1AAB F2	863	MVC	WORK(1), DCF(,XR1) SAVE RESIDUAL SECTOR COUNT
12B6	5C 01 F2 EC	864	MVC	DCF(2, XR1), RELOAD(, XR1) RESET THE DCF
12BA	4F 00 F2 1AAB	865	SLC	DCF(1, XR1), WORK SET SEC COUNT FOR RD DIAG
12BF	F2 02 08	866	JNM	DON
12C2	8C 18 49 1A02	867	MVC	PRTA+73(28, XR2), VDATOK SET DATA OK MESSAGE
12C7	F2 87 29	868	J	GEORGE
12CA	GC 0B 1F0B 1329	869	DON	MVC DISTBL+11(12), NODAT SET ERROR IF NO READ
12D0	F3 A1 02	870	SIO14	SIO DIAG, RD READ BAD SECTOR
12D3	D1 A2 AC	871	TIO14	TIO *(,XR1), BUSY WAIT FOR DIAGNOSTIC READ
12D6	0D 08 1329 1F0B	872	CLC	NODAT(12), DISTBL+11 DID ANYTHING READ?
12DC	F2 81 0F	873	JE	FRED SKIP UNPACK IF IT DID NOT
12DF	C0 87 021E	874	B	UNPACK UNPACK 1ST 12 BYTES OF DATA
12E3	0C	12E3	875	DC IL1'12'
12E4	1F0B	12E5	876	DC AL2(DISTBL+11)
12E6	1CE0	12E7	877	DC AL2(PRTA+69)
12E8	BC 5C 47	878	MVI	PRTA+71(,XR2), X'5C' SET LEFT FLD MARK IN MSG
12EB	BC 5C 54	879	MVI	PRTA+84(,XR2), X'5C' SET RIGHT FLD MARK IN MSG
12EE	8C 0B 53 1F0B	880	FRED	MVC PRTA+83(12, XR2), DISTBL+11 SET PACKED DATA IN MSG
12F3	C0 87 021A	881	GEORGE	B PRINT PRINT ACT - EXP - CTRL - ID - DATA
12F7	82	12F7	882	DC XL1'82'
12F8	54	12F8	883	DC IL1'84'

8081 5444 DISK ADJUSTMENT UTILITY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE STATEMENT
12F9	1CEF	12FA	884	DC AL2(PRTA+84)
12FB	C0 87 176B	885	B	CLPRTA
12FF	4D 00 F0 1A4F	886	CLC	COMDCF+1(,XR1), TRACK# GO CLEAR PRINT AREA
130A	F2 81 27	887	JE	SCGCOO WAS THIS THE LAST TRACK
1307	00 87 1F	888	B	ADCYL(,XR1) GO TO END
130A	130C	130B	889	VOLDAD DC GO READ ANOTHER CYLINDER
130C	00000002	130F	890	VOLDAD DC
1310	1EFF	1311	891	DATAD DC
1312	002F	1313	892	RELOAD DC
1314	1316	1315	893	VDCFAD DC
		1316	894	COMDCF EQU
		1319	895	DCF DC
1316	0000002F	1318	896	SSKAD DC
131A	131A	131D	897	DC
131C	0101	1329	898	NODAT DC
131E	D5D640C4C1E3C140	898	899	NOMDAD DC
1326	D9G5C1C4	132D	900	DC
132A	132A			
132C	0000			
		901		
		902		*****
		903	*	PRINT PACK IDENTIFICATION *
		904	*****	*****
132E	C0 87 164D	905	SCGCOO	B RECAL RETURN CARRIAGE TO CYLINDER ZERO
		906	USING	VOLDAD, XR1
1332	C2 01 130B	907	LA	VOLDAD, XR1 LD BASE REGISTER
1336	71 A6 0C	908	LIO13	LIO VOLDAD(,XR1), CTRL SET TO READ VOL LABEL
1339	71 A4 06	909	LIO14	LIO DATAD(,XR1), DAT SET DATA ADDRESS
133C	F3 A1 02	910	SIO13	SIO DIAG, RD READ VOL LABEL IN DIAG MODE
133F	D1 A2 34	911	TIO13	TIO *(,XR1), BUSY WAIT FOR READ
1342	0C 01 13C4 1C07	912	MVC	SCMSG3(2), DISK PUT DRIVE AND DISK IN MESSAGE
1348	0C 05 138E 1F0B	913	MVC	SCMSG3-6(6), DISTBL+8 GET VOLUMN LABEL
134E	0C 02 13B7 1F02	914	MVC	SCMSG3-13(3), DISTBL+2 GET 'VOL'
1354	C0 87 021A	915	B	PRINT PRINT IDENTIFICATION LINE
1358	46	1358	916	DC XL1'46'
1359	32	1359	917	DC IL1'50'
135A	13E6	1358	918	DC AL2(SCMSG4)
135C	A000	135D	919	DC XL2'A000'
135E	C0 87 1201	920	B	SCAN GO CHECK ANOTHER PACK
1362	C5E7D74040C1C3E3	1369	921	SCMS DC
136A	C3E8D36060C3E8D3	1394	922	DC
1372	6060C3E3D9D340C6	922		
137A	D3C46060D9C440C9	922		
1382	C440C6D3C46060E2	922		
138A	E3C1E3E4E240C2E8	922		
1392	E3C5E2	922		
1395	6060C6C9D9E2E340	1384	923	SCMS1A DC
139D	F1F240C2E8E3C5E2	923		
13A5	40C6D9D6D440C2C1	923		
13AD	C440E2C5C3E3D6D9	923		
13B5	E7E7E740E7E7E7E7	13C4	924	SCMSG3 DC
138D	E7E740D6D540E7E7	924		
13C5	4840C5D9D9D6D9E2	13E6	925	SCMSG4 DC
13CD	6840C9C64CC1D5E8	925		
13D5	40C1D9C540D7D9C9	925		
13DD	D5E3C5C440C1C2D6	925		
13E5	E5C5	925		
13E7	C4C1E3C140D6D240	1402	926	VDATOK DC
13EF	6040C3C8D240E2E3	926		
13F7	C1E3E4E240C6D6D9	926		
13FF	40C5D9D9	926		
		927		*****
		928	*	ROUTINE OB - ADJUST DATA SEPARATOR BY LISTENING TO THE PRINTER *
		929	*****	*****
1403	0B	1403	930	RTOB DC
1404	00	1404	931	DC
1405	1448	1406	932	DC
			933	
		1407	934	USING DATSEP, XR1

BOB1 5444 DISK ADJUSTMENT UTILITY

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Table with columns: ERR LOC, OBJECT CODE, ADDR, STMT, SOURCE STATEMENT. Contains assembly code for disk adjustment utility.

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523123

BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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1559 D0 90 77 1067 BF SNS6(,XR1) LOOK AGAIN IF NOT PLUS
155C 36 02 1A6F 1068 A B001,XR2 INCREMENT T.C.P. COUNTER
1560 F2 81 0C 1069 JZ STLP2 GO TO NEXT LOOP
1563 70 A3 E7 1070 SNS7 SNS SNSIN(,XR1),X'A3' SENSE TRACK CROSSING
1566 78 02 E6 1071 TBN SNSIN-1(,XR1),BIT6 TEST FOR TRACK CROSSING
1569 D0 90 87 1072 BF SNS7(,XR1) WAIT FOR TRACK CROSSING TO GO MINUS
156C D0 87 77 1073 B SNS6(,XR1) GO TO BYPASS NEXT TRK CROSSING PULSE
156F 70 A3 E7 156F 1074 STLP2 EQU *
1572 78 02 E6 1075 SNS8 SNS SNSIN(,XR1),X'A3' GET TRACK CROSSING
1575 D0 90 93 1076 TBN SNSIN-1(,XR1),BIT6 LOOK FOR MINUS TRACK CROSSING
1578 70 A3 E7 1077 BF SNS8(,XR1) LOOK AGAIN
1578 79 02 E6 1078 SNS9 SNS SNSIN(,XR1),X'A3' GET TRACK CROSSING
157E E2 02 01 1079 TBF SNSIN-1(,XR1),BIT6 LOOK FOR PLUS TRACK CROSSING
1581 D0 90 9C 1080 LA 1(,XR2),XR2 INCREMENT COUNT
1584 70 A3 E7 1081 BF SNS9(,XR1) LOOK AGAIN
1587 78 02 E6 1082 SNS10 SNS SNSIN(,XR1),X'A3' GET TRACK CROSSING
158A E2 02 01 1083 TBN SNSIN-1(,XR1),BIT6 LOOK FOR MINUS TRACK CROSSING
158D D0 90 A8 1084 LA 1(,XR2),XR2 INCREMENT COUNT
1590 F2 87 22 1085 BF SNS10(,XR1) LOOK AGAIN
1593 34 02 14DC 1086 STFRST J STFRST GO TO STEPPER 1ST TIME
1597 1D 01 14DC 1087 ST RUN,XR2 STORE TIMING FROM TRACK 52
159C C0 84 17CC 1088 CLC RUN(2),STRTUP(,XR1) ARE TIMES EQUAL
15A0 C0 82 17E3 1089 BM LONG RETURN FROM LONG IS TO ARR+4
15A4 70 00 E7 1090 BL SHORT RETURN FROM SHORT IS TO ARR
15A7 78 F0 E6 1091 SNS SNSIN(,XR1),0 SENSE CONSOLE SWITCHES
15AA C0 10 1527 1092 TBN SNSIN-1(,XR1),X'F0' IS SW 1 SET TO F?
15AE G0 87 164D 1093 BT STEPR RESTART ROUTINE IF YES
15B2 D0 87 5A 1094 B RECAL RESTORE CARRIAGE
15B5 74 02 02 1095 B MORED(,XR1) GO MAKE ANOTHER MEASUREMENT
15B8 7C 07 B5 1096 STFRST ST STRTUP(,XR1),XR2 STORE TRACK 2 TIMING
15BB C2 02 FFCF 1097 MVI STFRST+1(,XR1),X'07' TURN OFF 1ST TIME SWITCH
15BF D0 87 77 1098 LA X'FFCF',XR2 SET COUNT TO GO TO TRACK 52
15C2 0000 1099 B SNS6(,XR1)
15C4 0140 15C3 110C SNSIN DC XL2'0000'
15C5 1101 SEEK64 DC XL2'0140' S & N FOR 64 TRACK SEEK
1102 *****
1103 * ROUTINE E - SHORT SCOPE ROUTINE FOR READING DISK *
1104 *****
1105 * SWITCH 1 & 2 * SWITCH 3 & 4 *
1106 *****
1107 * 0 1 2 3 4 5 * 6 7 * 0 * X * 2 3 4 5 6 7 *
1108 *****
1109 * SECTOR ADDRESS * OPERATION * * SECTOR COUNT *
1110 * * * * * * * MAY BE 00 THRU 2F *
1111 * UPPER HEAD * DATA 0 0 0 READ* *
1112 * 00 THRU 5C * ID 0 1 0 READ* ON 8K SYSTEMS USE ONLY *
1113 * * * * * * * 0 READ* 00 FOR SECTOR COUNT *
1114 * LOWER HEAD * VERIFY 1 1 0 READ* ON READ DATA OPERATIONS *
1115 * 80 THRU DC * EQU 0 0 1 SCAN* *****
1116 *****
1117 * * * * * * * HIGH/EQU 0 1 1 SCAN*
1118 * * * * * * * NOT USED 1 1 1 SCAN*
1119 *****
15C6 OE 15C6 1120 RTOE DC XL1'0E'
15C7 00 15C7 1121 DC XL1'00'
15C8 FFFF 15C9 1122 DC XL2'FFFF'
1123
15CA 1124 USING SCOPE,XR1
1125 SCOPE LA SCOPE,XR1 LOAD BASE REGISTER
1126 HALTE B HALTR
1127 SNS SNS(,XR1),0 SENSE SW FOR PROG LOAD
1128 B READID GO GET ID FROM DISK
1129 MVC RDWD-2(2,XR1),RDIDIN-1 SET F & C BYTE IN CTRL WORD
1130 MVC SIO18+2(1,XR1),SNS1-1(,XR1) GET CONTROL BYTE
1131 SBF SIO18+2(,XR1),X'F0' SET TYPE OF REAU
1132 MVC SKWD-1(1,XR1),SNS1-1(,XR1) PUT HD BIT IN SEEK WORD
1133 SBF SKWD-1(,XR1),X'7F' TURN OFF EXTRA BITS
1134 SBF SIO18+1(,XR1),X'02' TURN OFF SCAN BIT

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DATE 15MAR72 15NOV72
EC NO. 571609 571626

PROG ID 0B08-1
PAGE 9

BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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15EF 78 80 5A 1135 TBN SNS1(,XR1),X'80' IS SCAN DESIRED
15F2 F2 90 03 1136 JF RESET DON'T TURN ON SCAN BIT
15F5 7A 02 4F 1137 SBN SIO18+1(,XR1),X'02' TURN ON SCAN BIT
15F8 5C 01 60 5A 1138 RESET MVC RDWD(2,XR1),SNS1(,XR1) SET SEC COUNT AND SECTOR ADDR
15FC 78 C0 60 1139 SBF R)WD(,XR1),X'CO' RESET UNUSED BIT IN SECTOR COUNT
15FF 78 03 5F 1140 SBF RDWD-1(,XR1),X'03' RESET UNUSED BITS IN SEC ADDRESS
1602 70 00 58 1141 SNS SNS(,XR1),0 SENSE SW FOR HALT
1605 78 F0 57 1142 TBN SNS-1(,XR1),X'F0' SW 1 IS F?
1608 D0 10 04 1143 BT HALTE(,XR1) STOP TO CHANGE SWITCHES
160B 71 A6 62 1144 LIO9 LIO SKEAD(,XR1),CTRL LOAD CTRL REG
160E F3 A0 00 1145 SIO12 SIO 0,SK NOMO SEEK TO SET HEADS
1611 71 A6 5C 1146 LIO12 LIO RDWDAD(,XR1),CTRL LD CONTROL REG
1614 31 A4 1311 1147 LIO20 LIO DATAD,DAT LOAD DATA REG
1618 F3 A1 00 1148 SIO18 SIO 0,RD Q BYTE CHANGED BY PROG FROM SWITCHES
161B D1 A2 51 1149 TIO8 TIO *(,XR1),BUSY WAIT FOR READ
161E D0 87 2E 1150 B RESET(,XR1) GO DO IT AGAIN
1621 0000 1622 1151 SNSE DC XL2'0000'
1623 0000 1624 1152 SNS1 DC XL2'0000'
1625 1627 1626 1153 RDWDAD DC AL2(*+2)
1627 0000C000 162A 1154 RDWD DC XL4'00000000'
162B 1628 162C 1155 SKEAD DC AL2(*)
162D 0000 162E 1156 SKWD DC XL2'0000'
1157 *****
1158 *****
1159 ** SUBROUTINES **
1160 *****
1161 *****
1162 *****
1163 *****
1164 * SEEK TO HIGHEST TRACK FOR NUMBER OF SEEKS BEING TESTED. *
1165 * CARRIAGE MUST BE AT CYLINDER 00 TO ENTER THIS ROUTINE *
1166 *****
162F 34 08 164C 1167 LACER ST ELACER+3,ARR STORE RETURN
1633 0C 00 1A7B 1A4F 1168 MVC RCLDCF(1),TRACK# SET HIGHEST TRACK NUMBER
1639 3C 01 1A7A 1169 MVI RCLDCF-1,X'01' SET FORWARD BIT
163D C0 87 164D 1170 B RECAL
1641 3C E0 1A7B 1171 MVI RCLDCF,X'E0' RESTORE RECAL DCF
1645 3C 00 1A7A 1172 MVI RCLDCF-1,X'00' RESTORE RECAL REVERSE
1649 C0 87 0000 1173 ELACER B *-* RETURN
1174
1175 *****
1176 * RECALIBRATE SUBROUTINE *
1177 *****
164D 34 08 167D 1178 RECAL ST ERECAL+3,ARR STORE RETURN
1651 C1 A0 167E 1179 TIO3 TIO BCALER,X'A0' ERROR TEST BEFORE RECAL
1655 31 A6 1A77 1180 LIO3 LIO RCLADR,X'A6' LD CTRL REG FOR RECAL
1659 F3 A0 00 1181 SIO3 SIO 0,X'A0' RECALIBRATE
165C 30 A2-1A51 1182 SNS3 SNS SNSO1,X'A2' *LOOK FOR SEEK
1660 39 10 1A51 1183 TBF SNSO1,X'10' *BUSY BIT DROP
1664 C0 90 165C 1184 B SNS3 BR IF STILL BUSY
1668 38 01 1A7A 1185 TBN RCLDCF-1,X'01' DON'T CHK FOR ZERO ON FORWARD SEEK
166C F2 10 07 1186 JT TIO4
166F 38 40 1A51 1187 TBN SNSO1,X'40' ACCESS AT CYL 00
1673 F2 90 35 1188 JF RCALER BR TO RECAL ERROR PRINT
1676 C1 A0 16AB 1189 TIO4 TIO RCALER,X'A0' ERROR TEST AFTER RECAL
167A C0 87 0000 1190 ERECAL B *-* RETRUN BRANCH
167E C0 87 1719 1191 BCALER B UPKSTS GET PRESENT STATUS
1682 39 40 1A50 1192 TBF SNSO1-1,X'40' INTERVENTION REQUIRED?
1686 39 80 1A52 1193 TBF SNS2A3-1,X'80' UNSAFE?
168A F2 90 04 1194 JF INTPRT BR TO INTERVENTION REQ PRINT IF EITHE
168D C0 87 1655 1195 B LIO3 RETURN TO REACL ROUTINE
1196
1197 *****
1198 * RECALIBRATE ERROR PRINT OUT IF NOT READY AT START *
1199 *****
1691 C0 87 021A 1200 INTPRT B PRINT GO PRINT RECAL ERROR
1695 C2 1695 1201 DC XL1'C2'
1696 20 1696 1202 DC IL1'32'

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DATE 15MAR72 15NOV72
EC NO. 571609 571626

PROG ID 0B08-1
PAGE 9A

523/31

BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1697	1EEC	1698	1203	DC	AL2(INTVRQ)
1699	A0FE	169A	1204	DC	XL2'A0FE'
169B	C0 87 1719	1205	B		UPKSTS
169F	3C 86 1746	1206	MVI	ERRSTS,X'86'	GO TO UNPACK STATUS
16A3	C0 87 173E	1207	B		PRTSTS
16A7	C0 87 16C9	1208	B		EHALT
		1209	B		EHALT
		1210	*****		
		1211	*		ERROR OCCURRED DURING RECALIBRATION OR NON MEASUREMENT SEEK
		1212	*****		
16AB	C0 87 021A	1213	RCALER	B	PRINT
16AF	C2	16AF	1214	DC	XL1'C2'
16B0	15	1215	DC		IL1'21'
16B1	1BFC	16B2	1216	DC	AL2(CALMSG)
16B3	A0FE	16B4	1217	DC	XL2'A0FE'
16B5	C0 87 1719	1218	B		UPKSTS
16B9	3C 86 1746	1219	MVI	ERRSTS,X'86'	GO UNPACK STATUS
16BD	C0 87 173E	1220	B		PRTSTS
16C1	C0 87 16D3	1221	B		READID
16C5	C0 87 1752	1222	B		PRTID
16C9	C0 87 0222	1223	EHALT	B	HALT
16CD	A0FE	16CE	1224	DC	XL2'A0FE'
16CF	C0 87 1851	1225	B		TIO3
		1226	*****		
		1227	*		READ ID FIELD INTO 'RDIDIN'
		1228	*****		
16D3	34 08 16F0	1229	READID	ST	EREADI+3,ARR
16D7	31 A6 16F2	1230	LIO22	LIO	RIDCAD,CTRL
16DB	F3 A0 00	1231	SI019	SIO	0,SK
16DE	3C FF 1A58	1232	MVI	RDIDIN,X'FF'	RESET ID FIELD
16E2	31 A6 1A6A	1233	LIO5	LIO	IDADDR,CTRL
16E6	F3 A1 01	1234	SI05	SIO	ID,RD
16E9	C1 A2 16E9	1235	TIO12	TIO	*,BUSY
16ED	C0 87 0000	1236	EREADI	B	0
16F1	16F1	16F2	1237	RIDDAD	DC
16F3	0000	16F4	1238	RIDDCF	DC
		1239	B		SSW 27 CONTROLS WHICH HEAD
		1240	*****		
		1241	*		CLEAR TABLES USED WITH ROUTINES 1 THRU 7
		1242	*****		
16F5	34 08 1718	1243	CLRTBL	ST	ECLRTB+3,ARR
16F9	0F FF 1FFF 1FFF	1244	SLC	DISTBL+255(256),DISTBL+255	CLEAR DISTRIBUTION TABLE
16FF	07 02 1A62 1A62	1245	SZ	SIOCY(3),SIOCY(3)	CLEAR SIO COUNTER
1705	0F CC 1ECC 1ECC	1246	SLC	CYCTBL+204(205),CYCTBL+204	CLEAR PER CYCLE TABLE
1708	3C FF 1DCC	1247	MVI	IDTBL+204,X'FF'	MV IN CLEAR CHARACTER
170F	0C CB 1DCB 1DCC	1248	MVC	IDTBL+203(204),IDTBL+204	CLEAR ID STORAGE TABLE
1715	C0 87 0000	1249	ECLRTB	B	**
		1250	*****		
		1251	*		UNPACK STATUS - INTO FORMAT XX XX XX XX AND PUT IT INTO
		1252	*****		
		1253	*		'STSMMSG' (11 BYTES).
		1254	*****		
		1255	*		ALSO PUTS THE 4 STATUS BYTES IN 'SNS0A1', AND
		1256	*****		
		1257	UPKSTS	ST	EUPKST+3,ARR
		1258	SNS4	SNS	SNS0A1,X'A2'
		1259	SNS5	SNS	SNS2A3,X'A3'
		1260	B		UNPACK
1719	34 08 173D	1729	1261	DC	XL1'04'
171D	30 A2 1A51	172B	1262	DC	AL2(SNS2A3)
1721	30 A3 1A53	172D	1263	DC	AL2(PRTA+95)
1725	C0 87 021E	1264	MVC	STSMMSG(11),EDIT3	MOVE IN STATUS EDIT WORD
1729	04	1265	ED	STSMMSG(11),PRTA+95	EDIT STATUS BYTES
172A	1A53	1266	EUPKST	B	**
172C	1CFA	1267	*****		
172E	0C 0A 1C68 1A91	1268	*		PRINT STATUS
1734	0A 0A 1C68 1CFA	1269	*****		
173A	C0 87 0000	1270	PRTSTS	ST	EPRST+3,ARR

BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC	OBJECT CODE	ADDR	STMT	SOURCE	STATEMENT
1742	C0 87 021A	1271	B		PRINT
1746	06	1746	1272	ERRSTS	DC
1747	18	1747	1273	DC	XL1'06'
1748	1C68	1749	1274	DC	IL1'24'
174A	3C 06 1746	1275	MVI	ERRSTS,6	AL2(STSMMSG)
174E	C0 87 0000	1276	EPRST	B	**
		1277	*****		
		1278	*		PRINT OUT THE LAST READ ID FIELD
		1279	*****		
		1280	*		PRINT OUT THE LAST READ ID FIELD
		1281	PRTID	ST	EPRID+3,ARR
		1282	B		UNPACK
1752	34 08 176A	175A	1283	DC	XL1'03'
1756	C0 87 021E	175C	1284	DC	AL2(RDIDIN)
175A	03	175E	1285	DC	AL2(IDERMS)
1758	1A58	1286	B		PRINT
1750	18C3	1763	1287	DC	XL1'86'
175F	C0 87 021A	1764	1288	DC	IL1'54'
1763	86	1766	1289	DC	AL2(ICALL)
1764	36	1290	EPRID	B	0
1765	1BE7	1291	*****		
1767	C0 87 0000	1292	*		CLEAR PRINT AREA
		1293	*****		
		1294	*		CLEAR PRINT AREA
		1295	*****		
1768	34 08 177C	1295	CLPRTA	ST	ECLPRT+3,ARR
176F	3C 40 1CFA	1296	MVI	PRTA+95,X'40'	SET RETURN
1773	0C 5E 1CF9 1CFA	1297	MVC	PRTA+94(95),PRTA+95	SET CLEAR CHARACTER
1779	C0 87 0000	1298	ECLPRT	B	**
		1299	*****		
		1300	*		CONVERT 1 BYTE OF BINARY TO DECIMAL. ARR+1 POINTS TO
		1301	*		AL2(ADDRESS OF BYTE TO BE CONVERTED)
		1302	*****		
177D	34 08 178C	1303	CNVBTD	ST	POINT+5,ARR
1781	0E 01 178C 1A6F	1304	ALC	POINT+5(2),B001	SAVE ARR
1787	0C 01 1792 0000	1305	POINT	MVC	GETBYT+5(2),0
1780	0C 00 1A68 0000	1306	GETBYT	MVC	BCTR2(1),0
1793	0C 01 17CB 178C	1307	MVC	ECNVBT+3(2),POINT+5	GET BYTE TO BE CONVERTED
1799	0E 01 17CB 1A6F	1308	ALC	ECNVBT+3(2),B001	MOVE POINTER TO RETURN
179F	0F 02 1A5B 1A5B	1309	SZ	DCTR2(3),DCTR2(3)	SET RETURN POINTER
17A5	34 01 1A4C	1310	ST	SVXR1,XR1	CLEAR DECIMAL COUNTER 2
17A9	35 01 1A68	1311	L	BCTR2,XR1	SAVE XR1
17AD	06 20 1A5B 1A6D	1312	MORCNV	AZ	BCTR2,XR1
17B3	36 01 1A75	1313	A	BMO1,XR1	SET XR1 TO BINARY VALUE
1767	C0 84 17AD	1314	BP	MORCNV	ADD 1 TO DECIMAL VALUE
17B8	F2 81 06	1315	JE	ASIL	SUBT 1 FROM BINARY VALUE
17B8	F2 81 06	1316	SZ	DCTR2(3),DCTR2(3)	TAKE ANOTHER CYCLE
17BE	07 02 1A5B 1A5B	1317	ASIL	L	SET DCTR TO ZERO IF BVALUE WAS ZERO
17C4	35 01 1A4C	1318	ECNVBT	B	RESTORE XR1
17C8	C0 87 0000	1319	B	0	RETURN TO ARR+2
		1320	*****		
		1321	*		ACCGUSTICAL PRINT ROUTINE - PRINTS A LONG OR SHORT LINE OF *S *
		1322	*		DEPENDING ON THE ENTRY POINT. RETURN FROM ENTRY TO LONG IS *
		1323	*		ARR+4, AND RETURN FROM ENTRY INTO SHORT IS ARR. *
		1324	*****		
		1325	LONG	MVI	NOISLN,80
17CC	3C 50 180F	1326	SLC	REVTIM(2),FWDTIM	Q BYTE IS CHANGED BY THE PROGRAM
17D0	0F 01 14DC 14DE	1327	ST	ESHLO+3,ARR	CALC DIFFERENCE
17D6	34 08 1819	1328	ALC	ESHLO+3(2),B004	STORE RETURN ADDRESS
17DA	0E 01 1819 1A73	1329	J	NOISE	MAKE RETURN ARR+4
17E0	F2 87 14	1330	SHORT	MVI	NOISLN,4
17E3	3C 04 180F	1331	SLC	FWDTIM(2),REVTIM	GO TO PRINT NOISY LINE
17E7	0F 01 14DE 14DC	1332	MVC	REVTIM(2),FWDTIM	SET LINE LENGTH FOR QUIET LINE
17ED	0C 01 14DC 14DE	1333	ST	ESHLO+3,ARR	CALC DIFFERENCE
17F3	34 08 1819	1334	NOISE	MVI	PRTA+80,X'5C'
17F7	3C 5C 1CEB	1335	MVC	PRTA+79(79),PRTA+80	SET RETURN ADDRESS
17FB	0C 4E 1CEA 1CEB	1336	B	UNPACK	SET NOISY CHARACTER
1801	C0 87 021E	1337	B	UNPACK	MAKE MANY NOISY CHARACTERS
1805	02	1807	1338	DC	XL1'02'
1806	14DC				GO UNPACK COUNTERS

BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1808 1CEB 1809 1339 DC AL2(PRTA+80)
180A CO 87 021A 1340 B PRINT PRINT NOISY LINE
180E 01 180E 1341 DC XL1*01'
180F 01 180F 1342 NOISLN DC IL1*01' CHANGED BY THE PROGRAM
1810 1CEB 1811 1343 DC AL2(PRTA+80)
1812 CO 87 176B 1344 B CLPRTA CLEAR PRINT AREA
1816 CO 87 0000 1345 ESHLO B 0 RETURN TO EITHER ARR+4 OR AKR
1346
1347 *****
1348 * JUMPER TEST ROUTINE FOR ROUTINE OC, AND OD. *
1349 *****
181A 34 08 1866 1350 JMPTST ST EJMPMS+3,ARR SET RETURN
181E CO 87 164D 1351 B RECAL
1822 OC 01 1A66 OAC8 1352 MVC SKDCF(2),FWDSDN2 SET SEEK TO FWD 2 TRACKS
1828 31 A6 1A6C 1353 LIO7 LIO SKDCAD,CTRL LOAD CTRL REG FOR SEEK
182C F3 A0 00 1354 SIO7 SIO 0,SK DO THE SEEK
182F 30 A3 14E0 1355 SNS11 SNS SN5C,A3 SNS TRACK CROSSING
1833 38 02 14DF 1356 TBN SN5C-1,BIT6 IS JUMPER ON?
1837 CO 10 184F 1357 BT CHKJMP GO PRINT JUMPER MESSAGE
1838 30 A3 14E0 1358 SNS17 SNS SN5C,A3 SNS TRACK CROSSING
183F 38 02 14DF 1359 TBN SN5C-1,BIT6 LOOK FOR TRACK CROSSING MINUS
1843 CO 10 185F 1360 BT PEEK BRANCH IF JUMPER IS ON
1847 38 04 14DF 1361 TBN SN5C-1,BIT5 HEAD SETTLING YET?
1848 CO 90 183B 1362 BF SNS17 GO SENSE AGAIN
184F CO 87 021A 1363 CHKJMP B PRINT PRINT JUMPER MESSAGE
1853 46 1853 1364 DC XL1*46'
1854 26 1854 1365 DC IL1*38'
1855 186C 1856 1366 DC AL2(JUMPM5)
1857 A000 1858 1367 DC XL2*A000'
1859 OE 01 1866 1A73 1368 ALC EJMPMS+3(2),B004 SET BAD RETURN
185F CO 87 164D 1369 PEEK B RECAL RESTORE CARRIAGE
1863 CO 87 0000 1370 EJMPMS B 0 RETURN
1867 C9D5E2E3C1D3D340 188C 1371 JUMPM5 DC CL38*INSTALL JUMPER FROM W3G2G04 TO W3R2P10*
186F D1E4D4D7C5D940C6 1371
1877 D9D6D440E6F3C7F2 1371
187F C7F0F440E3D640E6 1371
1887 F3D9F2D7F1F0 1371
1372
1373 *****
1374 * MASTER HALT FOR ROUTINES 07 AND 0A THRU 0E *
1375 *****
188D 34 08 18A8 1376 HALTR ST EHALTR+3,ARR STORE RETURN
1891 CO 87 18A9 1377 B SETCA SET HALCOD
1895 CO 00 18A0 0B39 1378 MVC HLTR(1),HLTCOD SET THIS HALT
1898 CO 87 0222 1379 B HALT
189F A000 18A0 1380 HLTR DC XL2*A000'
18A1 CO 87 18A9 1381 B SETDA SET DISK AND SPINDLE
18A5 CO 87 0000 1382 EHALTR B 0 RETURN
1383 *****
1384 * SET FIXED OR REMVBL, DRIVE 1 OR 2, RTN # IN PROG AND HALTS *
1385 *
1386 * TO ADD ANY DISK I/O INSTRUCTION ANYWHERE IN THE PROGRAM *
1387 * ADD A CONSTANT IN THE FOLLOWING FORMAT TO THE TABLE BELOW. *
1388 *
1389 * AL2('LABEL OF INSTRUCTION'+1) *
1390 *****
18A9 34 08 19AC 1391 SETDA ST ESETDA+3,ARR SET RETURN
18AD 34 01 1A4C 1392 ST SVXR1,XR1 SAVE XR1
18B1 34 02 1A4E 1393 ST SVXR2,XR2 SAVE XR2
18B5 3C BA 1929 1394 MVI SETINS,SBN CAUSE BIT3 IN DA TO TURN ON
18B9 3C 76 11B1 1395 MVI HLT9+1,X'76' SET HALT IN RTN 9 FOR DRIVE 2
18BD 3C F2 1C07 1396 MVI DISK,C'2' SET MSG FOR DRIVE 2
18C1 3C C6 187D 1397 MVI JUMPM5-15,C'F' SET JUMPER LOCATION FOR DRIVE 2
18C5 38 10 020A 1398 TBN SBYTE2,SSW13 CHECK FOR DRIVE 2
18C9 F2 10 10 1399 JT LISA BR TRUE TO CHK FOR 5406
18CC 3C 8B 1929 1400 MVI SETINS,SBF CAUSE BIT3 IN DA TO TURN OFF
18D0 3C 03 11B1 1401 MVI HLT9+1,X'03' SET HALT IN RTN 9 FOR DRIVE 1
18D4 3C F1 1C07 1402 MVI DISK,C'1' SET DISK MESSAGE TO DRIVE 1

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BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
18D8 3C C7 187D 1403 MVI JUMPM5-15,C'G' SET JUMPER LOCATION FOR DRIVE 1
18DC 30 A3 1A53 1404 LISA SNS SNS2A3,A3 LOOK FOR CPU MODEL
18E0 38 01 1A52 1405 TBN SNS2A3-1,BIT7 IS THIS A 5406
18E4 F2 9C 1E 1406 JF KURT JUMP IF IT IS A 5410
18E7 3C 14 17CD 1407 MVI LONG+1,20 SHORTEN NOISY PRINT LINES FOR 5406
18EB 3C 48 11B2 1408 MVI HLT9+2,X'48' SET RTN 9 HALT TO 5406 HLT ID
18EF 3C 40 10CC 1409 MVI HLT9+2,X'40' SET RTN9 HALT TO 5406 HLT ID
18F3 3D 03 11B1 1410 CLI HLT9+1,X'03' IS DRIVE 1 SET IN RTN HALT
18F7 F2 81 07 1411 JE KARL BRANCH IF IT IS SET FOR DRIVE 1
18FA 3C 10 11B1 1412 MVI HLT9+1,X'10' MV IN 5406 DRIVE 2 HALT IN RTN 9
18FE F2 87 04 1413 J KURT GO SET RTN 8 HALT
1901 3C 08 11B1 1414 KARL MVI HLT9+1,X'08' MV IN 5406 DRIVE 1 HALT IN RTN 9
1905 OC 00 10CB 11B1 1415 KURT MVC HLT9+1(1),HLT9+1 SET DRIVE NUMBER IN RTN 8 HALT
190B 3C BA 192C 1416 MVI SETIN2,SBN CAUSE BIT4 IN Q BYTE TO TURN ON
190F 3C C6 1C06 1417 MVI DISK-1,C'F' SET DISK MESSAGE FOR FIXED
1913 38 80 020A 1418 TBN SBYTE2,SSW10 TEST FOR REMOVABLE PACK
1917 F2 9C 08 1419 JF SET JUMP IF NOT REMOVABLE
191A 3C 8B 192C 1420 MVI SETIN2,SBF CAUSE BIT4 IN Q BYTE TO TURN OFF
191E 3C 09 1C06 1421 MVI DISK-1,C'R' SET MSG FOR REMOVABLE DISK
1922 35 01 19AE 1422 SET L DATBAD,XR1 SET TABLE POINTER IN XR1
1926 75 02 00 1423 LDADDR L 0(,XR1),XR2 PUT Q CODE ADDR IN XR2
1929 8B 10 00 1424 SETINS SBF 0(,XR2),X'10' SET DEVICE ADDR (CAN BE SBN)
192C 8B 08 00 1425 SETIN2 SBF 0(,XR2),X'08' SET DISK (CAN BE SBN)
192F D2 01 02 1426 LA 2(,XR1),XR1 INCREMENT XR1 BY 2
1932 1D 01 1A75 00 1427 CLC BMO1(2),0(,XR1) LOOK FOR END OF TABLE
1937 C0 01 1926 1428 BNE LDADDR
1938 08 01 0B39 1C07 1429 MZN HLTCOD,DISK CHANGE START HALT
1941 08 03 0B39 0A03 1430 MNN HLTCOD,X'A03' MOVE ROUTINE NUMBER TO HALT ID
1947 0C 00 0D2F 0B39 1431 MVC FRSTLN(1),HLTCOD CHANGE 1ST LINE PRINT
194D 0C 00 0EA4 0B39 1432 MVC ERRCOD(1),HLTCOD SET ERROR PRINT IDENTIFICATION
1950 0C 00 1EEC 1C07 1433 MVC INTVRQ(1),DISK SET ERROR MSG
1959 0C 00 1BFC 1C07 1434 MVC CALMSG(1),DISK SET ERROR MESSAGE
195F 0C 00 1A4F 0B1A 1435 MVC TRACK#(1),TRK100 MV IN SMALL MODEL HIEST ID
1965 0C 02 0B27 0B1E 1436 MVC RYTCYC(3),CYC100 MV IN SMALL MODEL EXPECTED # OF SID
196B 30 A2 1A51 1437 SNS1 SNS SNS0A1,X'A2' GET SENSE BYTE 0 AND 1
196F 38 08 1A51 1438 TBN SNS0A1,X'08' LOOK FOR 100 TRACK
1973 F2 10 0C 1439 JT TST27 JUMP IF MODEL 1
1976 0C 00 1A4F 0B1B 1440 MVC TRACK#(1),TRK200 MV IN BIG MODEL HIEST ID
197C 0C 02 0B27 0B21 1441 MVC RYTCYC(3),CYC200 MV IN BIG MODEL EXPECTED # OF SID
1982 38 80 0B16 1442 TST27 SBF FWDSDN-1,BIT0 SET UPPER HEAD FOR FORWARD
1986 38 80 0B18 1443 SBF REWSN-1,BIT0 SET UPPER HEAD FOR REVERSE
198A 38 80 16F3 1444 SBF RIDDCF-1,BIT0 SET READ ID FOR UPPER HEAD
198E 38 01 020C 1445 TBN SBYTE4,SSW27 USE LOWER READ HEAD?
1992 F2 9C 0C 1446 JF PREEND GO TO NEXT SW TEST IF NOT
1995 3A 80 0B16 1447 SBN FWDSDN-1,BIT0 SET LOWER HEAD ON FORWARD
1999 3A 80 0B18 1448 SBN REWSN-1,BIT0 SET LOWER HEAD ON REVERSE
199D 3A 80 16F3 1449 SBN RIDDCF-1,BIT0 SET READ ID RTN FOR LOWER HEAD
19A1 35 01 1A4C 1450 PREEND L SVXR1,XR1 RESTORE XR1
19A5 35 02 1A4E 1451 L SVXR2,XR2 RESTORE XR2
19A9 C0 87 0000 1452 ESETDA B *-
19AD 1980 19AE 1453 DATBAD DC AL2(DATBL)
19AF 0B99 19B0 1454 DATBL DC AL2(LIO1+1)
19B1 0BA0 19B2 1455 DC AL2(LIO2+1)
19B3 1656 19B4 1456 DC AL2(LIO3+1)
19B5 1543 19B6 1457 DC AL2(LIO4+1)
19B7 16E3 19B8 1458 DC AL2(LIO5+1)
19B9 10E9 19BA 1459 DC AL2(LIO6+1)
19BB 1829 19BC 1460 DC AL2(LIO7+1)
19BD 11C4 19BE 1461 DC AL2(LIO8+1)
19BF 160C 19C0 1462 DC AL2(LIO9+1)
19C1 1225 19C2 1463 DC AL2(LIO10+1)
19C3 1234 19C4 1464 DC AL2(LIO11+1)
19C5 1612 19C6 1465 DC AL2(LIO12+1)
19C7 1337 19C8 1466 DC AL2(LIO13+1)
19C9 133A 19CA 1467 DC AL2(LIO14+1)
19CB 12AC 19CC 1468 DC AL2(LIO15+1)
19CD 12AF 19CE 1469 DC AL2(LIO16+1)
19CF 141D 19D0 1470 DC AL2(LIO17+1)

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523439

BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE   ADDR STMT SOURCE STATEMENT
19D1 1427             19D2 1471      DC   AL2(LI018+1)
19D3 12A5             19D4 1472      DC   AL2(LI019+1)
19D5 1615             19D6 1473      DC   AL2(LI020+1)
19D7 146C             19D8 1474      DC   AL2(LI021+1)
19D9 16D8             19DA 1475      DC   AL2(LI022+1)
19DB 089D             19DC 1476      DC   AL2(SI01+1)
19DD 08A4             19DE 1477      DC   AL2(SI02+1)
19DF 165A             19E0 1478      DC   AL2(SI03+1)
19E1 1547             19E2 1479      DC   AL2(SI04+1)
19E3 16E7             19E4 1480      DC   AL2(SI05+1)
19E5 10EC             19E6 1481      DC   AL2(SI06+1)
19E7 182D             19E8 1482      DC   AL2(SI07+1)
19E9 11C7             19EA 1483      DC   AL2(SI08+1)
19EB 1470             19EC 1484      DC   AL2(SI09+1)
19ED 1231             19EE 1485      DC   AL2(SI10+1)
19EF 1237             19F0 1486      DC   AL2(SI011+1)
19F1 160F             19F2 1487      DC   AL2(SI012+1)
19F3 133D             19F4 1488      DC   AL2(SI013+1)
19F5 12D1             19F6 1489      DC   AL2(SI014+1)
19F7 1424             19F8 1490      DC   AL2(SI015+1)
19F9 142F             19FA 1491      CC   AL2(SI016+1)
19FB 12A9             19FC 1492      DC   AL2(SI017+1)
19FD 1619             19FE 1493      DC   AL2(SI018+1)
19FF 16DC             1A00 1494      DC   AL2(SI019+1)
1A01 196C             1A02 1495      DC   AL2(SNS1+1)
1A03 08B7             1A04 1496      DC   AL2(SNS2+1)
1A05 165D             1A06 1497      DC   AL2(SNS3+1)
1A07 171E             1A08 1498      DC   AL2(SNS4+1)
1A09 1722             1A0A 1499      DC   AL2(SNS5+1)
1A0B 1554             1A0C 1500      DC   AL2(SNS6+1)
1A0D 1564             1A0E 1501      DC   AL2(SNS7+1)
1A0F 1570             1A10 1502      DC   AL2(SNS8+1)
1A11 1579             1A12 1503      DC   AL2(SNS9+1)
1A13 1585             1A14 1504      DC   AL2(SNS10+1)
1A15 1830             1A16 1505      DC   AL2(SNS11+1)
1A17 147C             1A18 1506      DC   AL2(SNS12+1)
1A19 1485             1A1A 1507      DC   AL2(SNS13+1)
1A1B 148E             1A1C 1508      DC   AL2(SNS14+1)
1A1D 1497             1A1E 1509      DC   AL2(SNS15+1)
1A1F 14A3             1A20 1510      CC   AL2(SNS16+1)
1A21 183C             1A22 1511      DC   AL2(SNS17+1)
1A23 1473             1A24 1512      DC   AL2(SNS18+1)
1A25 154A             1A26 1513      DC   AL2(SNS19+1)
1A27 0B7C             1A28 1514      DC   AL2(TI01+1)
1A29 0BEE             1A2A 1515      DC   AL2(TI02+1)
1A2B 1652             1A2C 1516      DC   AL2(TI03+1)
1A2D 1677             1A2E 1517      DC   AL2(TI04+1)
1A2F 0F83             1A30 1518      DC   AL2(TI05+1)
1A31 10FB             1A32 1519 *    DC   AL2(TI06+1)
1A33 161C             1A34 1520      DC   AL2(TI07+1)
1A35 11DB             1A36 1521      DC   AL2(TI08+1)
1A37 123A             1A38 1522      DC   AL2(TI09+1)
1A39 123D             1A3A 1523      DC   AL2(TI010+1)
1A3B 16EA             1A3C 1524      DC   AL2(TI011+1)
1A3D 1340             1A3E 1525      DC   AL2(TI012+1)
1A3F 12D4             1A40 1526      DC   AL2(TI013+1)
1A41 1432             1A42 1527      DC   AL2(TI014+1)
1A43 1435             1A44 1528      DC   AL2(TI015+1)
1A45 FFFF             1A46 1529      DC   AL2(TI016+1)
1531 *****
1532 *****
1533 **   CONSTANTS   **
1534 *****
1535 *****
1A47 40             1A47 1536 BLNK DC   CL1' '
1A48 5C             1A48 1537 SPLAT DC  CL1' *'
1A49 FF00           1A4A 1538 BM100 DC  XL2'FF00'

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BINARY MINUS 100

BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE   ADDR STMT SOURCE STATEMENT
1A4B 0000             1A4C 1539 SVXR1 DC   XL2'0'
1A4D 0000             1A4E 1540 SVXR2 DC   XL2'0'
1A4F 00               1A4F 1541 TRACK# CC   XL1'0'
1A50 0000             1A51 1542 SNS0A1 DC  XL2'0'
1A52 0000             1A53 1543 SNS2A3 DC  XL2'0'
1A54 00               1A54 1544 SNPCNT DC  XL1'00'
1A55 00               1A55 1545 BCTR   DC   XL1'0'
1A56 000000          1A58 1546 RDIDIN DC  XL3'0'
1A59 F0F0F0F0F0F0F0 1A5F 1547 DCTR1 DC  CL7'0000000'
1A60 F0F0F0          1A58 1548 DCTR2 EQU DCTR1-4
1A63 C0000000        1A62 1549 SIDCY DC  CL3'000'
1A67 0000            1A66 1550 SKDCF DC  XL4'0'
1A69 1A56            1A68 1551 BCTR2 DC  XL2'0'
1A6B 1A63            1A6A 1552 IDADDR DC  AL2(RDIDIN-2)
1A6D F1              1A6C 1553 SKDCAD DC  AL2(SKDC-3)
1A6E 0001            1A6D 1554 D001 DC  XL1'F1'
1A70 0002            1A6F 1555 B001 DC  XL2'01'
1A72 0004            1A71 1556 B002 DC  XL2'2'
1A74 FFFF            1A73 1557 B004 DC  XL2'0004'
1A76 1A78            1A75 1558 BMO1 DC  XL2'FFFF'
1A78 000000E0        1A77 1559 RCLADR DC  AL2(RCLDCF-3)
1A7C 0000            1A78 1560 RCLDC   DC  XL4'000000E0'
1A7E 00              1A7D 1561 BSTARY DC  XL2'0'
1A7F 0000            1A7E 1562 SVBSTR DC  XL1'00'
1A81 F2F0F4          1A80 1563 BEND   DC  XL2'0'
1A84 F2F5F5          1A83 1564 MAXS10 DC  CL3'204'
1A87 20204020402020 1A86 1565 TOMUCH DC  CL3'255'
1A8F 402020          1A91 1566 EDIT3 DC  XL11'2020402020402020402020'
1A92 20204820402020 1AA4 1567 EDIT2 DC  XL19'202048204020204820404020204820484B4B'
1A9A 20404020204820 1567
1AA2 484848          1567
1AA5 1CE1            1A95 1568 EDIT1 EQU  EDIT3+4
1AA7 00              1AA6 1569 HIPRT DC  AL2(PRTA+70)
1AA8 00              1AA7 1570 OLD   DC  XL1'00'
1573 *****
1574 *   BIT 07 CONTROLS PRINTING ID TABLE FOOTNOTE   *
1575 *****
1AA9 00              1AA9 1576 BITSW1 DC  XL1'00'
1577 *****
1578 *   BIT SWITCH DEFINITIONS AND MESSAGES             *
1579 *****
1AAA 00              1AAA 1581 BITSW DC  XL1'0'
1582 *****
1583 *   BIT SW - CONTROLS PER CYCLE OPTION                *
1AAB C4C9E2D240C5D9D9 1ACB 1583 BIT00 DC  CL33'DISK ERROR DURING MEASUREMENT RUN'
1AB3 D6D940C4E4D9C9D5 1583
1ABB C74D04C5C1E2E4D9 1583
1AC3 C5D4C5D5E340D9E4 1583
1AC8 05               1583
1ACC E2D6D4C540D4C5C1 1AF4 1584 BIT01 DC  CL41'SOME MEASUREMENTS ARE BELOW THE LOW LIMIT'
1AD4 E2E4D9C5D4C5D5E3 1584
1ADC E240C1D9C540C2C5 1584
1AE4 D3D6E640E3C8C540 1584
1AEC D3D6E640D3C9D4C9 1584
1AF4 E3               1584
1AF5 E2D6D4C540D4C5C1 1B1E 1585 BIT02 DC  CL42'SOME MEASUREMENTS ARE ABOVE THE HIGH LIMIT'
1AFD E2E4D9C5D4C5D5E3 1585
1B05 E240C1D9C540C1C2 1585
1B0D D6E5C540E3C8C540 1585
1B15 C8C9C7C840D3C9D4 1585
1B1D C9E3             1585
1B1F C4C9D7E240D6D940 1B34 1586 BIT03 DC  CL22'DIPS OR SKIPS IN GRAPH'
1B27 E2D2C9D7E240C9D5 1586
1B2F 40C7D9C1D7C8   1586
1B35 E5C1D9C9C1E3C9D6 1B62 1587 BIT04 DC  CL46'VARIATION FROM LOWEST TO HIGHEST EXCEEDS LIMIT'

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BOB1 5444 DISK ADJUSTMENT UTILITY

BOB1 5444 DISK ADJUSTMENT UTILITY

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1B3D C540C6D9D6D440D3 1587
1B45 D6E6C5E2E340E3D6 1587
1B4D 40C8C9C7C8C5E2E3 1587
1B55 40C5E7C3C5C5C4E2 1587
1B5D 40D3C9D4C9E3 1587
1B63 C9D5C3D6D9D9C5C3 1B8E 1588 BIT05 DC CL44*INCORRECT NUMBER OF SEEKS WITH NO DISK ERROR*
1B6B E340D5E4D4C2C5D9 1588
1B73 40D6C640E2C5C5D2 1588
1B7B E240E6C9E3C840D5 1588
1B83 D64CC4C9E2D240C5 1588
1B8B D9D9D6D9 1588
1B8F C3C1D9D9C9C1C7C5 1B81 1589 BIT06 DC CL35*CARRIAGE DID NOT MOVE DURING A SEEK*
1B97 40C4C9C440D5D6E3 1589
1B9F 40D4D6E5C540C4E4 1589
1BA7 D9C9D5C740C140E2 1589
1BAF C5C5D2 1589
1590 * BIT 7 = PER CYCLE SWITCH
1591
1592 *****
1593
1B82 C9C440C6C9C5D3C4 1B83 1594 IDERMS DC CL18*ID FIELD IS XXXXXX*
1B8A 40C9E240E7E7E7E7 1594
1B8C E7E7 1594
1B84 40606040E7E7E7E7 1B87 1595 IDALL DC CL36* -- XXXXFF MEANS RD ID NOT COMPLETED*
1B8C C6C640D4C5C1D5E2 1595
1B84 40D9C440C9C440D5 1595
1B8C D6E340C3D6D4D7D3 1595
1B84 C5E3C5C4 1595
1B8B C9C5C3C1D340C5D9 1B8C 1596 CALMSG DC CL21*RECAL ERROR - DRIVE X*
1B8C D9D6D9406040C4D9 1596
1B8F C9E5C540E7 1596
1B8D 4B4B4B40C9D540D4 1C05 1597 MS DC CL9*... IN MS*
1C05 E2 1597
1C06 E7E7 1C07 1598 DISK DC CL2*XX*
1C08 C4C9D9C5C3E3C9D6 1C27 1599 DC CL32*DIRECTION, SID CYCLES, SEEK LENG*
1C10 D56B40E2C9D640C3 1599
1C18 E8C3D3C5E26B40E2 1599
1C20 C5C5D240D3C5D5C7 1599
1C28 E3C86B40C4C9E2D2 1C46 1600 DC CL31*TH, DISK ... LIMITS - LOW VAR *
1C30 404B4B4B40D3C9D4 1600
1C38 C9E3E2406040D3D6 1600
1C40 E64040E5C1D940 1600
1C47 40C8C9C7C8404B4B 1C5D 1601 HEAD DC CL10* HIGH ... *
1C4F 4B40 1601
1C51 E2E3C1E3E4E240C2 1C68 1602 STSMG DC CL24*STATUS BYTES XX XX XX XX*
1C59 E8E3C5E240E7E740 1602
1C61 E7E740E7E740E7E7 1602
1C69 C3E8D3C9D5C4C5D9 1C79 1603 IDMSG DC CL17*CYLINDER ID TABLE*
1C71 40C9C440E3C1C2D3 1603
1C79 C5 1603
1C7A D5D640D9C5C1C4C9 1C95 1604 NOSMPL DC CL28*NO READINGS TAKEN OR NOT RDY*
1C82 D5C7E240E3C1D2C5 1604
1C8A D540D6D940D5D6E3 1604
1C92 40D9C4E8 1604
1C96 E3D9C1C3D2 1C9A 1605 TRACK DC CL5*TRACK*
1C9B 1606 PRTA EQU *
1CFA 1607 DC CL96* * PRINT AREA
1C9B 4040404040404040 1607
1CA3 4040404040404040 1607
1CAB 4040404040404040 1607
1CB3 4040404040404040 1607
1CB6 4040404040404040 1607
1CC3 4040404040404040 1607
1CCB 4040404040404040 1607
1CD3 4040404040404040 1607
1CDB 4040404040404040 1607
1CE3 4040404040404040 1607
1CEB 4040404040404040 1607
1CF3 4040404040404040 1607

```

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ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT
1608 *****
1609 *****
1610 **
1611 ** NOTE: THE ADDRESS OF 'HERE' MUST BE LESS THAN X*1D00* **
1612 **
1613 *****
1614 *****
1615
1CFB 1616 HERE EQU * 'HERE' MUST BE LESS THAN X*1D00*
1CFC 1617 DC AL2(IDTBL-HERE)
1618
1619 * FROM 'HERE' TO X*1D00' IS UNUSED
1620
1D00
1621 DRG X*1D00*
1D00 1622 IDTBL EQU * IDTBL MUST BE AT X*1D00*
1D0C 1623 DS CL205
1D00 1624 NOTE DC CL51* -ACCESS MOVED WRONG NUMBER OF TRACKS ON THIS SEEK*
1D0D 5C4060C1C3C3C5E2 1624
1D05 E240D4D6E5C5C440 1624
1D0D E6D9D6D5C740D5E4 1624
1D05 D4C2C5D940D6C640 1624
1D0D E309C1C3D2E240D6 1624
1D0F D540E3C8C9E240E2 1624
1D0F C5C5D2 1624
1E00 1625 CYCTBL EQU * CYCTBL MUST BE AT X*1E00*
1E00 1626 DS CL205
1E00 C9D5E3C5D9E5C5D5 1E00 1627 INTVRO DC CL32*INTERVENTION REQUIRED ON DRIVE X*
1E05 E3C9D6D540D9C5D8 1627
1E0D E4C9D9C5C440D6D5 1627
1E05 40C4D9C9E5C540E7 1627
1E0D D9C5E5C5D9E2C5 1E03 1628 REV DC CL7*REVERSE*
1E04 C6D6D9E6C1D9C4 1E0A 1629 FWD DC CL7*FORWARD*
1F00 1630 DRG X*1F00*
1F00 1631 DISTBL EQU * 'DISTBL' MUST BE AT X*1F00*
1FFE 1632 DS CL255
1FFF 1633 END EQU *
0222 1634 HALT EQU X*222*
0216 1635 LINK EQU X*216*
022A 1636 LOAD EQU X*22A*
021A 1637 PRINT EQU X*21A*
0212 1638 TEST EQU X*212*
021E 1639 UNPACK EQU X*21E*
0208 1640 SBYTED EQU X*208*
020A 1641 SBYTE2 EQU X*20A*
0208 1642 SBYTE3 EQU X*20B*
020C 1643 SBYTE4 EQU X*20C*
020D 1644 SBYTE5 EQU X*20D*
0008 1645 SSW04 EQU X*08*
0000 1646 SSW10 EQU X*00*
0040 1647 SSW11 EQU X*40*
0020 1648 SSW12 EQU X*20*
0010 1649 SSW13 EQU X*10*
0001 1650 SSW17 EQU X*01*
0080 1651 SSW20 EQU X*80*
0040 1652 SSW21 EQU X*40*
0020 1653 SSW22 EQU X*20*
0010 1654 SSW23 EQU X*10*
0008 1655 SSW24 EQU X*08*
0004 1656 SSW25 EQU X*04*
0002 1657 SSW26 EQU X*02*
0001 1658 SSW27 EQU X*01*
0080 1659 SSW28 EQU X*80*
0040 1660 SSW29 EQU X*40*
0020 1661 SSW2A EQU X*20*
0010 1662 SSW2B EQU X*10*
0008 1663 SSW2C EQU X*08*
0004 1664 SSW2D EQU X*04*
0002 1665 SSW2E EQU X*02*
0001 1666 SSW2F EQU X*01*

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PER CYCLE PRINT MODE

CHECK FWD CLUTCH ONLY
CHECK REV CLUTCH ONLY

USE LOWER READ HEAD
SNAPSHOT MODE

REPEAT LAST PRINTOUT
DO ROUTINES 1 THRU 6 IF SSW2F IS ON
DO ROUTINES 1 THRU 3 IF SSW2E IS OFF

52347

BOB1 5444 DISK ADJUSTMENT UTILITY

BOB1 5444 DISK ADJUSTMENT UTILITY

ERR LOC OBJECT CODE ADDR STMT SOURCE STATEMENT

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0080 1667 BIT0 EQU X*80*
0040 1668 BIT1 EQU X*40*
0020 1669 BIT2 EQU X*20*
0010 1670 BIT3 EQU X*10*
0008 1671 BIT4 EQU X*08*
0004 1672 BIT5 EQU X*04*
0002 1673 BIT6 EQU X*02*
0001 1674 BIT7 EQU X*01*
00A2 1675 A2 EQU X*A2*
00A3 1676 A3 EQU X*A3*
0008 1677 ARR EQU X*08*
00A2 1678 BUSY EQU X*A2*
00A6 1679 CTRL EQU X*A6*
00A4 1680 DAT EQU X*A4*
0002 1681 DIAG EQU X*02*
0010 1682 IAR EQU X*10*
0001 1683 ID EQU X*01*
00E0 1684 PRTBSY EQU X*E0*
00A3 1685 SK EQU X*A0*
00A1 1686 RD EQU X*A1*
00BA 1687 SBN EQU X*BA*
00BB 1688 SBF EQU X*BB*
00A3 1689 TSTERR EQU X*A0*
0003 1690 VER EQU X*03*
0001 1691 XR1 EQU X*01*
0002 1692 XR2 EQU X*02*
1693 TREP
1694 TREP
1695 TREP
1696 TREP
1697 TREP
1698 TREP
1699 TREP
1700 TREP
1701 TREP
1702 TREP
1703 TREP
0A14 1704 END BEGIN

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CROSS-REFERENCE

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SYMBOL T LEN VALUE DEFN REFERENCES
ADCYL A 005 1246 0821 0888
ALLSET A 004 0E48 0431 0424
ARR C 001 0008 1677 0205 0413 0559 0636 1014 1167 1178 1229 1243 1257 1270 1281
1295 1303 1327 1333 1350 1376 1391
ASIL A 004 17C4 1317 1315
A0 A 003 0A0C 0019 1015
A2 C 001 00A2 1675
A3 C 001 00A3 1676 0972 0975 0978 0981 0984 0988 1062 1355 1358 1404
BASE A 004 10B7 0679 0703
BCALER A 004 167E 1191 1179
BCTR A 001 1A55 1545 0234* 0243* 0247 0254 0255
BCTR2 A 002 1A68 1551 1306* 1311
BEGIN A 006 0A14 0029 1704
BEGIN1 A 004 0B2C 0206 0032 0045 0058 0074 0086 0099
BEGIN3 A 004 0B28 0205 0030 0043 0056 0072 0084 0097
BEND A 002 1A80 1563 0316* 0328 0453
BFOR8 A 004 116C 0744 0742
BFOR9 A 004 11A9 0763
BGHALT A 004 0B34 0208 0302 0524
BITSW A 001 1AAA 1581 0228* 0232* 0250* 0278* 0283* 0322* 0332* 0336* 0339* 0347 0446* 0461
0468 0474 0480 0486 0492 0498 0504 0516 0517* 0565*
BITSW1 A 001 1AA9 1576 0605* 0623 0625*
BIT0 C 001 0080 1667 0232 0343 0344 0345 0346 0349 0350 0351 0352 0468 1442 1443
1444 1447 1448 1449
BIT00 A 033 1ACB 1583 0473
BIT01 A 041 1AF4 1584 0479
BIT02 A 042 1B1E 1585 0485
BIT03 A 022 1B34 1586 0491
BIT04 A 046 1B62 1587 0497
BIT05 A 044 1B8E 1588 0503
BIT06 A 035 1BB1 1589 0509
BIT1 C 001 0040 1668 0339 0474
BIT2 C 001 0020 1669 0332 0480
BIT3 C 001 0010 1670 0446 0486
BIT4 C 001 0008 1671 0336 0492
BIT5 C 001 0004 1672 0498 0565 0989 1015 1361
BIT6 C 001 0002 1673 0250 0504 0682 0744 0763 0973 0976 0979 0982 0985 1063 1066
1071 1076 1079 1083 1356 1359
0605 0623 0625 0991 0994 1000 1405
0386 0387 0388 0421 0422 0429 0430 0466 0661 0722
0303 0313 0357 1313 1427
0259
0305* 0326 0333 0337 0398
0817 0871 0911 0946 1149 1235
0243 0256 0414 0538 0821 1068 1304 1308
0315 0327 0329 0804
1328 1368
1216 1434*
0940
0829
0696 0730
1357
0443
0231
0280 0282 0522
0210 0317 0393 0435 0616 0828 0885 1344
0227
0230
0374 0377 0380 0400 0845 0848
0819 0821* 0846 0853 0886 0893
0599
0693* 0771* 0810* 0815* 0859* 0862* 0908* 0940* 0943* 0970* 1144* 1146*
1230* 1233* 1353*
0229 1246 1246*
CYCTBL A 001 1E00 1625

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BOB1 5444 DISK ADJUSTMENT UTILITY

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
CYC100	A	003	0B1E	0195	1436
CYC101	A	003	0ABF	0128	
CYC102	A	003	0ACF	0139	
CYC103	A	003	0ADF	0150	
CYC104	A	003	0AEF	0161	
CYC105	A	003	0AFF	0172	
CYC106	A	003	0B0F	0183	
CYC200	A	003	0B21	0196	1441
CYC201	A	003	0AC2	0129	
CYC202	A	003	0AD2	0140	
CYC203	A	003	0AE2	0151	
CYC204	A	003	0AF2	0162	
CYC205	A	003	0B02	0173	
CYC206	A	003	0B12	0184	
DAT	C	001	00A4	1680	0861* 0909* 1147*
CATAD	A	002	1311	0891	0861 0909 1147
DATBAD	A	002	19AE	1453	1422
DATBL	A	002	1980	1454	1453
CATSEP	A	004	1407	0935	0934 0935
DCF	A	004	1319	0895	0806* 0809* 0863 0864* 0865*
DCTR1	A	007	1A5F	1547	0284 0284* 0294* 0295 0304* 0418 0427 0440* 1548
DCTR2	A	007	1A5B	1548	0376 0379 0382 0420 0428 0847 0850 1309 1309* 1312* 1316 1316*
DGDCF	A	004	1443	0951	0939* 0944*
DIAG	C	001	0002	1681	0870 0910
DISK	A	002	1C07	1598	0372 0912 1396* 1402* 1417* 1421* 1429 1433 1434
DISTBL	A	001	1F00	1631	0256* 0285 0569 0569 0869* 0872 0876 0880 0891 0913 0914 1244 1244*
DDN	A	006	12CA	0869	0866
DD01	A	001	1A6D	1554	0236 0294 03C4 0440 1312
ECLPRT	A	004	1779	1298	1295*
ECLRTB	A	004	1715	1249	1243*
ECN0CH	A	004	107D	0646	0636* 0638
ECNVBT	A	004	17C8	1318	1307* 1308*
EDIT1	A	011	1A95	1568	0419 0426
EDIT2	A	019	1AA4	1567	0383
EDIT3	A	011	1A91	1566	1264 1568
EECNDC	A	004	1081	0647	0640*
EERRTS	A	004	1052	0632	0559*
EHALT	A	004	16C9	1223	1208
EHALTR	A	004	18A5	1382	1376*
EHALST	A	004	14F6	1022	1014* 1016
EJMPTS	A	004	1803	1370	1350* 1368*
ELACER	A	004	1649	1173	1167*
ENCD	A	004	1453	0964	0967 1003
ENCDST	A	004	1457	0965	0974
ENCODE	A	004	144C	0962	0961 0962
END	A	001	1FFF	1633	
ENDCK	A	003	0E7E	0451	0442 0445 0447 0449
ENOTOK	A	004	1176	0747	0680* 0745 0761*
EPRTID	A	004	1767	1290	1281*
EPRTST	A	004	174E	1276	1270*
EREADI	A	004	16ED	1236	1229*
ERECAL	A	004	167A	1190	1178*
ERRCOD	A	002	0EA4	0467	1432*
ERRSTS	A	001	1746	1272	0725* 1206* 1219* 1275*
ERRTST	A	004	0F76	0559	0274
ESETDA	A	004	19A9	1452	1391*
ESHLO	A	004	1816	1345	1327* 1328* 1333*
EUPKST	A	004	173A	1266	1257*
EXCAP	A	004	0BCC	0250	0248
EXPID	A	001	11FA	0791	0730* 0733
EXPTRK	A	004	0BFD	0261	0216* 0533*
FIRST	A	003	1227	0811	0802 0803 0808* 0812*
FNDEND	A	003	0C77	0311	0314
FNDST	A	003	0C3E	0291	0296
FRED	A	005	12EE	0880	0873

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
FRSTLN	A	002	0D2F	0363	1431*
FRSTSK	A	002	1118	0707	0677 0678 0679 0688 0689 0759
FWD	A	007	1EFA	1629	0364
FWDREV	A	001	1121	0712	0700 0701* 0702*
FWDSN	A	002	0B17	0191	0215 1442* 1447*
FWDSN1	A	002	0AB8	0124	
FWDSN2	A	002	0AC8	0135	1352
FWDSN3	A	002	0AD8	0146	
FWDSN4	A	002	0AE8	0157	
FWDSN5	A	002	0AF8	0168	
FWDSN6	A	002	0B08	0179	
FWDTIM	A	002	14DF	1007	0993* 0997 1326 1331* 1332
FWDYES	A	006	0FF0	0600	0597
GEORGE	A	004	12F3	0881	0868
GETBYT	A	006	178D	1306	1305*
GO	A	004	0B49	0214	0540
GRAPH	A	004	0DE3	0409	0407
HALT	C	001	0222	1634	0208 1223 1379
HALTE	A	004	15CE	1126	1143
HALTR	A	004	188D	1376	0657 0800 0936 0964 1053 1126
HALT8	A	003	1173	0746	0740* 0743*
HDSW	A	003	1253	0829	0807* 0830*
HEAD	A	010	1C50	1601	0362
HERE	A	001	1CFB	1616	1617
HI	A	001	0B24	0199	0029* 0042* 0055* 0071* 0083* 0096* 0330 0381
HIPRT	A	002	1AA6	1569	0588
HI1	A	001	0AC5	0132	0029
HI2	A	001	0AD5	0143	0042
HI3	A	001	0AE5	0154	0055
HI4	A	001	0AF5	0165	0071
HI5	A	001	0B05	0176	0083
HI6	A	001	0B15	0187	0096
HLTCOD	A	002	0B39	0209	1378 1429* 1430* 1431 1432
HLTR	A	002	18A0	1380	1378*
HLT8	A	003	10CA	0684	1409* 1415*
HLT9	A	003	11B0	0765	0779 1395* 1401* 1408* 1410 1412* 1414* 1415
HSMMSG	A	034	151B	1023	1020
HSTST	A	004	14E1	1014	0963 1052
IAR	C	001	0010	1682	
ID	C	001	0001	1683	1234
IDADDR	A	002	1A6A	1552	0239 1233
IDALL	A	036	1BE7	1595	1289
IDERMS	A	018	1BC3	1594	1285
IGEXMS	A	014	1187	0748	0734
IDMSG	A	017	1C79	1603	0574
IDTBL	A	001	1D00	1622	0578 1247* 1248 1248* 1617
IEXMS2	A	013	1194	0749	0738
INTPRT	A	004	1691	1200	1194
INTVRQ	A	032	1EEC	1627	1203 1433*
JMPTST	A	004	181A	1350	0965 1054
JUDY	A	003	10DF	0690	0704
JUMPM5	A	038	188C	1371	1366 1397* 1403*
KARL	A	004	1901	1414	1411
KIPP	A	004	115B	0739	0729
KRIS	A	006	0D18	0356	0358
KURT	A	006	1905	1415	1406 1413
LACER	A	004	162F	1167	0221
LASTID	A	004	102E	0620	0618
LDADDR	A	003	1926	1423	1428
LIMIT	A	003	123F	0819	0805*
LINK	C	001	0216	1635	0033 0046 0060 0073 0087
LI01	A	004	0B98	0237	1454
LI010	A	003	1224	0810	1463
LI011	A	003	1233	0815	0813 1464
LI012	A	003	1611	1146	1465
LI013	A	003	1336	0908	1466

523455

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
LIO14	A	003	1339	0909	1467
LIO15	A	003	12AB	0861	1468
LIO16	A	003	12AE	0862	1469
LIO17	A	003	141C	0940	0949 1470
LIO18	A	003	1426	0943	1471
LIO19	A	004	12A4	0859	1472
LIO2	A	004	089F	0239	1455
LIO20	A	004	1614	1147	1473
LIO21	A	004	146B	0970	1474
LIO22	A	004	16D7	1230	1475
LIO3	A	004	1655	1180	1195 1456
LIO4	A	004	1542	1060	1457
LIO5	A	004	16E2	1233	1458
LIO6	A	003	10E8	0693	1459
LIO7	A	004	1828	1353	1460
LIO8	A	003	11C3	0771	0782 1461
LIO9	A	003	160B	1144	1462
LISA	A	004	18DC	1404	1399
LNKRET	A	004	0F72	0547	0205* 0537 0539
LNSTRT	A	004	0FC0	0586	0584 0608 0619
LO	A	001	0B22	0197	0337 0375
LOAD	C	001	022A	1636	0061 0100
LOCK	A	006	0CD9	0337	0335 0356 0356
LOIS	A	004	0D89	0398	0325
LONG	A	004	17CC	1325	0998 1089 1407*
LOOP	A	004	0BA6	0241	0242 0242 0249
LO1	A	001	0AC3	0130	
LO2	A	001	0AD3	0141	
LO3	A	001	0AE3	0152	
LO4	A	001	0AF3	0163	
LO5	A	001	0B03	0174	
LO6	A	001	0B13	0185	
LRAK	A	006	0D43	0368	0366
LUCY	A	003	10CD	0685	0683
MAXSID	A	003	1A83	1564	0251
MINIAD	A	002	11FC	0792	0761
MINIFR	A	004	1199	0759	0780 0784 0792
MINSNS	A	002	11F3	0785	0685* 0686 069C* 0691 0766* 0767 0775* 0776
MORCNV	A	006	17AD	1312	1314
MORED	A	003	1536	1057	1055 1095
MORPRT	A	005	0DBD	0399	0454
MORSCN	A	004	1220	0809	0822
MS	A	009	1C05	1557	0373
MSK	A	001	11F6	0787	0786
MSKADD	A	002	11F5	0786	0771
MVDIST	A	006	0BE7	0256	0255*
NODAT	A	012	1329	0898	0869 0872
NOISE	A	004	17F7	1334	1329
NOISLN	A	001	180F	1342	1325* 1330*
NOMOAD	A	002	1328	0899	0859
NOPRCY	A	004	0F30	0523	0518
NOSAMP	A	004	0C57	0297	0570
NOSMPL	A	028	1C95	1604	0300
NOTE	A	051	1DFF	1624	0629
NOTFWD	A	003	14BC	0996	0992
NOTOK	A	004	1125	0719	0697 0698 0778
OLD	A	001	1AA7	1570	0582* 0585* 0598* 0600* 0601 0602*
ONE	A	001	114E	0732	0701
CNEMD	A	003	149F	0987	0990
PACKED	A	002	0FDD	0594	0586*
PASTPR	A	004	0E50	0435	0405
PEEK	A	004	185F	1369	1360
PLUS1	A	004	1463	C068	0966 0987 0995 1004
POINT	A	006	1787	1305	1303* 1304* 1307
PPIK	A	006	0BAA	0242	0241
PREEND	A	004	19A1	1450	1446

DATE 15MAR72 15NOV72
EC NO. 571609 571626

PROG ID 0808-1
PAGE 16

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
PRINT	C	001	021A	1637	0297 0359 0389 0431 0455 0463 0470 0476 0482 0488 0494 0500 0506 0510 0571 0612 0620 0626 0658 0719 0735 0831 0836 0881 0915 1017 1200 1213 1271 1286 1340 1363
PROP	A	006	0DED	0411	0399* 0401 0404* 0406 0408* 0410
PRTA	A	001	1C9B	1606	0364* 0367* 0368* 0369* 0370* 0371* 0372* 0373* 0376* 0379* 0382* 0383* 0384 0384* 0385* 0386* 0387* 0388* 0392 0411* 0412* 0418* 0419* 0420* 0421* 0422* 0425* 0426* 0427* 0428* 0429* 0430* 0581 0611 0615 0840 0841 0843* 0847* 0850* 0854 0858 0867* 0877 0878* 0879* 0880* 0884 1263 1265 1296* 1297 1297* 1334* 1335 1335* 1339 1343 1569
PRTADD	A	002	0E4F	0434	0413* 0414*
PRTALN	A	004	1014	0609	0589 0591
PRTBSY	C	001	00E0	1684	0779
PRTID	A	004	1752	1281	C622 0666 0727 1222
PRTING	A	001	0E4D	0433	0409* 0410*
PRTL1	A	001	0D2A	0360	0343* 0349*
PRTL2	A	001	0DB1	0390	0344* 0350*
PRTL3	A	001	0E4C	0432	0345* 0351*
PRTL4	A	001	1032	0621	0346* 0352*
PRTRTN	A	004	0C08	0273	0212 0233 0252 0262
PRTS1S	A	004	173E	1270	0664 0726 1207 1220
QCHKAD	A	002	1124	0714	0680
QSKCHK	A	004	10AF	0675	0714
QUKEND	A	004	104A	0630	0564 0624
RCALER	A	004	16AB	1213	1188 1189
RCLADR	A	002	1A77	1559	1180
RCLDCF	A	004	1A7B	1560	1168* 1169* 1171* 1172* 1185 1559
RD	C	001	00A1	1686	0816 0870 0910 0945 1148 1234
RDGAD	A	002	143F	0950	0943
RDIDIN	A	003	1A58	1546	0235* 0260 0261 0681 0696 0739 0774 0849 0857 1129 1232* 1284 1552
RDWD	A	004	162A	1154	1129* 1138* 1139* 1140*
RDWDAD	A	002	1626	1153	1146
READID	A	004	16D3	1229	0665 0695 0773 0844 1128 1221
RECAL	A	004	164D	1178	0214 0675 0801 0905 0937 1094 1170 1351 1369
RELOAD	A	002	1313	0892	0809 0864 0944
RESET	A	004	15F8	1138	1136 1150
REV	A	007	1EF3	1628	0367
REVFWD	A	001	11F8	0789	0780* 0781*
REVS1	A	002	0B19	0192	0532 1443* 1448*
REVS1	A	002	0ABA	0125	
REVS2	A	002	0ACA	0136	
REVS3	A	002	0ADA	0147	
REVS4	A	002	0AEA	0158	
REVS5	A	002	0AFA	0169	
REVS6	A	002	0BCA	0180	
REVTIM	A	002	14DC	1005	0996* 0997 1048 1051 1326* 1331 1332* 1338
RIDDAD	A	002	16F2	1237	1230
RIDDCF	A	002	16F4	1238	1444* 1449*
ROUTN7	A	004	1089	0657	0667
RTOA	A	001	11FD	0796	0757
RTOB	A	001	1403	0930	0798
RTOC	A	001	1448	0957	0932
RTOE	A	001	151C	1044	0959
RTOE	A	001	15C6	1120	1046
RT01	A	001	0A1C	0025	0017
RT02	A	001	0A2A	0038	0027
RT03	A	001	0A44	0051	0040
RT04	A	001	0A67	0067	0053
RT05	A	001	0A81	0079	0069
RT06	A	001	0A9B	0092	0081
RT07	A	001	1085	0653	0094
RT08	A	001	10AB	0672	0655
RT09	A	001	1195	0755	0674
RUN	A	001	14DC	1006	1087* 1088
RVONLY	A	006	0F50	0532	0222 0528 0530
RYTCYC	A	003	0827	0200	0563 1436* 1441*

DATE 15MAR72 15NOV72
EC NO. 571609 571626

PROG ID 0808-1
PAGE 16A

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SBF	C	001	00BB	1688	1400 1420
SBN	C	001	00BA	1687	1394 1416
SBYTE0	C	001	0208	1640	0353 0682 0744 0763
SBYTE2	C	001	020A	1641	1398 1418
SBYTE3	C	001	020B	1642	
SBYTE4	C	001	020C	1643	0217 0219 0281 0527 0529 1445
SBYTE5	C	001	020D	1644	0031 0044 0C57 0059 0073 0085 0098 0211 0279 0523 0536
SCAN	A	004	1201	0800	0920
SCGOOD	A	004	132E	0905	0820 0887
SCHATZ	A	003	11B3	0766	0764
SCMS	A	008	1369	0921	0834
SCMSG3	A	016	13C4	0924	0912* 0913* 0914*
SCMSG4	A	034	13E6	0925	0918
SCMS1A	A	032	13B4	0923	0839
SCNBAD	A	001	124F	0827	0818
SCOPE	A	004	15CA	1125	1124 1125
SEEK64	A	002	15C5	1101	1059
SET	A	004	1922	1422	1419
SETDA	A	004	18A9	1391	0206 0213 0762 0769 1377 1381
SETFWD	A	004	14CB	1000	
SETINS	A	003	1929	1424	1394* 1400*
SETIN2	A	003	192C	1425	1416* 1420*
SETUP1	A	004	0C3A	0285	0275* 0276 0423 0519* 0520
SETUP2	A	004	0C73	0310	0276* 0277* 0324 0402 0441 0520* 0521*
SHORT	A	004	17E3	1330	0947 0999 1090
SIOCY	A	003	1A62	1549	0236* 0251 0368 0563 1245 1245*
SI01	A	003	089C	0238	1476
SI010	A	003	1230	0814	0811 1485
SI011	A	003	1236	0816	1486
SI012	A	003	160E	1145	1487
SI013	A	003	133C	0910	1488
SI014	A	003	1200	0870	1489
SI015	A	003	1423	0942	1490
SI016	A	003	142E	0945	1491
SI017	A	003	12A8	0860	1492
SI018	A	005	1618	1148	1130* 1131* 1134* 1137* 1493
SI019	A	003	160B	1231	1494
SI02	A	003	08A3	0240	1477
SI03	A	003	1659	1181	1478
SI04	A	003	1546	1061	1479
SI05	A	003	16E6	1234	1480
SI06	A	003	101B	0694	1481
SI07	A	003	182C	1354	1482
SI08	A	003	11C6	0772	1483
SI09	A	003	146F	0971	1484
SIRK	A	004	0D26	0359	0348 0354
SK	C	001	00A0	1685	0694 0772 0814 0860 0942 0971 1145 1231 1354
SKAD	A	002	111D	0708	0693
SKCTRL	A	001	111F	0710	0708
SKDCAD	A	002	1A6C	1553	0237 0970 1060 1353
SKDCF	A	004	1A66	1550	0215* 0365 0369 0525 0532* 0583 0596 0598 0600 0969* 0991 0994*
					1000* 1059* 1352* 1553
SKEAD	A	002	162C	1155	1144
SKOUT	A	002	1447	0953	0938* 0939 0948*
SKWD	A	002	162E	1156	1132* 1133*
SNBYTS	A	001	11F9	0790	0770*
SNPCNT	A	001	1A54	1544	02C7* 0538*
SNSC	A	002	14E0	1009	0972* 0973 0975* 0976 0978* 0979 0981* 0982 0984* 0985 0988* 0989
					1001* 1002 1355* 1356 1358* 1359 1361
					1141* 1142
SNSE	A	002	1622	1151	1127* 1130 1132 1135 1138
SNSE1	A	002	1624	1152	1062* 1063 1065* 1066 1070* 1071 1075* 1076 1078* 1079 1082* 1083
SNSIN	A	002	15C3	1100	1091* 1092
					0643 0644 1182* 1183 1187 1192 1258* 1437* 1438
SNSOAI	A	002	1A51	1542	1495
SNSI	A	004	196B	1437	1495
SNS10	A	003	1584	1082	1085 1504

523159

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
SNS11	A	004	182F	1355	1505
SNS12	A	003	147B	0975	0977 1506
SNS13	A	003	1484	0978	0980 1507
SNS14	A	003	148D	0981	0983 1508
SNS15	A	003	1496	0984	0986 1509
SNS16	A	003	14A2	0988	1510
SNS17	A	004	183B	1358	1362 1511
SNS18	A	003	1472	0972	1512
SNS19	A	003	1549	1062	1513
SNS2	A	004	08B6	0244	1496
SNS2A3	A	002	1A53	1543	0244* 0245 0645 1193 1259* 1262 1404* 1405
SNS3	A	004	165C	1182	1184 1497
SNS4	A	004	171D	1258	1498
SNS5	A	004	1721	1259	1499
SNS6	A	003	1553	1065	1067 1073 1099 1500
SNS7	A	003	1563	1070	1072 1501
SNS8	A	003	156F	1075	1077 1502
SNS9	A	003	1578	1078	1081 1503
SON	A	004	10C3	0682	0706
SPACE	A	004	0F0E	0510	0462 0505
SPLAT	A	001	1A48	1537	0411
SSKAD	A	002	131B	0896	0810
SSW04	C	001	0008	1645	0353
SSW10	C	001	0080	1646	1418
SSW11	C	001	0040	1647	
SSW12	C	001	0020	1648	
SSW13	C	001	0010	1649	1398
SSW17	C	001	0001	1650	
SSW2A	C	001	0020	1661	
SSW2B	C	001	0010	1662	
SSW2C	C	001	0008	1663	
SSW2D	C	001	0004	1664	0211 0523
SSW2E	C	001	0002	1665	0059
SSW2F	C	001	0001	1666	0031 0044 0057 0073 0085 0098
SSW20	C	001	0080	1651	0281
SSW21	C	001	0040	1652	
SSW22	C	001	0020	1653	
SSW23	C	001	0010	1654	0217 0529
SSW24	C	001	0008	1655	0219 0527
SSW25	C	001	0004	1656	
SSW26	C	001	0002	1657	
SSW27	C	001	0001	1658	1445
SSW28	C	001	0080	1659	0279 0536
SSW29	C	001	0040	1660	
START1	A	004	086F	0227	0218 0220 0534
STEND	A	004	0C85	0315	0312
STEPR	A	004	1527	1053	1064
STFRST	A	003	1590	1086	1057* 1097*
STFRST	A	003	1585	1096	1086
STL2	A	001	156F	1074	1069
STORE	A	006	08D0	0251	0246
STRUP	A	001	14DE	1008	1088 1096*
STSM5G	A	024	1C68	1402	0385 0843 1264* 1265* 1274
STSTRT	A	004	0C65	0303	0292
SVBSTR	A	001	1A7E	1562	0326* 0327* 0404
SVXR1	A	002	1A4C	1539	0452* 0453 0560* 0630 0637* 0641 1310* 1317 1392* 1450
SVXR2	A	002	1A4E	1540	0561* 0631 1393* 1451
TEST	C	001	0212	1638	0705 0783 0941
TEST1	A	004	11EB	0783	0768 0777
TEST2	A	004	1112	0705	0687 0692
TIO1	A	004	087B	0230	0263 1514
TIO10	A	003	1239	0817	1523
TIO11	A	003	123C	0818	1524
TIO12	A	004	16E9	1235	1525
TIO13	A	003	133F	0911	1526

523463

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
TIO14	A	003	12D3	0871	1527
TIO15	A	003	1431	0946	1528
TIO16	A	004	1434	0947	1529
TIO2	A	004	08ED	0257	1515
TIO3	A	004	1651	1174	1225 1516
TIO4	A	004	1676	1189	1186 1517
TIO5	A	004	0F82	0562	1518
TIO7	A	003	10FA	0698	1520
TIO8	A	003	1610	1149	1521
TIO9	A	003	11DA	0778	1522
TOMUCH	A	003	1A86	1565	0295
TOOLNG	A	004	0DD8	0406	0403
TRACK	A	005	1C9A	1605	0371
TRACK#	A	001	1A4F	1541	0216 0585 0805 0886 0938 1168 1435* 1440*
TRACKS	A	001	1122	0713	0688* 0699*
TRK100	A	001	0B1A	0193	1435
TRK101	A	001	0ABB	0126	
TRK102	A	001	0ACB	0137	
TRK103	A	001	0ADB	0148	
TRK104	A	001	0AEB	0159	
TRK105	A	001	0AFB	0170	
TRK106	A	001	0B0B	0181	
TRK200	A	001	0B1B	0194	1440
TRK201	A	001	0ABC	0127	
TRK202	A	001	0ACC	0138	
TRK203	A	001	0ADC	0149	
TRK204	A	001	0AEC	0160	
TRK205	A	001	0AFC	0171	
TRK206	A	001	0B0C	0182	
TRUK	A	004	0CE6	0343	0338
TSTBTO	A	004	0EA5	0468	
TSTBT1	A	004	0EB4	0474	0469
TSTBT2	A	004	0EC3	0480	0475
TSTBT3	A	004	0ED2	0486	0481
TSTBT4	A	004	0EE1	0492	0487
TSTBT5	A	004	0EF0	0498	0493
TSTBT6	A	004	0EFF	0504	0499
TSTERR	C	001	00A0	1689	0698 0778 0818 0947
TSTZ7	A	004	19B2	1442	1439
TSTZ8	A	004	0F5E	0536	0526 0531
UNPACK	C	001	021E	1639	0592 0731 0851 0855 0874 1260 1282 1336
UNPKED	A	002	0FDF	0595	0587* 0588
UNPKID	A	006	0F93	0569	0562
UPBR	A	003	0E61	0443	0323* 0450*
UPKSTS	A	004	1719	1257	0273 0642 0663 0724 0942 1191 1205 1218
VAR	A	001	0B23	0198	0334 0378
VARCK	A	006	0CC6	0333	0331
VAR1	A	001	0AC4	0131	
VAR2	A	001	0AD4	0142	
VAR3	A	001	0AE4	0153	
VAR4	A	001	0AF4	0164	
VAR5	A	001	0B04	0175	
VAR6	A	001	0B14	0186	
VDATOK	A	028	1402	0926	0867
VDCFAD	A	002	1315	0893	0815 0862
VER	C	001	0003	1690	0816 0945
VOLDAD	A	002	1308	0889	0906 0907 0908
VOLDCF	A	004	130F	0890	0804*
WORK	A	001	1AA8	1571	0328* 0329* 0330 0333* 0334 0863* 0865
XRINCR	A	003	100A	0606	0603
XRI	C	001	0001	1691	0229* 0253 0253* 0254 0258 0285* 0291 0293 0293* 0303* 0305 0310* 0311 0313* 0315* 0316 0355* 0357* 0398* 0399 0444 0444 0448 0448 0451 0451* 0452 0560 0576* 0586 0590 0601 0602 0606 0606* 0617 0630* 0637 0638* 0639 0639* 0640 0641* 0678 0679* 0680 0680 0685 0686 0688 0690 0691 0693 0697 0698 0699 0700 0701 0701 0702 0730 0740 0742 0743 0759* 0761 0761 0766 0767 0770 0771 0775

BOB1 5444 DISK ADJUSTMENT UTILITY

CROSS-REFERENCE

SYMBOL	T	LEN	VALUE	DEFN	REFERENCES
					0776 0778 0779 0780 0781 0782 0784 0802 0803* 0804 0805 0806
					0807 0808 0809 0810 0811 0812 0813 0815 0817 0818 0819
					0821 0830 0861 0862 0863 0864 0864 0865 0871 0886 0888 0906
					0907* 0908 0909 0911 0934 0935* 0938 0939 0939 0940 0943 0944
					0946 0948 0949 0961 0962* 0963 0972 0973 0974 0975 0976 0977
					0978 0979 0980 0981 0982 0983 0984 0985 0986 0987 0988 0989
					0990 0993 0995 0996 0997 0997 1001 1002 1003 1004 1048 1049*
					1052 1056 1057 1059 1062 1063 1065 1066 1067 1070 1071 1072
					1073 1075 1076 1077 1078 1079 1081 1082 1083 1085 1083 1091
					1092 1095 1096 1097 1099 1124 1125* 1127 1129 1130 1130 1131
					1132 1132 1133 1134 1135 1137 1138 1138 1139 1140 1141 1142
					1143 1144 1146 1149 1150 1310 1311* 1313* 1317* 1392 1422* 1423
					1426 1426* 1427 1450*
XR2	C	001	0002	1692	0258* 0259* 0260 0561 0579* 0587 0604 0607 0607* 0609* 0631* 0677
					0681* 0689* 0696 0700* 0703* 0730 0739* 0774* 0840 0841* 0843 0847
					0850 0867 0878 0875 0880 0968* 0987* 0993 0996 1058* 1068* 1080
					1080* 1084 1084* 1087 1096 1098* 1393 1423* 1424 1425 1451*

TOTAL STATEMENTS FLAGGED IN THIS ASSEMBLY = 0

BOB1 5444 DISK ADJUSTMENT UTILITY

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-Y:Z.D B/ .. HA . & D BSY <C-ZUBXP /OZY+ D BC*B&B23 /OHMO - HJ O+BZ&H5*BGB2- 8 &H 6:UBOB10001
T+-Z5C*B&B23 /OH D D HROO+B2&H9*B GB2-B &H(OI ..C- B -7 D HOOH*BH- D DAC 8.I .,50H* .HC- ;Z8BOB10002
T+-DO &H(OI ..<B G /QE D&C 8.I & EOH*.HC-A -7 U & &OH*B&E-G DHM<<-Z UB1P /OZY+ DBC*B &B2O RH4BOB10003
T+-..OH*BH- ... ED .. D-.&-C3&7C3HOV P DB IM27C5&-G O&MYI)- A O CR&X O&MLO'?)Z8RM && AFE PIYBOB10004
T+-Z&W2|C2*-C5&H- I_ AA& ER<TO&?C O'|BxB|< &Q AW& F&|G7&|31-X2 &D .. D-.&-C3&7C3HO/ P&| 0,4BOB10005
T+-_/&C&HC7P VIS ZI <EN<BG SH- <B GE6&8A H(|/CCOH* QD*BGEU4< JZWB1* < ?=FU&BD H<Q/ |+ - 5D&BOB10006
T+->* -32U T /IQ ?OH*|H<BGE?M* /D DO-D; <F-DES /O> H+Y ED?HG-TO FVM &*|ZQAS EQ/Z<EQ E&|< 9QDBOB10007
T+-7PY 1Z/ZD&:D AOH*.D-4HB:Q.Z-8 FVME&3BTfV<9AAZ K&Z |1-4EM-HAA<B GB:Q: /DDC&HEQ/D C&YD &.-BOB10008
T+-OK.'HA MO AZ NC ..:/ZNC- & AZ ?OEH.#|HB CQBfUD < EN34 FV-2-&L /O_#OH*PF*BGC7Q &G00 *Z BOB10009
T+-1(| DACGQ<|L3 *CGQ# JDD+H BC-H &B3S -32U &: JD DAQ&EP1Z-0-D- G4 .. |H&H|HA &QOFV& E&E4 ET4BOB10010
T+-2H /Z-FYS EO =CH*BF&O*GI0- <B GB3&6 JZ5A3 EP1Z _(| DE-*MAG** C 2 &-6 JZ5OH*<|3Q AFXD O/-BOB10011
T+-3C(DE-<BGE&Z #:ADD|H*+QT4:CGP -&69C E-/Z*CO E-/Z1C EDAD CO ED&AZ1C& ED &U&-G D+S 38&BOB10012
T+-3=FDY| ADYFX4 (?TFDT2 --&:BAD DC& E-&Z&S&-HD+U EDTC CKY:- 61+Y +LCD DCH9#/DD&Z Z+8 RA*BOB10013
T+-49CKY#- 61+8 +LC> DCH8B HH&Z KO-D| 7*CIU<6LQ AFXP &4QOH*BfUE NGE2-F-0FGH<:=T- AFWM OY&BOB10014
T+-54&/ FC Q*Y1# 3C H*,A25B <*_JZ W+? *_&ODG.*&W-0 AG<H*ACOHG<4*A*B GE74.H-0BG|&EO&B GE74 \$/<BOB10015
T+-67B2<< /37FV? /1)'B2&< /3:FV& <D/3TF&D&HD/3TG|Y <B/37GF-. J3JFU* . J3DFU*. J3*FU- /OH RC BOB10016
T+-7DF-IMG+* /1) .(ED&E-JO C;B OH* P-&7>|J8<)-H&B&Z C;8&E-?HB;C5KC;# 2A &M-7>| U+L&B CU4 OQUBOB10017
T+-8VC;8. A2UFU- &&A2UI --+LD&ACU& E&O0BG18EP00CGH< EV&YCGH<EO0&BG10 EJO&CGH EJ34:CC3 2-KH 9,8BOB10018
T+-9-ID *Y OCGI& EV&YCGI&EP00BGH< EO0&AG10EJO&BGHD EJ&BG /YA OH* PE0QOFV&E&L4:CGP 2-J4 OTYBOB10019
T+-:s&Y*+P& A |H DD3Y&FD,2/01) D O H+&TOGCW.K &D 4 JZ<C&DELAD O D (7*8G /YJ+;8ED?H &* 12YBOB10020
T+-#O/OHEO&DEJ: +H ED?H&B<BG /D AHJ,.,+D ED?H&B<B G /EAHJ,4+D ED?H &B<BG /DAH/;&+A ED?H ;Q&BOB10021

523767

BOB1 5444 DISK ADJUSTMENT UTILITY

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+-&JU T /OHE-JO \$(C-HFD,2U T /OH E-K&SQ-T-DFD,2U T /OHE-KO&TT-BFD, 2U T /OHE-K<S&B G /Y 1/ BOB10022
T+-<EC-AFDY# JD D&Z K|A8<| OACGQ <|L3<CG\$ /O&+ & BC* &B3&8 JZV&Z -+ -BC|H&BT-&-3 2U < -,QB0B10023
T+-&BY*+C-DEB-Z R| ..?&BGB&28- H (aZ (CC ENAZ&YD DOH*.K*BG 4BAA NI DELC&BFU&AY = LC&H EE4BOB10024
TH--DB2*EQ?HA>3Y DFDY(*/*G** -E1 POH*BF&HJ GM- <H A 13&BOB10025
TAE=>G&GB - &&-BOB10026
T+-*XG&H& ADX+ D ER-H&EA-O FD*EL3& AC'44 --C&E&B71D W&-IC--& &YD*OH* BG-D + DER-H &B&Z &8&BOB10027
T.1 P ADXFW&2/OO + ADXFWQ) ADX AO FD* &YDG7E&H--D ED|HA ;HBA<BGC&C B - 9&BOB10028
T+/&EGHG /OHE-MH *7&BGE6_*&OC2-&L /O* OH*BF/G /1) K+ DED-H&CC&AFDX /OHE-T<)*3.AFUO 5 /Y 8#MB0B10029
T+/B.L&BG 48AB (DELCMADHCK && 4 JB0I&DEL<B&E1U 9*JZ&+K&EMLW FV. D OH* * DH? /1- QZ*BOB10030
T+/CFT*BG /ZA JZ GY C /1*ROH*P|Z& GE_| /1|KOH&E&E- DRP /1R(| -H &H ADJ_* N8I(&HEOC- B -- O 4BOB10031
T+/DA&/ C& A** C Q;|CP&/ &L DGDJ? B /D&* CQ;|CP&/ D*EQ&B&: OH*O424 FV*C4 DH4E H- D G|&H ;T&BOB10032
T+/D&AV& AT(# -O 6 /B:OH*E7&BG /. /ICC CMJG&H& E VDH* /OHEO&DEJ: +OH*PFL2BE4\$ /1* =OH* #T&BOB10033
T+/ETE5H*B&YCA&YD N& C- &BG /8AD-Y J/2&G /DF1F&H&H EOG1&OT7D -C&-NE &*&Y&B -HM&/ C& OH* M9UBOB10034
T+/F2 CC:(|15*L E6MC110CX94CWO;1 1;-P1*|T1=EL AG *Q-DJF301B-(* N# /OH*QDL-B -T2D | O E& RR BOB10035
T+/G_* CQ;|CP&/ ?OH*QDP 7XFW&7+ -<BGE-<5 /Z& C Q;|CP&/ J4E H4;B NL-C|DRZ# 7&/:T /OH C,YBOB10036
T+/HYD_BG-- D-Q AFRB- H &B GFH7 /1R10-DK&40 A:AZ1L RFU* &|A &A25&AOE* -.&*&E& 44H* \$KUBOB10037
T+/ITBP2G)BGC|+ - GF&#?+ /FSD_F -HG4 &B&AD29- | E&B&BG&SC /1),&Y* N-1* OH*BF&DHD&W - < *,QB0B10038
T+/H; /OHE-U&L<_CH BGI? /1*RT YDGF T /1&LOH*P-J&CPT H CFV? /1)*FV;< -- EO&BG /8DD1U*,# B /8 *H-BOB10039
T+/R 1ZQG.O1Z/< ,&: *ELD*E&\$>G ED|1* -.&L&OCZ&FD T 2 -S<F4UM ?HGH&O .GO&LH+ /_FS, 4 .D2U 3HMBOB10040
T+/<MG072-&* /OH ;CA&.G+B&P&D;&PEK <B5<-B&B&G /D&MA3 ?OH*PE44 &AZ|&YD X4H*-D00 BG7& .1< E/4BOB10041
T+/|IE- &B&LF-D A5|R 1<GTOMCR1*G DD2Y <BGEU&B J< .&EQ *E&F&:E&B&EH 4C DL1AOGC ML7/? HC H 1CDBOB10042
T+/&HD*# &BG /Z F</|WY C /1HA1;- P&CCAC=|C=1&-&<| Y46A-0=|R44CF4&J -Q(XD&<XDE<S|L1FA -B>< 8Y4BOB10043

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5134155
PAGE 20

BOB1 5444 DISK ADJUSTMENT UTILITY

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+/|E0:|UBUCB:+|	EBWA-1XR8)(6-I	O>TT1;I L_X0SDC	80*J 8ZPC8*SR9--	XE+X9=X94C05MC	X94Z Q:YBOB10044
T+|E<PR6|SRBW_	2*R 0|PYE<GR1MC	P6*XB82PDE<GB5>P	E1<GTOMCO4UA-<C|	M4UCS82GT9+I 1_s	RE<M 6.8BOB10045
T+/E#6|U. AJHO-D	MA28GFH7 /IR(L A	FU* C Z *EQ=OM*	BD?+ GFW+DOA|A<	L2:DC4EMDOE P8TD	E(2RDBOB10046
T+/J6/1MME C. B2	NJ G.C NGCHAED3	E/9P /15(0H+QF2B	GEF| /1JL0-H L1	UFHQ1Z/Z22: *H*	M: H -H+BOB10047
T+/K1U* 8B7BTVG-	BU*BE.7BTVGUBU*B	E+GBTVG-BU*BE&PB	TVGUBU*BEKXQBFXB	TVG-DU*BEH3-AFW	2U Y Q:MBOB10048
T+/L3|HK+ODER|B	GET&BUERUT: /A-	<OHHP020AFWNO IJ	82|1&D -E/1*	4BAL9+ &HC|H	EBZ =S&BOB10049
T|/MT/OHEJSHNF:	OH* (XES|SVINC	D2;.KE< A6*J 1-R	1_SRE(XT5MCC&|S	RE<E| APFO-D	1/<BOB10050
T+/N+E(3E/OP /1S	(OH+QF2BGEL&E/4_	2/#PB ?*G DER>U	1Z/Z22: *H|X: .	MOA NH7BT97UB9_B	E|3Q 4#&BOB10051
T+/OP /Z2DYD+H|	X: .M4IBG4H)7+H|	X: .M4IBL+H|X;E.	WB-HA4IB+H|X: .	WB-HA4IBY2Y+S| H	M7A4 EYMBOB10052
T+/PK JL* 8BDE23	-/-T* CX:|CWDA	N12BGEU7E/524 -I	2A#PB ?*|4H)7	AE B ""*B JPHOH*	QTP E.UBOB10053
T+/Q| E. /1\$LL E	:FV|* EAR:*1&P A	TOP_*Q78BL75 07H	E 7Y8L50AQEZ#0FA	# 5*0 E/82E-ED J	1ZMH *1HBOB10054
T+/RHA: *ER*EE	LD+:/ (FSM)BG.-	OIO OHO (-OL O FX&EL30	AFX, /1R(|+ E;30	FXV 4#UBOB10055	
T+/ECOM* C&HEX7	AYAR=<EQE|*+- CB	SFVD9DAZJ0I OPC-	AFX,2D *8&AZJ2Z	50E OD23G C /1*	R+M 0Z<BOB10056
T+/E=FV 9-AZK2Z	DOH*ON+BG /,BHA#	ZY|# /1*R|HQPJ2B	GE3# /1\$10H+BF2H	NF*2-#2BGE1U2//)	FOM* #LQBOB10057
T+/S9E3# /1\$LOH*	PH2BG SH-#2BGEVD	4BA50<EU02?+ C3	*FV-1Z/ZD2:LAOEH	O:*BG 02E (-	PF 2 |K4BOB10058
T+/+*1""G*2G /Z	SFMM|3A#<G202*17	<<C%|217<OH* C&	HE340Y/ZJ<H<EM2B	G /8DFV<*-OHGF-	EU&Y 0/QBOB10059
T+/|7B/1YGI, /0	(-PH*BG /YFFA1	Y| QP2BG 48A)	DOH+BG-<EOA?COH*	BFYQ6F=- /0 (-	P-C0 ;-HBOB10060
T+/;DEA3:CE8*=J3	:OH* C&HE80+ J:	<FW2< J:K < AZ	Y < J-.EBO+ J-	.FHWG /ZSFVZ4 JZ	<<E0 1C<BOB10061
T+/-VFH-FHAZ\$FH4	6 JZ50HEP,-HAA-+	BFVZEO3MAFU3 /0	|E QC02AE|0M7TE	HFAU+ J-RFX|2/1E	2AA- NR*BOB10062
T+/-CO2AE|BM7 0	AE|0M7TEHFAU2PA3	,CD8*:/3,OH+BG-H	M7A3,OH+BF-EAG+?	/1),OH* C&HFF&	/1Q RQYBOB10063
T+/|L60AFWQH2CF	MFW33Y DY1L-+ H	M72 &FD20Y1L-+ H	M72 &FE28AAL-OI	Q+2BG /ZFI/S<Y	+ J- KZYBOB10064
T+/SOR/Z30H*OL*8	G C|S:|TO|LE|G	U5|-E6MCF6)SME+&	31*.G2|J 8*R 9?|	R2_-12C&HFFT /1S	ZC E<BOB10065

DATE 15MAR72
EC NO. 571609

15NOV72
571626

PROG ID 0808-1
PAGE 20

IBM MAINTENANCE DIAGNOSTIC PROGRAM

PART NO. 5134155
PAGE 20A

BOB1 5444 DISK ADJUSTMENT UTILITY

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+/|TJFH .+*BG SH	- <BGFX /0 (-	R,CEAFU04 /Z+|.Y	RHL16S022/0G|<Q	Q-L-E -,2DA 2>1U	Z| < 3,2BOB10066
T+/|UKD|D22JOG|<*	Q-LBTFV<8 JZKZ	:|A&P3LHDSH2&EAC	< E<J2-HAA3QED&G	2/0&2BAFIC &21F	1|.Y 8&DBOB10067
T+/VGFK021/OF+H	887HEBC2#FK026J0	F|EDR,XMB .2E .S	H (HA /4AFXM 0 D	RI--AB3U*AO-CB3U	H 00 SH+BOB10068
T+/WB 4783UK :	UB3UK A23G +< A?	2G +< AZ|B1Y< -2	XB180Y/ZJ+ -EM-H	EC 0 FUB.FO0BB2*	.HL3 :/UBOB10069
T+/M*- 20+8 .FC>	E7<B 8K2Z <+Y	.ETD B1:-A&3|ED	ELCMBFUB /0 F&	.ME>-EVQNE1STD4U	QHJD 41-BOB10070
T+/XB1AQ<DSMK(AQ	KD3+L+/H3DD2MGJG	XQDMOEJ3E_-XE>	UEVYNJ18XD+OQ.JG	GEG K<JH7E-2L|J.	JEBE E-BOB10071
T+/Y3EB2KDJQRE_0	R\$ >7EV4PG/*SENG	NRANDPUM/J-OEGC	M/JK+E|MY1-2EG<	NK-_2B=80M/R7C6<	E=1Q =#-BOB10072
T+/Z>GAG8DTYK|J&	DD4 K5A&2ECP""4A	*#0	|C02|C02|C 02|	EN/Z T&E 2I	BOB10073
T+/DZ E B L""1Z	B B 27C	427P5HBA HBA HBA	HB -HDZ-EB -K2A	EB -K2A K4_.G+D	"H2BOB10074
T+/U <L18_1|1)X	R5_V 1+LR2)PGE(L	EO: .U6+PM1)PT&|X	U5: .C5<N 5<PAB>L	R1|E5:|SE<GR1MC	B1|< 1A4BOB10075
T+/Z-5>R 2ATEE(|	09UCL2)LIB=.05<N	5<PAB>LR1|E5:|	SE<GR1MCAQ_SV1MC	T2<N 2<XG2DCL2)L	I82E 2HHBOB10076
T+/E2)-SE|SRE+.	K2)-SE<XNE<-R0)-	H9+GR2*GT2)SNE<S	R5_J 4*3W: .TE+|	0E<TI12TE8>| 1:~	C1*M ELYBOB10077
T+/>N1+I 42XM2:|	15+|06)XE0-(5:L	M02PRE|SFE+.E1|.	SE+&I82/ 5)R 1KX	S4UCE6)X06+|A6)X	I0** ;Y-BOB10078
T+/7E1HCD2*J 5)8	TE|L09*M 1+LR2)P	GE<E 83PE42XD&S	I1)|J<XSE+X9=-	X94A-QDCX9=-X12*	5<M \$ BOB10079
T+/0.0)PSE|XDE<X	DE|P084CC5_LP42P	T1+LR1*|A44CE6)X	D6MA-<CLR2:PE&+)	.K4_ 2)N 5+.X92L	I6*M &SUBOB10080
T+/1F0=|15_N,E+.	15UCC< L1:|,E+.	E1|I 42PN1=|HE4C	D2;.KED_.K4CL2)L	I8-I QDCL5>R E+P	A6M 80&BOB10081
T+/2A<CTI12/ K4_	.E+.TO:|UBUCB:+|	E8UCX94CX94CX94C	X92|Y42XN1<PRE<X	D&+|AO_|E5)R 6*P	A1CU \$ &BOB10082
T+/225*-SE+|A42P	NE|SRE|P084CR1+T	TE*GC4UA ECA EDA	EDA EDA EDA ECA	EDA ECA EDA EDA	ED LZUBOB10083
T+/37EDA EDA EDA	EDA ECA EDA EDA	EDA ECA ECA ECA	ECA EDA ECA EDA	ECA ECA EDA EDA	ED -LUBOB10084
TAA32EDA M					4T<BOB10085
T</7*PDA-O* C :	SG L09*PD6+SR5_P	G& PU5<.E6MCOIUC	T6*GC4>I 5_N 22T	I8UCS1*PK	2C2BOB10086
T.J#;2)PT1 XV1)P	T2)SNE XE6+LI6*P	DE SNE<LR2:PE&+~	R1:PE6: .E1_S92G	R1	92HBOB10087

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15NOV72
571626

PROG ID 0808-1
PAGE 20A

6234

BOB1 5444 DISK ADJUSTMENT UTILITY

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
*****					** EBUBOB10088
*PROGRAM *1-6-	ADJ CLUCH* 7-PRT	STATUS* 8-QUK S	K CHK* 9-MINIFRI	END* A-SKAN PACK	* 912BOB10089
*ROUTINE	*****				** :L BOB10090
*FUNCTIONS * B-D	ATA SEPAP* C-ENC	OCE ADJ* C-FD BK	DLY * E-SCOPE L	GOP*	5CDBOB10091
*****					** EK<BOB10092
* *10-R	EMOVABLE *11-FIX	ED *12-DRIVE	1 *13-DRIVE 2	*20-PER CYCLE	* IC BOB10093
*SENSE	*****				** M,*BOB10094
*SWITCH *23-F	WD ONLY *24-REV	ONLY *25-NOT U	SED *27-LD HD U	SED*28-SNAPSHOT	* 2AUBOB10095
*OPTIONS	*****				** *-QB0B10096
* *2D-R	EPT PRINT*2E-RTN	4-6,2F*2F-RTN 1	-3 *	*****	
*****					** EKUBOB10098
EB/J*E7*=-DC*PH\$	=*7M&F| | C	F% ASC R A SO Q	*****		10280804710 102734DH80B10099

----- LAST PAGE -----

