

DISK SYSTEM ENTRY / EXIT  
STORAGE ALLOCATION.

COMPASS - VER 2.

10/22/71 12.27.15.

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ADDRESS	LENGTH	BINARY CONTROL CARDS.	
0	671	IDENT	ENTRY
671		END	

BLOCKS	TYPE	ADDRESS	LENGTH
ABSOLUTE*	ABSOLUTE	0	51
PROGRAM**	LOCAL	0	671

ENTRY POINTS.

ERRSUBP	-	600	DISKENT	-	2	RETURN	-	623	ERRALOC	-	574
SETESM	-	130	DISKERR	-	1	RETPAR	-	631	ERRMAP	-	576
SETESMI	-	132	DISKINT	-	0	ERRPARM	-	570			
PASSERR	-	602	FRETURN	-	615	ERRFILE	-	572			

EXTERNAL SYMBOLS.

D.SPY1	AP5	ERRPACK	BLK.FLG	PROBE	M.BFILE	FB.SHAP	CLOSER
D.SPY2	AP6	STKBUF	SW.SW	RETCLK	M.DDREQ	FB.FUND	MOVBLKR
OPERCL	AP7	SETPCNT	SW.DDS	SYSERR	M.DDRSP	FHR	CREPTRR
IPLIST	AP8	FRWENT	PG.PG	CALBEAD	M.RBUFS	FR.LEN	DORESPR
LOCSTAT	TEMP0	FRWERB	PG.DDS	REGS	M.WBUFS	FR.NAME	EBRNUM
MYINFO	TEMP1	FRWINT	PG.DTY	D.ENTRY	M.SLOTS	FR.WD1	ERRCLAS
SYSAB	TEMP2	ENTER	PTR.PTR	D.FNAME	M.LOCKS	FR.WD2	TABADDR
M.WRKSP	TEMP3	CLKBUF	PTR.DDS	DBG1	NLOCKS	FR.WD3	EC:FRRET
DESTROY	TEMP4	DSYSTM	PTR.CM	DSKLCK	M.DDSCT	FR.SUSP	CLEANUP
SHAZAM	TEMP5	DSWPTM	PTR.DTY	DBG2	M.FHRL	FR.LOCK	EOCC
PSEUDO	TEMP6	DUSRITM	PTR.NUM	M.AUTH	M.DARL	FR.DAR	XSECT
COMMROF	TEMP7	MYSCRF	CREATE	M.MKCAP	M.HASHL	FB.OPEN	FUND
COMMROL	TEMP8	MYCODE	CREBLK	EDSHP	M.ADDS	FR.CAPX	DECLARE
COMMRWF	TEMP9	MYSUBP	DELBLK	GDSKHDR	M.ASUSP	FR.DBSZ	DONE
COMMRWL	TEMP10	MYEVCH	OPEN	FDSKHDR	M.ADISK	FR.ONEL	DESTSUB
HOLDBLK	TEMP11	READCAP	ATTACH	FDSKPTR	M.SDISK	FR.FROZ	DARSERV
LOCTAB	TEMPA	WRITCAP	DETACH	GDSKDAT	M.FDISK	FR.WBIT	DABSERV
LOCTABE	TEMPB	SAVEREG	CONVERT	FDSKDAT	M.FCLEV	FR.SIZE	SETCLOS
LOCTABL	TEMPC	RESTREG	SETUP	FDSKDAT	M.UNAME	FR.SHAP	ALLCLO
LFT	TEMPD	MAINCL	DECODE	GETDSK	M.USCTR	FR.FUND	DSPBLK
FLDLEN	TEMPE	FILCL	CRELFH	FREEDSK	M.OPCLI	FR.FLAG	DSPFILN
USERRW	TEMPF	SLEEP	OPENDAR	RUSYDSK	M.IOCTR	FR.ROOT	DSPFILE
USERRWL	TEMPG	MYRESP	PRVOPEN	L.MNCL	M.TWAIT	FR.CLAM	ATCHBLK
DATMAP	TEMPH	RESP	MKPTR	M.GFILE	M.CLTIM	FR.MEMB	MELT
TERMRW	TEMPV	GFILE	DSPTR	M.HFILE	M.10SEC	FHRADD	FREEZE
TERMRWF	TEMPW	HFILE	CLOSE	M.FILCL	GF.LEN	FILEADR	EPSEUDO
TERMRWF	TEMPX	FILECAP	ECLOSE	M.EMPTY	GF.SUSF	LETFREE	DEFINI
CLOSRWF	TEMPY	CTEMP	DARSPA	M.RETRY	GF.SUSL	LFHADDR	EC:GEVF
CLOSRWL	TEMPZ	UDSKSCR	ZEROMAP	M CLOSE	GF.IOTF	DARADOR	SCRCL
CLOSRWF	MYIDENT	BFILE	CHMAP	M.TVRES	GF.IOTL	PAGESW	EC:COU
READRWF	MYDAR	DDRSP	CLODAR	M.HELP	GF.DDSF	MAPBUF	EC:CIN

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READRW	MYUNIT	RBUFS	HASH	M.SWAB	GF.DDSL	SIZES	ECISEV
READONF	MYSWOCC	RETRY	DELHASH	M.ABFCH	GF.DATF	SIZE	ECIREAD
READONL	DDSIPL	SLOTS	EXCLAIM	M.ABFIL	GF.DATL	NUMRESP	ECIRTRN
HENTRY	IOTIPL	HBR	SHCLAIM	M.ACREQ	GF.APTF	CREATER	ECIDSSE
DENTRY	HASHIPL	HBW	LOCK	M.ACRES	GF.APTL	CREBLKR	ECIESML
ORGADD8	SUSPIPL	PBR	UNLOCK	M.USRCC	GF.HSHF	DELBLKR	BEADC
ORGCLST	DATIPL	PBW	UNLOCKW	M.FRWCOC	FHRHASH	OPENR	ECIDSCP
ORGMAP	APTIPL	DBR	RELCLAM	M.TRMCC	DARHASH	ATTACHR	ECIRSTR
INTDAT	RETPARM	DBW	RELEASE	M.CLOCC	GF.HSHL	DETACHR	ECIGEVH
AP0	RETERR	GETRESP	FRW	M.ACTCC	GF.TRVF	ZROMAPR	ECICLK
AP1	USRPACK	TR.DRIV	MAKEMAP	M.TRYCC	FHB	CHMAPR	ECISAVE
AP2	IOTBUF	TR.LEVL	LOADBUF	M.DFILT	FB.LEN	CHMAPB1	
AP3	PROCADR	BLK.SIZ	AUDIT	M.DOBJS	FB.NAME	SETUPR	
AP4	ERRADDR	BLK.DTY	NOQLOCK	M.NOBJS	FB.WD3	CREATB1	

## DISK SYSTEM ENTRY POINT

0	0100000000 X	DISKINT	RJ	SYSERR	
1	0200000042 +	DISKERR	JP	DISKERR1	PROCESS USER DISK ERROR IN ECS
2	0130000003 +	DISKENT	SAVE	USRPACK	SAVE USER REGISTERS
5	7160000000 X		DSPCLK	CLKBUF	GET STARTING TIMES
12	5110000000 X		SA1	AP0	TYPE OF CALL
	7221777704		SX2	X1-MAXACT-1	
13	0322000041 *		PL	X2,DISKENTS	
	7221777730				
14	0302000024 +		SX2	X1-AN:LBUFF	JUMP IF FRETRW GOT WORKSPACE
	5140000000 X		ZR	X2,DISKENTA	OTHERWISE, GET WORKSPACE
24		DISKENTA	WSPACE	GET	
			BSS	0	
24	63710		SB7	X1	
	5110000000 X		SA1	LOCSTAT	LOCAL DISK SYSTEM STATUS
	63110		SB1	X1	
25	0210000026 +		JP	B1+DISKENT0	JUMP ON STATUS
				0	
26	0200000031 +	DISKENT0	BSS	DISKENT1	STATUS = NOT YET STARTED
27	0200000033 +		JP	DISKENT2	STATUS = RUNNING
30	0200000035 +		JP	DISKENT3	STATUS = SHUT DOWN
31	5117000137 +	DISKENT1	SA1	ACTION+B7	NOT YET STARTED .. CHECK ACTION
	73110		SX1	X1	TABLE ENTRY (LO 18 BITS) TO SEE
32	0301000037 +		ZR	X1,DISKENT4	IF O.K. TO GO ON. (JUMP IF NOT)

33	6150000034 +	DISKENT2	CALLX	D•SPY1,B5	CALL SPY TO RECORD ENTRY
34	0270000137 +		JP	ACTION,B7	CALL ACTION ROUTINE
35	7160000050	DISKENT3	SX6	E•SHUT	ERROR .. CALL AFTER SHUTDOWN
	5160000000 X		SA6	ERRNUM	
36	0200000572 +		JP	ERRFILE	
37	7160000031	DISKENT4	SX6	E•NOFUND	ERROR .. 1ST CALL NOT FUND
	5160000000 X		SA6	ERRNUM	
40	0200000572 +		JP	ERRFILE	
41	0100000000 X	DISKENTS	RJ	SYSERR	DISASTER .. BAD ACTION NUMBER IN OP

## **PROCESS ERROR IN ECS SYSTEM**

## DISK SYSTEM ENTRY / EXIT

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132	773737777770000000	SETESMI	VFD	36/773737777778,24/0 ESM MASK SET FOR ALL ERRORS BUT PANIC. I4B	
133	4000000000 X	*	VIEW	VFD	1/1,29/#T;:ECS#DSSE,30/#XOPERCL,60/STKBUF,60/1
134	00000000000000000000 X	*			
135	00000000000000000001	*			
136	4000000000 X	*	EXIT	VFD	1/1,29/#T;:ECS#RTRN,30/#XOPERCL
	0000000000 X	*			
		*			
		*			

## MACROS TO SET UP ACTION TABLE

NUMBER MACRO  
ANIPPNAMEQU  
ANICTRISET  
ENDM

PNAME  
ANICTRI  
ANICTRI+1

0 ANICTRI SET 0

MACRO  
NUMBER  
JP  
IFC  
VFD  
ELSE  
VFD  
ENDIF  
ENDM

DSKOPER!NOABLK,NAME  
NAME  
L NAME  
EQ,/NOABLK/GO/  
30/1

INDICATE ACTION O.K. W/O ALLOC BLK

XDSKOPER MACRO  
NUMBER  
RJ  
ENDM

NAME  
NAME  
SYSERR

IDSKOPER MACRO  
NUMBER  
JP  
VFD  
ENDM

NAME  
NAME  
L NAME  
30/1

INDICATE ACTION O.K. W/O ALLOC BLK

LIST X  
LIST -X

## \* DISK SYSTEM ACTION TABLE

ACTION BSS 0

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DSKOPS XTEXT  
LIST X

\* LIST OF ALL CALLS ON DISKSYS (USED BY INITIALIZATION AND ENTRY)

DSKOPS  
DSKOPS  
DSKOPS

1  
1  
1

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**DISK SYSTEM ENTRY / EXIT  
DISK SYSTEM ACTION TABLE**

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A

\*  
\*  
\* READ FILE (POSSIBLE FRETURN)  
\*  
137 0100000000 X XDSKOPER READ,4,READ,=XFRETRW,0  
\*  
\* WRITE FILE (POSSIBLE FRETURN)  
\*  
140 0100000000 X XDSKOPER WRIT,4,WRIT,=XFRETRW,0  
\*  
\*  
\* DISK USER-SERVICE SUBPROCESS INITIALIZATION CALL  
\*  
141 0200000231 + IDSKOPER INID,=XUSRDSK,0  
\*  
\*  
\* FRETURN HANDLER SUBPROCESS INITIALIZATION CALL  
\*  
142 0200000567 + IDSKOPER INIT,=XERETRW,0  
\*  
\*  
\* FRETURN INITIALIZATION FROM USER DISK  
\*  
143 0200000567 + DSKOPER FINI,=XERETRW,6,UDAT,(UCAP,T,FILE,OB,RDFIL),UDAT,UDADSKOPS  
,T,UDAT,(UCAP,T,ALLOC,0)  
\*  
\*  
\* TERMINATOR SUBPROCESS INITIALIZATION CALL  
\*  
144 0200000567 + IDSKOPER INIT,=XTERMIN,0  
\*  
\*  
\* HELPER SUBPROCESS INITIALIZATION CALL  
\*  
145 0200000567 + IDSKOPER INIT,=XHELPER,0  
\*  
\*  
\* ACCOUNTANT SUBPROCESS INITIALIZATION CALL  
\*  
146 0200000567 + IDSKOPER INIA,=XACCTP,0  
\*  
\*  
\* WRITE-TRY SUBPROCESS INITIALIZATION CALL  
\*  
147 0200000567 + IDSKOPER INIR,=XRETRY,0\*\*\*\*\*#\*\*\*\*\*#\*\*\*\*\*#\*\*\*\*\*#\*\*\*\*\*#\*\*\*\*\*#\*\*\*\*\*#\*\*\*\*\*#  
\*  
\* USER-BUG INITAILIZATION CALL  
\*  
150 0200000567 + IDSKOPER INIB,=XUSERBUG,0

DISK SYSTEM ENTRY / EXIT  
DISK SYSTEM ACTION TABLE

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\*  
\*\*\*\*\*  
\*  
\*  
\*  
\*  
\*  
\* CREATE DISK FILE  
\*  
151 0200000414 + DSKOPER CFIL,=XUSRDSK,2,UDAT,(BLKD,NUMLEV) DSKOPS  
\*  
\*  
\* PRIVLEDGED FILE CREATE  
\*  
152 0200000417 + DSKOPER PCFL,=XUSRDSK,3,UDAT,(BLKD,NUMLEV),UDAT DSKOPS  
\*  
\*  
\* DESTROY DISK FILE  
\*  
153 0200000426 + DSKOPER DFIL,=XUSRDSK,1,(UCAP,(x1),OB,DSTRY) DSKOPS  
\*  
\*  
\* CREATE FILE BLOCK(S)  
\*  
154 0200000427 + DSKOPER CBLK,=XUSRDSK,3,(UCAP,T,FILE,OB,DCRBL),UDAT,UDAT DSKOPS  
\*  
\*  
\* DESTROY FILE BLOCK(S)  
\*  
155 0200000432 + DSKOPER DBLK,=XUSRDSK,3,(UCAP,T,FILE,OB,DDLBL),UDAT,UDAT DSKOPS  
\*  
\*  
\* MOVE BLOCK  
\*  
156 0200000567 + DSKOPER MBLK,=XUSRDSK,4,(UCAP,T,FILE,OB,RDFIL+OB,DDLBL),UDAT DSKOPS  
,T,(UCAP,T,FILE,OB,WFILE+OB,DCRBL),UDAT  
\*  
\*  
\* OPEN READ ONLY  
\*  
157 0200000440 + DSKOPER OPRO,=XUSRDSK,1,(UCAP,(x1),OB,OPEN+OB,RDFIL) DSKOPS  
\*  
\*  
\* OPEN READ WRITE  
\*  
160 0200000442 + DSKOPER OPRW,=XUSRDSK,1,(UCAP,(x1),OB,OPEN+OB,RDFIL+OB,WFILE) DSKOPS  
,LE)  
\*  
\*  
\* CLOSE FILE (ECS FILE CAP)  
\*  
161 0200000451 + DSKOPER CLO,=XUSRDSK,1,(UCAP,T,FILE,OB,CLOSE) DSKOPS  
\* DSKOPS

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DISK SYSTEM ACTION TABLE

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		*	CLOSE FILE (DISK FILE CAP)	DSKOPS
162	0200000460 +	*	DSKOPER CLOS,=XUSRDSK,1,(UCAP,(,X1),OB,CLOSE)	DSKOPS
		*	PSEUDO CLOSE FILE (DISK FILE CAP)	DSKOPS
163	0200000462 +	*	DSKOPER PCLS,=XUSRDSK,1,(UCAP,(,X1),OB,CLOSE)	DSKOPS
		*	CLOSE ALL OPEN FILES	DSKOPS
164	0200000543 +	*	DSKOPER CAOF,=XUSRDSK,0	DSKOPS
		*	CLEAN UP FOR PROCESS SUICIDE	DSKOPS
165	0200000561 +	*	DSKOPER CLUP,=XUSRDSK,0	DSKOPS
		*	ATTACH BLOCKS	DSKOPS
166	0200000466 +	*	DSKOPER ATCH,=XUSRDSK,3,(UCAP,T,FILE,OB,ATCH),UDAT,UDAT	DSKOPS
		*	DETACH BLOCKS	DSKOPS
167	0200000467 +	*	DSKOPER DTCH,=XUSRDSK,3,(UCAP,T,FILE,OB,DTCH),UDAT,UDAT	DSKOPS
		*	FREEZE FILE	DSKOPS
170	0200000464 +	*	DSKOPER FREZ,=XUSRDSK,1,(UCAP,T,FILE,OB,FREZ)	DSKOPS
		*	MELT FILE	DSKOPS
171	0200000465 +	*	DSKOPER MELT,=XUSRDSK,1,(UCAP,T,FILE,OB,FREZ)	DSKOPS
		*	ZERO MAP	DSKOPS
172	0200000505 +	*	DSKOPER ZRM,=XUSRDSK,3,(UCAP,T,CLSCD,OB,CHMAP),UDAT,(UCAP,DSKOPS, ,T,FILE,OB,DMAP)	DSKOPS
		*	MAKE A MAP ENTRY (READ ONLY)	DSKOPS
173	0200000507 +	*	DSKOPER MMRO,=XUSRDSK,6,(UCAP,T,CLSCD,OB,CHMAP),UDAT,(UCAP,DSKOPS, ,T,FILE,OB,RDFIL+OB,DMAP),UDAT,UDAT,UDAT	DSKOPS

**DISK SYSTEM ENTRY / EXIT  
DISK SYSTEM ACTION TABLE**

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		DSKOPS
		DSKOPS
		DSKOPS
174	0200000510 +	DSKOPER MMRW,=XUSRDSK,6,(UCAP,T,CLSCD,OB,CHMAP),UDAT,(UCAP,D ,T,FILE,OB,RDFIL+OB,WFILE+OB,DMAP),UDAT,UDAT,UDAT
		DSKOPS
175	0200000513 +	DSKOPER CMRO,=XUSRDSK,7,(UCAP,T,CLSCD,OB,CHMAP),UDAT,(UCAP,D ,T,FILE,OB,RDFIL+OB,DMAP),UDAT,UDAT,UDAT,(UCAP,T,FILE,OB,DMAP)
		DSKOPS
176	0200000514 +	DSKOPER CMRW,=XUSRDSK,7,(UCAP,T,CLSCD,OB,CHMAP),UDAT,(UCAP,D ,T,FILE,OB,RDFIL+OB,WFILE+OB,DMAP),UDAT,UDAT,UDAT,(UCAP,T,FILE,OB,DMAP)
		DSKOPS
177	0200000537 +	DSKOPER CLKS,=XUSRDSK,0
		DSKOPS
200	0200000517 +	DSKOPER ECLM,=XUSRDSK,1,(UCAP,T,FILE,OB,ECLM)
		DSKOPS
201	0200000521 +	DSKOPER SCLM,=XUSRDSK,1,(UCAP,T,FILE,OB,SCLM)
		DSKOPS
202	0200000527 +	DSKOPER RLSE,=XUSRDSK,1,(UCAP,T,FILE,OB,REL)
		DSKOPS
203	0200000546 +	DSKOPER ABSV,=XUSRDSK,4,UDAT,UDAT,UDAT,UDAT
		DSKOPS
204	0200000547 +	DSKOPER ARSV,=XUSRDSK,3,UDAT,UDAT,(BLKD+8)
		DSKOPS
205	0200000552 +	DSKOPER DACF,=XUSRDSK,1,(UCAP,(XT)+0)
		DSKOPS

## DISK SYSTEM ENTRY / EXIT DISK SYSTEM ACTION TABLE

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\*  
\* LOAD DISK BUFFER (USED BY FRETURN HANDLER DURING WRITE)  
\*  
206 0200000530 \* DSKOPER LBUF,=XUSRDSK,4,UDAT,UDAT,UDAT,UDAT  
\*  
\* AUDIT FILE  
\*  
207 0200000535 \* DSKOPER AUDT,=XUSRDSK,2,(UCAP,T,CLIST),UDAT  
\*  
\* PROBE FOR FILEBLOCK  
\*  
210 0200000536 \* DSKOPER PROB,=XUSRDSK,2,(UCAP,T,FILE,OB,RDFIL),UDAT  
\*  
\* INTERCHANGE CONTENTS OF TWO DISK FILES  
\*  
211 0200000435 \* DSKOPER SHAZ,=XUSRDSK,2,(UCAP,T,FILE,OB,DCRBL+OB,DDLBL),(UCADSKOPS  
,P,T,FILE,OB,DCRBL+OB,DDLBL)  
\*  
\* SET / RESET "CLOSE ALL OPEN FILES" LOCK OUT (CLOSE FLAG)  
\*  
212 0200000545 \* DSKOPER CFLAG,=XUSRDSK,2,(UCAP,T,FILE,0),UDAT  
\*  
\* DISK RECOVERY OR LOAD COMPLETE  
\*  
213 0200000551 \* DSKOPER DONE,=XUSRDSK,0  
\*  
\* CALL DISK-SYSTEM INTERNAL DEBUGGER  
\*  
214 0200000562 \* DSKOPER DBUG,=XUSRDSK,0  
\*  
\* DESTROY SUBPROCESS (POSSIBLE DISK FILES IN MAP)  
\*  
215 0200000550 \* DSKOPER DSUB,=XUSRDSK,1,(UCAP,T,CLSCD,OB,DSTRY+OB,CHMAP)  
\*  
\* DISPLAY N-TH ATTACHED BLOCK  
\*  
216 0200000542 \* DSKOPER DSBN,=XUSRDSK,2,UDAT,UDAT  
\*  
\* PROCESS DIRTY BLOCK FOR F-RETURN  
\*  
217 0200000556 \* DSKOPER DIRT,=XUSRDSK,6,UDAT,UDAT,UDAT,UDAT,UDAT,UDAT

## DISK SYSTEM ENTRY / EXIT DISK SYSTEM ACTION TABLE

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\*  
\* DISPLAY ECS OCCUPIED BY THIS PROCESS (FIXED AND SWAPPED)  
\*  
220 0200000555 + DSKOPER EOCC,=XUSRDSK,0  
\*  
\* FUND PROCESS FIXED ECS FROM ALLOCATION BLOCK  
\*  
221 0200000553 + GO DSKOPER FUND,=XUSRDSK,1, (UCAP,T,ALLOC,777777B)  
\* (CRIPPLED CAPABILITIES NEED NOT APPLY)  
\*  
\* EXCLUSIVE CLAIM W/O QUEUE WAIT  
\*  
222 0200000523 + DSKOPER ECLF,=XUSRDSK,1, (UCAP,T,FILE,OB,ECLM)  
\*  
\* SHARED CLAIM W/O QUEUE WAIT  
\*  
223 0200000525 + DSKOPER SCLF,=XUSRDSK,1, (UCAP,T,FILE,OB,SCLM)  
\*  
\* DISPLAY FILE  
\*  
224 0200000540 + DSKOPER DSF,=XUSRDSK,1,UDAT  
\*  
\* DISPLAY N-TH FILE  
\*  
225 0200000541 + DSKOPER DSFN,=XUSRDSK,1,UDAT  
\*  
\* PSEUDO-CLOSE (ECC FILE CAPABILITY)  
\*  
226 0200000463 + DSKOPER EPCL,=XUSRDSK,1, (UCAP,T,FILE,OB,CLOSE)  
\*  
\* EXCLUSIVE OPEN  
\*  
227 0200000436 + DSKOPER XOPN,=XUSRDSK,1, (UCAP,(,X),OB,XOPN+OB,OPEN+OB,RDFILE,  
\* +OB,WFILE)  
\*  
\* DECLIRE PROCESS SWAPPED ECS CROSS SECTION  
\*  
\*  
230 0200000554 + DSKOPER XSEC,=XUSRDSK,1,UDAT

72. MAXACT EQU \*-ACTION

in DSKOPS +  
before LST  
\*  
\*  
\*  
\*  
\*

CHANGE SIZE OF LOCAL FILE TABLE

DSKOPER CLFT,<sub>1</sub>=USRDSK,<sub>1</sub>, UDAT

\*  
 \*  
 \*  
 \*  
 \*  
 \*\*\* INITIAL CALL \*\*\*  
 NO PARAMS

231	7110000000 X	L.INID	SX1	COMMRF	
	14211		BX2	X1	
232	7160000000 X		READ	MYCODE,X1,X1,COMMRF,X2,FRET	
243	7160000000 X	*	DSPCLK	CLKBUF	FIX CLK BUF AFTER SCR FILE READ
250	7110000000 X	*	SX1	COMMROL	
	14211		BX2	X1	
251	7160000000 X	*	READ	MYCODE,COMMRF,COMMROL,LFT+X2,FRET	
262	0200000264 +	*	JP	BEGIN	
263	0100000000 X	FRET	RJ	SYSERR	RETURN ON SYSTEM FILE
* OBTAIN A DISK SYSTEM INDEX FOR THIS PROCESS					
264	7160000000 X	BEGIN	GETEVH	(MAINCLP.M.ASUSP)	
272	0317000273 +		NZ	X7,BEGIN1	
	6100000000 X	*	RJ	SYSERR NO ROOM	
273	5170000000 X	BEGIN1	SA7	MYIDENT	
	73170		SX1	X7	
274	7160000000 X		RESUSP	X1,TEMP1	
305	5120000000 X		SA2	TEMP1	
	7160000000 X		SENDEV	X2	
314	7160000000 X		CAPIN	SLEEP,X1,MYEVCH	
323	7160000000 X		CAPIN	RESP,X1,MYRESP	
332	7160000000 X		CAPOUT	=XSCRCL!X1,MYSRCF SCR FILE FOR DEBUG	
341	7160000000 X	*	MYESM	SET ESM FOR ERRORS	
346	0200000350 +		JP	ALLERRS	
347	7737377777760000000	ALLERRS	VFD	BEGIN1A 36/77373777777B,24/0 ALL ERRORS BUT PANIC (14B)	
CLEAR EVENT CHANS					
350	7160000000 X	BEGIN1A	GETEVF	MYEVCH,BEGIN1B	CLEAR SLEEP CHANNEL
356	0200000350 +		JP	BEGIN1A	
357	7160000000 X	BEGIN1B	GETEVF	MYRESP,BEGIN1C	CLEAR RESPONSE CHANNEL
365	0200000357 +		JP	BEGIN1B	
366	6150000031 66555 13666	BEGIN1C	BSS	0	
LOCAL TABLE INITIALIZATION					
366	6150000031 66555 13666	*	SB5	INITIALIZE LOCAL TABLES	
			SB5	L.ILFH	INITIAL NUM OF FILE HEADERS
			BX6	X5+B5	
			SA6	X6-X6	
				LFT+B5	
367	5165000000 X	SA6	LFTSIZE	INITIALIZED SIZE OF LFT	<i>WST</i>

## **DISK SYSTEM ENTRY / EXIT ACTION ENTRY POINTS**

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## \*\*\* CREATE DISK FILE \*\*\*

**API: ACCOUNTING RECORD NAME**

**AP21 NUMBER OF LEVELS**

**AP3: 1ST SHAPE NUMBER (S<sub>0</sub>)**

414 6110000000 x L.CFIL SB1 ZPI  
6170000422 + SB7 CREFILE1  
415 13666 BX6 X6-X6  
5160000014 X SA6 AP3+NUMLEV+1  
416 0200000000 x JP CREATE

\*\*\* PRIVILEGED FILE CREATE \*\*\*

**AP1: ACCOUNTING RECORD NAME**

## **AP21 NUMBER OF LEVELS**

**AP3: 1ST SHAPE NUMBER (S0)**

AP3+NUMLEV: UNIQUE NAME AND DISK ADDR

DISK SYSTEM ENTRY / EXIT  
ACTION ENTRY POINTS

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417	6110000000 X	L.PCFL	SB1	AP1
	617000422 +		SB7	CREFILE1
420	7160000001		SX6	1
	5160000014 X		SA6	AP3+NUMLEV+1
421	0200000000 X		JP	CREATE

X6 = UNIQUE NAME / DISK ADDRESS  
↑FILECAP↑ = ECS FILE CAPABILITY FOR USER

422	5160000000 X	CREFILE1	SA6	AP4
	511000424 +		SA1	CREFILE2
423	5120000425 +		SA2	CREFILE3
	020000631 +		JP	RETPAR
424	0000000010000000000 X	CREFILE2	VFD	30/1/30/AP4
425	0000000010000000000 X	CREFILE3	VFD	30/1/30/FILECAP

DATA RETURN CONTROL  
CAPABILITY RETURN CONTROL

\*\*\* DESTROY DISK FILE \*\*\*  
API: DISK FILE CAPABILITY INDEX

426	0200000000 X	L.DFIL	JP	DESTROY
			EXT	DESTROY
			*	*** CREATE FILE BLOCK(S) ***
			*	AP1: INDEX OF USER CAPABILITY
			*	AP2: FILE ADDRESS
			*	AP3: WORD COUNT

427	5130000000 X	L.CBLK	SA3	AP1
	5110000000 X		SA1	AP2
430	5120000000 X		SA2	AP3
	617000623 +		SB7	RETURN
431	0200000000 X		JP	CREBLK
			*	*** DELETE FILE BLOCK(S) ***
			*	AP1: INDEX OF USER CAPABILITY
			*	AP2: FILE ADDRESS
			*	AP3: WORD COUNT

432	5130000000 X	L.DBLK	SA3	AP1
	5110000000 X		SA1	AP2
433	5120000000 X		SA2	AP3
	617000623 +		SB7	RETURN
434	0200000000 X		JP	DELBLK
			*	*** INTERCHANGE FILE CONTENTS ***
			*	AP1: PRIMARY ECS FILE CAPABILITY

435 0200000000 X

L.SHAZ JP EXT

SHAZAM  
SHAZAM

AP2: SECONDARY ECS FILE CAPABILITY

436 7160000001

5160000000 X

L.XOPN

SX6

I  
AP2  
AP3  
OPENRW1

INDICATE READ/WRITE  
INDICATE EXCLUSIVE OPEN

437 5160000000 X

0200000444 +

SA6  
SA6  
JP

X6-X6  
AP2  
AP3  
OPENRW1

\*\*\* EXCLUSIVE OPEN \*\*\*  
AP1: DISK FILE CAPABILITY

440 13666

5160000000 X

L.OPRO

BX6

X6-X6  
AP2  
AP3  
OPENRW1

INDICATE READ ONLY

441 5160000000 X

0200000444 +

SA6  
SA6  
JP

X6-X6  
AP2  
AP3  
OPENRW1

INDICATE REGULAR OPEN

\*\*\* OPEN FILE READ / WRITE \*\*\*  
AP1: CAPABILITY FOR DISK FILE

442 7160000001

5160000000 X

L.OPRW

SX6

I  
AP2  
X6-X6  
AP3  
AP1  
OPENRW2  
OPEN

INDICATE READ / WRITE

443 13666

5160000000 X

OPENRW1

SA6

AP2  
X6-X6  
AP3  
AP1  
OPENRW2  
OPEN

INDICATE REGULAR OPEN

444 6110000000 X

6170000446 +

SB1

AP2  
X6-X6  
AP3  
AP1  
OPENRW2  
OPEN

445 0200000000 X

6170000446 +

SB7

AP2  
X6-X6  
AP3  
AP1  
OPENRW2  
OPEN

446 13111

5120000450 +

OPENRW2

BX1

X1-X1  
AP2  
X6-X6  
AP3  
AP1  
OPENRW3  
RETPAR

DATA RETURN CONTROL  
CAPABILITY RETURN CONTROL  
EXIT ANDRETURN PARAMETERS

447 0200000631 +

6170000450 +

OPENRW2

JP

AP2  
X6-X6  
AP3  
AP1  
OPENRW3  
RETPAR

450 000000001000000000 X

6170000450 +

OPENRW2

VFD

AP2  
X6-X6  
AP3  
AP1  
OPENRW3  
RETPAR

30/1,30/FILECAP

\*\*\* CLOSE DISK FILE \*\*\*  
AP1: INDEX OF USER+S ECS FILE CAPABILITY

451 5130000000 X

6170000623 +

L.CLO

SA3

AP1  
RETURN  
X3  
X7  
CLOSE

AP1  
RETURN  
X3  
X7  
CLOSE

X3: \* ECS FILE UNIQUE NAME

\*\*\* CLOSE DISK FILE \*\*\*

DISK SYSTEM ENTRY / EXIT  
ACTION ENTRY POINTS

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				API : INDEX OF USER'S DISK FILE CAPABILITY
460	5130000000 X	L.CLOS	SA3 SB7 JP	API RETURN CLOSE
461	617000623 + 0200000000 X	*	*	*** PSEUDO - CLOSE DISK FILE *** AP1: DISK FILE CAPABILITY INDEX
462	0200000000 X	L.PCLS	JP EXT	PSEUDO PSEUDO
463	0200000000 X	L.EPCL	JP	EXEPSEUDO
464	0200000000 X	L.FREZ	JP	EXFREEZE
465	0200000000 X	L.MELT	JP	EXMELT
466	0200000000 X	L.ATCH	JP	EXATCHBLK
467	5150000000 X 617000477 +	L.DTCH	SA5 SB7 DISPCAP	API DETBLK1 X5 CONVERT
470	7160000000 X	*	*	
475	0200000000 X	*	*	
476	7150000000 020000503 +	SX5	JP	E.NOFIL DETBLK3
477	5110000000 X 5120000000 X	DETBLK1	SA1 SA2	AP2 AP3
				NO SUCH FILE LOCALLY OPEN

DISK SYSTEM ENTRY / EXIT  
ACTION ENTRY POINTS

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500	6170000502 + 66600		SB7	DETBLK2	
501	0200000000 X	*	SB6	BO	INDICATE REGULAR DETACH
502	0200000623 +	*	JP	DETACH	
503	7160000025	*	DETBLK2	JP	RETURN
504	5160000000 X	*	DETBLK3	SX6	E-NODFILE
		*		SA6	ERRNUM
		*		JP	ERRFILE

\*\*\* DELETE MAP ENTRY \*\*\*

AP1: CAP FOR SUBPROCESS NAME  
AP2: INDEX OF MAP ENTRY  
AP3: CAP FOR FILE IN MAP

505	6130000000 X	L.ZRM	SB3	API	
	617000623 +		SB7	RETURN	
506	0200000000 X	*	JP	ZEROMAP	

\*\*\* MAKE MAP ENTRY \*\*\*

AP1: CAP FOR SUBPROCESS  
AP2: INDEX OF MAP ENTRY  
AP3: FILE CAPABILITY (ECS)  
AP4: FILE ADDR  
AP5: CM ADDR  
AP6: WORD COUNT

507	7160000000	L.MMR0	SX6	API	SET READ ONLY FLAG PARAM
	020000511 +		JP	MKMAP	

510	7160000001	L.MMRW	SX6	API	SET READ / WRITE FLAG PARAM
		*		MKMAP	AP1: CAP FOR SUBPROCESS NAME
		*			AP2: INDEX OF MAP ENTRY
		*			AP3: CAP FOR FILE
		*			AP4: FILE ADDRESS
		*			AP5: CM ADDRESS
		*			AP6: WORD COUNT

511	5160000000 X	MKMAP	SAB	API	R/O OR R/W FLAG
	6110000000 X		SB1	JP	MAKEMAP
512	0200000000 X	*			

\*\*\* CHANGE A MAP ENTRY \*\*\*

AP1: CAP FOR SUBPROCESS  
AP2: INDEX OF MAP ENTRY  
AP3: FILE CAPABILITY (ECS)  
AP4: FILE ADDR  
AP5: CM ADDR

DISK SYSTEM ENTRY / EXIT  
ACTION ENTRY POINTS

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513 7160000000  
0200000515 \*

L.CMRO SX6 JP  
\* CHMP

AP6: WORD COUNT  
AP7: CAP FOR FILE IN MAP NOW (ECS)

SET READ ONLY FLAG

514 7160000001

L.CMRW SX6

SET READ WRITE FLAG

515 5160000000 X  
6116000000 X

CHMP SA6 SB1  
\* AP8  
AP1  
CHMAP

516 0200000000 X

\* \* \* EXCLUSIVE FILE CLAIM W/ WAIT \*\*\*

API: ECS FILE CAP INDEX

517 5110000000 X  
13666

L.ECLM SAI BX6

AP1  
X6-X6  
SET WAIT FLAG

520 5160000000 X  
0200000000 X

SA6 JP

AP2  
EXCLAIM

\* \* \* SHARED FILE CLAIM W/ WAIT \*\*\*

API: ECS FILE CAP INDEX

521 5110000000 X  
13666

L.SCLM SAI BX6

AP1  
X6-X6

522 5160000000 X  
0200000000 X

SA6 JP

AP2  
SHCLAIM

SET WAIT FLAG

\* \* \* EXCLUSIVE FILE CLAIM W/O WAIT \*\*\*

API: ECS FILE CAP INDEX

523 5110000000 X  
7160000001

L.ECLF SAI SX6

AP1  
1

524 5160000000 X  
0200000000 X

SA6 JP

AP2  
EXCLAIM

SET NO-WAIT FLAG

\* \* \* SHARED FILE CLAIM W/O WAIT \*\*\*

API: ECS FILE CAP INDEX

525 5110000000 X  
7160000001

L.SCLF SAI SX6

AP1  
1

526 5160000000 X  
0200000000 X

SA6 JP

AP2  
SHCLAIM

SET NO-WAIT FLAG

\*\*\* RELEASE FILE CLAIM \*\*\*

API: ECS FILE CAP INDEX

527 5110000000 X  
0200000000 X

L.RLSE SAI  
JP API  
RELCLAM

\*\*\* LOAD WRITE BUFFER FOR FRETURN HANDLER \*\*\*

AP1: 6638 UNIT NUMBER  
AP2: BLOCK SIZE CODE  
AP3: BUFFER ADDRESS IN BUFFER FILE  
AP4: HOLDING ADDRESS

530 6160000534 +  
5110000000 X  
531 5120000000 X  
5130000000 X  
532 63210  
63420  
5110000000 X  
533 0200000000 X  
534 0200000623 +

L.LBUF SB6 LDBUF1  
SA1 AP1  
SA2 AP2  
SA3 AP4 HOLDING ADDRESS  
SB2 X1 UNIT NUMBER  
SB4 X2 BLOCK SIZE CODE  
SA1 AP3 BUFFER ADDR  
JP LOADBUF  
LDBUF1 JP RETURN

\*\*\* AUDIT FILE \*\*\*

API: CAP FOR ECS INCARNATION

535 5110000000 X  
0200000000 X

L.AUDT SAI  
JP API  
AUDIT

\*\*\* PROBE FILE \*\*\*

API: CAP FOR ECS INCARNATION  
AP2: FILE ADDRESS

536 0200000000 X

L.PROB JP PROBE

\*\*\* RETURN DISK SYSTEM CLOCKS \*\*\*

(NO PARAMETERS)

\* A 3 WORD DATA BLOCK IS RETURNED

537 0200000000 X L·CLKS JP RETCLK

\* \*\*\*\* DISPLAY FILE \*\*\*\*

\* API: DI: ECS FILE UNIQUE NAME

540 0200000000 X L·DSF JP =XDSPFILE

\* \*\*\*\* DISPLAY N-TH FILE \*\*\*\*

\* API: DI: INDEX OF FILE IN LFT

541 0200000000 X L·DSFN JP =XDSPFILEN

\* \*\*\*\* DISPLAY N-TH ATTACHED BLOCK RECORD \*\*\*\*

\* API: DI: ECS FILE UNIQUE NAME

\* AP2: DI: INDEX OF ABR TO BE DISPLAYED

542 0200000000 X L·DSBN JP =XDSPBLK

\* \*\*\* CLOSE ALL OPEN FILES \*\*\*

(NO PARAMETERS)

543 12111 617000623 + L·CAOF BXI SB7 JP X1=X1 RETURN =XALLCLO SET FLAG TO NOT CLOSE FILE WITH CLOSE LOCK SET

\* \*\*\* SET / RESET CLOSE ALL LOCK OUT \*\*\*

API: ECS FILE CAP

AP2: ZERO FOR RESET; NON-ZERO FOR RESET

RETURNS: USER X6 = PREVIOUS LOCK OUT FLAG SETTING

544 0200000000 X L·CFLG JP =XSETCLOS

\* \*\*\* ACCOUNTING BLOCK SERVICES \*\*\*

545 0200000000 X L·ABSV JP =XDABSERV

\* \*\*\* ACCOUNTING RECORD SERVICES \*\*\*

546 0200000000 X L·ARSV JP =XDARSERV

\*\*\* DESTROY SUBPROCESS \*\*\*  
API: SUBPROCESS TO BE DESTROYED

550 0200000000 X L.DSUB JP =XDESTSUB

\*\*\* LOAD OR RECOVERY DONE \*\*\*  
(NO PARAMETERS)

551 0200000000 X L.DONE JP =XDONE

\*\*\* DECLARE ACCOUNTING FILE \*\*\*

552 0200000000 X L.DACF JP =XDECLARE

\*\*\* DECLARE FIXED ECS ALLOCATION BLOCK \*\*\*  
API: AN ALLOCATION BLOCK

553 0200000000 X L.FUND JP =XFUND

\*\*\* DECLARE PROCESS SWAPPED ECS CROSS SECTION

554 0200000000 X L.XSEC JP =XXSECT

\*\*\* RETURN AMOUNT OF ECS (SWAP AND FIX) OCCUPIED

555 0200000000 X L.EOCC JP =XECC

\*\*\* MOVE DIRTY BLOCK FOR F-RETRUN FRIEND \*\*\*  
(6 DATUM PARAMETERS)

556 0100000000 X L.DIRT SKPT DIRT  
560 0200000623 + JP RETURN

\*\*\* CLEAN UP FOR PROCESS SHUTDOWN \*\*\*

561 0200000000 X L.CLUP JP =XCLEANUP

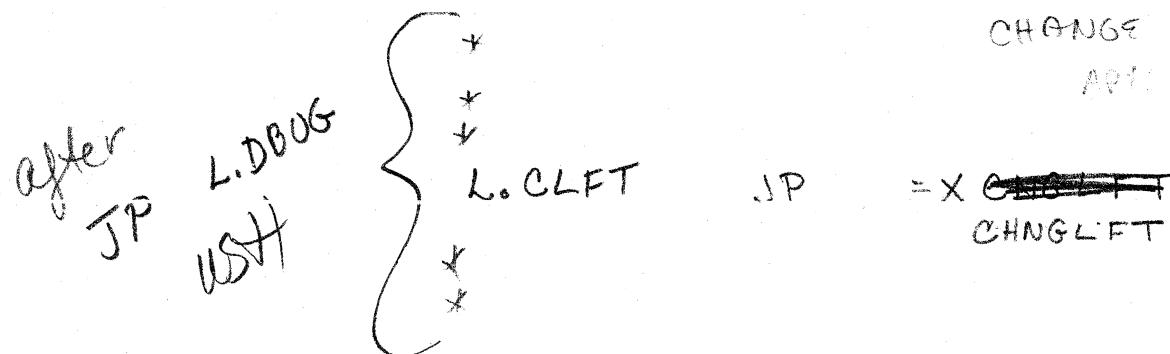
\*\*\* CALL DEBUGGER \*\*\*

DISK SYSTEM ENTRY / EXIT  
ACTION ENTRY POINTS

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562	5110000000 x	L.DBUG	SA1	API SYSERR/RETURN FLAG
	7211777111		SX1	X1-666B CHECK FOR DISASTER
563	011000564 +	*	NZ	X1,L,DBUGI
564	0100000000 x	L.DBUGI	RJ	SYSERR SYSERR DECLARED BY PREV SUBP IN STACK
566	0200000562 +		BKPT	CALL
		*	JP	L,DBUG
		*		TEMP DEF FOR UNIMPLEMENTED ACTION ENTRIES
567		L.MBLK	BSS	
567		L.INIP	BSS	
567		L.FINI	BSS	
567		L.INIT	BSS	
567		L.INIH	BSS	
567		L.INIA	BSS	
567		L.INIR	BSS	
567		L.INIB	BSS	
567	0100000000 x	RJ	SYSERR	UN-IMPLEMENTED ACTION NUMBER



## ERROR EXIT POINTS

†ERRNUM† SHOULD CONTAIN ERROR NUMBER

570	7160000002	ERRPARM	SX6	E•PARMS
	5160000000 X		SA6	ERRCLAS
571	0200000605 +		JP	ERRExit
572	7160000003	ERRFILE	SX6	E•FILES
	5160000000 X		SA6	ERRCLAS
573	0200000605 +		JP	ERRExit
574	7160000006	ERRALOC	SX6	E•ABLOCK
	5160000000 X		SA6	ERRCLAS
575	0200000605 +		JP	ERRExit
576	7160000013	ERRMAP	SX6	E•MAPS
	5160000000 X		SA6	ERRCLAS
577	0200000605 +		JP	ERRExit
	*	ENTRY	ERBSUBP	
600	7160000004	ERRSUBP	ENTRY	SETESM, SETESM1
	5160000000 X		SX6	E•SUBP
601	0200000605 +		SA6	ERRCLAS
	*		JP	ERRExit
602	5140000000 X	PASSERR	SA4	AP0
	5150000000 X		SA5	AP1
603	10644		BX6	X4
	10755		BX7	X5
			SA6	ERRCLAS
604	5170000000 X		SA7	ERRNUM
	0200000605 +		JP	ERRExit
	*			
605	5140000000 X	ERRExit	SA4	ERRCLAS
	5150000000 X		SA5	ERRNUM
606	10644		BX6	X4
	10755		BX7	X5
			SA6	RETERR+1
607	5170000002 X		SA7	RETERR+2
	617000611 +		SB7	ERRExit1
610	0200000640 +		JP	CLOCKS
611	0130000612 +	ERRExit1	RESTORE	USRPACK
614	0130000000 X		XJ	RETERR
	*			
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	*			
	*			F=RETURN EXIT POINT

DISK SYSTEM ENTRY / EXIT  
SUBPROCESS EXIT POINTS

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615	6170000616 + 0200000640 +	FRETURN	SB7 JP RESTORE FRETURN	FRETURN1 CLOCKS USRPACK	UPDATE CLOCKS
616	0130000617 +	FRETURN1	*	*	
621	0130000622 +	*	*	*	
	*	*	*	*	
	*	*	*	*	
623	6170000624 + 0200000640 +	RETURN	SB7 JP RESTORE RETURN	BRETURN1 CLOCKS USRPACK	UPDATE CLOCKS
624	0130000625 +	RETURN1	*	*	RESTORE USER REGISTERS
627	0130000630 +	*	*	*	
	*	*	*	*	
	*	*	*	*	
631	10611 10722 516000001 X	RETPAR	BX6 BX7 SA6 SA7 SB7 JP CLOCKS USRPACK RETPARM	X1 X2 RETPARM*1 RETPARM*2 RETPAR1 CLOCKS USRPACK RETPARM	STORE RETURN CONTROLS
632	5170000002 X 6170000634 +	*	*	*	UPDATE CLOCKS
633	0200000640 +	RETPAR1	RESTORE	*	RESTORE USER REGISTERS
634	0130000635 +	*	*	*	
637	0130000000 X	*	*	*	
	*	*	*	*	
	*	*	*	*	
	2	SYSTIME	EQU	2	
	3	SWPTIME	EQU	3	
	1	USRTIME	EQU	1	
	*	*	*	*	
	*	*	*	*	
	*	*	*	*	
	640	CLOCKS	SA1 SA2 SA3 DSPCLK	CLKBUF+SYSTIME CLKBUF+SWPTIME CLKBUF+USRTIME CLKBUF	UPDATE DISK SYS ELAPSED TIME CLOCKS B7 = RETURN LINK PICK UP OLD TIMES
	5110000002 X 5126000003 X	*	*	*	
641	5130000001 X 7160000000 X	*	*	*	
	*	*	*	*	
646	6150000647 +	CALLX	D+SPY2,B5	*	
	*	*	*	*	
647	5140000002 X 5150000000 X	SA4 SAS	CLKBUF+SYSTIME DSYSTIM	UPDATE TOTALS	
650	37441 36645 5065000000	IX4 IX6 SA6 SA4	X4-X1 X4+X5 A5+0 CLKBUF+SWPTIME		
651	5140000003 X	*	*	*	

DISK SYSTEM ENTRY / EXIT  
SUBPROCESS EXIT POINTS

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652	37442	5150000000 X	SAS	DSWPTIM
		36645	IX4	X4-X2
		5065000000	IX6	X4+X5
653	5140000001 X	5140000001 X	SA6	A5+0
654	37443	5150000000 X	SA4	CLKBUF+USRTIME
		36645	SA5	DUSRIM
		5065000000	IX4	X4-X3
		*	IX6	X4+X5
		*	SA6	A5+0
655	5140000000 X	*	WSPACE	FREE
670	0270000000	*	JP	87 RETURN
670		SYMBOLS	XTEXT	
671		*	END	
	44357	STORAGE USED	4548 STATEMENTS	907 SYMBOLS 000010 INVENTED SYMBOLS
		6600 ASSEMBLY	27.086 SECONDS	881 REFERENCES

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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ACCTF	13		3/37	27/12						
ACTION	137	PROGRAM*	3/50	4/02	6/44 L	13/03				
ALLCLO	0	EXTERNAL*	22/33							
ALLERRS	347	PROGRAM*	14/37	14/38 L						
AN:ABSV	44		10/43 D							
AN:ARSV	45		10/48 D							
AN:ATCH	27		9/25 D							
AN:AUDT	50		11/10 D							
AN:CAOF	29		9/14 D							
AN:CBLK	15		8/25 D							
AN:CFIL	12		8/10 D							
AN:CFLG	53		11/26 D							
AN:CLKS	40		10/23 D							
AN:CLO	22		8/52 D							
AN:CLOS	23		9/04 D							
AN:CLUP	26		9/19 D							
AN:CMRD	36		10/10 D							
AN:CMRW	37		10/16 D							
AN:CTRL	72		6/09 D	7/43	8/30 D	9/14	10/04	10/43 D	11/26	12/16
			7/06	7/43 D	8/30	9/19	10/04 D	10/43	11/31	12/16 D
			7/06 D	7/43	8/35	9/19 D	10/04	10/48	11/31 D	12/16
			7/06	7/48	8/35	9/19	10/10	10/48 D	11/31	12/21
			7/11	7/48 D	8/35	9/25	10/10 D	10/48	11/37	12/21 D
			7/11 D	7/48	8/41	9/25 D	10/10	10/53	11/37 D	12/21
			7/11	7/53	8/41	9/25	10/16	10/53 D	11/37	12/26
			7/17	7/53 D	8/41	9/30	10/16 D	10/53	11/43	12/26 D
			7/17 D	7/53	8/46	9/30 D	10/16	11/05	11/43 D	12/26
			7/17	8/10	8/46 D	9/30	10/23	11/05 D	11/43	12/31
			7/22	8/10 D	8/46	9/35	10/23 D	11/05	11/48	12/31 D
			7/22 D	8/10	8/52	9/35 D	10/23	11/10	11/48 D	12/31
			7/22	8/15	8/52	9/35	10/28	11/10 D	11/48	12/36
			7/27	8/15 D	8/52	9/40	10/28 D	11/10	11/53	12/36 D
			7/27 D	8/15	9/04	9/40 D	10/28	11/15	11/53 D	12/36
			7/27	8/20	9/04	9/40	10/33	11/15 D	11/53	12/41
			7/33	8/20 D	9/04	9/45	10/33 D	11/15	12/05	12/41 D
			7/33 D	8/20	9/09	9/45 D	10/33	11/20	12/05 D	12/41
			7/33	8/25	9/09	9/45	10/38	11/20 D	12/05	12/49
			7/38	8/25 D	9/09	9/51	10/38 D	11/20	12/10	12/49 D
			7/38 D	8/25	9/14	9/51 D	10/38	11/26	12/10 D	12/49
			7/38	8/30	9/14	9/51	10/43	11/26 D	12/10	
AN:DACE	46		10/53 D							
AN:DBLK	16		8/30 D							
AN:DBUG	55		11/37 D							
AN:DFIL	14		8/20 D							
AN:DIRT	60		11/53 D							
AN:DONE	54		11/31 D							
AN:DSBN	57		11/48 D							
AN:DSE	65		12/26 D							
AN:DSFN	66		12/31 D							
AN:DSUB	56		11/43 D							
AN:DTCH	30		9/30 D							
AN:ECLF	63		12/16 D							
AN:ECLM	41		10/28 D							

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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AN:EOCC	61		12/05 D					
AN:EPCL	67		12/36 D					
AN:FINI	4		7/27 D					
AN:FREZ	31		9/35 D					
AN:FUND	62		12/10 D					
AN:INIA	7		7/43 D					
AN:INIB	11		7/53 D					
AN:INID	2		7/17 D					
AN:INIF	3		7/22 D					
AN:INIH	6		7/38 D					
AN:INIR	10		7/48 D					
AN:INIT	5		7/33 D					
AN:LBUF	47		3/34 11/05 D					
AN:MBLK	17		8/35 D					
AN:MELT	32		9/40 D					
AN:MMRO	34		9/51 D					
AN:MMRW	35		10/04 D					
AN:OPRO	20		8/41 D					
AN:OPRW	21		8/46 D					
AN:PCFL	13		8/15 D					
AN:PCLS	24		9/09 D					
AN:PROB	51		11/15 D					
AN:READ	0		7/06 D					
AN:RLSE	43		10/38 D					
AN:SCLF	64		12/21 D					
AN:SCLM	42		10/33 D					
AN:SHAZ	52		11/20 D					
AN:WRIT	1		7/11 D					
AN:XOPN	70		12/41 D					
AN:XSEC	71		12/49 D					
AN:ZRM	33		9/45 D					
AP1IPL	0	EXTERNAL*						
AP0	0	EXTERNAL*	3/30	25/29				
AP1	0	EXTERNAL*	15/42	16/45	18/03	19/42	20/30	21/08 24/01
			16/02	17/31	18/44	20/10	20/40	21/23 25/30
			16/33	17/47	19/16	20/19	20/50	21/39
AP2	0	EXTERNAL*	16/34	17/12 S	17/28 S	20/21 S	20/42 S	21/24
			16/46	17/20 S	18/52	20/32 S	20/52 S	
AP3	0	EXTERNAL*	15/45 S	16/35	17/19 S	17/30 S	21/28	
			16/05 S	16/47	17/21 S	18/53		
AP4	0	EXTERNAL*	16/12 S	16/18	21/25			
AP5	0	EXTERNAL*						
AP6	0	EXTERNAL*						
AP7	0	EXTERNAL*						
AP8	0	EXTERNAL*	19/41 S	20/09 S				
ATCHBLK	0	EXTERNAL*	18/47					
ATTACH	0	EXTERNAL*						
ATTACHR	0	EXTERNAL*						
AUDIT	0	EXTERNAL*	21/40					
BEADC	0	EXTERNAL*	4/43	4/44				
BEGIN	264	PROGRAM*	14/16	14/22 L				
BEGIN1	273	PROGRAM*	14/23	14/26 L				
BEGINIA	350	PROGRAM*	14/37	14/42 L	14/43			

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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BEGIN1B	357	PROGRAM*	14/43	14/44 L	14/45
BEGIN1C	366	PROGRAM*	14/45	14/46 L	
BEGIN2	370	PROGRAM*	15/03 L	15/05	
BEGIN3	375	PROGRAM*	15/14 L	15/18	
BFILE	0	EXTERNAL*			
BLK.DTY	0	EXTERNAL*			
BLK.FLG	0	EXTERNAL*			
BLK.SIZ	0	EXTERNAL*			
BUSYDSK	0	EXTERNAL*			
CALREAD	0	EXTERNAL*	4/43	4/44	
CHMAP	0	EXTERNAL*	20/11		
CHMAPB1	0	EXTERNAL*			
CHMAPR	0	EXTERNAL*			
CHMP	515	PROGRAM*	20/05	20/09 L	
CLEANUP	0	EXTERNAL*	23/45		
CLKBUF	0	EXTERNAL*	3/30	26/39	26/41
			14/11	26/40	26/43
CLOCKS	640	PROGRAM*	25/46	26/02	26/10
CLODAR	0	EXTERNAL*			26/23
CLOSE	0	EXTERNAL*	18/65		26/39 L
CLOSER	0	EXTERNAL*			
CLOSROF	0	EXTERNAL*			
CLOSRWF	0	EXTERNAL*			
CLOSRWL	0	EXTERNAL*			
COMMROF	0	EXTERNAL*	14/15		
COMMROL	0	EXTERNAL*	14/12	14/15	
COMMRWF	0	EXTERNAL*	14/06		
COMMRWL	0	EXTERNAL*	14/09	15/29	
CONVERT	0	EXTERNAL*	18/47		
CREATB1	0	EXTERNAL*			
CREATE	0	EXTERNAL*	15/66	16/06	
CREATER	0	EXTERNAL*			
CREBLK	0	EXTERNAL*	16/47		
CREBLKR	0	EXTERNAL*			
CREFILE1	422	PROGRAM*	15/63	16/03	16/12 L
CREFILE2	424	PROGRAM*	16/13	16/18 L	
CREFILE3	425	PROGRAM*	16/14	16/19 L	
CRELFH	0	EXTERNAL*			
CREPTRR	0	EXTERNAL*			
CTEMP	0	EXTERNAL*			
DABSERV	0	EXTERNAL*	22/48		
DARADDR	0	EXTERNAL*			
DARHASH	0	EXTERNAL*			
DARSERV	0	EXTERNAL*	22/52		
DARSPA	0	EXTERNAL*			
DATIPL	0	EXTERNAL*			
DATMAP	0	EXTERNAL*			
DBR	0	EXTERNAL*			
DBUG1	0	EXTERNAL*			
DBUG2	0	EXTERNAL*			
DBW	0	EXTERNAL*			
DDRSP	0	EXTERNAL*			
DDSIPL	0	EXTERNAL*			

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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DECLARE	0	EXTERNAL*	23/18		
DECODE	0	EXTERNAL*			
DELBLK	0	EXTERNAL*	16/49		
DELBLKR	0	EXTERNAL*			
DELHASH	0	EXTERNAL*			
DENTRY	0	EXTERNAL*			
DESTROY	0	EXTERNAL*	16/25		
DESTSUB	0	EXTERNAL*	23/06		
DETACH	0	EXTERNAL*	19/03		
DETACHR	0	EXTERNAL*			
DETBLK1	477	PROGRAM*	18/45	18/52 L	
DETBLK2	502	PROGRAM*	19/01	19/05 L	
DETBLK3	503	PROGRAM*	18/51	19/07 L	
DF:FINI	0	EXTERNAL*	15/29		
DISKENT	2	PROGRAM*	3/28 L		
DISKENTA	24	PROGRAM*	3/35	3/37 L	
DISKENT0	26	PROGRAM*	3/43	3/45 L	
DISKENT1	31	PROGRAM*	3/46	3/50 L	
DISKENT2	33	PROGRAM*	3/47	4/01 L	
DISKENT3	35	PROGRAM*	3/48	4/04 L	
DISKENT4	37	PROGRAM*	3/52	4/08 L	
DISKENTS	41	PROGRAM*	3/32	4/12 L	
DISKERR	1	PROGRAM*	3/56 L		
DISKERR1	42	PROGRAM*	3/26	4/19 L	
DISKERR2	46	PROGRAM*	4/23 L	4/37	
DISKERR3	56	PROGRAM*	4/21	4/32 L	
DISKERR4	62	PROGRAM*	4/26	4/39 L	
DISKERR5	63	PROGRAM*	4/36	4/40 L	
DISKERR6	124	PROGRAM*	4/46 L	4/47	
DISKINT	0	PROGRAM*	3/24 L		
DONE	0	EXTERNAL*	23/13		
DORESPR	0	EXTERNAL*			
DSKLCK	0	EXTERNAL*			
DSPBLK	0	EXTERNAL*	22/24		
DSPFILE	0	EXTERNAL*	22/10		
DSPFILN	0	EXTERNAL*	22/17		
DSPTR	0	EXTERNAL*			
DSWPTIM	0	EXTERNAL*	15/24 S	27/01	
DSYSTIM	0	EXTERNAL*	15/23 S	26/49	
DUSRTIM	0	EXTERNAL*	15/25 S	27/06	
D•ENTRY	0	EXTERNAL*	4/46	23/40	24/06
D•FNAME	0	EXTERNAL*			
D•SPY1	0	EXTERNAL*	4/02		
D•SPY2	0	EXTERNAL*	26/46		
ECLOSE	0	EXTERNAL*	17/51		
ECSERR	127	PROGRAM*	4/41	4/49 L	
EC:CIN	0	EXTERNAL*	14/32	14/33	
EC:CCLK	0	EXTERNAL*	3/30	14/11	26/43
EC:COUT	0	EXTERNAL*	14/34		
EC:DSCP	0	EXTERNAL*	4/43	4/44	17/50
EC:DSSE	0	EXTERNAL*	5/03		18/47
EC:ESML	0	EXTERNAL*	4/51	14/37	
EC:FRET	0	EXTERNAL*	26/05		

**DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.**

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FRW	0	EXTERNAL*
FRWENT	0	EXTERNAL*
FRWERR	0	EXTERNAL*
FRWINT	0	EXTERNAL*
FR.CAPX	0	EXTERNAL*
FR.CLAM	0	EXTERNAL*
FR.DAR	0	EXTERNAL*
FR.DBSZ	0	EXTERNAL*
FR.FLAG	0	EXTERNAL*
FR.FROZ	0	EXTERNAL*
FR.FUND	0	EXTERNAL*
FR.LEN	0	EXTERNAL*
FR.LOCK	0	EXTERNAL*
FR.MEMB	0	EXTERNAL*
FR.NAME	0	EXTERNAL*
FR.ONEL	0	EXTERNAL*
FR.OPEN	0	EXTERNAL*
FR.ROOT	0	EXTERNAL*
FR.SHAP	0	EXTERNAL*
FR.SIZE	0	EXTERNAL*
FR.SUSP	0	EXTERNAL*
Fr.WD1	0	EXTERNAL*
Fr.WD2	0	EXTERNAL*
Fr.WD3	0	EXTERNAL*
Fr.WRIT	0	EXTERNAL*
FUND	0	EXTERNAL*
GDSKDAT	0	EXTERNAL*
GDSKHDR	0	EXTERNAL*
GDSKPTR	0	EXTERNAL*
GETDSK	0	EXTERNAL*
GETRESP	0	EXTERNAL*
GFILE	0	EXTERNAL*
GF.APTF	0	EXTERNAL*
GF.APTL	0	EXTERNAL*
GF.DATE	0	EXTERNAL*
GF.DATL	0	EXTERNAL*
GF.DDSF	0	EXTERNAL*
GF.DDSL	0	EXTERNAL*
GF.HSHF	0	EXTERNAL*
GF.HSHL	0	EXTERNAL*
GF.IOTF	0	EXTERNAL*
GF.IOTL	0	EXTERNAL*
GF.LEN	0	EXTERNAL*
GF.SUSF	0	EXTERNAL*
GF.SUSL	0	EXTERNAL*
GF.TRVF	0	EXTERNAL*
HASH	0	EXTERNAL*
HASHIPL	0	EXTERNAL*
HBR	0	EXTERNAL*
HBW	0	EXTERNAL*
HENTRY	0	EXTERNAL*
HFILE	0	EXTERNAL*
HOLDBLK	0	EXTERNAL*

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14/29

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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INTDAT	0	EXTERNAL*									
IOTBUF	0	EXTERNAL*									
IOTIPL	0	EXTERNAL*									
IPLIST	0	EXTERNAL*									
IP:ILIST	0	EXTERNAL*									
			3/11	15/29							
			3/11 D	4/44 S	14/11 S	14/23	14/33 S	14/37 S	15/29 S	18/47	
			3/30 S	4/44 S	14/11 S	14/31 S	14/33 S	14/37	15/29 S	26/43 S	
			3/30 S	4/44	14/15 S	14/31 S	14/33 S	14/43 S	15/29 S	26/43 S	
			3/30	14/09 S	14/15 S	14/31	14/33	14/43 S	15/29 S	26/43	
			3/37 S	14/09 S	14/15 S	14/32 S	14/34 S	14/43 S	15/29 S	27/12 S	
			3/37 S	14/09 S	14/15 S	14/32 S	14/34 S	14/45 S	17/50 S	27/12 S	
			3/37	14/09 S	14/15 S	14/32 S	14/34 S	14/45 S	17/50 S	27/12 S	
			4/43 S	14/09 S	14/15 S	14/32 S	14/34 S	14/45 S	17/50 S	27/12	
			4/43 S	14/09 S	14/23 S	14/32 S	14/34 S	15/29 S	18/47 S		
			4/43	14/11 S	14/23 S	14/33 S	14/37 S	15/29 S	18/47 S		
LDBUF1	534	PROGRAM*	21/22	21/31 L							
LFHADDR	0	EXTERNAL*									
LFT	0	EXTERNAL*	14/15	14/53 S	15/04 S	15/10					
LFTFREE	0	EXTERNAL*	15/11 S								
LOADBUF	0	EXTERNAL*	21/29								
LOCK	0	EXTERNAL*									
LOCSTAT	0	EXTERNAL*									
LOCTAB	0	EXTERNAL*									
LOCTABF	0	EXTERNAL*									
LOCTABL	0	EXTERNAL*									
L.ABSV	546	PROGRAM*	10/43	22/48 L							
L.ARSV	547	PROGRAM*	10/48	22/52 L							
L.ATCH	466	PROGRAM*	9/25	18/37 L							
L.AUDT	535	PROGRAM*	11/10	21/39 L							
L.CAOF	543	PROGRAM*	9/14	22/31 L							
L.CBLK	427	PROGRAM*	8/25	16/33 L							
L.CFIL	414	PROGRAM*	8/10	15/42 L							
L.CFLG	545	PROGRAM*	11/26	22/43 L							
L.CLKS	537	PROGRAM*	10/23	22/03 L							
L.CLO	451	PROGRAM*	8/52	17/47 L							
L.CLOS	460	PROGRAM*	9/04	18/03 L							
L.CLUP	561	PROGRAM*	9/19	23/45 L							
L.CMRO	513	PROGRAM*	10/10	20/04 L							
L.CMRW	514	PROGRAM*	10/16	20/07 L							
L.DACF	552	PROGRAM*	10/53	23/18 L							
L.DBLK	432	PROGRAM*	8/30	16/45 L							
L.DBUG	562	PROGRAM*	11/27	24/01 L	24/07						
L.DBUG1	564	PROGRAM*	24/03	24/06 L							
L.DFIL	426	PROGRAM*	8/20	16/25 L							
L.DIRT	556	PROGRAM*	11/53	23/40 L							
L.DONE	551	PROGRAM*	11/31	23/13 L							
L.DSBN	542	PROGRAM*	11/48	22/24 L							
L.DSF	540	PROGRAM*	12/26	22/10 L							
L.DSFN	541	PROGRAM*	12/31	22/17 L							
L.DSUB	550	PROGRAM*	11/43	23/06 L							
L.DTCH	467	PROGRAM*	9/30	18/44 L							
L.ECLF	523	PROGRAM*	12/16	20/40 L							
L.ECLM	517	PROGRAM*	10/28	20/19 L							
L.EOCC	555	PROGRAM*	12/05	23/34 L							

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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L.EPCL	463	PROGRAM*	12/36	18/18 L
L.FINI	567	PROGRAM*	7/27	24/12 L
L.FREZ	464	PROGRAM*	9/35	18/24 L
L.FUND	553	PROGRAM*	12/10	23/24 L
L.IABR	144		15/12	
L.ILFH	31		14/50	15/07
L.INIA	567	PROGRAM*	7/43	24/15 L
L.INIB	567	PROGRAM*	7/53	24/17 L
L.INID	231	PROGRAM*	7/17	14/06 L
L.INIF	567	PROGRAM*	7/22	24/11 L
L.INIH	567	PROGRAM*	7/28	24/14 L
L.INIR	567	PROGRAM*	7/48	24/16 L
L.INIT	567	PROGRAM*	7/33	24/13 L
L.LBUF	530	PROGRAM*	11/05	21/22 L
L.MBLK	567	PROGRAM*	8/35	24/10 L
L.MELT	465	PROGRAM*	9/40	18/30 L
L.MMRO	507	PROGRAM*	9/51	19/29 L
L.MMRW	510	PROGRAM*	10/04	19/33 L
L.MNCL	0	EXTERNAL*		
L.OPRO	440	PROGRAM*	8/41	17/19 L
L.OPRW	442	PROGRAM*	8/46	17/27 L
L.PCFL	417	PROGRAM*	8/15	16/02 L
L.PCLS	462	PROGRAM*	9/09	18/11 L
L.PROB	536	PROGRAM*	11/15	21/48 L
L.RLSE	527	PROGRAM*	10/38	21/08 L
L.SCLF	529	PROGRAM*	12/21	20/50 L
L.SCLM	521	PROGRAM*	10/33	20/30 L
L.SHAZ	435	PROGRAM*	11/20	17/04 L
L.XOPN	439	PROGRAM*	12/41	17/11 L
L.XSEC	554	PROGRAM*	12/49	23/29 L
L.ZRM	509	PROGRAM*	9/45	19/16 L
MATNCL	0	EXTERNAL*	3/37	14/23 27/12
MAKEMAP	0	EXTERNAL*	19/43	
MAPBUF	0	EXTERNAL*		
MAXACT	72		3/31	13/03 D
MELT	0	EXTERNAL*	18/30	
MKMAP	511	PROGRAM*	19/30	19/41 L
MKPTR	0	EXTERNAL*		
MOVBLKR	0	EXTERNAL*		
MYCODE	0	EXTERNAL*	14/39	14/15
MYDAR	0	EXTERNAL*		
MYEVCH	0	EXTERNAL*	14/32	14/43
MYIDENT	0	EXTERNAL*	3/36	14/26 S 15/27 27/11
MYINFO	0	EXTERNAL*	15/29	
MYRESP	0	EXTERNAL*	14/33	14/45
MYSCRF	0	EXTERNAL*	14/34	15/29
MYSUBP	0	EXTERNAL*		
MYSWOCC	0	EXTERNAL*		
MYUNIT	0	EXTERNAL*		
M.ABFCH	0	EXTERNAL*		
M.ABFIL	0	EXTERNAL*		
M.ACREQ	0	EXTERNAL*		
M.ACRES	0	EXTERNAL*		

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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M.ACCTC	0	EXTERNAL*			
M.ADDS	0	EXTERNAL*			
M.ADISK	0	EXTERNAL*			
M.ASUSP	0	EXTERNAL*	14/23		
M.AUTH	0	EXTERNAL*			
M.BFILE	0	EXTERNAL*			
M.CLOCC	0	EXTERNAL*			
M CLOSE	0	EXTERNAL*			
M.CLTIM	0	EXTERNAL*			
M.DARL	0	EXTERNAL*			
M.DDREQ	0	EXTERNAL*			
M.DDRSP	0	EXTERNAL*			
M.DDSCT	0	EXTERNAL*			
M.DFILT	0	EXTERNAL*			
M.DOBJS	0	EXTERNAL*			
M.EMPTY	0	EXTERNAL*			
M.FCLEV	0	EXTERNAL*			
M.FDISK	0	EXTERNAL*			
M.FHRL	0	EXTERNAL*			
M.FILCL	0	EXTERNAL*			
M.FRWC	0	EXTERNAL*			
M.GFILE	0	EXTERNAL*			
M.HASHL	0	EXTERNAL*			
M.HELP	0	EXTERNAL*			
M.HFILE	0	EXTERNAL*			
M.IOCTR	0	EXTERNAL*			
M.LOCKS	0	EXTERNAL*			
M.MKCAP	0	EXTERNAL*			
M.OPCL	0	EXTERNAL*			
M.RBUFS	0	EXTERNAL*			
M.RETRY	0	EXTERNAL*			
M.SDISK	0	EXTERNAL*			
M.SLOTS	0	EXTERNAL*			
M.SWAB	0	EXTERNAL*			
M.TRMCC	0	EXTERNAL*			
M.TRYCC	0	EXTERNAL*			
M.TVRES	0	EXTERNAL*			
M.TWAIT	0	EXTERNAL*			
M.UNAME	0	EXTERNAL*			
M.USCTR	0	EXTERNAL*			
M.USRCC	0	EXTERNAL*			
M.WBUFS	0	EXTERNAL*			
M.WRKSP	0	EXTERNAL*	3/37 27/12		
M.10SEC	0	EXTERNAL*			
NLOCKS	0	EXTERNAL*			
NOBJJS	0	EXTERNAL*			
NOQLOCK	0	EXTERNAL*			
NUMLEV	13		15/25 S 16/05 S		
NUMRESP	0	EXTERNAL*			
OPEN	0	EXTERNAL*	17/33		
OPENDAR	0	EXTERNAL*			
OPENR	0	EXTERNAL*			
OPENRW1	444	PROGRAM*	17/14 17/22 17/31 L		

DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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OPENRW2	446	PROGRAM*	17/32	17/35 L							
OPENRW3	450	PROGRAM*	17/36	17/39 L							
OPERCL	0	EXTERNAL*	3/11	4/52	5/04	5/08	15/28				
OP:11:CL	0	EXTERNAL*	3/11 D	4/30	4/44	14/10	14/32	17/49	26/12		
			3/29	4/41	4/44	14/14	14/33	18/46	26/13		
			3/29	4/43	4/44	14/22	14/36	25/48	26/25		
			3/37	4/43	4/45	14/30	14/42	26/04	26/42		
			4/20	4/43	14/08	14/31	14/44	26/05	27/12		
ORGADDR	0	EXTERNAL*									
ORGCLST	0	EXTERNAL*									
ORGMAP	0	EXTERNAL*									
PAGESW	0	EXTERNAL*									
PASSERR	602	PROGRAM*		25/29 L							
PBR	0	EXTERNAL*									
PBW	0	EXTERNAL*									
PG.DDS	0	EXTERNAL*									
PG.DTY	0	EXTERNAL*									
PG.PG	0	EXTERNAL*									
PROBE	0	EXTERNAL*			21/48						
PROCADR	0	EXTERNAL*			4/20						
PRVOPEN	0	EXTERNAL*									
PSEUDO	0	EXTERNAL*				18/11					
PTR.CM	0	EXTERNAL*									
PTR.DDS	0	EXTERNAL*									
PTR.DTY	0	EXTERNAL*									
PTR.NUM	0	EXTERNAL*									
PTR.PTR	0	EXTERNAL*									
RBUFS	0	EXTERNAL*									
READCAP	0	EXTERNAL*		14/28							
READONF	0	EXTERNAL*									
READONL	0	EXTERNAL*									
READRWF	0	EXTERNAL*									
READRWL	0	EXTERNAL*									
REDSHP	0	EXTERNAL*									
REGS	0	EXTERNAL*			4/43	4/44	4/44				
RELCLAM	0	EXTERNAL*		21/09							
RELEASE	0	EXTERNAL*									
RESP	0	EXTERNAL*		14/33							
RESTREG	0	EXTERNAL*									
RETCLOCK	0	EXTERNAL*		22/53							
REVERR	0	EXTERNAL*		25/43 S	25/44 S	25/48					
RETPAR	631	PROGRAM*		16/16	17/37	26/18 L					
RETPARM	0	EXTERNAL*		26/20 S	26/21 S	26/25					
RETPAR1	634	PROGRAM*		26/22	26/24 L						
RETRY	0	EXTERNAL*									
RETURN	623	PROGRAM*		15/30	16/48	18/04	19/17	22/32	26/09 L		
				16/36	17/48	19/05	21/31	23/41			
RETURN1	624	PROGRAM*		26/09	26/11 L						
SAVEREG	0	EXTERNAL*									
SCRCL	0	EXTERNAL*		14/34							
SETCLOS	0	EXTERNAL*		22/43							
SETESM	130	PROGRAM*		4/28	4/51 L	25/24 E					
SETESM1	132	PROGRAM*		4/53	5/01 L	25/24 E					

## DISK SYSTEM ENTRY / EXIT SYMBOLIC REFERENCE TABLE

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DISK SYSTEM ENTRY / EXIT  
SYMBOLIC REFERENCE TABLE.

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USERRWL	0	EXTERNAL*					
USRPACK	0	EXTERNAL*	3/29	25/48	26/04	26/12	26/25
USRTIME	1		26/35 D	26/41	27/05		
VIEW	133	PROGRAM*	4/32	5/03 L			
WRITCAP	0	EXTERNAL*					
XSECT	0	EXTERNAL*	23/29				
ZEROMAP	0	EXTERNAL*	19/18				
ZROMAPR	0	EXTERNAL*					