

DEBUG
STORAGE ALLOCATION.

COMPASS - VER 2.

05/24/71 11.25.54.

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ADDRESS	LENGTH	BINARY CONTROL CARDS.	
0	731	IDENT	DEBUG
731		END	

ENTRY POINTS.

D.SPY1	=	712	BK.DYN	=	305	D.BEGIN	=	47
D.SPY2	=	716	BK.SAVE	=	333	D.SYSER	=	0

EXTERNAL SYMBOLS.

D.EVCH	READONL	DDSIPL	BFILE	CHMAP	L.MNCL	M.TWAIT	FR.CLAM
D.DCAP	HENTRY	IOTIPL	DDRSP	CLODAR	M.GFILE	M.CLTIM	FR.MEMB
BK.NPTR	DENTRY	HASHIPL	RBUFS	HASH	M.HFILE	M.10SEC	EHRADDR
BK.NLEN	ORGADDR	SUSIPL	RETRY	DELHASH	M.FILCL	GF.LEN	FILEADR
BK.NAME	ORGCLST	DATIPL	SLOTS	EXCLAIM	M.EMPTY	GF.SUSF	LETFREE
BK.GO	ORGMAP	APTIP	HBR	SHCLAIM	M.RETRY	GF.SUSL	LFHADDR
BK.STOR	INTDAT	RETPARM	HBW	LOCK	M CLOSE	GF.IOTF	DARADDR
BKLINK	AP0	RETERR	PBR	UNLOCK	M.TVRES	GF.IOTL	PAGESW
BK.NUM	AP1	PASSERR	PBW	UNLOCKW	M.HELP	GF.DDSF	MAPBUF
D.SPYF	AP2	USRPACK	DBR	RELCLAM	M.SWAB	GF.DDSL	SIZES
D.SPYN	AP3	IOTBUF	DBW	RELEASE	M.ABFCH	GF.DATF	SIZE
D.CTR	AP4	PROCADR	GETRESP	FRW	M.ABFIL	GF.DATL	NUMRESP
D.USRTM	AP5	ERRADDR	TR.DRIV	MAKEMAP	M.ACREQ	GF.APTF	CREATER
D.SYSTM	AP6	ERRPACK	TR.LEVL	LOADBUF	M.ACRES	GF.APTL	CREBLKR
D.SWPTM	AP7	STKBUF	BLK.SIZ	AUDIT	M.USRCC	GF.HSHF	DELBLKR
D.FHRAD	AP8	SETPCNT	BLK.DTY	NOQLOCK	M.FRWCC	FHRHASH	OPENR
DBGIPL	TEMPO	DISKENT	BLK.FLG	PROBE	M.TRMCC	DARHASH	ATTACHR
D.BKBUF	TEMP1	DISKERR	SW.SH	RETCLK	M.CLOCC	GE.HSHL	DETACHR
D.BKCAL	TEMP2	DISKINT	SWDDS	SYSERR	M.ACTCC	GE.TRVF	ZROMAPR
D.TBUF	TEMP3	FRWENT	PG.PG	FRETURN	M.TRYCC	FHB	CHMAPR
D.BKADR	TEMP4	FRWERR	PGDDS	RETURN	M.DFIET	FB.LEN	CHMAPB1
D.BKIND	TEMP5	FRWINT	PG.DTY	RETPAR	M.DOBJS	FB.NAME	SETUPR
OPERCL	TEMP6	ENTER	PTR.PTR	ERRPARM	NOBJS	FB.WD3	CREATEB1
COMMROP	TEMP7	CLKBUF	PTR.DDS	ERRFILE	M.BFILE	Fr.SHAP	CLOSER
COMMROL	TEMP8	DSYSTIM	PTR.CM	ERRALOC	M.DDREQ	Fr.FUND	MOVBLKR
COMMRWF	TEMP9	DSWPTIM	PTR.DTY	ERRMAP	M.DDRSP	FHR	CREPTRR
COMMRWL	TEMP10	DUSRIM	PTR.NUM	CALBEAD	M.RBUFS	Fr.LEN	DORESPR
HOLDBLK	TEMP11	MYSCRF	CREATE	REGS	M.WBUFS	Fr.NAME	ERRNUM
LOCTAB	TEMPA	MYCODE	CREBLK	D.ENTRY	M.SLOTS	FR.WD1	ERRCLAS
LOCTABP	TEMPB	mysubp	DELBLK	D.FNAME	M.LOCKS	FR.WD2	TABADDR
LOCTABL	TEMPC	MYEVCH	OPEN	DBUG1	NLOCKS	FR.WD3	EC.CCAP
LFT	TEMPD	READCAP	ATTACH	DSKLCK	M.DDSCT	FR.SUSP	EC.WBIT
FLDLEN	TEMPE	WRITCAP	DETACH	DBUG2	M.FHRL	FR.LOCK	EC.RTRN
USERRWF	TEMPF	SAVEREG	CONVERT	M.AUTH	M.DARL	Fr.DAR	EC.SEV
USERRWL	TEMPG	RESTREG	SETUP	M.MKCAP	M.HASHL	Fr.OPEN	EC.GEVF
DATMAP	TEMPH	MAINCL	DECODE	REDSHP	M.ADDS	FR.CAPX	D.AFLAG
TERMRWL	TEMPV	FILCL	CRELFH	GDSKHDR	M.ASUSP	FR.DBSZ	EC.RSTR
TERMROF	TEMPW	SLEEP	OPENDAR	FDSKHDR	M.ADISK	FR.ONEL	BEADCL
TERMRWF	TEMPX	MYRESP	PRVOPEN	GDSKPTR	M.SDISK	FR.FROZ	EC.IDSCP

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CLOS RWF	TEMPY	RESP	MKPTR	FDSKPTR	M.FDISK	FR.WRIT	ECISAVE
CLOS RWL	TEMPZ	GFILE	DSPTR	GDSKDAT	M.FCLEV	FR.SIZE	
CLOS ROF	MYIDENT	HFILE	CLOSE	FDSKDAT	M.UNAME	FR.SHAP	
READ RWF	MYDAR	FILECAP	ECLOSE	GETDSK	M.USCTR	FR.FUND	
READ RWL	MYUNIT	CTEMP	DARSPA	FREEDSK	M.OPCL	FR.FLAG	
READON	MYSWOCC	UDSKSCR	ZEROMAP	BUSYDSK	M.IOCTR	FR.ROOT	

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24 0130000025 +

BEAD 4

DO ..STOP

41 0130000042 +

RESTORE EXERRPACK

44 0100000000 X
46 0200000044 +

D.SYSL BKPT
JP

CRASHED
D.SYSL

ENTER DEBUGGER
REMAIN IN TERMINAL COMA

* ENTER FROM STATIC BREAKPOINT

47 0130000050 +	D-BEGIN	SAVE	=XERRPACK
52 7160777776	*	SX6	-1
		SA6	BK.NUM
53 5110000000 X		SA1	D-ENTRY PICK UP RETURN
	20136	LX1	30
54 7120000001		SX2	1
	36612	IX6	X1+X2 INCR RETURN ADDR
	20636	LX6	30
55 5160000000 X		SA6	D-ENTRY
	53210	SA2	X1
	000012	DUP	PICK UP I.D.
		TYPEX2	10,1
304 6110000462 +		S81	D-HELLO
	0200000345 +	JP	D-TYPE

* INDICATE STATIC BREAKPOINT

* ENTER FROM DYNAMIC BKPT

305 0130000306 +	BK,DYN	SAVE	=XERRPACK	SAVE REGS
310 5110000000 X		SA1	BK,STOP	COMPUTE
	21136	AX1	30	
311 7120000000 X		SX2	BK,LINK	BREAKPOINT
	37112	IX1	X1-X2	NUMBER
312 73610		AX1	1	SAVE BKPT NUMBER
	5160000000 X	SX6	X1	
		SA6	BK,NUM	
313 7266000000 X		SX6	X6+BK,NAME	ADDRESS OF BKPT NAME
	5160000000 X	SA6	BK,NPTR	STORE INTO STRING DESCRIPTOR
314 64160		S81	A6	
	7110000147	SX1	BK,BELL	
315 0130000316 +		BEAD	7	RING BELL ON TTY
		EQU	147B	TTY BELL CHAR
332 6110000000 X		S81	BK,NPTR	TYPE NAME OF BKPT
	0200000345 +	JP	D-TYPE	

* DYNAMIC BREAKPOINT SAVE TABLE. SAVES INST WORD REPLACED BY BKPT.
SEE ALSO BKLINK IN DEBUGGER READ/WRITE AREA (DBUGLOC)

333

	BK.SAVE	BSS	0	
*	LINKNO	SET	0	
000005:	DUP	BK.MAX,3		SAVE INST WORD HERE
	BSSZ	1		JUMP TO CORRESPONDING LINK
	LINKNO	JP	BKLINK+LINKNO	
		SET	LINKNO+2	

* TYPE MESSAGE AND AWAIT COMMAND

345 0130000346 +
362 7110000005
363 0130000364 +

D.TYPE BEAD S
D.CMD SX1 PERCENT
BEAD 7

PROMPT W/PERCENT SIGN

* PERCENT EQU S

400 13666
5160000000 X
401 6110000000 X
402 0130000403 +
417 5150000000 X
66100
420 6120000016
421 5141000426 +
13445
422 0304000425 +
6111000001
423 0712000421 +
6110000465 +
424 0200000345 +
425 0210000444 +

BX6 X6-X6
SA6 D.TBUF
SB1 D.TBUF
BEAD 6
SAS D.TBUF
SB1 B0
SB2 D.NCMDS
D.CMD1 SA4 B1+D.CMDS
BX4 X4-X5
ZR X4+D.CMD2
SB1 B1+1
LT B1,B2,D.CMD1
SB1 D.POO ILLEGAL COMMAND
JP D.TYPE
D.CMD2 JP B1+D.RTNS (JUMP TO PROPER ROUTINE)

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* COMMAND AND JUMP TABLES

	D.CMDS	BSS	0	
426	00000000000000000000	VFD	60/0	(NULL)
426	03320000000000000000	VFD	4/0,7/155B,49/0	(CR)
427	01024321551550000000	VFD	4/0,7/41B,7/43B,7/43B,7/64B,7/155B,21/0	ACCT
430	01166220505550000000	VFD	4/0,7/47B,7/62B,7/41B,7/42B,7/155B,21/0	GRAB
431	01146222513550000000	VFD	4/0,7/46B,7/62B,7/45B,7/45B,7/155B,21/0	FREE
432	0144453106506640000	VFD	4/0,7/62B,7/45B,7/66B,7/43B,7/50B,7/155B,14/0	REVCH
434	0156453106506640000	VFD	4/0,7/67B,7/45B,7/66B,7/43B,7/50B,7/155B,14/0	WEVCH
435	01104521152476640000	VFD	4/0,7/44B,7/45B,7/42B,7/65B,7/47B,7/155B,14/0	DEBUGA
436	01145127332000000000	VFD	4/0,7/46B,7/51B,7/56B,7/155B,28/0	FINA
437	01125632112626640000	VFO	4/0,7/45B,7/56B,7/64B,7/45B,7/62B,7/155B,14/0	ENTRY
440	01045330151550000000	VFD	4/0,7/42B,7/53B,7/60B,7/64B,7/155B,21/0	BKPT
441	01325321502606640000	VFD	4/0,7/55B,7/53B,7/43B,7/41B,7/60B,7/155B,14/0	MKCAP
442	01305721527550000000	VFD	4/0,7/54B,7/57B,7/43B,7/53B,7/155B,21/0	LOCK
443	01525427506536640000	VFD	4/0,7/65B,7/54B,7/57B,7/43B,7/53B,7/155B,14/0	ULOCK
444		BSS	0	

16 D.NCMDS EQU

*-D.CMDS

	D.RTNS	BSS	0	
444	0200000504 +	JP	D.EXIT	RETURN TO BREAKPOINT
445	0200000504 +	JP	D.EXIT	RETURN TO BREAKPOINT
446	0200000521 +	JP	D.ACCT	TOGGLE ACCOUNTING FLAG
447	0200000524 +	JP	D.GRAB	GET DISK LOCK EVENT
450	0200000533 +	JP	D.FREE	RELEASE DISK LOCK EVENT
451	0200000545 +	JP	D.REVCH	READ EVENT CHANNEL
452	0200000557 +	JP	D.WEVCH	WRITE EVENT CHANNEL
453	0200000574 +	JP	D.DEBUG	CALL BEAD (..STOP)
454	0200000630 +	JP	D.FIN	RETURN TO BEAD (END OF TEST)
455	0200000632 +	JP	D.ENTR	SIMULATE USER CALL ENTRY TO SUBB
456	0200000633 +	JP	D.BKPT	SET BREAKPOINT
457	0200000656 +	JP	D.MKCAP	CONSTRUCT DISK FILE CAPABILITY
460	0200000670 +	JP	D.LOCK	LOCK FILE HEADER
461	0200000673 +	JP	D.ULOCK	UNLOCK FILE HEADER

MESSAGES

462	0000000000000000000464	*	D.HELLO	VFD	60/*+2	BREAKPOINT MESSAGE
463	000000000000000000012	*		VFD	60/10	
464	0317550000000000000000	*		VFD	4/0,7/147B,7/155B,42/0	BELL,CR
465	0000000000000000000467	*	D.PO0	VFD	60/*+2	ILLEGAL COMMAND MESSAGE
466	000000000000000000012	*		VFD	60/10	
467	0077550000000000000000	*		VFD	4/0,7/37B,7/155B,42/0	QUESTION MARK,CR
470	0000000000000000000472	*	D.OK	VFD	60/*+2,60/10	
471	000000000000000000012	*		VFD	4/0,7/57B,7/53B,7/155B,35/0	O.K.
472	0136536640000000000000	*		VFD	4/0,7/56B,7/57B,7/60B,7/45B,7/155B,21/0	NOPE!
473	0000000000000000000475	*	D.NOPE	VFD	60/*+2,60/10	
474	000000000000000000012	*		VFD	4/0,7/65B,7/0,7/54B,7/57B,7/63B,7/45B,7/155B,7/0	
475	01345730113550000000	*		VFD	4/0,7/46B,7/65B,7/54B,7/54B,7/155B,21/0	NOPE!
476	0000000000000000000500	*	D.ULOSE	VFD	60/*+2,60/10	
477	000000000000000000012	*		VFD	4/0,7/65B,7/0,7/54B,7/57B,7/63B,7/45B,7/155B,7/0	
500	01520026136632273200	*		VFD	4/0,7/65B,7/0,7/54B,7/57B,7/63B,7/45B,7/155B,7/0	
501	0000000000000000000503	*	D.FULL	VFD	60/*+2,60/10	
502	000000000000000000012	*		VFD	4/0,7/46B,7/65B,7/54B,7/54B,7/155B,21/0	
503	01146526131550000000	*		VFD	4/0,7/46B,7/65B,7/54B,7/54B,7/155B,21/0	

* COMMAND ROUTINES

504 5110000000 X 0321000504 *	D.EXIT SAI PL	BK.NUM X1,D.EXIT	DYNAMIC BKPT NO. JUMP IF DYNAMIC BKPT
* EXIT FROM STATIC BREAKPOINT			
505 0130000506 + 510 0200000000 X	RESTORE JP	EXERRPACK D.ENTRY	
* EXIT FROM DYNAMIC BREAKPOINT			
511 20101 7261000333 + 512 5110000520 + 12661 513 5160000000 X 20636	D.EXITI LX1 SX6 SA1 BX6 LX6 SA6	I X1+BK.SAVE JP.OP X6+X1 30 BK.GO	X1 = BKPT NUMBER + 2 ADDRESS OF SAVED INST WORD CONSTRUCT JUMP TO SAVED INST WORD STORE THE JUMP
514 0130000515 + 517 0200000000 X	RESTORE JP	EXERRPACK BK.GO	EXECUTE SAVED INST AND RETURN
520 00000000002000000000	JP.OP	DATA 0200000008	JUMP OP CODE
521 5150000000 X 7160000001	D.ACCT	SAS SX6 BX6 SA6	=XD.AFLAG 1 X5-X6 =XD.AFLAG
522 13656 5160000000 X			TOGGLE LOWEST BIT
523 0200000362 +		JP	D.CMD
524 6110000473 + 7160000000 X	D.GRAB	SB1 GETEVF JP	D.NOPE DSKLCK,D.TYPE D.CMD
532 0200000362 +			
533 7160000000 X 543 0200000362 + 544 6110000501 + 0200000345 +	D.FREE D.FREE1 + D.REVCH	SENDEV JP SB1 SA1 SB1	DSKLCK,0,D.FREE1 D.CMD D.FULL D.TYPE D.EVCH D.NOPE (MAINCL,X1),D.TYPE D.EVCH+1 D.EVCH+2 D.CMD
545 5110000000 X 6110000473 +			
546 7160000000 X 555 5160000001 X 556 0200000362 +		GETEVF SA6 SAT JP	

557	5110000000 X	D.WEVCH	SA1	D.EVCH
	5120000002 X		SA2	D.EVCH+2
560	7160000000 X		SENDEV	(MAINCL,X1), (,X2), D.WEV1
571	0200000362 +		JP	D.CMD
572	6110000476 +	D.WEV1	SB1	D.ULOSE
	0200000345 +		JP	D.TYPE
573	6110000501 +	+	SB1	D.FULL
	0200000345 +	+	JP	D.TYPE
574	0130000575 +	D.DEBUG	DEBUG	
611	0200000362 +		JP	D.CMD
612	0130000613 +	D.FRET	DEBUG	DISGUSTING. NEVER COME HERE!
627	0200000630 +		JP	D.FIN
630	0130000631 +	D.FIN	RETURN	
632	0200000000 X	D.ENTR	JP	DISKENT CALL SELF SORT OF READ / WRITE THE I/O TABLE

SET BREAKPOINT

633	5150000000 X	D.BKPT	SA5	D.BKADR ADDRESS FOR BREAKPOINT
	5140000000 X		SA4	D.BKIND INDEX OF BREAKPOINT
634	7264777765		SX6	X4=10
635	0326000655 +	PL	X6+D.BKPT1	JP: IF ALL BKPTS USED UP INCR BKPT INDEX
	54640	SX6	X4+1	
	53350	SA6	A4	
636	73240	SA3	X5	WORD TO BE SAVED
	20402	SX2	X4	
	36442	LX4	2	
637	5224000003 X	IX4	X4+X2	
	0312000655 +	SA2	X4+D.BKBUF+3	SAVE WORD BUFFER
640	10633	NZ	X2,D.BKPT1	JP: IF BKPT SET ALREADY
	54620	BX6	X3	
	7264000000 X	SA6	A2	
641	7170000100	SX6	X4+D.BKBUF	CONSTRUCT RJ. INSTR
	20722	SX7	0100B	
	12667	LX7	18	
642	20636	BX6	X6+X7	
	5160000000 X	LX6	30	
643	7160000000 X	SA6	D.BKCAL	WRITE RJ. TO CODE FILE
654	0200000362 +	WRITE	MYCODE,A3,D.BKCAL,1,SYSERR	
655	6110000473 +	D.BKPT1	JP	D.CMD
	0200000345 +	SB1	D.NOPE	
	+	JP	D.TYPE	

CONSTRUCT DISK FILE CAPABILITY

656 5150000000 X D.MKCAP S5
7160000000 X CRCAP JP
667 0200000362 + * D.CAP, DBUG2, (MAINCL,M.DFILT), (+X5)
D.CMD

PICK UP DATA PART OF CAPABILITY

670 5140000000 X D.LOCK SA4
6160000672 + SB6 JP
671 0200000000 X D.LOCK1 JP
672 0200000362 + * D.CMD

LOCK FILE HEADER RECORD
D.FHRAD NOTE: D.LOCK CLOBBERS
D.LOCK1 +TEMP5+ AND +FHR+ - +FHR+7+
LOCK
D.CMD

673 5140000000 X D.ULOCK SA4
7160000000 X REODS BX6
706 10644 SA6 FHRADD
5160000000 X SB6 D.ULOCK1
707 6160000710 + UNLOCK
0200000000 X D.CMD
710 0200000362 + D.TYPE
711 0200000345 + *

ON-LOCK FILE HEADER RECORD
D.FHRAD NOTE: +D.ULOCK+ CLOBBERS +TEMP5+
X4,FHR,FR,LEN +FHRADDR+ AND +FHR+ THRU +FHR+7+
Y4
FHRADDR
D.ULOCK1
UNLOCK
D.CMD
D.TYPE

* DISK SYSTEM INTERNAL SPY. KEEPS SEPARATE COUNTS AND TIMERS
(USER,SYSTEM,AND SWAP TIMES) FOR EACH DISK SYSTEM
ACTION. SPYING IS TURNED ON BY SETTING THE SPY-FLAG
(D.SPYF) NON-ZERO.

1 USRTIM EQU 1
2 SYSTIM EQU 2
3 SWPTIM EQU 3

* FIRST HALF OF SPY .. JUST AFTER ENTERING FROM USER CALL

712 5150000000 X D.SPY1 S5 D.SPYF
0315000714 + NZ JUMP IF SPYING ENABLED
713 0250000000 JP B5
714 76670 D.SPY1A SX6 B7
5160000000 X SA6 D.SPYN RECORD ACTION NUMBER
715 0250000000 JP B5 EXIT

* SECOND HALF OF SPY .. JUST BEFORE RETURN TO USER

716 5150000000 X D.SPY2 S5 D.SPYF SPY FLAG
0315000720 + NZ X5,D.SPY2A EXIT IF SPYING NOT ENABLED
717 0250000000 JP B5
720 5150000000 X D.SPY2A S5 D.SPYN ACTION NUMBER
63650 SB6 X5

* INCREMENT COUNTER FOR THIS ACTION

721 5156000000 X
7265000001
722 54650

SA5
SX6
SA6

B6+D.CTR
X5+1
A5

* INCR CLOCKS FOR ACTION BY ELAPSED TIME

5140000001 X
37443
723 5156000000 X
36645
54650

SA4
IX4
SA5
IX6
SA6

CLKBUF.USRTIM
X4-X3
B6+D.USRTM
X4+X5
A5

ELAPSED USER TIME

724 5140000002 X
37441
725 5156000000 X
36645
54650

SA4
IX4
SA5
IX6
SA6

CLKBUF.SYSTIM
X4-X1
B6+D.SYSTM
X4+X5
A5

ELAPSED SYSTEM TIME

726 5140000003 X
37442
727 5156000000 X
36645
54650

SA4
IX4
SA5
IX6
SA6

CLKBUF.SWPTIM
X4-X2
B6+D.SWPTM
X4+X5
A5

ELAPSED SWAP TIME

730 0250000000

JP

B5

EXIT

730 SYMBOLS XTEXT

731 END

43271 STORAGE USED
6600 ASSEMBLY

3281 STATEMENTS
21,238 SECONDS

528 SYMBOLS 000032 INVENTED SYMBOLS
511 REFERENCES

DEBUG
SYMBOLIC REFERENCE TABLE.

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APTIPL	0	EXTERNAL*						
AP0	0	EXTERNAL*						
AP1	0	EXTERNAL*						
AP2	0	EXTERNAL*						
AP3	0	EXTERNAL*						
AP4	0	EXTERNAL*						
AP5	0	EXTERNAL*						
AP6	0	EXTERNAL*						
AP7	0	EXTERNAL*						
AP8	0	EXTERNAL*						
ATTACH	0	EXTERNAL*						
ATTACHR	0	EXTERNAL*						
AUDIT	0	EXTERNAL*						
BADNEWS	21	PROGRAM*	3/47	3/50 L				
BEADC	0	EXTERNAL*	3/49	5/18	5/18	5/18	5/37	7/14
			4/02	5/18	5/18	5/18	7/05	11/11
			5/18	5/18	5/18	5/18	7/07	11/14
BFILE	0	EXTERNAL*						
BK.BELL	147		5/35	5/38 D				
BK.DYN	305	PROGRAM*	3/07 E	5/23 L				
BK.GO	0	EXTERNAL*	10/19 S	10/22				
BKLINK	0	EXTERNAL*	5/26	6/13	6/13	6/13	6/13	6/13
BK.MAX	5		6/09					
BK.NAME	0	EXTERNAL*	5/32					
BK.NLEN	0	EXTERNAL*						
BK.NPTR	0	EXTERNAL*						
BK.NUM	0	EXTERNAL*						
BK.SAVE	333	PROGRAM*	3/07 E	6/05 L	10/04			
BK.STOP	0	EXTERNAL*	5/24					
BLK.DTY	0	EXTERNAL*						
BLK.FLG	0	EXTERNAL*						
BLK.SIZ	0	EXTERNAL*						
BUSYDSK	0	EXTERNAL*						
CALBEAD	0	EXTERNAL*						
			3/49	5/18	5/18	5/18	5/37	7/14
			4/02	5/18	5/18	5/18	7/05	11/11
			5/18	5/18	5/18	5/18	7/07	11/14
CHMAP	0	EXTERNAL*						
CHMAPB1	0	EXTERNAL*						
CHMAPR	0	EXTERNAL*						
CLKBUF	0	EXTERNAL*	13/08	13/14	13/20			
CLODAR	0	EXTERNAL*						
CLOSEL	0	EXTERNAL*						
CLOSER	0	EXTERNAL*						
CLOSROF	0	EXTERNAL*						
CLOSRWF	0	EXTERNAL*						
CLOSRWL	0	EXTERNAL*						
COMMROF	0	EXTERNAL*						
COMMROL	0	EXTERNAL*						
COMMRWF	0	EXTERNAL*						
COMMRWL	0	EXTERNAL*						
CONVERT	0	EXTERNAL*						
CREATEB1	0	EXTERNAL*						
CREATE	0	EXTERNAL*						

DEBUG SYMBOLIC REFERENCE TABLE

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SYMBOLIC REFERENCE TABLE.

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D.EVCH	0	EXTERNAL*	10/47	10/50 S	10/51 S	11/01	11/02
D.EXIT	504	PROGRAM*	8/23	8/24	10/04 L	10/05	
D.EXIT1	511	PROGRAM*	10/14 L				
D.FHRAD	0	EXTERNAL*	12/07	12/13			
D.FIN	630	PROGRAM*	8/31	11/14	11/17 L		
D.ENAME	0	EXTERNAL*					
D.FREE	533	PROGRAM*	8/27	10/40 L			
D.FREE1	543	PROGRAM*	10/41	10/41 L			
D.FRET	612	PROGRAM*	11/13 L				
D.FULL	501	PROGRAM*	9/25 L	10/42	11/07		
D.GRAB	524	PROGRAM*	8/26	10/36 L			
D.HELLO	462	PROGRAM*	5/18	9/04 L			
D.LOCK	670	PROGRAM*	8/95	12/07 L			
D.LOCK1	672	PROGRAM*	12/08	12/10 L			
D.MKCAP	656	PROGRAM*	8/34	12/02 L			
D.NCMDS	16		7/16	8/20 D			
D.NOPE	473	PROGRAM*	9/16 L	10/36	10/48	11/50	
D.OK	470	PROGRAM*	9/12 L				
D.PO0	465	PROGRAM*	7/22	9/08 L			
D.REVCH	545	PROGRAM*	8/28	10/47 L			
D.RTNS	444	PROGRAM*	7/24	8/22 L			
D.SPYF	0	EXTERNAL*	12/34	12/46			
D.SPYN	0	EXTERNAL*	12/39 S	12/50			
D.SPY1	712	PROGRAM*	3/06 E	12/34 L			
D.SPY1A	714	PROGRAM*	12/35	12/38 L			
D.SPY2	716	PROGRAM*	3/06 E	12/46 L			
D.SPY2A	720	PROGRAM*	12/47	12/50 L			
D.SWPTM	0	EXTERNAL*	13/22				
D.SYSER	0	PROGRAM*	3/45 E	3/46 L			
D.SYSL	44	PROGRAM*	4/06 L	4/07			
D.SYSTM	0	EXTERNAL*	13/16				
D.TBUF	0	EXTERNAL*	7/11 S	7/12	7/14		
D.TYPE	345	PROGRAM*	5/19	7/04 L	10/38	10/50	11/08
			5/41	7/23	10/43	11/06	11/51
D.ULOCK	673	PROGRAM*	8/36	12/13 L			
D.ULOCK1	710	PROGRAM*	12/17	12/19 L			
D.ULOSE	476	PROGRAM*	9/21 L	11/05			
D.USRTM	0	EXTERNAL*	13/10				
D.WEVCH	557	PROGRAM*	8/29	11/01 L			
D.WEV1	572	PROGRAM*	11/04	11/05 L			
ECLOSE	0	EXTERNAL*					
EC:CCAP	0	EXTERNAL*	12/04				
EC:DSCP	0	EXTERNAL*	3/49	5/18	5/18	5/18	5/37
			4/02	5/18	5/18	5/18	7/05
			5/18	5/18	5/18	5/18	7/07
EC:GEVF	0	EXTERNAL*	10/38	10/50			7/14
EC:RSTR	0	EXTERNAL*	3/49	5/18	5/18	5/18	7/07
			4/02	5/18	5/18	5/18	7/14
			4/04	5/18	5/18	5/18	7/05
EC:RTRN	0	EXTERNAL*	11/18				10/10
EC:SAVE	0	EXTERNAL*	3/47	5/05	5/18	5/18	5/37
			3/49	5/18	5/18	5/18	7/05
			4/02	5/18	5/18	5/18	11/11
							11/14

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SYMBOLIC REFERENCE TABLE.

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ECI\$EV	0	EXTERNAL*	10/41	11/04					
ECI\$WRIT	0	EXTERNAL*		11/49					
ENTER	0	EXTERNAL*							
ERRADDR	0	EXTERNAL*							
ERRALOC	0	EXTERNAL*							
ERRCLAS	0	EXTERNAL*							
ERRFILE	0	EXTERNAL*							
ERRMAP	0	EXTERNAL*							
ERRNUM	0	EXTERNAL*							
ERRPACK	0	EXTERNAL*							
ERRPARM	0	EXTERNAL*							
EXCLAIM	0	EXTERNAL*							
FB.FUND	0	EXTERNAL*							
FB.LEN	0	EXTERNAL*							
FB.NAME	0	EXTERNAL*							
FB.SHAP	0	EXTERNAL*							
FB.WD3	0	EXTERNAL*							
FDSKDAT	0	EXTERNAL*							
FDSKHDR	0	EXTERNAL*							
FDSKPTR	0	EXTERNAL*							
FHB	0	EXTERNAL*							
FHR	0	EXTERNAL*							
FHRADDR	0	EXTERNAL*							
FHRHASH	0	EXTERNAL*							
FILCL	0	EXTERNAL*							
FILEADR	0	EXTERNAL*							
FILECAP	0	EXTERNAL*							
FLDLEN	0	EXTERNAL*							
FREEDSK	0	EXTERNAL*							
FRETURN	0	EXTERNAL*							
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*							

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L.MNCL	0	EXTERNAL*
MAINCL	0	EXTERNAL*
MAKEMAP	0	EXTERNAL*
MAPBUF	0	EXTERNAL*
MKPTR	0	EXTERNAL*
MOVBLKR	0	EXTERNAL*
MYCODEF	0	EXTERNAL*
MYDAR	0	EXTERNAL*
MYEVCH	0	EXTERNAL*
MYIDENT	0	EXTERNAL*
MYRESP	0	EXTERNAL*
MYSCRF	0	EXTERNAL*
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*
M.ACTCC	0	EXTERNAL*
M.ADDS	0	EXTERNAL*
M.ADISK	0	EXTERNAL*
M.ASUSP	0	EXTERNAL*
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*

10/50 11/04 12/04

11/49

12/04

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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·10SEC	0	EXTERNAL*						
NLOCKS	0	EXTERNAL*						
NOBJS	0	EXTERNAL*						
NOQLOCK	0	EXTERNAL*						
NUMRESP	0	EXTERNAL*						
OPEN	0	EXTERNAL*						
OPENDAR	0	EXTERNAL*						
OPENR	0	EXTERNAL*						
OPERCL	0	EXTERNAL*						
OP:11:CL	0	EXTERNAL*	3/27	5/05	5/18	5/18	5/18	7/05 10/22 11/14
			3/27 D	5/18	5/18	5/18	5/18	7/05 10/37 11/14
			3/49	5/18	5/18	5/18	5/18	7/07 10/40 11/18
			3/49	5/18	5/18	5/18	5/18	7/07 10/49 11/48
			3/49	5/18	5/18	5/18	5/24	7/07 11/03 12/03
			4/02	5/18	5/18	5/18	5/37	7/14 11/11
			4/02	5/18	5/18	5/18	5/37	7/14 11/11
			4/02	5/18	5/18	5/18	5/37	7/14 11/11
			4/04	5/18	5/18	5/18	7/05	10/10 11/14
ORGADDR	0	EXTERNAL*						
ORGCLST	0	EXTERNAL*						
ORGMAP	0	EXTERNAL*						
PAGESW	0	EXTERNAL*						
PASSERR	0	EXTERNAL*						
PBR	0	EXTERNAL*						
PBW	0	EXTERNAL*						
PERCENT	5	EXTERNAL*						
PG·DDS	0	EXTERNAL*						
PG·DTY	0	EXTERNAL*						
PG·PG	0	EXTERNAL*						
PROBE	0	EXTERNAL*						
PROCADR	0	EXTERNAL*						
PRVOPEN	0	EXTERNAL*						
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*	12/14					
READONF	0	EXTERNAL*						
READONL	0	EXTERNAL*						
READRWF	0	EXTERNAL*						
READRWL	0	EXTERNAL*						
REDSHP	0	EXTERNAL*						

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TEMP6	0	EXTERNAL*
TEMP7	0	EXTERNAL*
TEMP8	0	EXTERNAL*
TEMP9	0	EXTERNAL*
TERMROF	0	EXTERNAL*
TERMRWF	0	EXTERNAL*
TERMRWL	0	EXTERNAL*
TR.DRIV	0	EXTERNAL*
TR.LEVL	0	EXTERNAL*
UDSKSCR	0	EXTERNAL*
UNLOCK	0	EXTERNAL*
UNLOCKW	0	EXTERNAL*
USERRW	0	EXTERNAL*
USERRWL	0	EXTERNAL*
USRPACK	0	EXTERNAL*
USRTIM	1	12/27 D 13/08
WRITCAP	0	EXTERNAL*
ZEROMAP	0	EXTERNAL*
ZROMAPR	0	EXTERNAL*