

```
PPPPPPPPPPPP  AAAA AAA  SSSSSSSSSSSS  RRRRRRRRRRRR  TTTTTTTTTTTTTT  LLL
PPPPPPPPPPPP  AAAA AAA  SSSSSSSSSSSS  RRRRRRRRRRRR  TTTTTTTTTTTTTT  LLL
PPPPPPPPPPPP  AAAA AAA  SSSSSSSSSSSS  RRRRRRRRRRRR  TTTTTTTTTTTTTT  LLL
PPP  PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPPPPPPPPPPP  AAA  AAA  SSSSSSSSSS  RRRRRRRRRRRR  TTT  LLL
PPPPPPPPPPPP  AAA  AAA  SSSSSSSSSS  RRRRRRRRRRRR  TTT  LLL
PPPPPPPPPPPP  AAA  AAA  SSSSSSSSSS  RRRRRRRRRRRR  TTT  LLL
PPP  AAAA AAA  SSS  RRR  RRR  TTT  LLL
PPP  AAAA AAA  SSS  RRR  RRR  TTT  LLL
PPP  AAAA AAA  SSS  RRR  RRR  TTT  LLL
PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  AAA  AAA  SSS  RRR  RRR  TTT  LLL
PPP  AAA  AAA  SSSSSSSSSS  RRR  RRR  TTT  LLLLLLLLLLLLLLLL
PPP  AAA  AAA  SSSSSSSSSS  RRR  RRR  TTT  LLLLLLLLLLLLLLLL
PPP  AAA  AAA  SSSSSSSSSS  RRR  RRR  TTT  LLLLLLLLLLLLLLLL
```

```
PPPPPPPP      AAAAAA      SSSSSSSS  LL      000000      CCCCCCCC      AAAAAA      TTTTTTTTTT      EEEEEEEEEEE
PPPPPPPP      AAAAAA      SSSSSSSS  LL      000000      CCCCCCCC      AAAAAA      TTTTTTTTTT      EEEEEEEEEEE
PP      PP      AA      AA      SS      LL      00      00      CC      AA      AA      TT      EE
PP      PP      AA      AA      SS      LL      00      00      CC      AA      AA      TT      EE
PP      PP      AA      AA      SS      LL      00      00      CC      AA      AA      TT      EE
PP      PP      AA      AA      SS      LL      00      00      CC      AA      AA      TT      EE
PPPPPPPP      AA      AA      SSSSSS  LL      00      00      CC      AA      AA      TT      EEEEEEEEE
PPPPPPPP      AA      AA      SSSSSS  LL      00      00      CC      AA      AA      TT      EEEEEEEEE
PP      AAAAAAAAAA      SS      LL      00      00      CC      AAAAAAAAAA      TT      EE
PP      AAAAAAAAAA      SS      LL      00      00      CC      AAAAAAAAAA      TT      EE
PP      AA      AA      SS      LL      00      00      CC      AA      AA      TT      EE
PP      AA      AA      SS      LL      00      00      CC      AA      AA      TT      EE
PP      AA      AA      SSSSSSSS  LL      00      00      CC      AA      AA      TT      EE
PP      AA      AA      SSSSSSSS  LL      00      00      CC      AA      AA      TT      EE
PP      AA      AA      SSSSSSSS  LLLLLLLLLL      000000      CCCCCCCC      AA      AA      TT      EEEEEEEEEEE
PP      AA      AA      SSSSSSSS  LLLLLLLLLL      000000      CCCCCCCC      AA      AA      TT      EEEEEEEEEEE
                                     ....
                                     ....
                                     ....
                                     ....

LL      IIIIII      SSSSSSSS
LL      IIIIII      SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLLL      IIIIII      SSSSSSSS
```



```
1 0001 0 MODULE PASS$LOCATE ( %TITLE 'LOCATE procedure'
2 0002 0 IDENT = '1-001' ! File: PAS$LOCATE.B32 Edit: SBL1001
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: Pascal Language Support
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module contains PASS$LOCATE, which implements the
36 0036 1 VAX-11 Pascal LOCATE procedure.
37 0037 1
38 0038 1 ENVIRONMENT: User mode - AST reentrant
39 0039 1
40 0040 1 AUTHOR: Steven B. Lionel, CREATION DATE: 23-December-1981
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. SBL 23-December-1981
45 0045 1 --
46 0046 1
```


PASSLOCATE
1-001

LOCATE procedure
Declarations

B 7
16-Sep-1984 01:43:53
14-Sep-1984 12:51:37

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[PASRTL.SRC]PASLOCATE.B32;1

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```
: 48      0047 1 %SBTTL 'Declarations'
: 49      0048 1
: 50      0049 1 PROLOGUE DEFINITIONS:
: 51      0050 1
: 52      0051 1
: 53      0052 1 REQUIRE 'RTLIN:PASPROLOG';      ! Externals, linkages, PSECTs, structures
: 54      0116 1
: 55      0117 1
: 56      0118 1 TABLE OF CONTENTS:
: 57      0119 1
: 58      0120 1
: 59      0121 1 FORWARD ROUTINE
: 60      0122 1 PASSLOCATE: NOVALUE;      ! Do a LOCATE
: 61      0123 1
: 62      0124 1
: 63      0125 1 MACROS:
: 64      0126 1
: 65      0127 1 NONE
: 66      0128 1
: 67      0129 1 EQUATED SYMBOLS:
: 68      0130 1
: 69      0131 1 NONE
: 70      0132 1
: 71      0133 1 FIELDS:
: 72      0134 1
: 73      0135 1 NONE
: 74      0136 1
: 75      0137 1 OWN STORAGE:
: 76      0138 1
: 77      0139 1 NONE
: 78      0140 1
```



```
80 0141 1 %SBTTL 'PASSLOCATE - LOCATE procedure'
81 0142 1 GLOBAL ROUTINE PASSLOCATE (
82 0143 1     PFV: REF $PASSPFV FILE VARIABLE,
83 0144 1     COMPONENT: REF VECTOR [, LONG],
84 0145 1     ERROR
85 0146 1 ): NOVALUE =
86 0147 1
87 0148 1 !++
88 0149 1 ! FUNCTIONAL DESCRIPTION:
89 0150 1
90 0151 1     PASSLOCATE implements the VAX-11 Pascal LOCATE procedure. It
91 0152 1     positions the file at the specified component, and enters
92 0153 1     Generation mode.
93 0154 1
94 0155 1 ! CALLING SEQUENCE:
95 0156 1
96 0157 1     CALL PASSLOCATE (PFV.mr.r, COMPONENT.rlu.r [, ERROR.j.r])
97 0158 1
98 0159 1 ! FORMAL PARAMETERS:
99 0160 1
100 0161 1     PFV           - The Pascal File Variable (PFV) passed by reference.
101 0162 1                  The structure of the PFV is defined in PASPFV.REQ.
102 0163 1
103 0164 1     COMPONENT    - The number of the file component to locate.
104 0165 1
105 0166 1     ERROR         - Optional. If specified, the address to unwind to
106 0167 1                  if an error occurs.
107 0168 1
108 0169 1 ! IMPLICIT INPUTS:
109 0170 1
110 0171 1     NONE
111 0172 1
112 0173 1 ! IMPLICIT OUTPUTS:
113 0174 1
114 0175 1     NONE
115 0176 1
116 0177 1 ! ROUTINE VALUE:
117 0178 1
118 0179 1     NONE
119 0180 1
120 0181 1 ! SIDE EFFECTS:
121 0182 1
122 0183 1     Places file in Generation mode
123 0184 1
124 0185 1 ! SIGNALLED ERRORS:
125 0186 1
126 0187 1     FILNOTOPE - File not open
127 0188 1     FILNOTDIR - File not opened for direct access
128 0189 1
129 0190 1
130 0191 1 !--
131 0192 1
132 0193 2 BEGIN
133 0194 2
134 0195 2 LOCAL
135 0196 2     FCB: REF $PASSFCB_CONTROL_BLOCK,
136 0197 2     PFV_ADDR: VOLATILE,
```

```
! Do a LOCATE
! File variable
! Component number
! Unwind address if error
```

```
! File control block
! Enable argument
```

PASSLOCATE
1-001

LOCATE procedure
PASSLOCATE - LOCATE procedure

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[PASRTL.SRC]PASLOCATE.B32;1

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```
: 137 0198 2      UNWIND_ACT: VOLATILE,      ! Enable argument
: 138 0199 2      ERROR_ADDR: VOLATILE;    ! Enable argument
: 139 0200 2
: 140 0201 2      BUILTIN
: 141 0202 2      ACTUALCOUNT;
: 142 0203 2
: 143 0204 2      ENABLE
: 144 0205 2      PASS$IO_HANDLER (PFV_ADDR, UNWIND_ACT, ERROR_ADDR);
: 145 0206 2
: 146 0207 2      IF ACTUALCOUNT () GEQU 3
: 147 0208 2      THEN
: 148 0209 2      ERROR_ADDR = .ERROR;      ! Set unwind address
: 149 0210 2
: 150 0211 2      !+
: 151 0212 2      ! Set PFV address enable argument.
: 152 0213 2      !-
: 153 0214 2
: 154 0215 2      PFV_ADDR = PFV [PFV$R_PFV];
: 155 0216 2
: 156 0217 2      !+
: 157 0218 2      ! Validate and lock PFV
: 158 0219 2      !-
: 159 0220 2
: 160 0221 2      PASS$VALIDATE_PFV (PFV [PFV$R_PFV]; FCB);
: 161 0222 2
: 162 0223 2      !+
: 163 0224 2      ! Set unwind action to unlock file.
: 164 0225 2      !-
: 165 0226 2
: 166 0227 2      UNWIND_ACT = PASS$K_UNWIND_UNLOCK;
: 167 0228 2
: 168 0229 2      !+
: 169 0230 2      ! Open file if it should be implicitly opened.
: 170 0231 2      !-
: 171 0232 2
: 172 0233 2      IF NOT .PFV [PFV$V_VALID]
: 173 0234 2      THEN
: 174 0235 2      PASS$OPEN_IMPLICIT (PFV [PFV$R_PFV], FCB [FCB$R_FCB]; FCB);
: 175 0236 2
: 176 0237 2      !+
: 177 0238 2      ! Verify that the file is open.
: 178 0239 2      !-
: 179 0240 2
: 180 0241 2      IF NOT .PFV [PFV$V_OPEN]
: 181 0242 2      THEN
: 182 0243 2      $PASSIO_ERROR (PASS$_FILNOTOPE,0);
: 183 0244 2
: 184 0245 2      !+
: 185 0246 2      ! Verify that the file is opened for direct access
: 186 0247 2      !-
: 187 0248 2
: 188 0249 2      IF NOT .FCB [FCB$V_DIRECT]
: 189 0250 2      THEN
: 190 0251 2      $PASSIO_ERROR (PASS$_FILNOTDIR,0);
: 191 0252 2
: 192 0253 2      !+
: 193 0254 2      ! Undefine file buffer
```


PASSLOCATE
1-001

LOCATE procedure
PASSLOCATE - LOCATE procedure

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[PASRTL.SRC]PASLOCATE.B32;1

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```

194 0255 2  !-
195 0256 2
196 0257 2  PFV [PFV$V_DFB] = 0;
197 0258 2
198 0259 2  !+
199 0260 2  | Store the component number in FCB$L_COMPONENT and set FCB$V_LOCATE.
200 0261 2  | This will cause a subsequent PUT to write to the specified record.
201 0262 2  | -
202 0263 2
203 0264 2  FCB [FCB$L_COMPONENT] = .COMPONENT [0];
204 0265 2  FCB [FCB$V_LOCATE] = 1;
205 0266 2
206 0267 2  !+
207 0268 2  | Set Generation mode
208 0269 2  | Indicate at EOF
209 0270 2  | Indicate successful completion
210 0271 2  | Unlock the file
211 0272 2  | -
212 0273 2
213 0274 2  FCB [FCB$V_INSPECTION] = 0;
214 0275 2  FCB [FCB$V_GENERATION] = 1;
215 0276 2  FCB [FCB$V_EOF] = 1;
216 0277 2  FCB [FCB$L_STATUS] = 0;
217 0278 2  PFV [PFV$V_LOCK] = 0;
218 0279 2
219 0280 2  RETURN;
220 0281 2
221 0282 1  END;
```

! End of routine PASSLOCATE

```
.TITLE PASSLOCATE LOCATE procedure
.IDENT \1-001\

.EXTRN PASSLOCATE, PASS$IO_HANDLER
.EXTRN PASS$VALIDATE_PFV
.EXTRN PASS$OPEN_IMPLICIT
.EXTRN PASS$SIGNAL, PASS$FILNOTOPE
.EXTRN PASS$FILNOTDIR
```

.PSECT _PASS\$CODE,NOWRT, SHR, PIC,2

			00C4 00000	.ENTRY PASSLOCATE, Save R2,R6,R7	: 0142
	5E		08 C2 00002	SUBL2 #8, SP	
			7E D4 00005	CLRL ERROR_ADDR	: 0193
		04	AE 7C 00007	CLRQ UNWIND_ACT	
	6D	0067	CF DE 0000A	MOVAL 6\$, (FP)	
	03		6C 91 0000F	CMPB (AP), #3	: 0207
			04 1F 00012	BLSSU 1\$	
	6E	0C	AC D0 00014	MOVL ERROR, ERROR_ADDR	: 0209
	56	04	AC D0 00018	MOVL PFV, R6	: 0215
08	AE		56 D0 0001C	MOVL R6, PFV_ADDR	
		00000000G	00 16 00020	JSB PASS\$VALIDATE_PFV	: 0221
	04		01 D0 00026	MOVL #1, UNWIND_ACT	: 0227
	06	06	A6 E8 0002A	BLBS 6(R6), 2\$	: 0233
		00000000G	00 16 0002E	JSB PASS\$OPEN_IMPLICIT	: 0235
08	07	A6	05 E0 00034	BBS #5, 7(R6), 3\$	: 0241
			7E D4 00039	CLRL -(SP)	: 0243

PASSLOCATE
1-001

LOCATE procedure
PASSLOCATE - LOCATE procedure

F 7

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	7E	00G	8F	9A	0003B	MOVZBL	#PASSK_FILNOTOPE, -(SP)	:	
			0E	11	0003F	BRB	4\$	:	
	52	FC	A7	9E	00041	3\$:	MOVAB	-4(FCB), R2	0249
OE	62		01	E0	00045	BBS	#1, (R2), 5\$	:	
			7E	D4	00049	CLRL	-(SP)	:	0251
	7E	00G	8F	9A	0004B	MOVZBL	#PASSK_FILNOTDIR, -(SP)	:	
00000000G	00		02	FB	0004F	4\$:	CALLS	#2, PASS\$SIGNAL	
				04	00056	RET		:	
	06	A6	02	8A	00057	5\$:	BICB2	#2, 6(R6)	0257
D8	A7	08	BC	D0	0005B	MOVL	@COMPONENT, -40(FCB)	:	0264
02	A2		01	88	00060	BISB2	#1, 2(R2)	:	0265
01	A2		08	8A	00064	BICB2	#8, 1(R2)	:	0274
01	A2		30	88	00068	BISB2	#48, 1(R2)	:	0276
		D4	A7	D4	0006C	CLRL	-44(FCB)	:	0277
	07	A6	80	8F	8A	0006F	BICB2	#128, 7(R6)	0278
				04	00074	RET		:	0282
				0000	00075	6\$:	.WORD	Save nothing	0193
	50	08	AC	D0	00077	MOVL	8(AP), R0	:	
	50	04	A0	D0	0007B	MOVL	4(R0), R0	:	
		F4	A0	9F	0007F	PUSHAB	ERROR_ADDR	:	
		F8	A0	9F	00082	PUSHAB	UNWIND_ACT	:	
		FC	A0	9F	00085	PUSHAB	PFV_ADDR	:	
			03	DD	00088	PUSHL	#3	:	
			5E	DD	0008A	PUSHL	SP	:	
	7E	04	AC	7D	0008C	MOVQ	4(AP), -(SP)	:	
00000000G	00		03	FB	00090	CALLS	#3, PASS\$IO_HANDLER	:	
			04	00097	RET			:	

; Routine Size: 152 bytes, Routine Base: _PASSCODE + 0000

; 222 0283 1
; 223 0284 1 !<BLF/PAGE>

PASSLOCATE
1-001

LOCATE procedure
PASSLOCATE - LOCATE procedure

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[PASRTL.SRC]PASLOCATE.B32;1

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: 225 0285 1 END
: 226 0286 1
: 227 0287 0 ELUDOM

! End of module PASSLOCATE

PSECT SUMMARY

Name	Bytes	Attributes
_PASSCODE	152	NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	0	0	581	00:01.0
\$255\$DUA28:[PASRTL.OBJ]PASLIB.L32;1	427	91	21	33	00:00.4

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:PASLOCATE/OBJ=OBJ\$:PASLOCATE MSRC\$:PASLOCATE/UPDATE=(ENH\$:PASLOCATE)

: Size: 152 code + 0 data bytes
: Run Time: 00:05.5
: Elapsed Time: 00:25.0
: Lines/CPU Min: 3153
: Lexemes/CPU-Min: 12428
: Memory Used: 78 pages
: Compilation Complete

0295 AH-BT13A-SE
VAX/VMS V4.0

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