


```

CCCCCCCC 000000 BBBB8888 VV      VV EEEEEEEEE EEEEEEEEE CCCCCCCC TTTTTTTTT 000000 RRRRRRR
CCCCCCCC 000000 BBBB8888 VV      VV EEEEEEEEE EEEEEEEEE CCCCCCCC TTTTTTTTT 000000 RRRRRRR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BBBB8888 VV      VV EE          EE          CC        TT          00      00 RRRRRRR
CC        00      00 BBBB8888 VV      VV EE          EE          CC        TT          00      00 RRRRRRR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CC        00      00 BB      BB VV      VV EE          EE          CC        TT          00      00 RR      RR
CCCCCCCC 000000 BBBB8888 VV      VV EEEEEEEEE EEEEEEEEE CCCCCCCC TTTTTTTTT 000000 RRRRRRR
CCCCCCCC 000000 BBBB8888 VV      VV EEEEEEEEE EEEEEEEEE CCCCCCCC TTTTTTTTT 000000 RRRRRRR

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```

LL        IIIIII SSSSSSS
LL        IIIIII SSSSSSS
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
LLLLLLLLLL IIIIII SSSSSSS
LLLLLLLLLL IIIIII SSSSSSS

```

(2) 58
(3) 134

DECLARATIONS
COBRTL Vector

```
0000 1 .TITLE COB$VECTOR - Entry vectors for COBRTL.EXE
0000 2 .IDENT /1-009/ ; File: COBVECTOR.MAR Edit: LGB1009
0000 3
0000 4
0000 5 *****
0000 6
0000 7 *
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0000 25 *
0000 26 *****
0000 27
0000 28
0000 29 ++
0000 30 FACILITY: Run-Time Library - COBOL Language Support
0000 31
0000 32 ABSTRACT:
0000 33
0000 34 This module contains the entry vector definitions for the
0000 35 VAX-11 Run-Time Library shareable image COBRTL.EXE
0000 36
0000 37 ENVIRONMENT: User mode, AST Reentrant
0000 38
0000 39 AUTHOR: Steven B. Lionel, CREATION DATE: 29-October-1982
0000 40
0000 41 MODIFIED BY:
0000 42
0000 43 1-001 - Original. SBL 29-October-1982
0000 44 1-002 - Add entry for COB$$HANDLER so that VMSRTL can reference the mask.
0000 45 SBL 11-May-1983
0000 46 1-003 - Add new entries for COB$DISPLAY and COB$POS_ERASE. LEB 20-May-1983
0000 47 1-004 - Add all COBOL code that can be shared. LEB 23-May-1983
0000 48 1-005 - Take out COB$$RESTIVA (found during an RTL test build, so no affect
0000 49 on programs). LEB 24-May-1983
0000 50 1-006 - Change reference from COB$DISPLAY SCR to COB$DISP SCR as well as
0000 51 COB$DISPLAY SCR NO ADV to COB$DISP SCR NO ADV. LEB 25-May-1983
0000 52 1-007 - Add entry COB$ACC SCR to module COB$ACCEPT. LEB 22-Aug-1983
0000 53 1-008 - add entry COB$$RET A AB PREV to module COB$DISPLAY. MDL 29-Aug-1983
0000 54 1-009 - Add entries COB$POS_ACCEPT and COB$POS_DISPLAY to COB$POS_ERASE.
0000 55 LGB 27-Feb-1984
0000 56 --
```

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0000 58      .SBTTL  DECLARATIONS
0000 59      :
0000 60      : LIBRARY MACRO CALLS:
0000 61      :
0000 62      :     NONE
0000 63      :
0000 64      : EXTERNAL DECLARATIONS:
0000 65      :
0000 66      :     .DSABL  GBL                ; Force all external symbols to be declared
0000 67      :
0000 68      : MACROS:
0000 69      :
0000 70      :
0000 71      :+
0000 72      : Macro to define an entry vector for a CALL entry point
0000 73      :-
0000 74      :
0000 75      :.MACRO  VCALL  NAME, ALTMSK
0000 76      :.EXTRN  NAME
0000 77      :.TRANSFER NAME
0000 78      :.IF B ALTMSK
0000 79      :.MASK   NAME
0000 80      :.IFF
0000 81      :.MASK   ALTMSK
0000 82      :.ENDC
0000 83      :JMP    NAME+2
0000 84      :.ENDM
0000 85      :
0000 86      :+
0000 87      : Macro to define an entry vector for a JSB entry point
0000 88      :-
0000 89      :
0000 90      :.MACRO  VJSB  NAME
0000 91      :.EXTRN  NAME
0000 92      :.TRANSFER NAME
0000 93      :JMP    NAME
0000 94      :.BLKB  2
0000 95      :.ENDM
0000 96      :
0000 97      :+
0000 98      : Macro to define an entry vector for a condition handler whose actual
0000 99      : routine address has a different name from the vector entry.
0000 100     :-
0000 101     :
0000 102     :.MACRO  VHANDL NAME, INTNAME
0000 103     :.EXTRN  INTNAME
0000 104     NAME::
0000 105     :.TRANSFER NAME
0000 106     :.MASK   INTNAME
0000 107     :JMP    INTNAME+2
0000 108     :.ENDM
0000 109     :
0000 110     :+
0000 111     : Macro to define an alias for the next vectored entry point
0000 112     :-
0000 113     :
0000 114     :.MACRO  ALIAS  NAME

```



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0000 134          .SBTTL  COBRTL Vector
0000 135
0000 136 :+
0000 137 : Define vectored entry points for the COBOL Language Support procedures
0000 138 : by module in alphabetical order.
0000 139 :
0000 140 : Any additions to this file should be reflected in
0000 141 : COMS:COBRTLVEC.DAT. All new entry points must be appended to the end
0000 142 : of the list. NEVER change existing entries unless you are sure that
0000 143 : what you do won't break existing programs.
0000 144 :-
0000 145
0000 146 : Module COB$$HANDLER
0000 147          VHANDL  COB$$HANDLER      COB$$HANDLER
0008 148
0008 149 : Module COB$ACCEPT
0008 150          VCALL  COB$ACCEPT
0010 151
0010 152 : Module COB$ACC_DATE
0010 153          VCALL  COB$ACC_DATE
0018 154
0018 155 : Module COB$ACC_DAY
0018 156          VCALL  COB$ACC_DAY
0020 157
0020 158 : Module COB$ACC_DAYWEEK
0020 159          VCALL  COB$ACC_DAYWEEK
0028 160
0028 161 : Module COB$ACC_TIME
0028 162          VCALL  COB$ACC_TIME
0030 163
0030 164 : Module COB$CVTPQ_R9
0030 165          VJSB   COB$CVTPQ_R9
0038 166
0038 167 : Module COB$CVTQP_R9
0038 168          VJSB   COB$CVTQP_R9
0040 169
0040 170 : Module COB$CVTRPQ_R9
0040 171          VJSB   COB$CVTRPQ_R9
0048 172
0048 173 : Module COB$CVTRQP_R9
0048 174          VJSB   COB$CVTRQP_R9
0050 175
0050 176 : Module COB$DISPLAY
0050 177          VCALL  COB$DISPLAY
0058 178          VCALL  COB$DISP_NO_ADV
0060 179
0060 180 : Module COB$DIVQ_R8
0060 181          VJSB   COB$DIVQ_R8
0068 182
0068 183 : Module COB$ERROR
0068 184          VCALL  COB$ERROR
0070 185
0070 186 : Module COB$INTARI
0070 187          VCALL  COB$ADDI
0078 188          VCALL  COB$CMPI
0080 189          VCALL  COB$DIVI
0088 190          VCALL  COB$DIVI_OSE

```

```

0090 191          VCALL  COB$MULTI
0098 192          VCALL  COB$SUBI
00A0 193
00A0 194 : Module COB$INTER
00A0 195          VJSB   COB$CVTDI_R7
00A8 196          VJSB   COB$CVTFI_R7
00B0 197          VJSB   COB$CVTID_R7
00B8 198          VJSB   COB$CVTIF_R7
00C0 199          VJSB   COB$CVTIL_R8
00C8 200          VJSB   COB$CVTIP_R9
00D0 201          VJSB   COB$CVTIQ_R8
00D8 202          VJSB   COB$CVTIW_R8
00E0 203          VJSB   COB$CVTLI_R8
00E8 204          VJSB   COB$CVTPI_R9
00F0 205          VJSB   COB$CVTQI_R8
00F8 206          VJSB   COB$CVTRIC_R8
0100 207          VJSB   COB$CVTRIP_R9
0108 208          VJSB   COB$CVTRIQ_R8
0110 209          VJSB   COB$CVTRIW_R8
0118 210          VJSB   COB$CVTTI_R8
0120 211          VJSB   COB$CVTWI_R8
0128 212
0128 213 : Module COB$IOEXCEPTION
0128 214          VCALL  COB$IOEXCEPTION
0130 215
0130 216 : Module COB$MULQ_R8
0130 217          VJSB   COB$MULQ_R8
0138 218
0138 219 : Module COB$PAUSE
0138 220          VCALL  COB$PAUSE
0140 221
0140 222 :+
0140 223 : End of initial COBRTL vector. All subsequent additions must be made
0140 224 : after this point.
0140 225 :-
0140 226
0140 227 :+
0140 228 : The following entry is present so that the vector of VMSRTL can reference
0140 229 : the mask of COB$$HANDLER.
0140 230 :-
0140 231
0140 232 : Module COB$$HANDLER
0140 233          VCALL  COB$$HANDLER
0148 234
0148 235 :+
0148 236 : Add the following entries for the new version of COBOL.
0148 237 :-
0148 238
0148 239 : Module COB$DISPLAY
0148 240          VCALL  COB$DISP_SCR
0150 241          VCALL  COB$DISP_SCR_NO_ADV
0158 242
0158 243 : Module COB$POS_ERASE
0158 244          VCALL  COB$POS_ERASE
0160 245
0160 246
0160 247 :+

```



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0160 248 ; Add all remaining COBOL specific code that can be shared (note that
0160 249 ; the exceptions are tables, COB$FIND NAME, COB$CALL, COB$CANCEL,
0160 250 ; COB$RMS_BLOCKS, COB$DHANDL, COB$$RESTVA.
0160 251 ;
0160 252 ;
0160 253 ;
0160 254 ; Module COB$CVTDQ_R8
0160 255 ;
0160 256 ;         VJSB    COB$CVTDQ_R8
0168 257 ;
0168 258 ; Module COB$CVTFQ_R8
0168 259 ;
0168 260 ;         VJSB    COB$CVTFQ_R8
0170 261 ;
0170 262 ; Module COB$CVTDQ_R8
0170 263 ;
0170 264 ;         VJSB    COB$CVTDQ_R8
0178 265 ;
0178 266 ; Module COB$CVTQF_R8
0178 267 ;
0178 268 ;         VJSB    COB$CVTQF_R8
0180 269 ;
0180 270 ; Module COB$CVTRDQ_R8
0180 271 ;
0180 272 ;         VJSB    COB$CVTRDQ_R8
0188 273 ;
0188 274 ; Module COB$CVTRFQ_R8
0188 275 ;
0188 276 ;         VJSB    COB$CVTRFQ_R8
0190 277 ;
0190 278 ; Module COB$DBEXCEPTION
0190 279 ;
0190 280 ;         VCALL    COB$DBEXCEPTION
0198 281 ;
0198 282 ; Module COB$EXPI
0198 283 ;
0198 284 ;         VCALL    COB$EXPI
01A0 285 ;         VCALL    COB$EXPI_OSE
01A8 286 ;
01A8 287 ; Module COB$LINAGE
01A8 288 ;
01A8 289 ;         VCALL    COB$INIT_LINAGE
01B0 290 ;         VCALL    COB$LINAGE
01B8 291 ;         VCALL    COB$TERM_LINAGE
01C0 292 ;
01C0 293 ; Module COB$SET_SWITCH
01C0 294 ;
01C0 295 ;         VCALL    COB$SET_SWITCH
01C8 296 ;
01C8 297 ; Module COB$SWITCH
01C8 298 ;
01C8 299 ;         VCALL    COB$SWITCH
01D0 300 ;
01D0 301 ; Module COB$ACCEPT (new entry to an already existing shared module)
01D0 302 ;
01D0 303 ;         VCALL    COB$ACC_SCR
01D8 304 ;

```

```
01D8 305 ; Module COB$DISPLAY (new entry to an already existing shared module)
01D8 306
01D8 307          VCALL COB$$RET_A_AB_PREV
01E0 308
01E0 309 ; Module COB$POS_ERASE (new entries to an already existing shared module)
01E0 310
01E0 311          VCALL COB$POS_ACCEPT
01E8 312          VCALL COB$POS_DISPLAY
01F0 313
01F0 314          .END
```

; End of module COB\$VECTOR

COB\$VECTOR
Symbol table

- Entry vectors for COBRTL.EXE

G 6

15-SEP-1984 23:38:08 VAX/VMS Macro V04-00
6-SEP-1984 10:49:39 [COBRTL.SRC]COBVECTOR.MAR;1

Page 8
(3)

COB\$\$HANDLER	*****	X	01	COB\$POS_ERASE	*****	X	01
COB\$\$RET_A_AB_PREV	*****	X	01	COB\$SET_SWITCH	*****	X	01
COB\$ACCEPT	*****	X	01	COB\$SUBI	*****	X	01
COB\$ACC_DATE	*****	X	01	COB\$SWITCH	*****	X	01
COB\$ACC_DAY	*****	X	01	COB\$TERM_LINAGE	*****	X	01
COB\$ACC_DAYWEEK	*****	X	01				
COB\$ACC_SCR	*****	X	01				
COB\$ACC_TIME	*****	X	01				
COB\$ADDI	*****	X	01				
COB\$CMPI	*****	X	01				
COB\$CVTDI_R7	*****	X	01				
COB\$CVTDQ_R8	*****	X	01				
COB\$CVTFI_R7	*****	X	01				
COB\$CVTFQ_R8	*****	X	01				
COB\$CVTID_R7	*****	X	01				
COB\$CVTIF_R7	*****	X	01				
COB\$CVTIL_R8	*****	X	01				
COB\$CVTIP_R9	*****	X	01				
COB\$CVTIQ_R8	*****	X	01				
COB\$CVTIW_R8	*****	X	01				
COB\$CVTLI_R8	*****	X	01				
COB\$CVTPI_R9	*****	X	01				
COB\$CVTPQ_R9	*****	X	01				
COB\$CVTQD_R8	*****	X	01				
COB\$CVTQF_R8	*****	X	01				
COB\$CVTQI_R8	*****	X	01				
COB\$CVTQP_R9	*****	X	01				
COB\$CVTRDQ_R8	*****	X	01				
COB\$CVTRFQ_R8	*****	X	01				
COB\$CVTRIL_R8	*****	X	01				
COB\$CVTRIP_R9	*****	X	01				
COB\$CVTRIQ_R8	*****	X	01				
COB\$CVTRIW_R8	*****	X	01				
COB\$CVTRPQ_R9	*****	X	01				
COB\$CVTRQP_R9	*****	X	01				
COB\$CVTTI_R8	*****	X	01				
COB\$CVTWI_R8	*****	X	01				
COB\$DBEXCEPTION	*****	X	01				
COB\$DISPLAY	*****	X	01				
COB\$DISP_NO_ADV	*****	X	01				
COB\$DISP_SCR	*****	X	01				
COB\$DISP_SCR_NO_ADV	*****	X	01				
COB\$DIVI	*****	X	01				
COB\$DIVI_OSE	*****	X	01				
COB\$DIVQ_R8	*****	X	01				
COB\$ERROR	*****	X	01				
COB\$EXPI	*****	X	01				
COB\$EXPI_OSE	*****	X	01				
COB\$HANDLER	00000000	RG	01				
COB\$INIT_LINAGE	*****	X	01				
COB\$IOEXCEPTION	*****	X	01				
COB\$LINAGE	*****	X	01				
COB\$MULTI	*****	X	01				
COB\$MULTQ_R8	*****	X	01				
COB\$PAUSE	*****	X	01				
COB\$POS_ACCEPT	*****	X	01				
COB\$POS_DISPLAY	*****	X	01				

! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes
ABS	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$COB\$VECTOR	000001F0 (496.)	01 (1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	40	00:00:00.09	00:00:01.95
Command processing	134	00:00:00.33	00:00:02.23
Pass 1	101	00:00:01.05	00:00:05.40
Symbol table sort	0	00:00:00.03	00:00:00.03
Pass 2	70	00:00:00.50	00:00:02.35
Symbol table output	9	00:00:00.04	00:00:00.04
Psect synopsis output	2	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	358	00:00:02.05	00:00:12.04

The working set limit was 900 pages.
7783 bytes (16 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 62 non-local and 0 local symbols.
314 source lines were read in Pass 1, producing 19 object records in Pass 2.
4 pages of virtual memory were used to define 4 macros.

! Macro library statistics !

Macro library name	Macros defined
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/LIS=LIS\$:COBVECTOR/OBJ=OBJ\$:COBVECTOR MSRC\$:COBVECTOR/UPDATE=(ENH\$:COBVECTOR)

COBRMSBLO LIS	COBSPANC LIS	COBSPANC2 LIS	COBSWITCH LIS	CONUSHR MAP	CONUDEF MDL	CONV LINK REQ	CONV CALL LIS	CONV REQ	RECLAIM MAP	ADDKEY LIS	COBRESTVA LIS	COBSETSUI LIS	COBVECTOR LIS						
CONUSHR MAP	CONUDEF MDL	CONV LINK REQ	CONV CALL LIS	CONV REQ	RECLAIM MAP	ADDKEY LIS	COBRESTVA LIS	COBSETSUI LIS	COBVECTOR LIS	CONUSHR MAP	CONUDEF MDL	CONV LINK REQ	CONV CALL LIS	CONV REQ	RECLAIM MAP	ADDKEY LIS			
COBRESTVA LIS	COBSETSUI LIS	COBVECTOR LIS	CONUSHR MAP	CONUDEF MDL	CONV LINK REQ	CONV CALL LIS	CONV REQ	RECLAIM MAP	ADDKEY LIS	COBRESTVA LIS	COBSETSUI LIS	COBVECTOR LIS	CONUSHR MAP	CONUDEF MDL	CONV LINK REQ	CONV CALL LIS	CONV REQ	RECLAIM MAP	ADDKEY LIS