```
LLL              IIIIIIIIII   BBBBBBBBBBBB   RRRRRRRRRRRR   TTTTTTTTTTTTTTTT   LLL
LLL              IIIIIIIIII   BBBBBBBBBBBB   RRRRRRRRRRRR   TTTTTTTTTTTTTTTT   LLL
LLL              IIIIIIIIII   BBBBBBBBBBBB   RRRRRRRRRRRR   TTTTTTTTTTTTTTTT   LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBBBBBBBBBBB   RRRRRRRRRRRR         TTT          LLL
LLL                 III       BBBBBBBBBBBB   RRRRRRRRRRRR         TTT          LLL
LLL                 III       BBBBBBBBBBBB   RRRRRRRRRRRR         TTT          LLL
LLL                 III       BBB      BBB   RRR   RRR            TTT          LLL
LLL                 III       BBB      BBB   RRR   RRR            TTT          LLL
LLL                 III       BBB      BBB   RRR   RRR            TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLL                 III       BBB      BBB   RRR      RRR         TTT          LLL
LLLLLLLLLLLLLLLL   IIIIIIIIII  BBBBBBBBBBBB   RRR      RRR        TTT      LLLLLLLLLLLLLLLL
LLLLLLLLLLLLLLLL   IIIIIIIIII  BBBBBBBBBBBB   RRR      RRR        TTT      LLLLLLLLLLLLLLLL
LLLLLLLLLLLLLLLL   IIIIIIIIII  BBBBBBBBBBBB   RRR      RRR        TTT      LLLLLLLLLLLLLLLL
```

FILEID**LIBCVTDF

```
LL          IIIIII    BBBBBBBB      CCCCCCCC  VV        VV  TTTTTTTTTT  DDDDDDD      FFFFFFFFFF
LL          IIIIII    BBBBBBBB      CCCCCCCC  VV        VV  TTTTTTTTTT  DDDDDDD      FFFFFFFFFF
LL            II      BB      BB  CC            VV      VV       TT     DD      DD   FF
LL            II      BB      BB  CC            VV      VV       TT     DD      DD   FF
LL            II      BB      BB  CC             VV    VV        TT     DD      DD   FF
LL            II      BBBBBBBB    CC             VV    VV        TT     DD      DD   FFFFFFFF
LL            II      BBBBBBBB    CC              VV  VV         TT     DD      DD   FFFFFFFF
LL            II      BB      BB  CC              VV  VV         TT     DD      DD   FF
LL            II      BB      BB  CC               VVVV          TT     DD      DD   FF
LL            II      BB      BB  CC               VV VV         TT     DD      DD   FF      ....
LL            II      BB      BB  CC               VV VV         TT     DD      DD   FF      ....
LLLLLLLLLL  IIIIII    BBBBBBBB      CCCCCCC          VV          TT     DDDDDDD      FF      ....
LLLLLLLLLL  IIIIII    BBBBBBBB      CCCCCCC          VV          TT     DDDDDDD      FF      ....


LL          IIIIII    SSSSSSSS
LL          IIIIII    SSSSSSSS
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    SSSSSSSS
LLLLLLLLLL  IIIIII    SSSSSSSS
```

```
0000     1          .TITLE  LIB$CVTDF       ; Convert Double to Floating
0000     2          .IDENT  /1-010/         ; File: LIBCVTDF.MAR Edit: RNH1010
0000     3  ;
0000     4  ;
0000     5  ;************************************************************************
0000     6  ;*                                                                      *
0000     7  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                             *
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0000    24  ;*                                                                      *
0000    25  ;*                                                                      *
0000    26  ;************************************************************************
0000    27  ;
0000    28  ;
0000    29  ; FACILITY: General Utility library
0000    30  ;++
0000    31  ; ABSTRACT:
0000    32  ;
0000    33  ;       LIB$CVTDF converts a Double precision floating point scalar
0000    34  ;       quantity to Single precision floating point quantity and
0000    35  ;       checks for floating overflow.
0000    36  ;
0000    37  ;--
0000    38  ;
0000    39  ; VERSION: 01
0000    40  ;
0000    41  ; HISTORY:
0000    42  ;
0000    43  ; AUTHOR:
0000    44  ;       Thomas N. Hastings, 27-May-77: Version 01
0000    45  ;
0000    46  ; MODIFIED BY:
0000    47  ;
0000    48  ;
0000    49  ;
```

```
                0000     51              .SBTTL  HISTORY              ; Detailed Current Edit History
                0000     52
                0000     53
                0000     54  ; Edit History for Version 01 of LIB$CVTDF
                0000     55  ;
                0000     56
                0000     57  ; 1-007 - Update version number and copyright notice.  JBS 16-NOV-78
                0000     58  ; 1-008 - Remove $CHFDEF macro - it is not needed.  JBS 16-DEC-78
                0000     59  ; 1-009 - Add "_" to PSECT directive.  JBS 21-DEC-78
                0000     60  ; 1-010 - Change shared external references to G^ RNH 25-Sep-81
```

LIB$CVTDF
1-010

; Convert Double to Floating   L 8   15-SEP-1984 23:49:58   VAX/VMS Macro V04-00   Page 3
DECLARATIONS   6-SEP-1984 11:04:19   [LIBRTL.SRC]LIBCVTDF.MAR;1   (3)

```
        0000        62                      .SBTTL  DECLARATIONS
        0000        63
        0000        64    ;
        0000        65    ; INCLUDE FILES:
        0000        66    ;
        0000        67
        0000        68    ;
        0000        69    ; EXTERNAL SYMBOLS:
        0000        70    ;
        0000        71
        0000        72
        0000        73              .EXTRN  LIB$SIG_TO_RET          ; Library routine to convert a signal
        0000        74                                              ; to an error return to caller
        C000        75                                              ; if the establisher
        0000        76                                              ; R0 = signaled condition
        0000        77
        0000        78    ; MACROS:
        0000        79    ;
        0000        80    ; EQUATED SYMBOLS:
        0000        81    ;
        0000        82    ;
        0000        83
        0000        84    ;
        0000        85    ; OWN STORAGE:
        0000        86    ;
        0000        87
        0000        88    ;
        0000        89    ; PSECT DECLARATIONS:
        0000        90    ;
        0000        91
    00000000        92              .PSECT  _LIB$CODE PIC,SHR,LONG,EXE,NOWRT
        0000        93                                              ; program section for LIB$ code
        0000        94
```

```
                         0000   96              .SBTTL  LIB$CVTDF - Convert Double to Floating and check overflow
                         0000   97
                         0000   98     ;++
                         0000   99     ; FUNCTIONAL DESCRIPTION:
                         0000  100     ;
                         0000  101     ;       LIB$CVTDF converts a Double precision floating point scalar
                         0000  102     ;       to a single precision floating point scalar and checks
                         0000  103     ;       for floating point overflow.
                         0000  104     ;
                         0000  105     ; CALLING SEQUENCE:
                         0000  106     ;
                         0000  107     ;       Status.wlc.v = FOR$CVTDF (double.rd.r, floating.wf.r)
                         0000  108     ;
                         0000  109     ;
                         0000  110     ; INPUT PARAMETERS:
                         0000  111     ;
             00000004    0000  112     ;       double = 4                          ; first arg is adr. of double prec. scalar
                         0000  113     ;
                         0000  114     ; IMPLICIT INPUTS:
                         0000  115     ;       NONE
                         0000  116     ;
                         0000  117     ; OUTPUT PARAMETERS:
                         0000  118     ;
             00000008    0000  119     ;       single = 8                          ; second arg is adr. of single prec. scalar
                         0000  120     ;
                         0000  121     ; IMPLICIT OUTPUTS:
                         0000  122     ;       NONE
                         0000  123     ;
                         0000  124     ; COMPLETION CODES:
                         0000  125     ;
                         0000  126     ;       Success if no floating overflow, otherwise failure
                         0000  127     ;
                         0000  128     ; SIDE EFFECTS:
                         0000  129     ;       NONE
                         0000  130     ;
                         0000  131     ;--
                         0000  132
                         0000  133
                         0000  134
                  0000   0000  135              .ENTRY  LIB$CVTDF, 0                ; standard call-by-reference entry
                         0002  136
  6D  00000000'GF  DE    0002  137              MOVAL   G^LIB$SIG_TO_RET, (FP)      ; setup handler
     08 BC  04 BC  76    0009  138              CVTDF   @double(AP), @single(AP)    ; convert double to floating
                         000E  139                                                  ; trap on overflow to handler
                         000E  140                                                  ; which will unwind an return err cond
                         000E  141                                                  ; in R0 to caller of LIB$CVTDF
         50  01   CE     000E  142              MNEGL   #1, R0                      ; success status code
                  04     0011  143              RET                                 ; return
                         0012  144
                         0012  145              .END
```

LIB$CVTDF   ; Convert Double to Floating   15-SEP-1984 23:49:58 VAX/VMS Macro V04-00   Page 5
Symbol table   6-SEP-1984 11:04:19 [LIBRTL.SRC]LIBCVTDF.MAR;1   (4)

```
DOUBLE          = 00000004
LIB$CVTDF         00000000 RG    01
LIB$SIG_TO_RET    ******** X     00
SINGLE          = 00000008
```

```
                              +-----------------+
                              ! Psect synopsis  !
                              +-----------------+
```

```
PSECT name                  Allocation        PSECT No.   Attributes
----------                  ----------        ---------   ----------
.  ABS  .                   00000000 (    0.)  00 (   0.)  NOPIC  USR   CON  ABS  LCL  NOSHR NOEXE NORD  NOWRT NOVEC BYTE
_LIB$CODE                   00000012 (   18.)  01 (   1.)  PIC    USR   CON  REL  LCL  SHR   EXE   RD    NOWRT NOVEC LONG
```

```
                    +---------------------------+
                    ! Performance indicators !
                    +---------------------------+
```

Phase	Page faults	CPU Time	Elapsed Time
Initialization	31	00:00:00.06	00:00:02.55
Command processing	106	00:00:00.28	00:00:02.83
Pass 1	65	00:00:00.23	00:00:03.84
Symbol table sort	0	00:00:00.00	00:00:00.01
Pass 2	40	00:00:00.18	00:00:02.43
Symbol table output	1	00:00:00.00	00:00:00.00
Psect synopsis output	3	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	248	00:00:00.79	00:00:11.69

The working set limit was 900 pages.
1409 bytes (3 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 4 non-local and 0 local symbols.
145 source lines were read in Pass 1, producing 11 object records in Pass 2.
0 pages of virtual memory were used to define 0 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/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:LIBCVTDF/OBJ=OBJ$:LIBCVTDF MSRC$:LIBCVTDF/UPDATE=(ENH$:LIBCVTDF)