```
LLL                 IIIIIIIII     BBBBBBBBBBBB      RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
LLL                 IIIIIIIII     BBBBBBBBBBBB      RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
LLL                 IIIIIIIII     BBBBBBBBBBBB      RRRRRRRRRRRR     TTTTTTTTTTTTTTT  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
LLLLLLLLLLLLLLL     IIIIIIIII     BBBBBBBBBBBB      RRR         RRR        TTT        LLLLLLLLLLLLLLL
LLLLLLLLLLLLLLL     IIIIIIIII     BBBBBBBBBBBB      RRR         RRR        TTT        LLLLLLLLLLLLLLL
LLLLLLLLLLLLLLL     IIIIIIIII     BBBBBBBBBBBB      RRR         RRR        TTT        LLLLLLLLLLLLLLL
```

```
LL              IIIIII    BBBBBBBB      CCCCCCCC  VV      VV  TTTTTTTTTT  DDDDDDDD    FFFFFFFFFF
LL              IIIIII    BBBBBBBB      CCCCCCCC  VV      VV  TTTTTTTTTT  DDDDDDDD    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      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            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              ....
LLLLLLLLLL      IIIIII    BBBBBBBB      CCCCCCCC        VV          TT      DDDDDDDD    FF              ....
LLLLLLLLLL      IIIIII    BBBBBBBB      CCCCCCCC        VV          TT      DDDDDDDD    FF              ....

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
LLLLLLLLLL      IIIIII    SSSSSSSS
LLLLLLLLLL      IIIIII    SSSSSSSS
```

Table of contents

```
0000     1          .TITLE  LIB$CVTDF       ; Convert Double to Floating
0000     2          .IDENT  /1-010/         ; File: LIBCVTDF.MAR Edit: RNH1010
0000     3
0000     4 ;
0000     5 ;*****************************************************************************
0000     6 ;*                                                                           *
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0000    24 ;*                                                                           *
0000    25 ;*                                                                           *
0000    26 ;*****************************************************************************
0000    27 ;
0000    28 ;
0000    29 ; FACILITY: General Utility library
0000    30 ;++
0000    31 ; ABSTRACT:
0000    32 ;
0000    33 ;       LIB$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
```

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

```
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
_255DUA28:[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)
```

LIBCVTDX
LIS

LIBCVTMAC
LIS

LIBCRCTAB
LIS

LIBCVTDF
LIS

LIBCUSTOM
LIS

LIBCREDIR
LIS

LIBCUTATB
LIS

LIBCOMMON
LIS

LIBCRC
LIS