```
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       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           LLLLLLLLLLLLLLL
LLLLLLLLLLLLLLLL   IIIIIIIIII   BBBBBBBBBBBB   RRR      RRR        TTT           LLLLLLLLLLLLLLL
LLLLLLLLLLLLLLLL   IIIIIIIIII   BBBBBBBBBBBB   RRR      RRR        TTT           LLLLLLLLLLLLLLL
```

```
LL          IIIIII    BBBBBBBB    IIIIII    NN      NN    SSSSSSSS    VV          VV
LL          IIIIII    BBBBBBBBB   IIIIII    NN      NN    SSSSSSSS    VV          VV
LL            II      BB      BB     II      NN      NN    SS          VV          VV
LL            II      BB      BB     II      NN      NN    SS          VV          VV
LL            II      BB      BB     II      NNNN    NN    SS          VV          VV
LL            II      BB      BB     II      NNNN    NN    SS          VV          VV
LL            II      BBBBBBBB       II      NN  NN  NN    SSSSSS      VV          VV
LL            II      BBBBBBBB       II      NN  NN  NN    SSSSSS      VV          VV
LL            II      BB      BB     II      NN    NNNN         SS     VV          VV
LL            II      BB      BB     II      NN    NNNN         SS      VV        VV
LL            II      BB      BB     II      NN      NN         SS       VV      VV      ....
LL            II      BB      BB     II      NN      NN         SS        VV    VV       ....
LLLLLLLLL    IIIIII    BBBBBBBB    IIIIII    NN      NN    SSSSSSSS          VV          ....
LLLLLLLLL    IIIIII    BBBBBBBB    IIIIII    NN      NN    SSSSSSSS          VV          ....


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
LLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLL    IIIIII    SSSSSSS
```

LIB$INSV
1-002

C 2
- insert a variable length bit field   16-SEP-1984 00:12:09   VAX/VMS Macro V04-00   Page 1
                                               6-SEP-1984 11:08:18   [LIBRTL.SRC]LIBINSV.MAR;1   (1)

```
0000      1          .TITLE  LIB$INSV - insert a variable length bit field
0000      2          .IDENT  /1-002/                       ; File: LIBINSV.MAR
0000      3
0000      4  ;
0000      5  ;************************************************************************
0000      6  ;*                                                                      *
0000      7  ;*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                            *
0000      8  ;*   DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.             *
0000      9  ;*   ALL RIGHTS RESERVED.                                               *
0000     10  ;*                                                                      *
0000     11  ;*   THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED *
0000     12  ;*   ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE *
0000     13  ;*   INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER *
0000     14  ;*   COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY *
0000     15  ;*   OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY *
0000     16  ;*   TRANSFERRED.                                                        *
0000     17  ;*                                                                      *
0000     18  ;*   THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE *
0000     19  ;*   AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT *
0000     20  ;*   CORPORATION.                                                        *
0000     21  ;*                                                                      *
0000     22  ;*   DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS *
0000     23  ;*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.             *
0000     24  ;*                                                                      *
0000     25  ;*                                                                      *
0000     26  ;************************************************************************
0000     27  ;
0000     28
0000     29  ;++
0000     30  ; FACILITY: General Utility Library
0000     31  ;
0000     32  ; ABSTRACT:
0000     33  ;
0000     34  ;       Insert a portion of the source into an area determined by the base,
0000     35  ;       position, and size.
0000     36  ;
0000     37  ; ENVIRONMENT: User Mode, AST Reentrant
0000     38  ;
0000     39  ;--
0000     40  ; AUTHOR: Donald G. Petersen, CREATION DATE: 30-Dec-77
0000     41  ;
0000     42  ; MODIFIED BY:
0000     43  ;
0000     44  ;       DGP, 30-Dec-77 : VERSION 00
0000     45  ; 01    - Original
0000     46  ; 1-001 - Update version number and copyright notice.  JBS 16-NOV-78
0000     47  ; 1-002 - Add "_" to PSECT directives.  JBS 21-DEC-78
```

LIB$INSV
1-002

D 2
- insert a variable length bit field   16-SEP-1984 00:12:09 VAX/VMS Macro V04-00   Page 2
DECLARATIONS   6-SEP-1984 11:08:18 [LIBRTL.SRC]LIBINSV.MAR;1   (2)

```
          0000      49              .SBTTL  DECLARATIONS
          0000      50 ;
          0000      51 ; INCLUDE FILES:
          0000      52 ;
          0000      53
          0000      54 ;
          0000      55 ; MACROS:
          0000      56 ;
          0000      57
          0000      58 ;
          0000      59 ; EQUATED SYMBOLS:
          0000      60 ;
          0000      61
          0000      62 ;
          0000      63 ; OWN STORAGE:
          0000      64 ;
          0000      65
          0000      66 ;
          0000      67 ; PSECT DECLARATIONS:
          0000      68 ;
       00000000      69          .PSECT _LIB$CODE PIC, SHR, LONG, EXE, NOWRT
          0000      70
```

```
                            0000      72              .SBTTL  LIB$INSV - insert a field
                            0000      73  ;++
                            0000      74  ; FUNCTIONAL DESCRIPTION:
                            0000      75  ;
                            0000      76  ;       The field specified by the base, position, and size is replaced by bits
                            0000      77  ;       size-i : 0 of the source.  If the size is zero, no insertion is performed.
                            0000      78  ;       A reserved operand fault occurs if a size greater than 32 is specified.
                            0000      79  ;
                            0000      80  ; CALLING SEQUENCE:
                            0000      81  ;
                            0000      82  ;       CALL LIB$INSV (src.rl.r, pos.rl.r, size.rbu.r, base.wv.r)
                            0000      83  ;
              00000004      0000      84          SOURCE = 4                                   ; Adr. of source
              00000008      0000      85          POSITION = 8                                 ; Adr. of beginning position
              0000000C      0000      86          SIZE = 12                                    ; Adr. of size to insert
              00000010      0000      87          BASE = 16                                    ; Adr. of base to insert into
                            0000      88  ; INPUT PARAMETERS:
                            0000      89  ;
                            0000      90  ;       NONE
                            0000      91  ;
                            0000      92  ; IMPLICIT INPUTS:
                            0000      93  ;
                            0000      94  ;       NONE
                            0000      95  ;
                            0000      96  ; OUTPUT PARAMETERS:
                            0000      97  ;
                            0000      98  ;       NONE
                            0000      99  ;
                            0000     100  ; IMPLICIT OUTPUTS:
                            0000     101  ;
                            0000     102  ;       NONE
                            0000     103  ;
                            0000     104  ; COMPLETION CODES:
                            0000     105  ;
                            0000     106  ;       NONE
                            0000     107  ;
                            0000     108  ; SIDE EFFECTS:
                            0000     109  ;
                            0000     110  ;       SS$_ROPRAND - a reserved operand fault occurs if:
                            0000     111  ;                     1.) a size greater than 32 is specified
                            0000     112  ;                     2.) a position greater is greater than 31 and the field is in
                            0000     113  ;                         registers
                            0000     114  ;
                            0000     115  ;--
                            0000     116
                            0000     117          .ENTRY LIB$INSV , ^M< >              ; Entry point
                            0002     118
10 BC  0C BC  08 BC  04 BC  F0 0002  119          INSV    @SOURCE(AP), @POSITION(AP), -
                            000B     120                  @SIZE(AP), @BASE(AP)         ; insert source field
                         04 000B     121          RET
                            000C     122          .END
```

```
BASE            = 00000010
LIB$INSV          00000000 RG   01
POSITION        = 00000008
SIZE            = 0000000C
SOURCE          = 00000004
```

```
                                    +-----------------+
                                    ! 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	0000000C (12.)	01 (1.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	LONG

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

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.07	00:00:02.33
Command processing	102	00:00:00.35	00:00:04.44
Pass 1	64	00:00:00.22	00:00:02.96
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	38	00:00:00.16	00:00:00.87
Symbol table output	1	00:00:00.01	00:00:00.01
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	238	00:00:00.83	00:00:10.63

The working set limit was 750 pages.
1169 bytes (3 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 5 non-local and 0 local symbols.
122 source lines were read in Pass 1, producing 10 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$:LIBINSV/OBJ=OBJ$:LIBINSV MSRC$:LIBINSV/UPDATE=(ENH$:LIBINSV)