```
   SSSSSSSSSSS     000000000     RRRRRRRRRRR     TTTTTTTTTTTTTTT     333333333       222222222
   SSSSSSSSSSS     000000000     RRRRRRRRRRRR    TTTTTTTTTTTTTTT     333333333       222222222
   SSSSSSSSSSS     000000000     RRRRRRRRRRRR    TTTTTTTTTTTTTTT     333333333       222222222
SSS              000          000  RRR         RRR        TTT        333          333  222          222
SSS              000          000  RRR         RRR        TTT        333          333  222          222
SSS              000          000  RRR         RRR        TTT        333          333  222          222
SSS              000          000  RRR         RRR        TTT                     333                222
SSS              000          000  RRR         RRR        TTT                     333                222
SSS              000          000  RRR         RRR        TTT                     333                222
   SSSSSSSSS     000          000  RRRRRRRRRRR            TTT                333                   222
   SSSSSSSSS     000          000  RRRRRRRRRRRR           TTT                333                   222
   SSSSSSSSS     000          000  RRRRRRRRRRRR           TTT                333                   222
            SSS  000          000  RRR   RRR              TTT                   333             222
            SSS  000          000  RRR   RRR              TTT                   333             222
            SSS  000          000  RRR   RRR              TTT                   333             222
            SSS  000          000  RRR      RRR           TTT        333        333          222
            SSS  000          000  RRR      RRR           TTT        333        333          222
            SSS  000          000  RRR      RRR           TTT        333        333          222
            SSS  000          000  RRR      RRR           TTT        333        333          222
SSSSSSSSSSS          000000000     RRR         RRR        TTT           333333333       222222222222222
SSSSSSSSSSS          000000000     RRR         RRR        TTT           333333333       222222222222222
SSSSSSSSSSS          000000000     RRR         RRR        TTT           333333333       222222222222222
```

```
  SSSSSSSS  FFFFFFFFFF  KK      KK  EEEEEEEEEE  YY      YY  WW      WW  RRRRRRRR    DDDDDDDD
  SSSSSSSS  FFFFFFFFFF  KK      KK  EEEEEEEEEE  YY      YY  WW      WW  RRRRRRRR    DDDDDDDD
SS          FF          KK      KK  EE          YY      YY  WW      WW  RR      RR  DD      DD
SS          FF          KK      KK  EE          YY      YY  WW      WW  RR      RR  DD      DD
SS          FF          KK    KK    EE            YY  YY    WW      WW  RR      RR  DD      DD
SS          FF          KK    KK    EE            YY  YY    WW      WW  RR      RR  DD      DD
  SSSSSS    FFFFFFFF    KKKKKK      EEEEEEEE        YY      WW      WW  RRRRRRRR    DD      DD
  SSSSSS    FFFFFFFF    KKKKKK      EEEEEEEE        YY      WW      WW  RRRRRRRR    DD      DD
        SS  FF          KK    KK    EE              YY      WW  WW  WW  RR  RR      DD      DD
        SS  FF          KK    KK    EE              YY      WW  WW  WW  RR  RR      DD      DD
        SS  FF          KK      KK  EE              YY      WWWW  WWWW  RR    RR    DD      DD      ....
        SS  FF          KK      KK  EE              YY      WWWW  WWWW  RR    RR    DD      DD      ....
SSSSSSSS    FF          KK      KK  EEEEEEEEEE      YY      WW      WW  RR      RR  DDDDDDDD        ....
SSSSSSSS    FF          KK      KK  EEEEEEEEEE      YY      WW      WW  RR      RR  DDDDDDDD        ....

RRRRRRRR    EEEEEEEEEE    QQQQQQ
RRRRRRRR    EEEEEEEEEE    QQQQQQ
RR      RR  EE          QQ      QQ
RR      RR  EE          QQ      QQ
RR      RR  EE          QQ      QQ
RR      RR  EE          QQ      QQ
RRRRRRRR    EEEEEEEE    QQ      QQ
RRRRRRRR    EEEEEEEE    QQ      QQ
RR  RR      EE          QQ  QQ  QQ
RR  RR      EE          QQ  QQ  QQ
RR    RR    EE          QQ    QQ
RR    RR    EE          QQ    QQ
RR      RR  EEEEEEEEEE    QQQQ  QQ
RR      RR  EEEEEEEEEE    QQQQ  QQ
```

MAC

```
! File: SFKEYWRD.REQ IDENT = 'V04-000'  ! File: SFKEYWRD.REQ Edit: PDG3006
!*****************************************************************************
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!*****************************************************************************

!++
! FACILITY:     VAX-11 SORT / MERGE
!               PDP-11 SORT / MERGE
!
! ABSTRACT:
!
!       Require file to define spec file keywords.
!
! ENVIRONMENT:  VAX/VMS user mode
!
! AUTHOR: V. Bennison
!
! MODIFIED BY:
!
!       T03-002 Peter D Gilbert
!               Add ZONED, change PACKED to PACKED_DECIMAL.  PDG 10-Jan-1983
!       T03-003 Add CDD_PATH_NAME and PAD.  PDG 8-Feb-1983
!       T03-004 Correct spelling of TRAILING_SIGN.  PDG 2-Mar-1983
!       T03-005 Change DEC_MULTINATIONAL to MULTINATIONAL.  PDG 13-Apr-1983
!       T03-006 Add DTYPE.  19-May-1983
!--
```

```
!
! This require file contains the symbolic names and strings that define the
! PDP-11 SORT/MERGE Version 3.0 specification file keywords.  This file is
! required by module $SFWRD, the specification file keyword module.
!
! The text appears in the following format:  under the KEYWORDS MACRO
! definition are a number of sets of two strings.  The first string in
! each set is the symbolic keyword name.  This will be assigned a sequential
! number at compile time.  The second string is the actual keyword used by the
! parser.  Note that some actual keywords may be prefixes of other keywords
! (for example, ASCII and ASCII_FLOATING, LE and LEADING_SIGN).
!
! ****** TRANSLATION INSTRUCTIONS ******
!
! Specification file keywords for PDP-11 SORT/MERGE may be translated into
! foreign languages.  In order to do this, the keyword string, the second
! string in each of the following sets, should be translated.  $SFWRD may then
! be recompiled using BLISS-16.  PDP-11 SORT/MERGE should then be rebuilt with
! the task-builder.
!
! CAUTION - CAUTION - CAUTION - CAUTION - CAUTION - CAUTION - CAUTION
!
! ONLY THE KEYWORD  STRING MAY BE TRANSLATED.  IF THE FIRST STRING IN EACH
! SET, THE SYMBOLIC MESSAGE NAME, IS CHANGED, THE PDP-11 SORT/MERGE
! SPECIFICATION FILE PARSER WILL NOT OPERATE CORRECTLY.
!
! RESTRICTION:  THE MAXIMUM LENGTH OF ANY KEYWORD IS 256 BYTES.  THIS IS
! BECAUSE THE MESSAGE TEXT MODULE USES THE BLISS %ASCIC FUNCTION TO BUILD
! COUNTED STRINGS.
!
! CHANGING THE LENGTH OF THE KEYWORD STRINGS WILL HAVE AN AFFECT ON THE
! SIZE OF THE FINAL TASK.  MANY LONG STRINGS MAY MAKE THE FINAL SORT/MERGE
! TASK LARGER THAN THE TASK ORIGINALLY SHIPPED.
!
```

SOR

```
!
!
!
LIT
                                                                    LIT
                                                                    LIT
                                                                    LIT
                                                                    LIT
                                                                    LIT
```

```
NOTE - THE SYMBOLIC KEYWORD NAME MUST NOT EXCEED 6 BYTES
PLEASE USE THE EXAMPLE PRESENTED BELOW AS A GUIDE FOR FORMATTING LINES
      'DUMMYA',       'DUMMY MESSAGE FOR FORMATTING GUIDE',

MACRO
    KEYWORDS =
        'PROC', 'PROCESS'               ,   !process
        'RECD', 'RECORD'                ,   !record sort process
        'TAG',  'TAG'                   ,   !tag sort process
        'ADDR', 'ADDRESS'               ,   !address sort process
        'INDX', 'INDEX'                 ,   !index sort process
        'STAB', 'STABLE'                ,   !stable
        'NOST', 'NOSTABLE'              ,   !no stable
        'CHSQ', 'CHECK_SEQUENCE'        ,   !check sequence
        'NOCH', 'NOCHECK_SEQUENCE'      ,   !no check sequence
        'COLL', 'COLLATING_SEQUENCE'    ,   !collating sequence
        'SEQU', 'SEQUENCE'              ,   !sequence
        'ASC',  'ASCII'                 ,   !ascii collating sequence
        'EBC',  'EBCDIC'                ,   !ebcdic
        'DEC',  'MULTINATIONAL'         ,   !multinational
        'MODF', 'MODIFICATION'          ,   !modification
        'IGNO', 'IGNORE'                ,   !ignore
        'FOLD', 'FOLD'                  ,   !fold
        'TIEB', 'TIE_BREAK'             ,   !tiebreak
        'NOTI', 'NOTIE_BREAK'           ,   !no tiebreak
        'FIEL', 'FIELD'                 ,   !field
        'NAME', 'NAME'                  ,   !name
        'SIZE', 'SIZE'                  ,   !size
        'POSI', 'POSITION'              ,   !position
        'DIGI', 'DIGITS'                ,   !digits
        'ASCF', 'ASCII_FLOATING'        ,   !ascii floating data type
        'ASCZ', 'ASCII_ZONED'           ,   !ascii zone data type
        'BINA', 'BINARY'                ,   !binary data type
        'CHAR', 'CHARACTER'             ,   !character
        'DECI', 'DECIMAL'               ,   !decimal
        'DIBO', 'DIBOL'                 ,   !dibol
        'FFLT', 'F_FLOATING'            ,   !f floating
        'DFLT', 'D_FLOATING'            ,   !d floating
        'GFLT', 'G_FLOATING'            ,   !g floating
        'HFLT', 'H_FLOATING'            ,   !h floating
        'PACK', 'PACKED_DECIMAL'        ,   !packed decimal
        'ZONE', 'ZONED'                 ,   !zoned
        'SIGN', 'SIGNED'                ,   !signed
        'UNSI', 'UNSIGNED'              ,   !unsigned
        'LEAD', 'LEADING_SIGN'          ,   !leading sign
        'TRAI', 'TRAILING_SIGN'         ,   !trailing sign
        'OVER', 'OVERPUNCHED_SIGN'      ,   !overpunched sign
        'SEPA', 'SEPARATE_SIGN'         ,   !separate sign
        'INCL', 'INCLUDE'               ,   !include
        'OMIT', 'OMIT'                  ,   !omit
        'KEY',  'KEY'                   ,   !key
        'IF',   'IF'                    ,   !if
        'THEN', 'THEN'                  ,   !then
```

```
        'ELSE', 'ELSE'                  ,   !else
        'ASCE', 'ASCENDING'             ,   !ascending
        'DESC', 'DESCENDING'            ,   !descending
        'DATA', 'DATA'                  ,   !data
        'COND', 'CONDITION'             ,   !condition
        'TEST', 'TEST'                  ,   !test
        'EQ',   'EQ'                    ,   !equal
        'NE',   'NE'                    ,   !not equal
        'LE',   'LE'                    ,   !less than or equal
        'LT',   'LT'                    ,   !less than
        'GE',   'GE'                    ,   !greater than or equal
        'GT',   'GT'                    ,   !greater than
        'AND',  'AND'                   ,   !and
        'OR',   'OR'                    ,   !or
        'WORK', 'WORK_FILES'            ,   !work_files
        'CDD',  'CDD_PATH_NAME'         ,   !cdd_path_name
        'PAD',  'PAD'                   ,   !pad
        'DTYP', 'DTYPE'                 ,   !dtype
        'UNKN', '' %;           ! LAST KEYWORD - DO NOT CHANGE
```

COM
REQ

SMGUSRTRM
LIS

SORLIB
REQ

SORTSHR
MAP

DEFS0
REQ

DKS
REQ

SORT32

SRTSPC
REQ

CDDTYPE
R32

SORTMERGE
MAP

SMGVECTOR
LIS

CHKPNT
REQ

CDDMAC
R32

SFKEYWRD
REQ

RECSYM
R32

SRTTRN
MAR

OPCODES
REQ