```
.MCALL  .MODULE
.MODULE SPOOL,VERSION=06,COMMENT=<Spooler Root Module>,AUDIT=YES

; Copyright (c) 1998 by Mentec, Inc., Nashua, NH.
; All rights reserved
;
; This software is furnished under a license for use only on a
; single computer system and  may  be  copied  only  with  the
; inclusion of the above copyright notice.  This software,  or
; any other copies thereof, may not be provided  or  otherwise
; made available to any other person except for  use  on  such
; system and to one who agrees to these license  terms.  Title
; to  and  ownership of the software shall at all times remain
; in Mentec, Inc.
;
; The information in this document is subject to change without
; notice and should not be construed as a commitment by Digital
; Equipment Corporation, or Mentec, Inc.
;
; Digital and Mentec  assume  no  responsibility for the use or
; reliability of its software on equipment which is not supplied
; by Digital  or Mentec,  and listed  in the  Software  Product
; Description.
```

```
; SPOOL Data

        .PSECT  .QUEE.,D
QEROOM::.BLKW   <NQELEM>*10.            ; Extra queue element space...
                                        ;  one for writing to workfile,
                                        ;      and reading from workfile,
                                        ;      and outstanding marktime,
                                        ;  one for each output device,
                                        ; (PIX uses one of those allocated
                                        ;  for all the unused printers)

.IF EQ V$JOB                            ; if not the XM version,
        .PSECT  .IMPD.,D

SPFBUF::.BLKW   256.                    ; SP forwarding buffer
.ENDC; EQ V$JOB                         ; (otherwise, it's in SP handler)

;+
; USR sensitive completion code is collected in program section .ROOT.
;-
;       .PSECT  .ROOT.,I
```

```
        .SBTTL  Definitions, Macros,  Conditionals

;+
;COND
;       V$JOB   (0)             REL job
;                1              SAV (virtual) job
;
;       SP$MLS  (=V$JOB)        stream(s)
;               0               1 stream
;               1               multiple streams
;-

.IIF NDF V$JOB V$JOB =: 0               ; Build REL version by default
        SP$MLS  =: V$JOB                ; V-job version has multiple streams

;+
; Macros:
;-

        .AUDIT  .SPOOL, .SPTASK, .SPINT, .SPINIT
        .MCALL  .EXIT

        .MACRO  ......
        .ENDM

;+
; Definitions:
;-

$JSW    =: 44                           ; Job Status Word address
        OVLY$   =: 001000               ; Overlayed Job Bit
        VIRT$   =: 002000               ; Virtual Job Bit

.IF NE SP$MLS
NUMDEV  =:      8.                      ; Number of SPOOL output devices
.IFF; NE SP$MLS
NUMDEV  =:      1                       ; Number of SPOOL output devices
.ENDC; NE SP$MLS

NQELEM  =:      NUMDEV+1                ; This MUST be the same as that
                                        ; defined in SPINIT.

;+
; PSECT ordering:
;-

        .PSECT  .QUEE.,D,GBL,REL,CON
        .PSECT  .PURE.,D,GBL,REL,CON
        .PSECT  .ROOT.,I,GBL,REL,CON
        .PSECT  .CODE.,I
        .PSECT  .TEXT.,D
.IF NE V$JOB
        .PSECT  .IMPD.,D
.IFF; NE V$JOB
        .PSECT  .IMPD.,D,GBL,REL,CON
.ENDC; NE V$JOB

.IF NE V$JOB
        .ASECT
        . = $JSW                        ; Job Status Word
        .WORD   <OVLY$!VIRT$>           ; Set VIRTUAL and OVERLAY bits
.ENDC; NE V$JOB
```

```
        .SBTTL  SPOOL  - Main Entry Point

;+
; Main SPOOL entry point.
;-

        .PSECT  .CODE.,I

SPOOL::
.IF EQ V$JOB
        CALL    SPINIT                  ; Call the initialization routine.
        JMP     SPTASK                  ; Go to the task scheduler.
        ......
.IFF; EQ V$JOB
        JMP     SPINIT                  ; Start the XM spooler
        ......
.ENDC; EQ V$JOB

        .END    SPOOL
```