

VM/SP 3 Program Directory

PREFACE

This Program Directory is for IBM Virtual Machine/System Product Release 3, (VM/SP 3), Program Number 5664-167. It contains program procedural and material information.

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1.0 INTRODUCTION

This Program Directory contains information concerning the procedures and materials associated with this product. It is recommended that you read this document in its entirety before installing VM/SP 3.

Please perform the following steps to obtain information on installing VM/SP 3:

1. Read VM/SP Installation Guide, SC24-5237.
2. Read this Program Directory.
3. Contact the Level One Support Center as soon as possible after the decision to install this product is made. You should request that the Installation and PUT Buckets be sent to you. Three days prior to installation or servicing you should again call the Level One Support Center for and updates or changes to these Buckets.

2.0 PROGRAM DOCUMENTATION

The following publications always accompany this product from PID:

- VM/SP Licensed Program Specifications, GC20-1842
- VM/SP Planning Guide and Reference, SC19-6201
- VM/SP Installation Guide, SC24-5237.

The following publications accompany this product from PID when feature number 7042 is specified with your order:

- VM/SP Service Routines Program Logic, LY20-0890
- VM/SP System Logic and Problem Determination Guide Volume 1 (CP), LY20-0892
- VM/SP System Logic and Problem Determination Guide Volume 2 (CMS), LY20-0893
- VM/SP Data Areas and Control Block Logic Volume 1 (CP), LY24-5220
- VM/SP Data Areas and Control Block Logic Volume 2 (CMS), LY24-5221

The following microfiche accompanies this product from PID when feature number 7053 is specified with your order:

- VM/370 Program Listings CP (UP/AP), SYC0-9017
- VM/370 Program Listings CMS, SYC0-9018

The following microfiche accompanies this product from PID when feature number 7052 is specified with your order:

- VM/SP Program Listings CP (UP), LYC0-9012
- VM/SP Program Listings CP (AP/MP), LYC0-9013
- VM/SP Program Listings CMS, LYC0-9014

3.0 SERVICE INFORMATION

This program is classified as System Control Programming. Contact your IBM Representative for information concerning available Program Services.

The VM/SP product tapes have been service upleveled to service level 312 (PUT 8501) with the following exception:

1. The source files have NOT been modified. Service has only been applied to the object files.

4.0 PRODUCT PACKAGING

4.1 PRODUCT TAPES

Type of User	1600 BPI	6250 BPI
Users ordering a Starter System	Feature - DASD	Feature - DASD
	Number Type	Number Type
	5202 - 3330	5203 - 3330
	5230 - 3330	5231 - 3330
	5204 - 3340	5205 - 3340
	5228 - 3340	5229 - 3340
	5206 - 3350	5207 - 3350
	5226 - 3350	5227 - 3350
	5208 - 3310 or	5209 - 3310 or
	- 3370	- 3370
	5224 - 3310 or	5225 - 3310 or
	- 3370	- 3370
	5212 - 3375	5213 - 3375
	5220 - 3375	5221 - 3375
	5210 - 3380	5211 - 3380
5222 - 3380	5223 - 3380	
Four Volumes Starter System ¹ Text ² CP Source ⁴ CMS Source ⁵	Two Volumes Starter System ¹ Text/Source ³	

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Type of User	1600 BPI	6250 BPI
Users not ordering a Starter System	Feature Number 5214 or 5218	Feature Number 5215 or 5219
	Three Volumes Text ² CP Source ⁴ CMS Source ⁵	One Volume Text/Source ³
	Feature Number 5216	Feature Number 5217
	Three Volumes Text ⁶ CP Source ⁸ CMS Source ⁹	One Volume Text/Source ⁷

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- ¹ See Figure 1 on page 6
 - ² See Figure 2 on page 7
 - ³ See Figure 5 on page 8
 - ⁴ See Figure 3 on page 7
 - ⁵ See Figure 4 on page 7
 - ⁶ See Figure 6 on page 9
 - ⁷ See Figure 9 on page 10
 - ⁸ See Figure 7 on page 9
 - ⁹ See Figure 8 on page 9

4.1.1 Tape Formats

Note: In all the following representations of tape layouts, a tape mark is represented by:



4.1.1.1 Starter System Tape

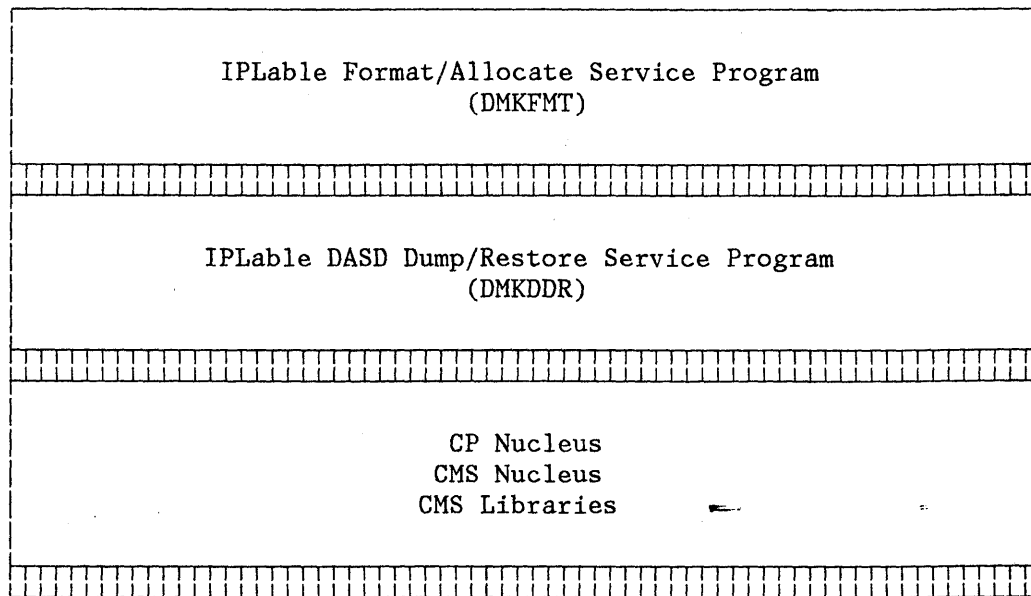


Figure 1. Starter System Tape Format: Applicable Feature numbers:

5202, 5203, 5230, 5231 - 3330 DASD
5204, 5205, 5228, 5229 - 3340 DASD
5206, 5207, 5226, 5227 - 3350 DASD
5208, 5209, 5224, 5225 - 3310/3370 DASD
5212, 5213, 5220, 5221 - 3375 DASD
5210, 5211, 5222, 5223 - 3380 DASD

A note about Starter Systems: A Starter System is an installation aid. It is **not** a complete VM/SP System and should not be used as such.

4.1.1.2 Text Tape

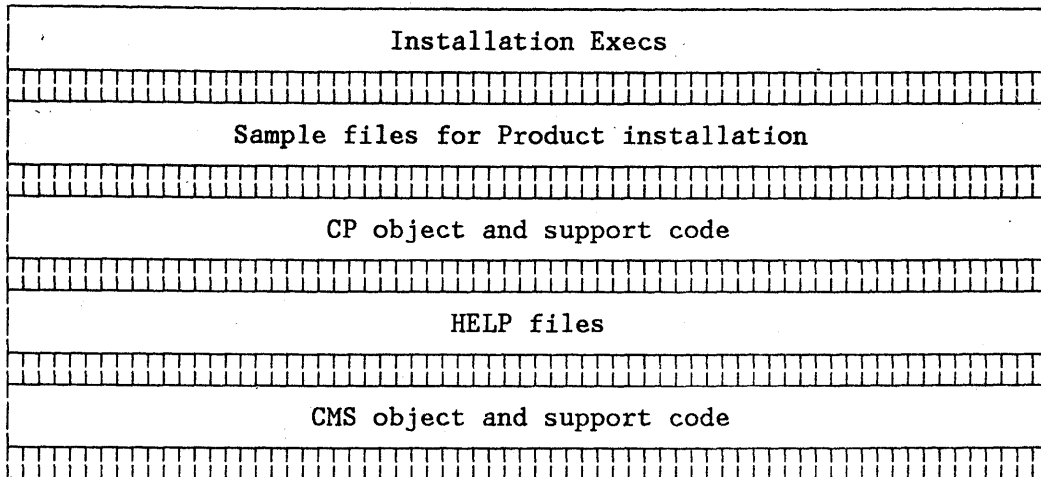


Figure 2. Text Tape Format¹⁰ : Applicable Feature numbers: 5214 or 5218
Volume 1

4.1.1.3 CP Source Tape

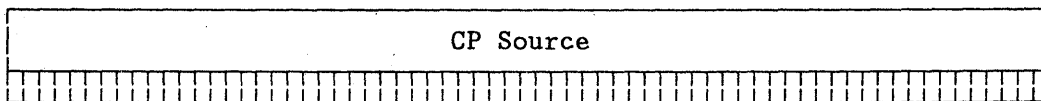


Figure 3. CP Source Tape Format¹⁰ : Applicable Feature numbers: 5214 or
5218 Volume 2

4.1.1.4 CMS Source Tape

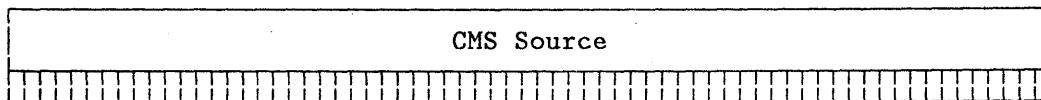


Figure 4. CMS Source Tape Format¹⁰ : Applicable Feature numbers: 5214 or
5218 Volume 3

4.1.1.5 Text and Source Tape

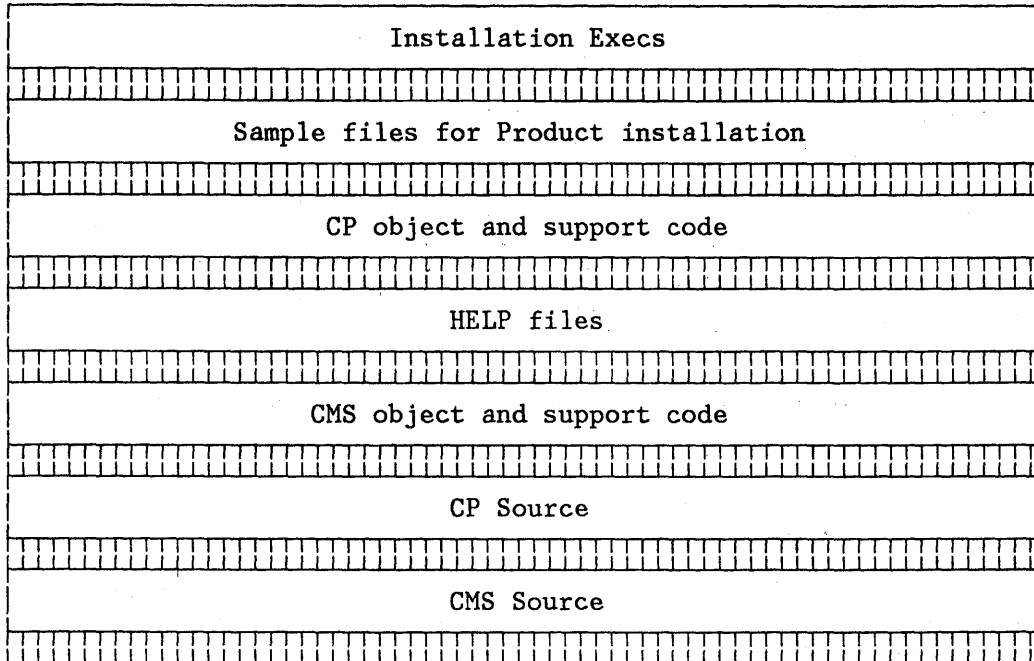


Figure 5. Text and Source Tape Format¹⁰ : Applicable Feature numbers: 5215 or 5219

¹⁰ These Text and Source tapes contain both VM/370 and VM/SP modules.

4.1.1.6 Text Tape

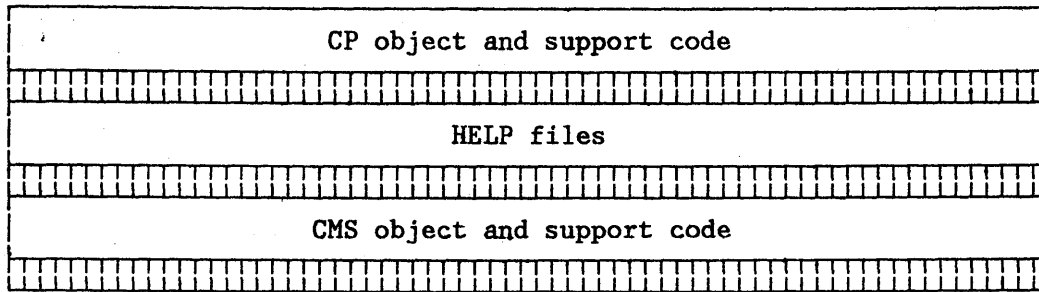


Figure 6. Text Tape Format¹¹ : Applicable Feature number: 5216 Volume 1

4.1.1.7 CP Source Tape

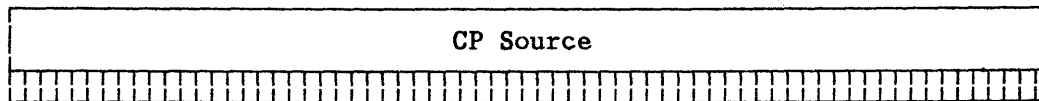


Figure 7. CP Source Tape Format¹¹ : Applicable Feature number: 5216 Volume 2

4.1.1.8 CMS Source Tape

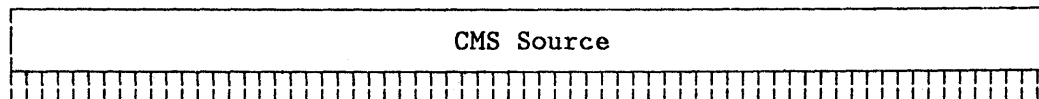


Figure 8. CMS Source Tape Format¹¹ : Applicable Feature number: 5216 Volume 3

4.1.1.9 Text and Source Tape

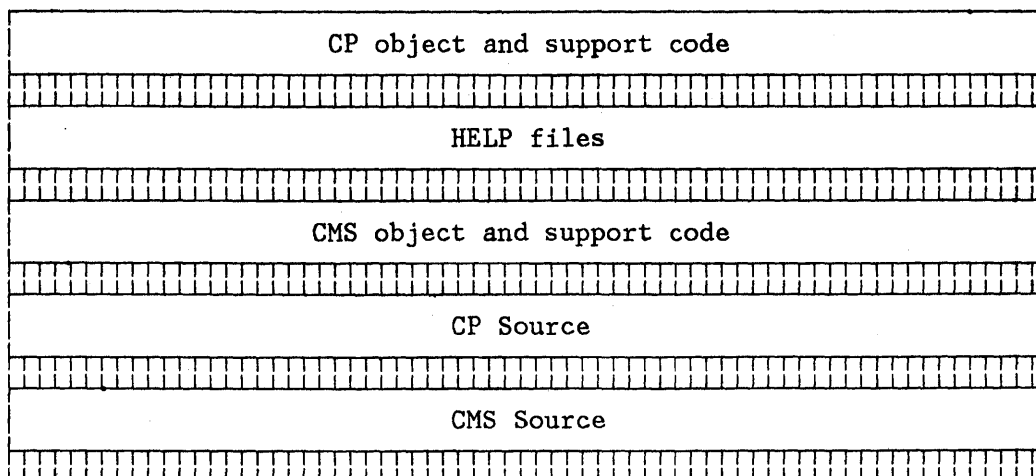


Figure 9. Text and Source Tape Format¹¹ : Applicable Feature number: 5217

4.2 EREP DISTRIBUTION TAPE

EREP Version 2 Release 3, available as 5749-010 with feature numbers 5022 and 5023, is included with your order of 5664-167 VM/SP Release 3. EREP is required to provide hardware support.

If you have received EREP as part of your order of 5664-167 please refer to the EREP Program Directory enclosed for EREP installation procedures.

If you have received EREP as part of your order of 5750-AAK please refer to Chapter 6 of the VM/SP Installation Guide, SC24-5237 for installation procedures.

¹¹ These Text and Source tapes contain only those modules which are unique to VM/SP.

5.0 MIGRATION GUIDELINES

Refer to the VM/SP Installation Guide, SC24-5237, and the VM/SP Release 3 Guide, SC24-5240 for primary information concerning migrating to VM/SP 3 from previous releases of:

- VM/SP
- VM/BSEPP
- VM/SEPP
- VM/370

5.1 SPOOL FILES

5.1.1 Migrating From Previous Releases of VM/SP to VM/SP 3

The VM/SP 3 level of the SPTAPE command can accept spool files from a tape created by previous releases of VM/SP's SPTAPE command.

5.1.2 Migrating to VM/SP 3 From Pre-VM/SP Systems

When migrating from a pre-VM/SP level of VM to VM/SP 3, you should ensure that all existing spool files on the lower level system are processed, (i.e. printed and punched and all reader files taken care of by the individual users), before switching the VM/SP 3 system into production status.

5.2 PREP EXEC

Be aware that the installation EXEC (PREP EXEC) supplied on file one of the merged product tapes is written in the EXEC 2 language and therefore will **not** work on pre-VM/SP systems.

5.3 CMS MODULES REQUIRING A CP MACLIB

The DMKSP MACLIB is loaded to MAINT's 194 disk. If DMSITE, DMSIUC, DMSPOL, DMSPOP, DMSPOQ, DMSPOR, DMSPOS or DMSRDR are to be assembled using VMFASM you **must** access MAINT's 194 disk. For any other CMS module assembly the following message appears and can be ignored.

```
DMSGLB002W FILE 'DMKSP MACLIB' NOT FOUND
```

5.4 ELIMINATION OF CERTAIN FILES ON MULTIPLE DISKS

- For previous releases of VM the TEXT files for DMKDDR, DMKDIR, DMKFMT, DMKIMG, DMKNMT, DMKRND and DMKTRR were shipped on the Product Text Tape for loading onto both MAINT's 194 and 190 disks. For Release 3 and subsequent releases these files will be shipped on the Product Text Tape for loading onto MAINT's 190 disk **only**. If, after migrating to Release 3, any of the above files appear on MAINT's 194 they should be erased.
- For previous releases of VM the TEXT file for DMKLD00E was shipped on the Product Text Tape for loading onto both MAINT's 194 and 190 disks. For Release 3 and subsequent releases, this file will be shipped on the Product Text Tape for loading onto MAINT's 194 disk **only**. If, after migrating to Release 3, this file appears on MAINT's 190 it should be erased.

5.5 OBSOLETE FILES TO BE ERASED

The following files are made obsolete by VM/SP 3 and should be erased from the indicated disks:

- CMS source files to be erased from MAINT's 393 disk
 - DMSEXC ASSEMBLE
 - DMSIFC ASSEMBLE
 - DMSOLD ASSEMBLE
 - DMSREA ASSEMBLE
 - DMSSEG ASSEMBLE
 - DMSTLA ASSEMBLE
 - DMSXSG ASSEMBLE
- CMS object and executable files to be erased from MAINT's 190 disk
 - CMSXGEN EXEC
 - CNV\$PROF EXEC
 - CPEREP EXEC
 - EDGAR EXEC
 - SLC LEC0000
 - SLC LF30000
 - CPEREP MODULE
 - DMSEXT MODULE
 - DMSXTF MODULE
 - ECOMMAND MODULE
 - LISTFILE MODULE
 - RENAME MODULE
 - QUERY MODULE
 - XEDIT MODULE
 - XEDMAIN MODULE
 - DMSEXC TEXT
 - DMSIFC TEXT
 - DMSOLD TEXT
 - DMSREA TEXT
 - DMSSEG TEXT
 - DMSTLA TEXT
 - DMSXSG TEXT

- EREPLIB TXTLIB
- ERPTFLIB TXTLIB
- \$EDGAR XEDIT
- CNV\$PROF XEDIT
- EDGAR XEDIT

Note: The CMS and CMSL named systems should be resaved after performing the above operations in order to have a shared S-stat.

5.6 CMSSEG REMOVAL CONSIDERATIONS

5.6.1 Changes in DMSNUC (NUCON)

The following fields in DMSNUC have changed for this release:

Pre- VM/SP 3 Label	Use	VM/SP 3 Label	Use
OSMODLDW	Size of OS Simulation (CMSSEG) in doublewords	Reserved	Initialized to binary zeros
DCSSFLAG	DCSS indicator flags	Reserved	Init. to binary zeros
ACMSSEG	Address of DMSSEG	Reserved	Init. to binary zeros
AOSMODL	Address of start of CMSSEG	ADMSSVT	Address of DMSSVT

5.6.2 Change in SYSNAMES Macro

The entry for CMSSEG, (the first entry in the list), has been deleted. All non-VM/SP 3 modules that use SYSNAMES must be reassembled with the new version of the macro.

6.0 MISCELLANEOUS NOTES

6.1 AUXFILE RECONCILIATION

Since the object files on the product tape may not be at the same service level as the auxfiles on your current service tape, you may wish to adjust the auxfiles on that service tape to correctly reflect the object files on the product tape. Below is a sample exec that illustrates one possible way of accomplishing this.

1. Access the disk where the auxfiles that you wish to modify reside in R/W mode as filemode B.
2. Create a CMS EXEC on your A-disk of those auxfiles.
3. Create an exec called FIXAUX EXEC A like the sample program below.

```
/* Sample Exec to adjust auxfiles - 3/1/85 */
Trace o
Arg servlevel .
NEXTAUX:
'EXECIO 1 DISKR CMS EXEC '
If rc ^= 0 then Exit
Parse Upper Pull junk1 junk2 fname ftype fmode .
NEXTLINE:
'EXECIO 1 DISKR' fname ftype fmode '(MARGINS 10 12'
If rc ^= 0 then do
  Push 'FILE'
  Push 'REPEAT *'
  Push 'CINSERT *'
  Push 'NEXT'
  Push 'TOP'
  'XEDIT' fname ftype fmode '(NOPROF'
end
else do
  Parse Upper Pull level
  If level <= servlevel & level ^= '' then do
    Push 'FILE'
    Push 'REPEAT -*'
    Push 'CINSERT *'
    Push 'UP'
    Push 'CLOCATE :1'
    Push 'SET ZONE 1 *'
    Push '/'level
    Push 'SET ZONE 10 12'
    'XEDIT' fname ftype fmode '(NOPROF'
    end
  else
    Signal NEXTLINE
End
Signal NEXTAUX
```

4. Enter the command 'FIXAUX servlevel', where 'servlevel' is the service level you wish you auxfiles to be at (eg. FIXAUX 307). This will comment out all updates that have come on a service level that is higher than the service level you specified.

6.2 3370 MODEL 2 CONSIDERATIONS

APAR VM21121 has been applied to PREP EXEC and included on this product tape. With this modification, PREP will now format model two dasd completely. In order to correctly allocate the dasd space, all users installing VM/SP on 3370 Models A2 or B2 must make the following adjustment in the install procedures as defined in the Release 3.1 VM/SP Installation Guide:

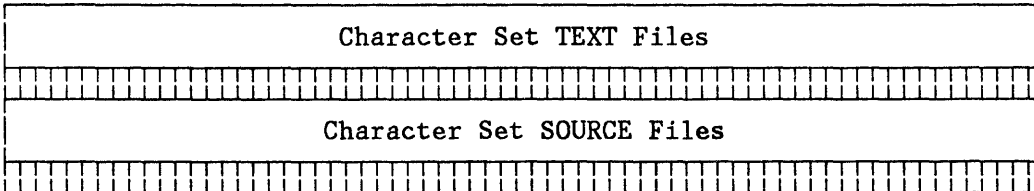
After completing the DDR "restore all" to VMSRES (Phase 2, Step 2), the end of the 3370-2 VMSRES pack must be allocated as PERM space:

1. Rewind the Starter System tape.
2. IPL the tape (for the FORMAT/ALLOCATE program).
3. Type "allocate" in response to "ENTER FORMAT OR ALLOCATE" prompt.
4. Type the real address of your Starter System pack in response to the "ENTER DEVICE ADDRESS (CUU)" prompt.
5. Type "fb-512" in response to "ENTER DEVICE TYPE" prompt.
6. Type "VMSRES" in response to "ENTER DEVICE LABEL" prompt.
7. Enter "perm 51916 89093" when prompted for allocation data.
8. Type "end" and then proceed with Step 3 of the installation process.

6.3 OPTIONAL 3800 MODEL 3 CHARACTER SETS

The 3800 Model 3 character sets are on optional feature tape 7029 or 7031 labelled VM 3800-3 IMAGELIB. The tape format and installation procedures follow.

6.3.1 Character Set Tape Format



6.3.2 Character Set File Names

Kind of File	Prefix
Character Arrangement Table (CAT's)	XTB1
Graphic Character Modification Module (GRAPHMOD's)	GRF2
Library Character Set Model 3 (LCS's)	LCS2
Library Character Set Model 1 (LCS's)	LCS1

6.3.3 Installation Procedure

1. Create and format a 10 cylinder temporary disk with filemode 'fm'.
2. Enter VMFPLC2 LOAD * * fm to load all TEXT files.
3. IMAG3800 CNTRL contains all 3800 Model 3 character sets. Edit this file and remove any character sets your installation will not use. Include all LCS2's, desired CAT's, and GRAPHMOD's referenced by the CAT's.
4. Prepare an image library. See the VM/SP Planning Guide and Reference for details.
5. Use the IMAGELIB command to load the image library. See the VM/SP Operator's Guide for details.
6. Copy character sets that will be used with the SETPRT command to the S-disk. Copy desired CAT's. Copy LCS's and GRAPHMOD's referenced by the CAT's.
7. Installation Considerations
 - Load SOURCE files as needed for character set customization.
 - If customized CAT's reference odd CGMID's Load LCS1's into the image library for printing on the 3800 Model 1
 - If customized CAT's reference 3800 Model 1 CGMID's not shipped as LCS's, modify them for the 3800 Model 3 to reference the equivalent LCS.

* * * * * E N D O F D O C U M E N T * * * * *