IBM INSTALLATION INSTRUCTIONS

Add FC 5214 to IBM 3494 Tape Library. Second Hard Drive for Library Manager

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SSD, Tucson

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Status: Field Use

Note: Install this Field Feature Bill Material (FFBM) only on the 3494 Tape Library for which it was shipped.

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Before Install (Sections 1 through 8)

1.0 Machines Affected

This FFBM affects all 3494 Tape Library Dataservers that require the Second Hard Drive for the Library Manager.

Note: The 3494 Tape Library Dataserver has been manufactured with three different Library Managers. Refer to Figure 1, Figure 2 on page 4 and Figure 3 on page 4 to determine which particular Library Manager is installed within this subsystem.

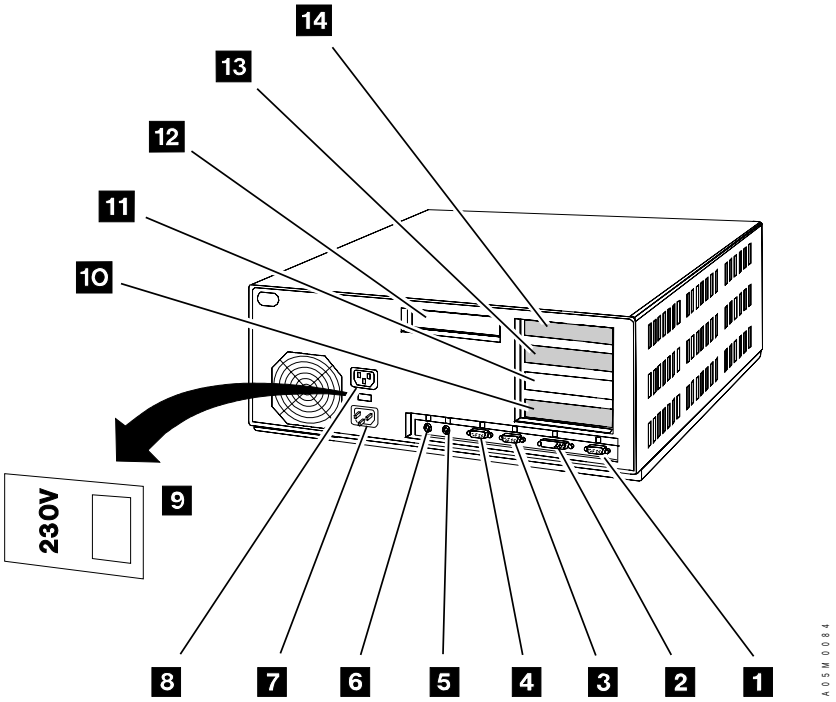

Figure 1. PS/ValuePoint System Unit

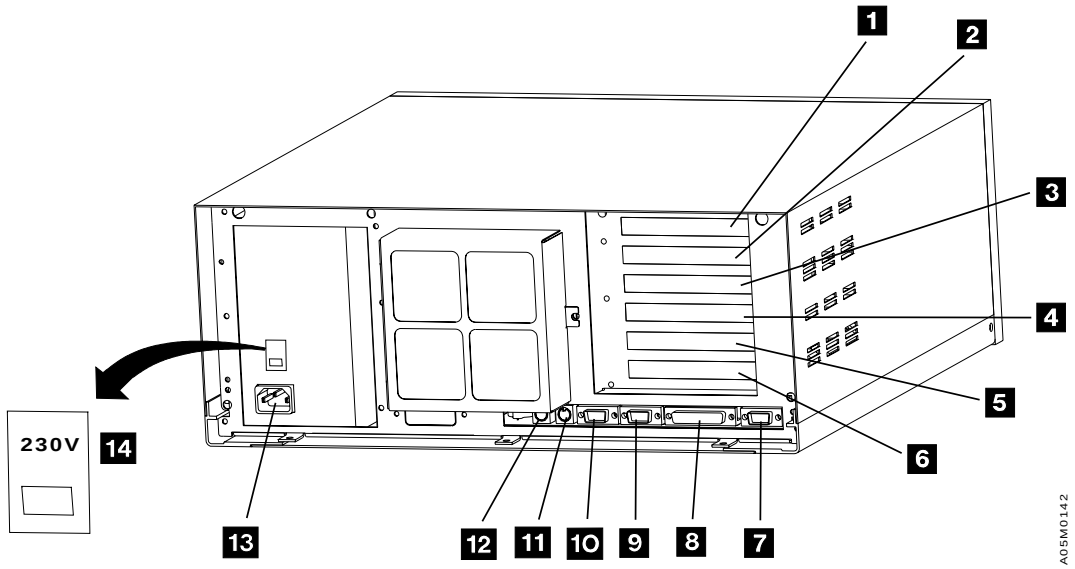

Figure 2. Model 7585 Industrial Computer System Unit

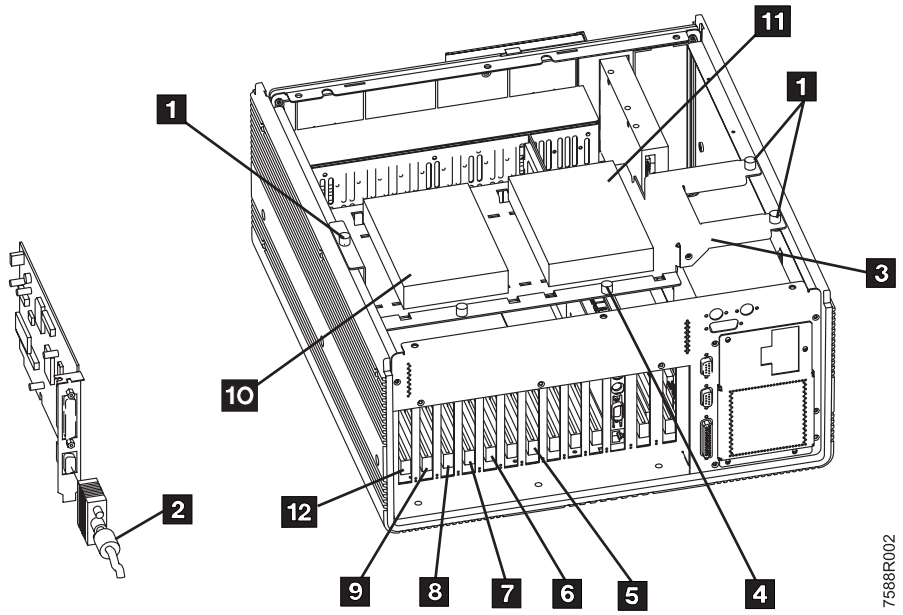

Figure 3. Model 7588 Industrial Computer System Unit

2.0 Prerequisites / Concurrent / Companion

2.1 Prerequisites

3494 Library Manager Code must be at Patch level LM514.05 or higher.

Checkpoint for Microcode ECs: Check the EC level of the Library Manager by using the following steps:

1. From the **"Mode"** pulldown menu on the Library Manager, select **"Service Menu..."**. If asked for, type the password **'service'**, without the quotes.
2. From the **"Service"** pulldown menu, select **"View Code Levels..."**.
3. From the **"View Code Levels..."** window, scroll down to **"LM EC Level is..."** and read the current EC level.
4. From the **"View Code Levels"** window, scroll down to **"LM Patch Level is..."** and read the current Patch level.

3.0 FFBM To Be Installed

FFBM	Description
05H4017	Hardware and Installation Instructions

4.0 Preparation

Read and understand the purpose and details of this Installation Instruction.

Check all items listed on the Bill of Material to determine that all parts have been received.

5.0 Programming Updates

None.

6.0 Purpose and Description

6.1 Purpose

This FFBM provides a second hard disk drive to be installed in the library manager system unit.

6.2 Description

Provides a second hard disk drive, a feature installation diskette and installation instructions to allow installation of the second hard drive (FC 5214) for the 3494 Library Manager.

7.0 Installation Time

Machine Hours	System Hours	CE Hours
1.9	0.0	2.0

8.0 Special Tools, Materials, and/or Procedures Required

If you have a PS/ValuePoint, you will require a copy of the **PS/ValuePoint Installing Options** manual that was shipped with the 3494. Familiarize yourself with Chapter 1, “Option Installation Overview”, located in the **PS/ValuePoint Installing Options** manual.

If you have a Model 7585 Industrial PC you will require a copy of the **Model 7585 Industrial Computer Information: Installation, Operation, Hardware Maintenance** (S06H-2298) that was shipped with the 3494. Familiarize yourself with Chapter 3, “Installing Options”, located in the **7585 Industrial Computer Information: Installation, Operation, Hardware Maintenance** manual.

If you have a Model 7588 Industrial PC you will require a copy of the **Model 7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance** (S76H-4349) that was shipped with the 3494. Familiarize yourself with Chapter 3, “Installing Options”, located in the **7588 Industrial Computer Information: Installation, Operation, Hardware Maintenance** manual.

Details of Installation (Sections 9, 10, and 11)

9.0 Safety

Refer to 10.1 Subsystem Power and follow steps 10.1.1 through 10.1.13.

10.0 Details Of Installation

10.1 Subsystem power

__ 1. Ask the operator to complete or cancel jobs in the queue.

__ 2. Ask the operator to vary all library devices **offline**.

__ 3. Place the library manager in **Offline** mode by selecting the **"Offline"** option from the **"Mode"** pull-down menu.

__ 4. Once offline, place the library in **Pause** mode by selecting the **"Pause"** option from the **"Mode"** pull-down menu.

__ 5. Shut down the library manager by selecting the **"Shutdown"** option from the **"Mode"** pull-down menu.

__ 6. Open a Service Window by selecting the **"Service Window"** button on the "3494 Tape Library Dataserver Shutdown" panel. A Service window is opened for you. If asked for, type the password: **'service'**, without the quotes.

__ 7. Insert the hard disk feature install diskette in the diskette drive and type **a:hddinst** in the Service Window.

__ 8. When you receive the message that installation is complete, remove the hard disk feature install diskette from the diskette drive.

__ 9. Type **exit** at the prompt (“[C:\]”).

__ 10. Select **Shutdown computer for power-off** from the Shutdown panel.

__ 11. After the Shutdown completes, use the library **Unit Power switch** on the library operator panel to power the library down.

__ 12. Turn off **CB1** on the 3494 Control Unit power control compartment (PCC).

10.2 Prepare the Library Manager System Unit for Service

__ 1. If the braided strap to the MIC1 card is too short to allow the PC to be pulled out towards the front, loosen the screw holding the braided strap to the MIC1 card or the metal stiffener around the MIC and LPC cards and remove the strap.

Note: Proceed with the following step ONLY IF the Library Manager is a PS/ValuePoint computer. Skip to step 3 if the Library Manager is a Model 7585 Industrial Computer System Unit; or to step 4 if the Library Manager is a Model 7588 Industrial Computer System Unit.

__ 2. If you have a PS/ValuePoint library manager, remove the cover of the Library Manager by following the instructions below. For additional detail on removing the cover, see **PS/ValuePoint Installing Options** manual.

__ a. With the front of the computer facing you unlock the cover lock.

__ b. Push down and hold the cover-release latch (on the top left-hand side of the unit) as you slide the cover toward you until it separates from the computer.

__ c. Go to section 10.3, “Prepare the Hard Drive for Installation.”

__ 3. If you have a Model 7585 Industrial Computer System Unit, remove the cover of the Library Manager by following the instructions below.

__ a. Unscrew the two knurled thumbscrews near the top on the back of the system unit, until they release (the two thumbscrews are retained inside the top cover; they will not come out).

__ b. Slide the top cover toward the back approximately 50mm and then lift it off.

__ c. Go to section 10.3, “Prepare the Hard Drive for Installation.”

__ 4. If you have a Model 7588 Industrial Computer System Unit, remove the cover of the Library Manager by following the instructions below.

__ a. Loosen the six screws on the top cover of the system unit, and place the cover to the side for future reinstallation.

10.3 Prepare the Hard Drive for Installation

__ 1. Check the manufacturer label on the existing first hard disk drive. Skip the following step if the first hard disk drive is **not** a Western Digital hard disk drive.

__ 2. You must change the jumper position on the first hard disk drive if it is a Western Digital hard disk. These drives must be changed to dual master. This means you must change the jumper from pins 3 and 5 to pins 5 and 6. The pins are labeled as follows:

If you hold the drive with the pins facing you, there is a set of 6 or 10 pins on the right, between the power connector and the wide signal cable.

The top row of pins are the odd pins, the bottom row are the even pins. The top right is pin 1 and the bottom right is pin 2. Therefore, the top row for a 6 pin drive, counting from the right, would be 1, 3, and 5. The bottom row counting from the right would be 2, 4, and 6.

__ 3. You must change the jumper position on the new hard disk drive to indicate it is the second, or slave, hard disk drive.

10.4 Install the Second Hard Disk Drive

Note: Proceed with the following step **ONLY IF** the Library Manager is a PS/ValuePoint computer. Skip to step 2 if the Library Manager is a Model 7585 Industrial Computer System Unit; or to step 3 if the Library Manager is a Model 7588 Industrial Computer System Unit.

__ 1. If you are installing the second hard disk drive in the PS/ValuePoint see **Installing Internal Drives in the PS/ValuePoint Installing Options** manual for additional details.

__ a. Follow the instructions for installing the hard drive in Bay 5. Notice in the installation figures, that the drive is not centered on the mounting bracket.

Note: Identify correct power and signal cables, and orientation of the connectors to the disk drive before installing the drive/bracket assembly into the chassis. Also, it may be necessary to modify the hard disk drive signal cable. Some cables have locking tabs on the side of the large thin connector that do not fit on some drives. The tabs must be broken off to allow the connector to be plugged into the drive.

__ b. Four screws (P/N 0055726) and one HDD Mounting Kit (P/N 76H4358) were furnished within FFBM 05H4017 for those installations that involved Model 7588 Industrial Computer System Units. Set the parts to the side for parts dispositions as defined by Section 14.0, “Parts Disposition” on page 13.

__ c. Go to section 10.5, “Reinstall the Computer Cover” on page 10.

__ 2. If you are installing the second hard disk drive in a Model 7585 Industrial Computer System, see Chapter 3 of the **Model 7585 Industrial Computer Information: Installation, Operation, Hardware Maintenance (S06H-2298)** for additional details.

__ a. Remove the drive mounting plate that is installed in the front mounted position.

__ b. Install the second hard disk drive on the front drive mounting plate.

__ c. Reinstall the front mounting plate with the hard drive installed into the computer.

Note: Identify correct power and signal cables, and orientation of the connectors to the disk drive before installing the drive/bracket assembly into the chassis.

__ d. Connect the hard drive cables.

Note: It may be necessary to modify the hard disk drive signal cable. Some cables have locking tabs on the side of the large thin connector that do not fit on some drives. The tabs must be broken off to allow the connector to be plugged into the drive.

__ e. Four screws (P/N 0055726) and one HDD Mounting Kit (P/N 76H4358) were furnished within FFBM 05H4017 for those installations that involved Model 7588 Industrial Computer System Units. Set the parts to the side for parts dispositions as defined by Section 14.0, “Parts Disposition” on page 13.

__ f. Go to section 10.5, “Reinstall the Computer Cover” on page 10.

__ 3. If you are installing the second hard disk drive in a Model 7588 Industrial Computer System Unit see Chapter 3 of the **7588**

Industrial Computer System Unit Information: Installation, Operation, Hardware Maintenance (S76H-4349) for additional details.

__ a. Using four screws (P/N 0055726, supplied), attach the hard disk drive to the shock mount bracket (P/N 76H4325, supplied).

Note: Be sure that you attach the hard disk drive to the bracket in such a manner that the side flanges on the bracket point down and away from the hard disk drive.

__ b. Attach the shock mount bracket to the hard drive carrier assembly by aligning the tab, and tightening the knurled screw.

10.5 Reinstall the Computer Cover

Note: Proceed with the following step ONLY IF the Library Manager is a PS/ValuePoint computer. Skip to step 2 if the Library Manager is a Model 7585 Industrial Computer System Unit; or to step 3 if the Library Manager is a Model 7588 Industrial Computer System Unit.

__ 1. If you have a PS/Value Point library manager do the following procedures:

__ a. Align the glides of the cover with the tracks on the front of the computer.

__ b. Slide the cover to the back of the computer until it snaps into place.

__ c. Lock the cover lock.

__ d. Go to section 10.6, “Reinstall Ground Strap.”

__ 2. If you have a Model 7585 Industrial Computer System, do the following procedures.

__ a. Place the cover over the computer and slide the cover toward the front of the computer.

__ b. tighten the two knurled thumbscrews near the top rear of the cover.

__ c. Go to section 10.6, “Reinstall Ground Strap.”

__ 3. If you have a Model 7588 Industrial Computer System, do the following procedures.

__ a. Connect the IDE ribbon cable and the power cable to the rear of the HDD.

__ b. Reinstall the cover, and tighten the six screws on the top cover of the system unit.

10.6 Reinstall Ground Strap

__ 1. If the ground strap was removed in section 10.2, “Prepare the Library Manager System Unit for Service” on page 8, reinstall the ground strap that was removed from the MIC1 card or the metal stiffener around the MIC and LPC cards and tighten the ground strap mounting screw.

10.7 3494 Power-up

__ 1. Turn **CB1** on.

__ 2. Ensure **Power-on switch** is activated on the Library Manager.

__ 3. Power the 3494 on using the **Library Unit power switch**.

10.8 Second Hard Disk Drive Preparation

__ 1. When the 162 error occurs, press **Enter** to run configuration.

__ 2. A window may appear that requires **Enter** to be pressed. Press **Enter** to continue.

__ 3. Press **Esc** to save/exit.

__ 4. Reply **YES** to save configuration.

__ 5. After the computer reboots, the rest of the process is automated. The steps that occur are as follows:

   a. The new hard disk drive is partitioned.

   b. The computer is rebooted.

   c. The new hard disk drive partitions are formatted.

   d. The logs and dumps from the C: drive are transferred to the D: drive.

   e. The computer is rebooted.

__ 6. After the above steps complete, the Library Manager will be started again.

Note: The Library Manager logs and dumps will now be located on the new D: drive in the D:\LM\LOG and D:\LM\DMP directories, respectively, after installation completes.

11.0 Test Procedure

__ 1. The library manager will be initialized with the Operator screen on the display. Operational mode pop-up window will be displayed.

__ 2. Select **"Operational status"** on the **"Status"** pull-down.

__ 3. Locate status for **"Dual write"** and verify that it is **'Enabled'**.

__ 4. Put the library manager in **Auto, Online** mode.

__ 5. Return the subsystem to the customer.

Go to Section 12.0, “Field Updating” on page 13.

After Installation (Sections 12 through 15)

12.0 Field Updating

None

13.0 Field Support Publications

Store these instructions and diskette(s) in the 3494 Licensed Internal Code binder. If the hard disk drive fails, the instructions and diskette(s) will be needed to re-install the feature.

14.0 Parts Disposition

__ 1. All parts removed as a result of this MES installation belong to the customer.

__ 2. All MES furnished parts that are deemed unnecessary for this MES installation, are to be returned to IBM for local parts disposition.

15.0 Machine Records

__ 1. Update machine history provided. Using existing procedures, update all field records to reflect that Feature Code 5214 has been installed.

__ 2. Using existing procedures, report installation and quality.