IBM INSTALLATION INSTRUCTIONS

Dual Gripper (FC 5215)
For the 3494 Model HA1
High Availability Library

Document Number 08L5919   EC C70612A

SSD, Tucson

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Support/DPCE Review by:	L. Lawson
Status:	Field Use

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

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Before Install (Sections 1 through 8)

1.0 Machines Affected

This FFBM affects any 3494 Model HA1 that requires the installation of the "Dual Gripper" (FC 5215) function.

2.0 Prerequisites / Concurrent / Companion

2.1 Prerequisites

__ 1. 3494 Library Manager Code must be at EC C88492 (Patch level LM50D.xx) or higher.

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

   __ a. From the "Mode" pulldown menu on the Library Manager, select "Service Menu...". If asked for, type the password 'SERVICE'.

   __ b. From the "View Code Levels..." window, scroll down to "LM EC Level is..." and read the current EC level.

   __ c. From the "View Code Levels" window, scroll down to "LM Patch Level is..." and read the current Patch level.

2.2 Concurrent

Installation of this MES will work concurrently with a nearly identical MES that should have been received for the installation of the "Dual Gripper" function within the 3494 Model L10/L12/L14 Control Unit.

DO NOT START this MES installation if the second MES has not been received at the start of this MES installation.

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3.0 FFBM To Be Installed

FFBM	Qty	Description
08L5919	1	Hardware and Instructions

4.0 Preparation

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

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

5.0 Programming Updates

None.

6.0 Purpose and Description

6.1 Purpose

This FFBM provides Dual Gripper function to enhance throughput.

6.2 Description

Provides a second reach assembly (gripper), bumper bracket, mounting hardware and Installation Instructions.

7.0 Installation Time

Machine Hours	System Hours	CE Hours
2.5	0.0	2.8

8.0 Special Tools, Materials, and/or Procedures Required

The IBM 3494 Tape Library Dataserver Maintenance Information manual will be required for this install.

Warning: Some parts handled during this installation are sensitive to electrostatic discharge (ESD). See "Working with ESD-Sensitive Parts" in the CARR section of the 3494 Maintenance Information Manual.

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

9.0 Safety

9.1 Safety Notice

None

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. If you are in an HA1 environment, ensure that dual active accessor mode is off.

___ 4. Place the library manager in **Offline** mode.

___ 5. From the **Mode** at Library Manager *B*, select to **Shutdown** the Library Manager. (This will only shutdown the the standby Library Manager.)

___ 6. Once the **Shutdown panel** appears, select to **Shutdown for power off**.

___ 7. Once the Library Manager completes its shutdown, power off the frame at the CB1 on the PCC.

___ 8. Leave this frame powered off until the "Dual Gripper" function within the 3494 Model L10/L12/L14 has been completed.

Note: **Restrictions in this Mode**: The library will indicate it is running in degraded mode because the standby Library Manager (links not enabled) is not enabled.

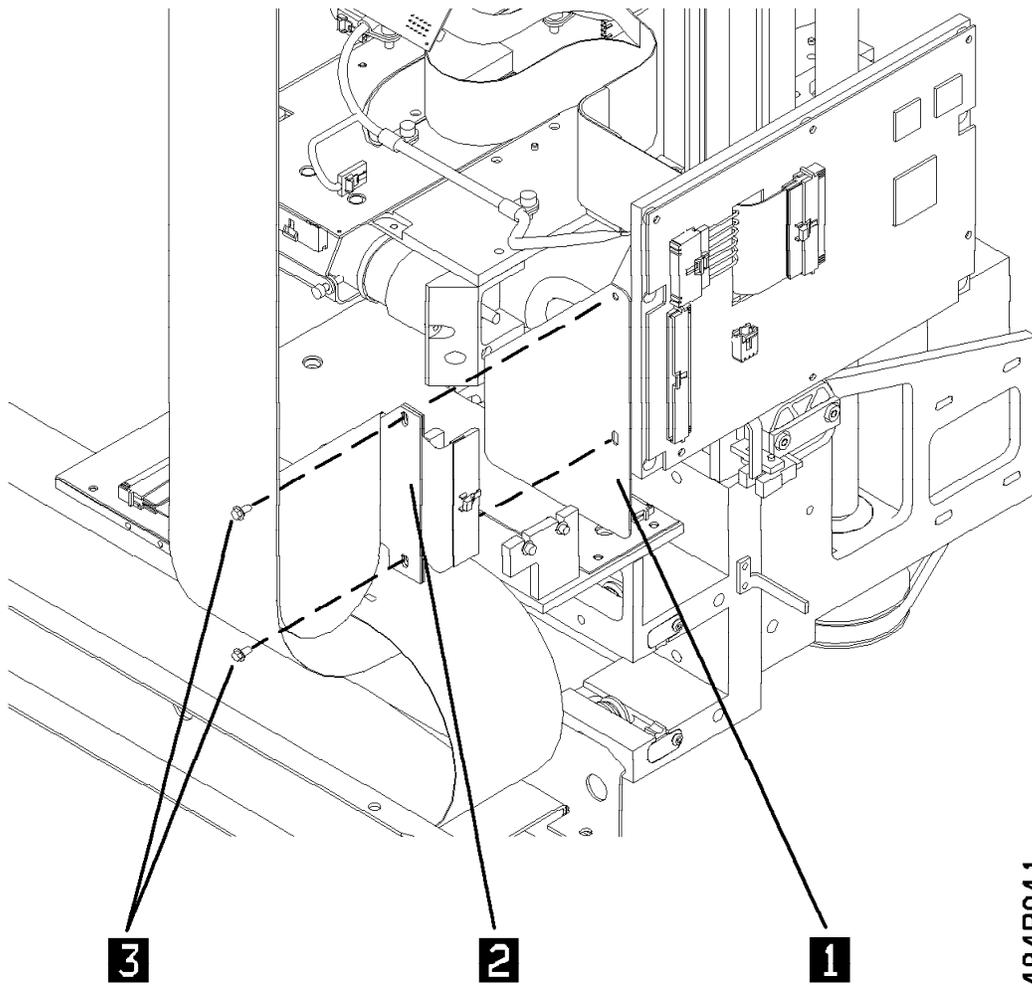Proceed to Section 10.2, "Cable Loop Restraint."

10.2 Cable Loop Restraint

See Figure 1 on page 6 when doing the following step.

___ 1. Remove two screws **3** , install the plate **1** (PN 05H7400, supplied) between the cable assembly and the picker casting.

___ 2. Reinstall with the two screws removed in the previous step.

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Figure 1. Install Cable Loop Restraint

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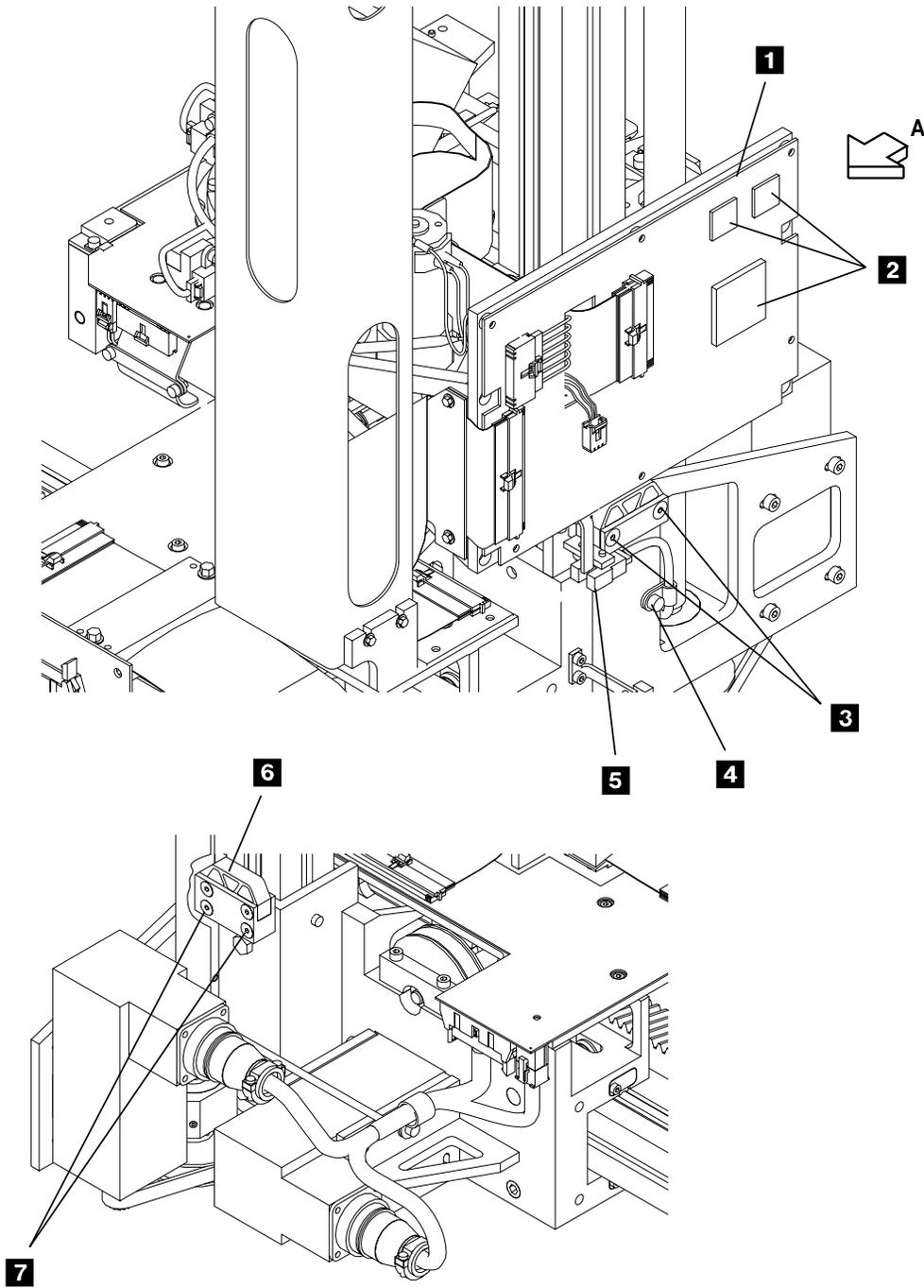## 10.3 Remove the Y-Home Sensor/Bumper Assembly

See Figure 2 on page 8 when doing the following step.

___ 1. Remove the Y-Axis home sensor/bumper assembly **5** by removing the two mounting screws **3** . Retain hardware for later use.

___ 2. Remove the Y-home sensor cable clamp **4** . Retain the hardware for later use.

___ 3. Remove the bumper assembly **6** by removing the 2 screws **7** . Removed hardware will not be used again. Set aside for proper parts disposition.

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Figure 2. Picker Card and Y-Axis Bumper Asm.

10.4 Install the new Bumper Bracket

See Figure 3 on page 10 when doing the following step.

___ 1. Insert some paper in the Y-axis rail T-nut slot above the Y-axis casting **4** to prevent the T-nut **3** from sliding down below the top of the of Y-axis casting. If the T-nut slides down below the top of the Y-axis casting it will be very difficult to retrieve.

___ 2. Locate the bumper bracket location hole **2** on the Y-rail assembly **1** .

___ 3. Insert the T-nut **3** (P/N 34G9647, supplied) into the Y-rail assembly center slot within +/- 25mm vertically to the bumper bracket positioning hole **2** on the Y-rail assembly.

___ 4. Insert the bumper bracket mounting screw **8** through the bumper bracket **7** .

___ 5. Position the bumper bracket and the mounting screw **8** to the Y-rail assembly and engage the thread of the bumper mounting screw **8** into the T-nut **3** . Do not tighten the screw.

___ 6. Remove the paper inserted in step 1.

___ 7. Position the bumper bracket **7** (with the mounting screw engaged into the T-nut) so that the bumper bracket locating pin can be inserted into the Y-axis bumper locating hole **2** . Tighten the bumper bracket mounting screw **8** .

Go to Section 10.5, "Install the Y-Axis Home Sensor."

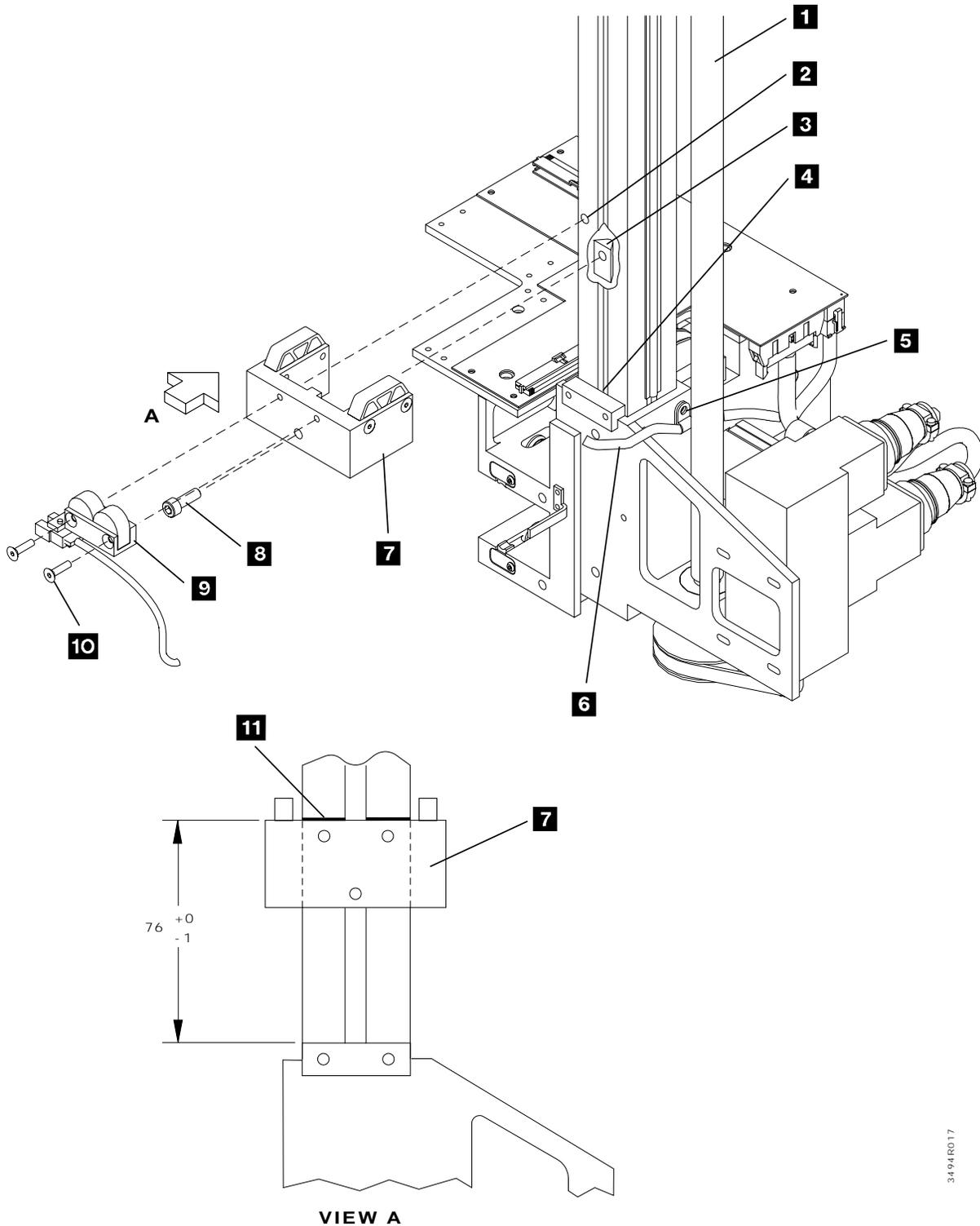## 10.5 Install the Y-Axis Home Sensor

See Figure 3 on page 10 when doing the following step.

___ 1. Reinstall the screws **10** and the Y-axis home sensor/bumper assembly **9** (that were both removed in Seciton 10.3, step 1 on page 7) into the bumper bracket just installed in step 7.

___ 2. Route the Y-home sensor cable **6** as shown, and install the cable clamp **5** to the Y-axis casting using the cable clamp and screw removed previously.

Note: Ensure that the Y-home sensor cable is routed to prevent any contact with moving parts.

Go to Section 10.6, "Install the Second Picker Assembly" on page 11.

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Figure 3. New Y-Axis Bumper and Sensor Asm.

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10.6 Install the Second Picker Assembly

See Figure 4 on page 12 when doing the following step.

__ 1. Install the dual gripper attachment brackets, P/N 05H1998,(4X) **2** to the underside of the reach assembly **1** using screws, P/N 1621509 and lockwashers, P/N 1622259, **3** provided.

> **Note:** You can use two hex wrenches **7** of appropriate size to support the picker assembly to the attachment brackets just installed while you install the mounting screws and lockwashers on the opposite side during the next step. You can also rotate the Picker Assembly to gain access to the mounting screws.

__ 2. Install the picker assembly, P/N 05H7196, **6** using screws, P/N 1621509 and lockwashers, P/N 1622259, **5** provided.

__ 3. Install the dual gripper interface cable assembly, P/N 05H4058, **4** between the upper and lower reach card assembly.

Turn on CB1 when the procedure is complete.

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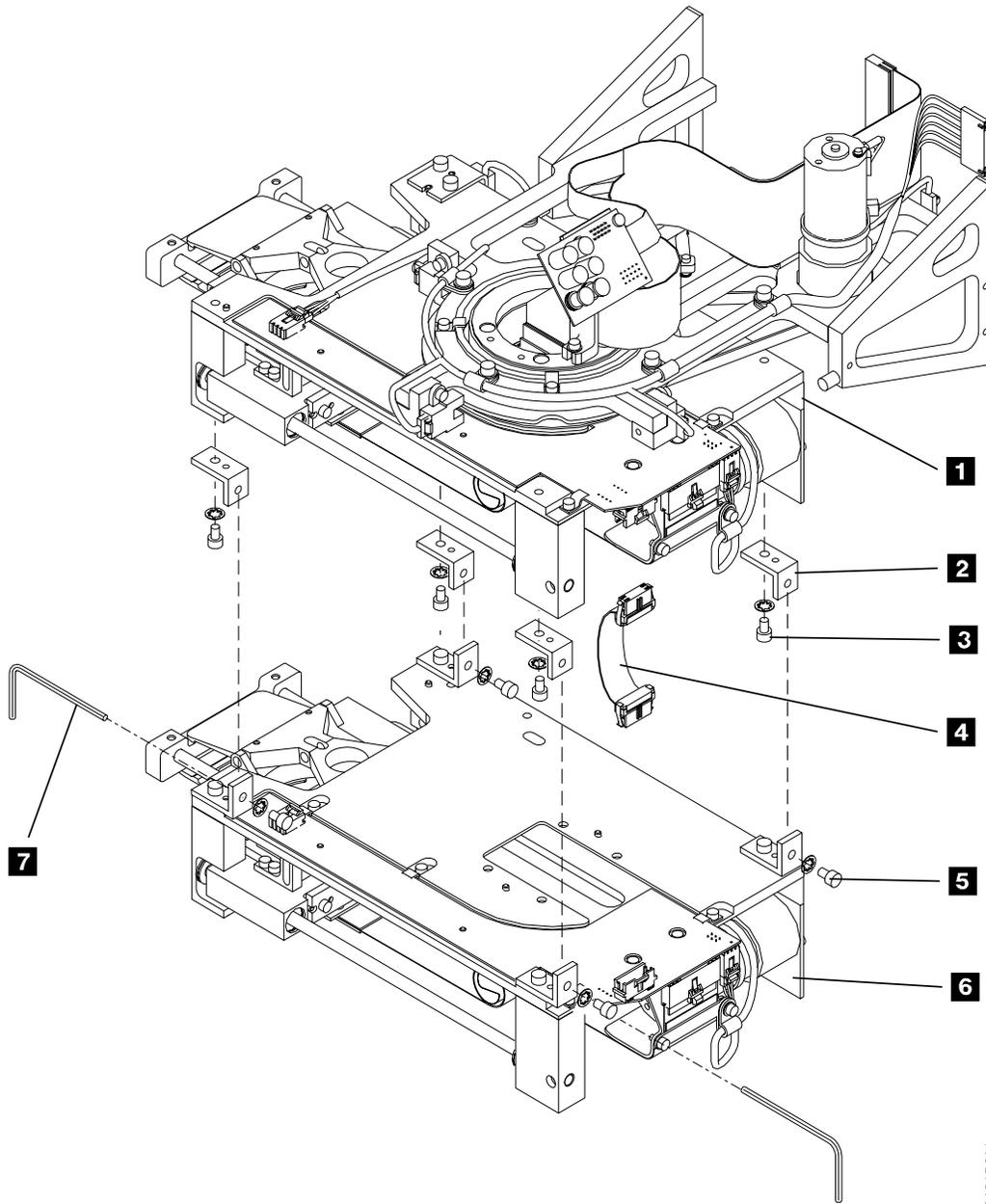
Figure 4. Dual Gripper Assembly

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After Installation (Sections 11 through 15)

11.0 Test Procedure

The test procedure will be accomplished within installation instruction P/N 50G0973 ("Dual Gripper <FC 5215> for the 3494 Tape Library Dataserver Models L10/L12/L14"), after the installation of the "Dual Gripper" function within the 3494 Model L10/L12/L14.

Go to Section 12.0, "Field Updating."

12.0 Field Updating

None

13.0 Field Support Publications

None

14.0 Parts Disposition

See the *Ownership of Parts Matrix*, to determine the correct owner of removed or unused parts. Process all parts determined to be IBM property as follows:

USA

Provide all parts to the IBM Branch Office for potential return in accordance to existing return, recovery and reclamation programs.

World Trade

Return removed parts to Country Central Stock per existing procedures.

15.0 Machine Records

___ 1. Update machine history provided. Using existing procedures, update all appropriate field records to reflect that Feature Code 5215 has been installed.

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

___ 3. Return to the Test Procedure within the "Dual Gripper" installation instructions (P/N 50G0973) for the 3494 Model L10/L12/L14 Control Unit.

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