**GCX**
*INSTRUMENT MOUNTING SYSTEMS*

## Installation Guide

## Philips MP90 VHM™ Wall Mount Kit

*The purpose of this guide is to describe the procedures for installing the MP90 VHM™ Wall Mount Kit.*



## Table of Contents

# Section 1.0:  Mounting the VHM-Series Arm

This section covers mounting of the VHM Arm.

## 1.1  Parts Reference

The following parts and hardware are included in the installation kit (hardware not shown):

| Item # | Description | Qty |
|--------|-------------|-----|
| 1 | VHM Arm with 6" Riser and Philips Mounting Plate | 1 |
| 2 | Lever, Tilt Adjustment | 1 |
| 3 | Remote Speedpoint/External Alert/Display Mounting Kit (see page 5 for parts) | 1 |
| 4 | Down Post Kit, 6" and 12" Posts | 1 |
| 5 | Utility Hook Kit | 1 |
| 6 | Wall Channel Cover, 16" | 1 |
| 7 | 1/8" Hex Wrench | 1 |
| 8 | 1/4" Hex Wrench | 1 |
| 9 | 5/32" Hex Wrench | 1 |
| 10 | 9/64" Hex Wrench | 1 |
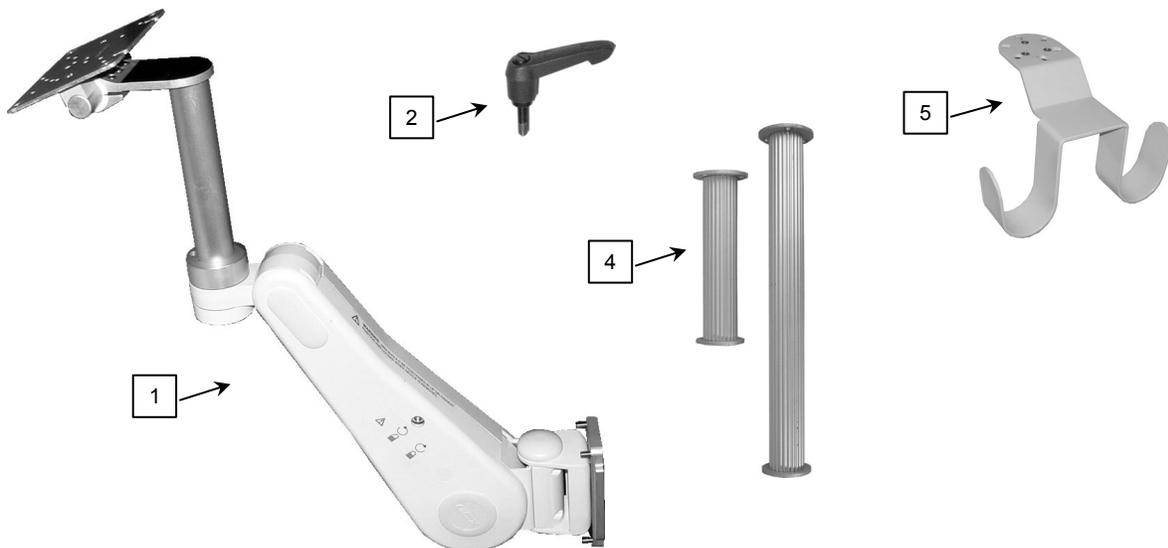
**Tools Required**

Phillips screwdriver (not provided); 9/64", 1/8", and 1/4" hex wrenches (provided).

### 1.2 Mounting the VHM Arm in the Wall Channel

**Mounting VHM Arm in Wall Channel**

1.  Thread the Height Locking Lever into the mounting hole in the right side of the Arm. The Lever operates by turning clockwise to tighten or counterclockwise to loosen. Ensure that the Locking Lever is in the locked position before mounting the Arm in the channel.

Height Locking Lever
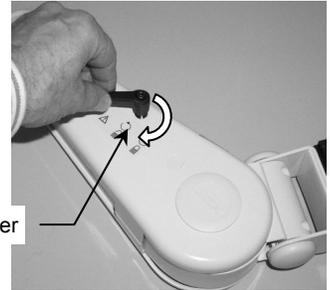
2.  While supporting the bottom of the Arm, guide the Slide into the top of the wall channel (below left) and move Arm to required mounting position.

3.  Using the 1/8" hex wrench provided, tighten four (4) set screws in Slide to secure position of Arm (below right).

Insert Slide

Set Screws (2 upper)

Set Screws (2 lower)
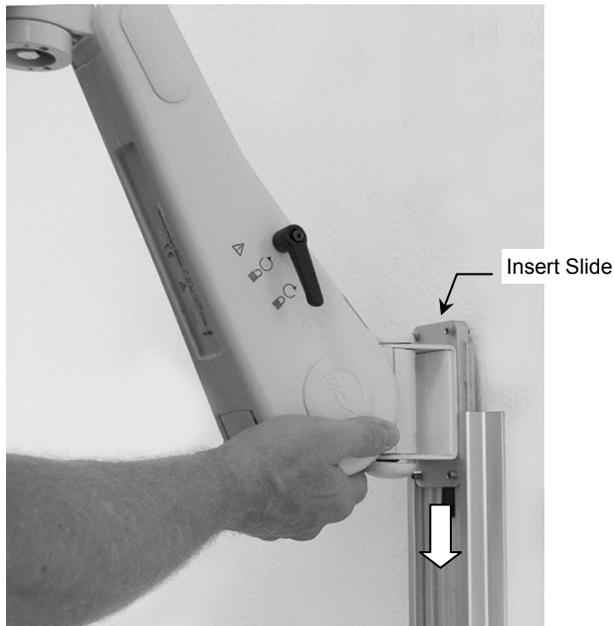
### 1.3  Installing the Tilt Adjustment Lever

**Installation Note:** Do not install the Tilt Adjustment Lever if you will be mounting a M8031B (15") display with Power Supply Holster. Tilt tension adjustment (if using Philips-supplied equipment) will be accomplished using a 9/64" hex wrench to loosen/tighten the two (2) socket head cap screws on top of the Manual Tilt Clamp.

1.  Using the 1/4" hex wrench, remove the tilt limit screw (right) from the Manual Tilt Clamp.

2.  Screw the Tilt Adjustment Lever (clockwise) into the threaded hole on top of the Manual Tilt Clamp. **Note:** It may be necessary to tilt the Mounting Plate down to install the Tilt Lever. Adjust tilt tension screws (below center) if necessary.

Tilt Limit Screw

Tilt Tension Screws (2)
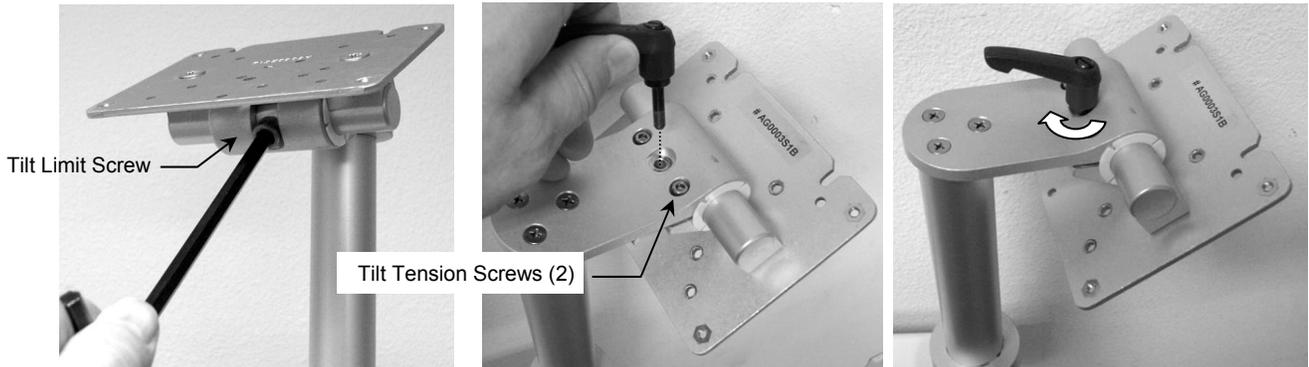
**Note:** The Tilt Adjustment Lever is a multi-position clamping lever that operates by lifting, rotating, and releasing the handle.

LIFT

ROTATE

RELEASE
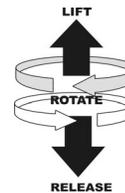
# Section 2.0: Attaching Remote Speedpoint/Alert Brackets & Mounting the Display

## Parts Reference

The following parts and hardware are included in this installation kit (hardware not shown):

| Item # | Description | Qty |
|:---:|---|:---:|
| 1 | Remote Bracket | 1 |
| 2 | Alert Bracket | 1 |
| 3 | Remote Speedpoint Adapter | 1 |
| 4 | Reinforcing Bar | 1 |
| 5 | VESA Mounting Adapter, 100mm to 75mm | 1 |
| 6 | Spacer, 17" Display Mounting  (P/N AG0019S22A) | 1 |
| 7 | Spacer, 15" Display Mounting  (P/N AG0019S15A) | 1 |
| 8 | M4 x 6mm Flat Head Machine Screw (FHMS) | 2 |
| 9 | M4 x 8mm Pan Head Machine Screw (PHMS) | 10 |
| 10 | M4 x 10mm PHMS | 2 |
| 11 | M4 x 12mm PHMS | 4 |
| 12 | M4 x 16mm PHMS | 2 |
| 13 | M4 x 16mm FHMS | 3 |
| 14 | M4 x 20mm FHMS | 2 |
| 15 | M4 x 25mm PHMS | 4 |
| 16 | M4 x 40mm PHMS | 2 |
| 17 | Alert Spacer, 1.25" Aluminum | 2 |
| 18 | Spacer, 1/2" Nylon | 2 |
| 19 | #8 Retention Washer | 2 |
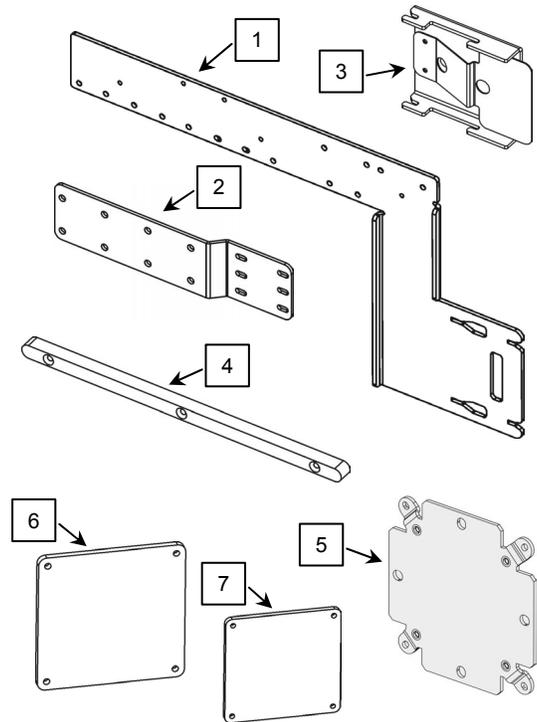


## Tools Required

Phillips screwdriver (not provided).

## Installation Reference – Remote Bracket Mounting Holes

Mounting holes are identified by shaded areas shown below:



Alert Bracket Mounting Holes

Mounting Holes for Power Supply Holster (15" Display Only)

Reinforcing Bar Mounting Holes

Bracket-to-Display Mounting Holes

Remote Speedpoint Mount
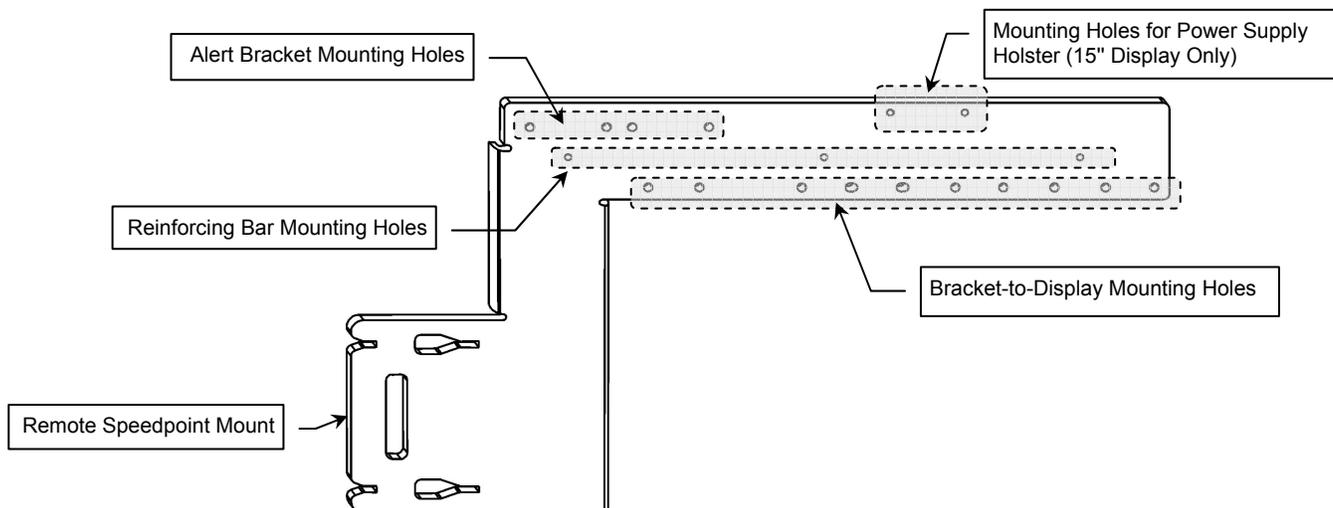
## 2.1 Attaching Remote Bracket and Mounting 15" (M8031B) Display

The following attachment procedures are for right-side mounting of both Remote and Alert devices on the M8031B display. The mounting holes shown in the following illustrations are typical. The actual application may require the use of different mounting holes.



1. Insert **Spacer** (P/N AG0019S15A) between display and Remote Bracket.

M4 x 16 mm PHMS (2)

2. Loosely fasten **Remote Bracket** to upper mounting holes in display with two (2) **M4 x 16 mm PHMS**. Leave 5mm of each screw exposed to allow VESA Mounting Plate to be inserted between Remote Bracket and display.



3. Guide mounting screws into upper slots of Mounting Plate, ensuring Mounting Plate is **between Display and Remote Bracket**.

M4 x 12 mm PHMS (2)

4. Thread two (2) **M4 x 12 mm PHMS** into lower mounting holes in display.

5. Tighten all four (4) mounting screws.

6. Proceed to Sections 4.0 and 5.0 for further installation procedures.

## 2.2 Attaching Remote Bracket and Mounting 17" (M8033C) Display

The following attachment procedures are for right-side mounting of both Remote and Alert devices on the M8031C display. The mounting holes shown in the following illustrations are typical. The actual application may require the use of different mounting holes.



Spacer

VESA Mounting Adapter

M4 x 25 mm PHMS (4)

**1.** Insert **Spacer** (P/N AG0019S22A) between display and **VESA Mounting Adapter** (P/N FLP-0002-17C).

**2.** Fasten VESA Mounting Adapter to display with four (4) **M4 x 25 mm PHMS** as shown.

Remote Bracket

M4 x 12 mm PHMS (2)

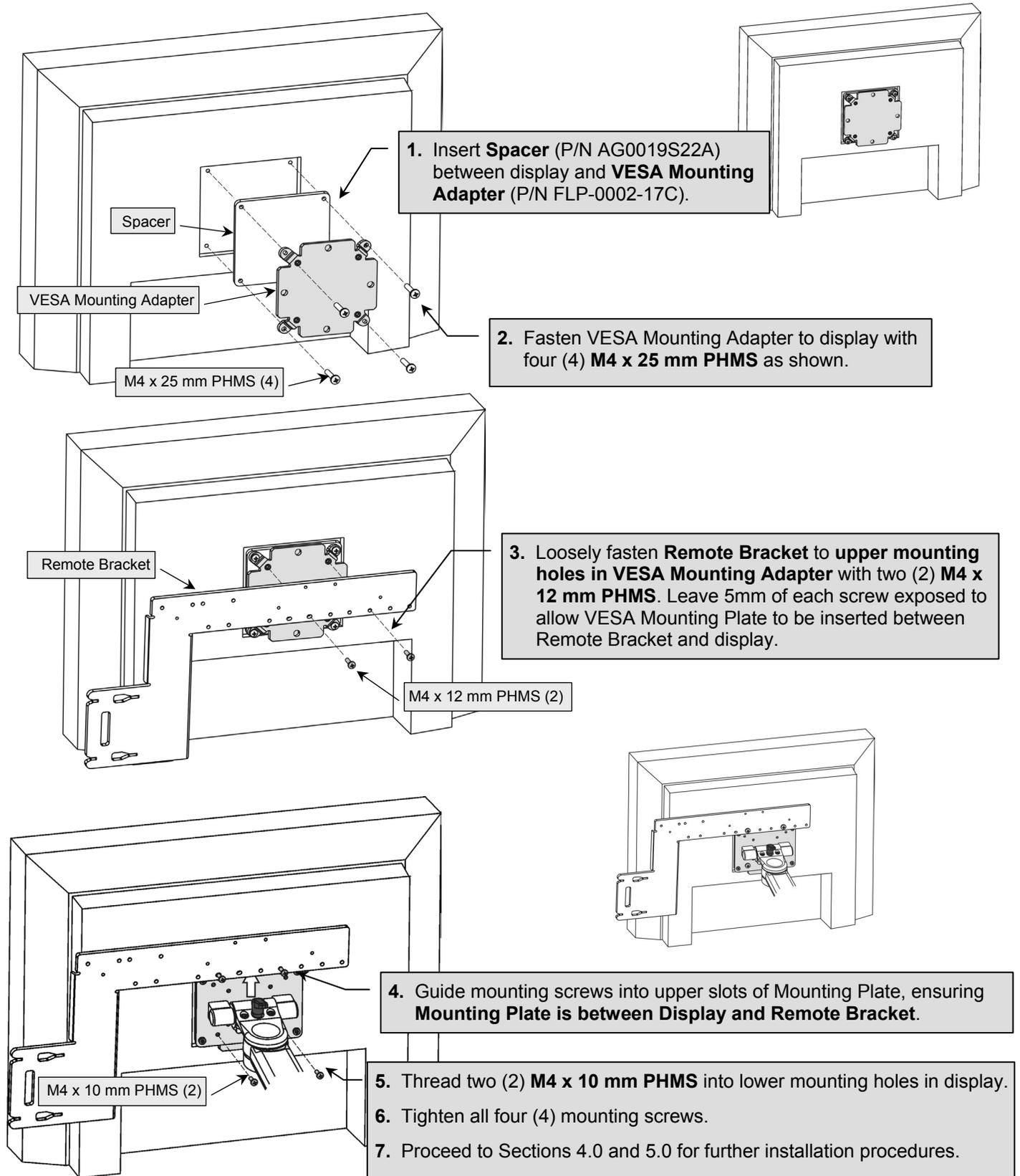**3.** Loosely fasten **Remote Bracket** to **upper mounting holes in VESA Mounting Adapter** with two (2) **M4 x 12 mm PHMS**. Leave 5mm of each screw exposed to allow VESA Mounting Plate to be inserted between Remote Bracket and display.

M4 x 10 mm PHMS (2)

**4.** Guide mounting screws into upper slots of Mounting Plate, ensuring **Mounting Plate is between Display and Remote Bracket**.

**5.** Thread two (2) **M4 x 10 mm PHMS** into lower mounting holes in display.

**6.** Tighten all four (4) mounting screws.

**7.** Proceed to Sections 4.0 and 5.0 for further installation procedures.

## 2.3  Attaching Alert Bracket and Reinforcing Bar to Remote Bracket

These procedures apply to both 15" and 17" displays.

Alert Bracket

M4 x 8 mm PHMS (2)

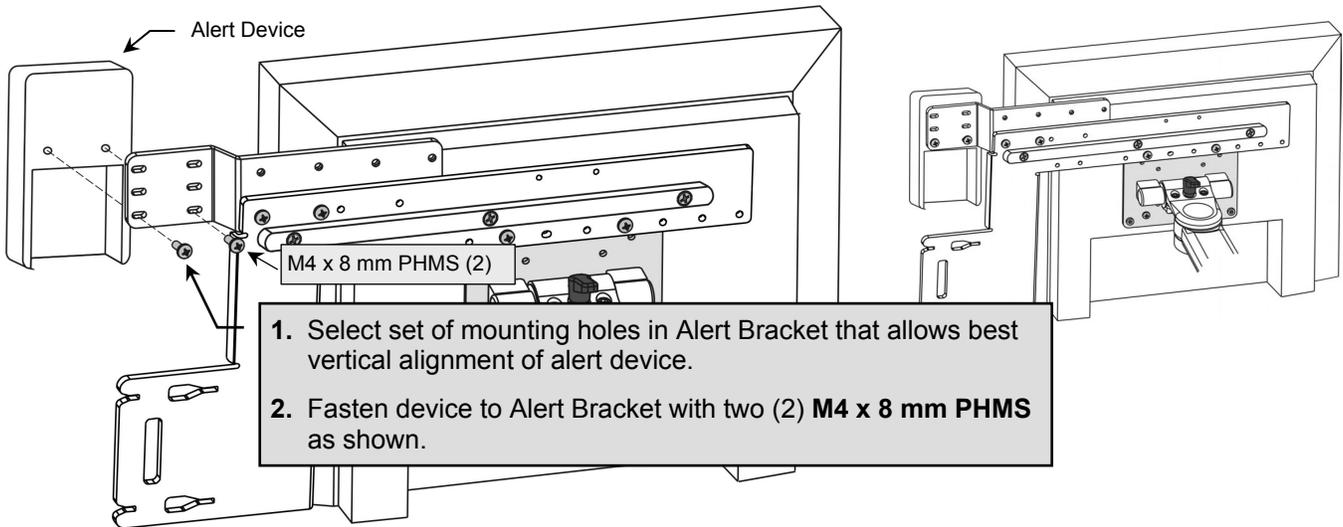**1.** Fasten **Alert Bracket** to **Remote Bracket** with two (2) **M4 x 8 mm PHMS** as shown.

Reinforcing Bar

M4 x 16 mm FHMS (3)

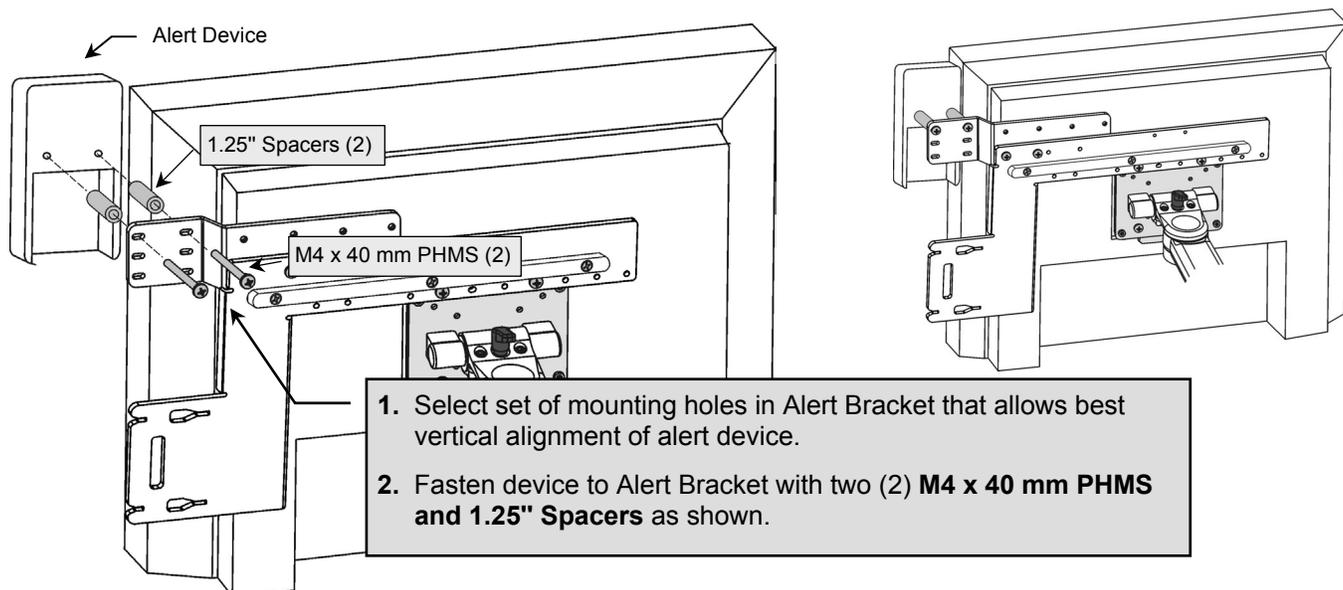**2.** Fasten **Reinforcing Bar to Remote Bracket** with three (3) **M4 x 16 mm FHMS** as shown.
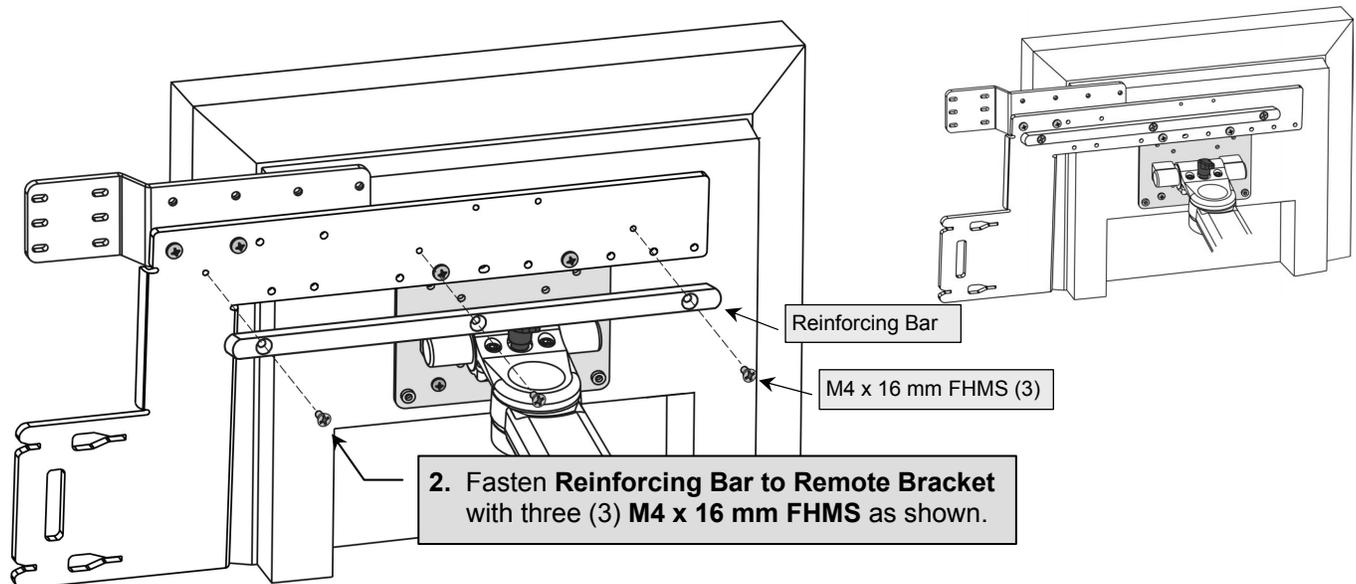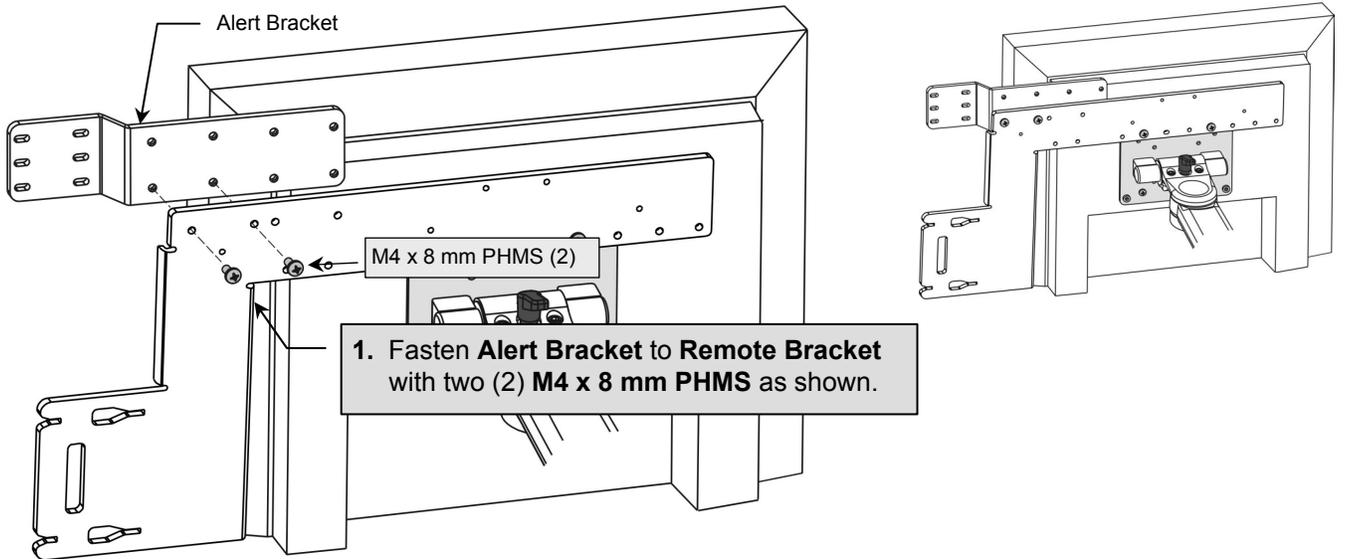
**2.4  Mounting the Devices and Power Supply Holster**

**2.4.1  Mounting External Alert Device with 15" (M8031B) Display**

Alert Device

M4 x 8 mm PHMS (2)

> **1.** Select set of mounting holes in Alert Bracket that allows best vertical alignment of alert device.
>
> **2.** Fasten device to Alert Bracket with two (2) **M4 x 8 mm PHMS** as shown.

**2.4.2  Mounting External Alert Device with 17" (M8033C) Display**

Alert Device

1.25" Spacers (2)

M4 x 40 mm PHMS (2)

> **1.** Select set of mounting holes in Alert Bracket that allows best vertical alignment of alert device.
>
> **2.** Fasten device to Alert Bracket with two (2) **M4 x 40 mm PHMS and 1.25" Spacers** as shown.

## 2.5  Mounting the Remote Speedpoint

Remote Speedpoint

Remote Adapter

M4 x 6 mm FHMS (2)

**1.** Fasten **Remote Adapter** to rear of device with two (2) **M4 x 6 mm FHMS** as shown.

Insert four (4) **tabs** on **into slots** in Remote Bracket.

Tabs engaged

**Press Tab** to disengage Remote Speedpoint from Remote Bracket.
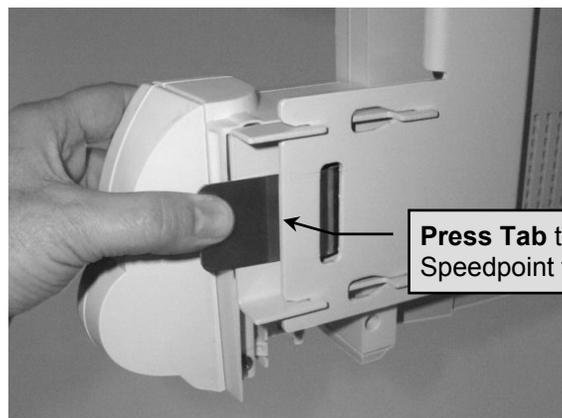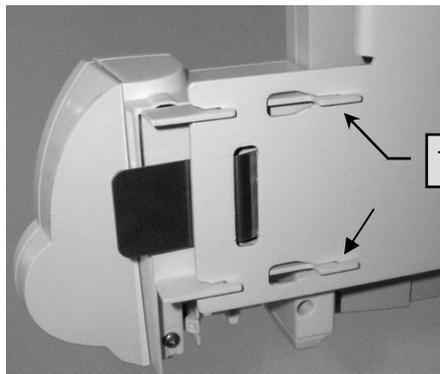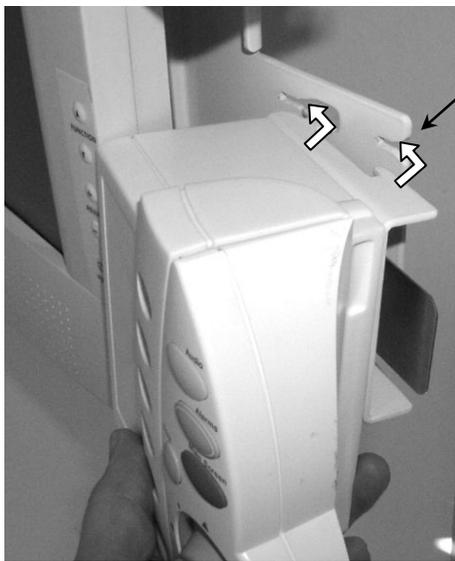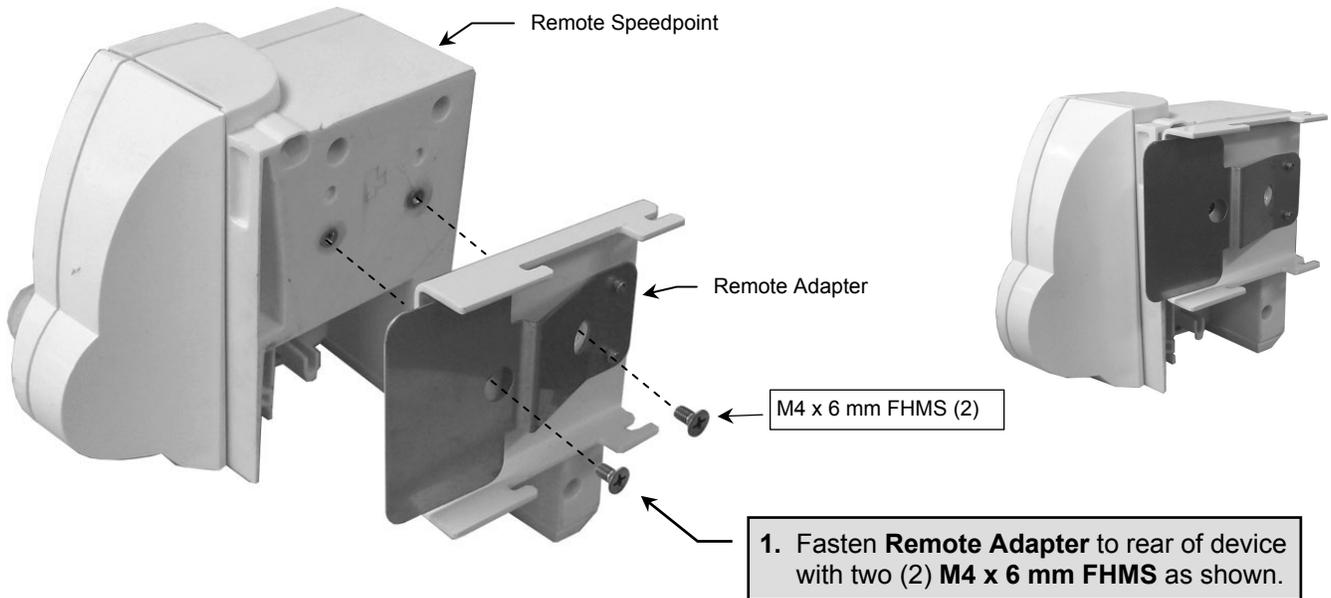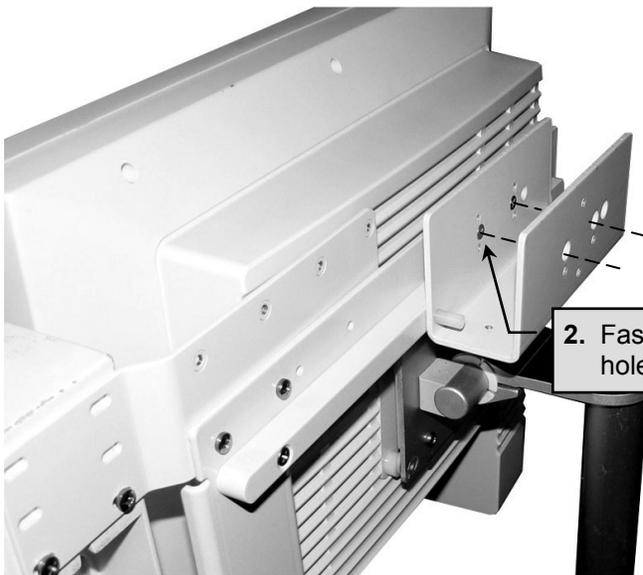
## 2.6  Attaching Power Supply Holster (not supplied) to Remote Bracket

This procedure applies only to the 15" (M8031B) display. The Power Supply Holster is not supplied in this installation kit.

Insert screws through inside wall of Holster.
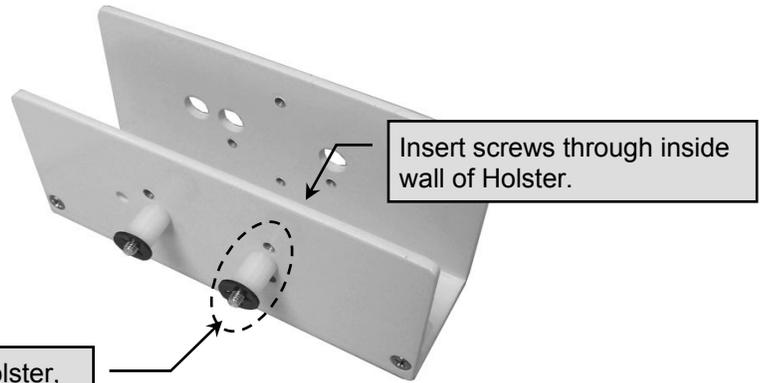
**1.** Insert **M4 x 20 mm FHMS (2)** from inside Holster, and assemble **Nylon Spacers (2), and Retention Washers (2) on Screws** as shown.
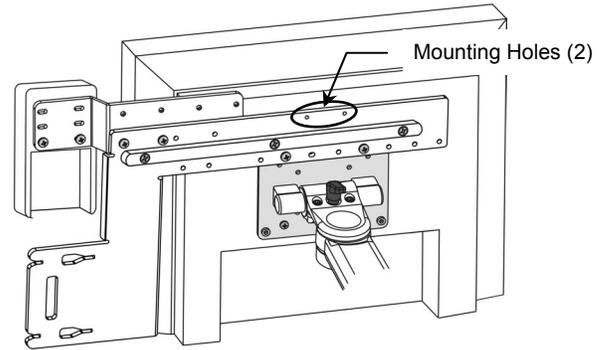
Mounting Holes (2)

**2.** Fasten Power Supply Holster to two (2) mounting holes in the Remote Bracket as shown.
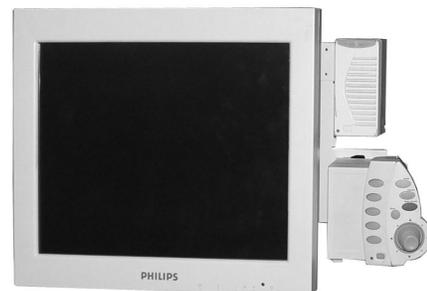
## Section 3.0:  Attaching Down Post & Utility Hook to the VHM Arm

**Installation Note:** The Down Post and Utility Hook Kits contain mounting hardware called out below.

**Tools Required:**  Phillips screwdriver (not provided), 5/32" hex wrench (provided).

1. Remove the round plastic bolt cap from the bottom front end of the arm.

2. Using the 5/32" hex wrench provided, fasten the Post (6" or 12") to the Swivel Cup with three (3) #10-32 x 3/8" SHCS.



VHM Arm

Swivel Cup

#10-32 x 3/8" SHCS (3)

Post (6" shown)
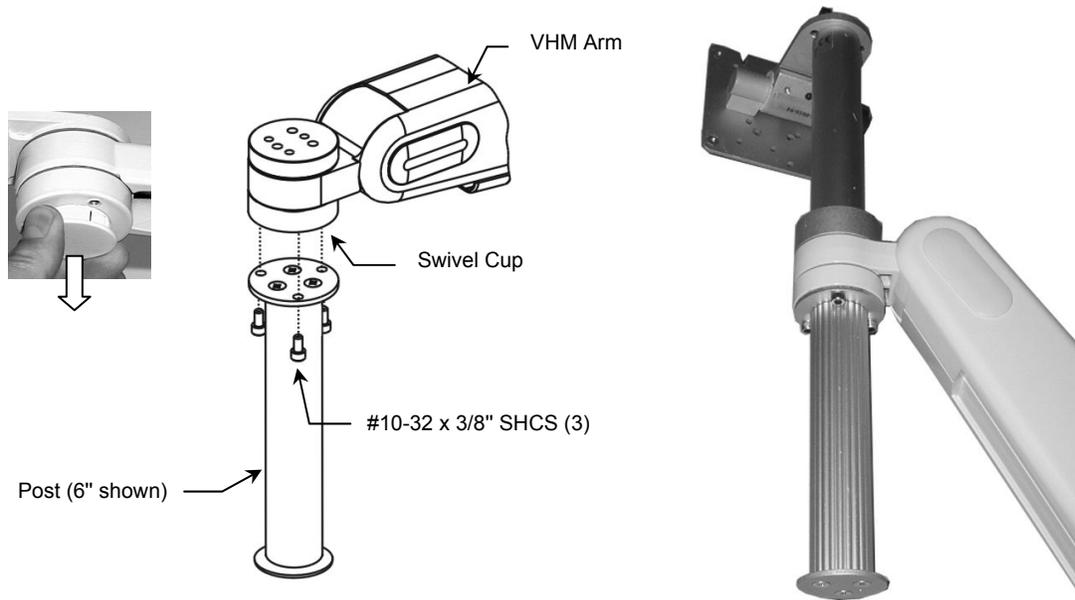
3. Using a Phillips screwdriver, unscrew Lower Post Disc from bottom end of Down Post (below left).

4. Align the inner 3-hole mounting pattern in the Utility Hook with the mounting holes in the bottom of the Down Post. Fasten Utility Hook to Post with three (3) #10 x 5/8" pan head sheet metal screws (PHSMS) as shown below right.



Post Disc Removed

#10 x 5/8" PHSMS (3)

Utility Hook
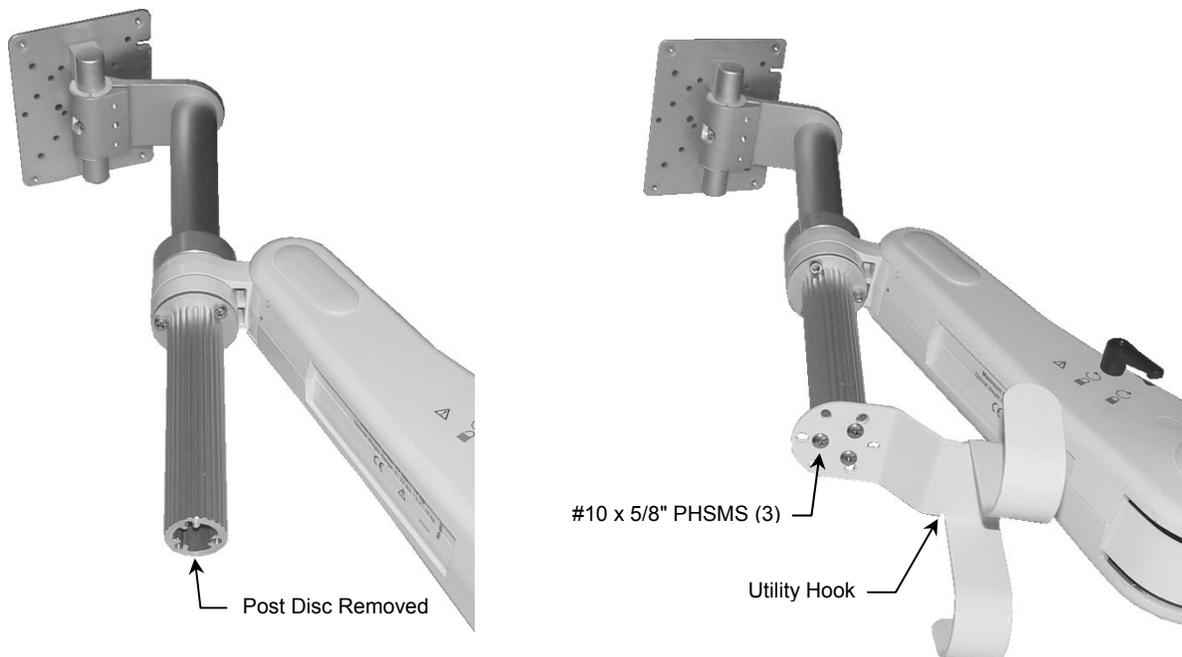
# Section 4.0: Counterbalance Adjustment

The VHM Arm must be adjusted to counterbalance the mounted instruments throughout the Arm's vertical range of motion. When properly counterbalanced, the VHM Arm will maintain its height when the Locking Lever is disengaged. Because instrument weights vary, some adjustment is required to achieve optimal performance.

⚠ **Use Caution while performing this procedure. Do not attempt counterbalance adjustment unless the instrument and accessories are mounted on the Arm.**

1. Grasp the Arm behind the mounted instrument(s) to prevent sudden upward motion. Carefully unlock the Arm and move it to a horizontal position that allows access to the Adjuster Cover (below left). Lock Arm in horizontal position.

2. Open the Adjuster Cover by inserting a flat blade screwdriver in the slot at the rear of the Cover and prying upward. If necessary unlock and readjust the Arm until the Counterbalance Adjuster bolt is accessible through the Adjuster Cover (below center). Lock Arm when Counterbalance Adjuster is accessible.

3. With the 1/2" [13mm] socket wrench on the Adjuster, carefully unlock the arm. Turn the Adjuster *counterclockwise (CCW)* to increase counterbalance force, or *clockwise (CW)* to decrease counterbalance force. Counterbalance is correctly adjusted when the mounted instrument can be moved up or down with minimal force and does not rise or fall after releasing the Arm. Close Adjuster Cover.

Counterbalance Adjuster Bolt

Adjuster Cover

1/2" [13 mm] Socket Wrench

**CW** Decreases Force
**CCW** Increases Force
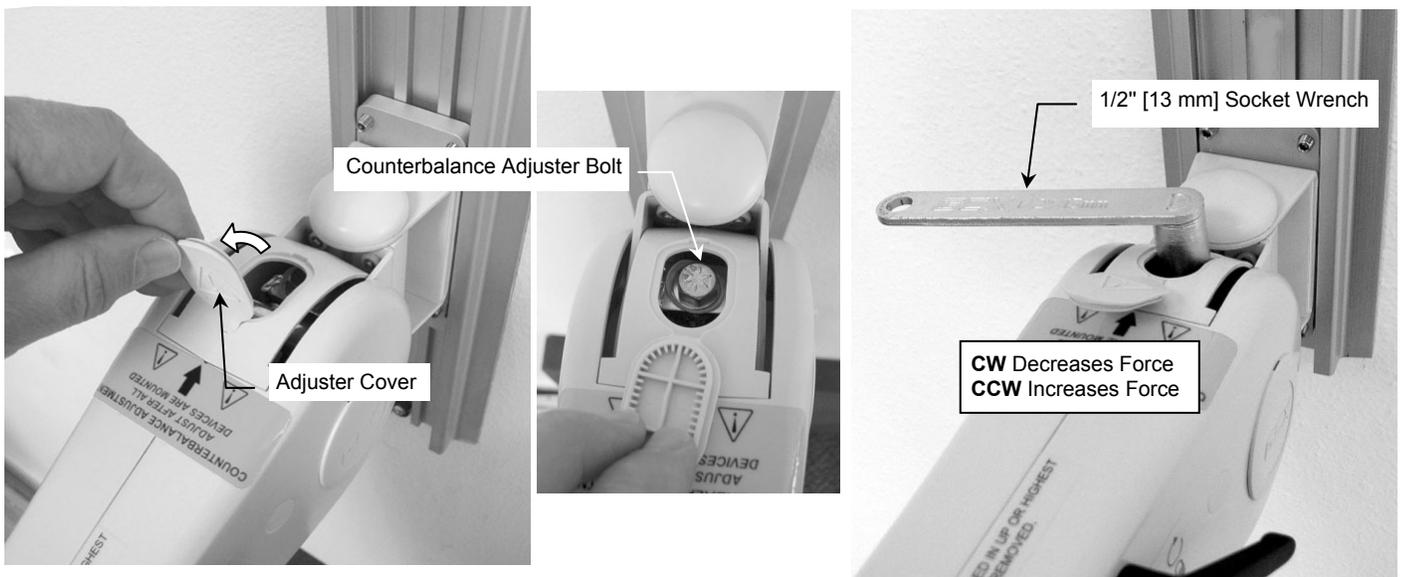
4. Check the pivot, tilt, and swivel functions for proper tension. If adjustments are required, refer to the *"VHM Arm Operation & Adjustment"* on pages 5 - 6.

## Section 5.0: Cable Management

### Cable Guides

Two (2) Molded Cable Guides are provided to facilitate routing of cables along the underside of the arm. Squeeze the Cable Guide until its edges snap into the grooves in the bottom surface of the arm. Leave extra cable loose at the front and rear of the arm to prevent cable binding or damage to connectors.

Cable Guides (2)

### Wall Channel Cover (not shown)

After instruments are mounted and cables connected, install the Wall Channel Cover in accordance with *Channel Cover Installation Guide* (DU-UT-0001-20).

## Section 6.0: Routine Maintenance and Cleaning

### Routine Maintenance

Periodically check all tilting, swiveling, pivoting, and mounting hardware. Tighten as necessary for optimal operation and safety.

### Cleaning the Mounting Assembly

1. The mounting assembly may be cleaned with most mild, non-abrasive solutions commonly used in the hospital environment (e.g. diluted bleach, ammonia, or alcohol solutions).

2. The surface finish will be permanently damaged by strong chemicals and solvents such as acetone and trichloroethylene.

3. Do not use steel wool or other abrasive material to clean the mounting assembly.

4. Damage caused by the use of unapproved substances or processes will not be covered by warranty. We recommend testing of any cleaning solution on a small area of the arm that is not visible to verify compatibility.

5. Do not submerge or allow liquids to enter the arm. Wipe any cleaning agents off of the arm immediately using a water-dampened cloth. Dry the arm thoroughly after cleaning.

**CAUTION:** GCX makes no claims regarding the efficacy of the listed chemicals or processes as a means for controlling infection. Consult your hospital's infection control officer or epidemiologist. To clean or sterilize mounted instruments or accessory equipment, refer to the specific instructions delivered with those products.