

# DIGITAL DS-BA370-AA RAID StorageWorks Shelf

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## Field Installation Guide

Part Number: EK-BA37F-IN. A01

**November 1998**

**Compaq Computer Corporation  
Houston, Texas**

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**November 1998**

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# Preface

## Overview

This guide provides the information necessary to install the DS-BA370-AA RAID StorageWorks Shelf in an H9A10 or H9A15 cabinet.

## Intended Audience

This guide is intended for Compaq service personnel or qualified self-maintenance customers who are familiar with installing computer systems.

## How to Use This Guide

Read this guide *before* installing the DS-BA370-AA RAID StorageWorks shelf.

Before installation review the warranty. The terms of the warranty agreement with Compaq may require that a qualified Compaq Customer Services representative install the system. Contact your local Compaq representative if you have any questions.

## Organization

This guide is organized as follows:

**Chapter 1, Introduction** – Provides an overview of the possible configurations of the BA370 StorageWorks shelf in a standard or extended depth H9A10 or H9A15 cabinet and the types of installations available.

**Chapter 2, Installation** – Provides site preparation, unpacking, shelf installation, and option installation information.

## Conventions

This guide uses the following conventions:

<b>Convention</b>	<b>Meaning</b>
<b>Note</b>	A note calls the reader's attention to any item of information that may be of special importance.
<b>Caution</b>	A caution contains information essential to avoid damage to the equipment.
<b>Warning</b>	A warning contains information essential to the safety of personnel.
<b>❶</b>	Circled numbers provide a link between figures or examples and text.

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Information Design

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# Introduction

## 1.1 Introduction

The BA370 StorageWorks shelves are normally factory installed in either H9A10 or H9A15 cabinets that have an EIA rail-hole pattern. These cabinets can be upgraded in the field by adding additional BA370 StorageWorks shelves.

The standard depth H9A10 cabinet can normally have one BA370 shelf mounted in the top front of the cabinet, while the extended depth H9A10 cabinet can have one BA370 shelf mounted in the top front and one BA370 shelf mounted in the top rear.

The standard depth H9A15 cabinet can normally have two BA370 shelves mounted one above the other in the front of the cabinet, while the extended depth H9A15 cabinet can have two BA370 shelves mounted one above the other in the front and two BA370 shelves mounted one above the other in the rear.

## 1.2 Types of Installation

There are three ways of mounting the BA370 shelves in the H9A10 and H9A15 cabinets. These three mounting types are:

- Front fixed mounting
- Front slide mounting
- Rear fixed mounting

The front fixed mounting is used when there are only going to be front mounted BA370 shelves in the cabinet.

The front slide mounting is used when BA370 shelves are going to be front and rear mounted in the same cabinet. This allows the front shelf to be extended from the cabinet to allow access to the rear of both shelves for maintenance.

## Introduction

The rear fixed mounting is used for all rear mounted BA370 shelves in the cabinet.

The standard depth H9A10 cabinet can have one front fixed mounted or one front slide mounted BA370 shelf in the top of the cabinet. The extended depth H9A10 cabinet can have one front slide mounted BA370 shelf in the top front of the cabinet and one rear fixed mounted BA370 shelf in the top rear of the cabinet.

The standard depth H9A15 cabinet can have two front fixed mounted or two front slide mounted BA370 shelves in the front of the cabinet. The extended depth H9A15 cabinet can have two front slide mounted BA370 shelves in the front of the cabinet and two rear fixed mounted BA370 shelves in the rear of the cabinet.

An optional front door and bezel kit is available for front fixed and slide mounted BA370 shelves that are installed in H9A10 and H9A15 cabinets that do not have a front door.

## **2.1 Introduction**

This chapter contains the following information:

- Contents of the installation kits
- Site preparation
- BA370 StorageWorks shelf preparation
- Front fixed mounting installation procedures
- Front slide mounting installation procedures
- Rear fixed mounting installation procedures
- Battery mounting bracket installation
- Optional front door and bezel kit installation procedures
- H7600 front mounting brackets installation procedures

## Installation

### 2.2 Installation Kits

Four different kits are available for installing the BA370 shelf in an H9A10 or H9A15 cabinet. The kit used, or the combination of kits used, depends on the type of installation that is being performed. An optional front door and bezel kit is available for the front fixed and slide mounted BA370 shelves that are installed in H9A10 and H9A15 cabinets that do not have a front door.

A field mounting kit (2T-BA370-FI) is required for installing a front fixed or rear fixed mounted BA370 shelf. This kit basically consists of two rails that are temporarily installed to support the BA370 shelf while the shelf is being secured in the cabinet. After the BA370 shelf is secured in the cabinet, these two rails are removed. Table 2-1 lists the components included in the 2T-BA370-FI field mounting kit.

**Table 2-1 2T-BA370-FI Field Mounting Kit Contents**

<b>Description</b>	<b>Part Number</b>	<b>Quantity</b>
Right mounting rail with a fixed mounting bracket	70-33938-01	1
Right removable mounting bracket	74-53721-01	1
Left mounting rail with a fixed mounting bracket	70-33938-02	1
Left removable mounting bracket	74-53721-02	1
U-nut, 10-32	90-07786-01	8
Screw, 10-32 truss-head	90-00063-39	8
<i>DIGITAL DS-BA370-AA RAID StorageWorks Shelf Field Installation Guide</i>	EK-BA37F-IN	1

## Installation

A front fixed mounting kit (2T-BA370-KF), along with the field mounting kit, is required for installing a front fixed mounted BA370 shelf. Table 2-2 lists the components included in the 2T-BA370-KF front fixed mounting kit.

**Table 2-2 2T-BA370-KF Front Fixed Mounting Kit Contents**

<b>Description</b>	<b>Part Number</b>	<b>Quantity</b>
Left flange mounting bracket	74-53286-01	1
Right flange mounting bracket	74-53271-01	1
Screw, 8-32 machine	90-06035-03	8
Lock washer	90-06634-00	12
U-nut, 10-32	90-07786-01	12
Screw, 10-32 truss-head	90-00063-39	16
Battery mounting bracket	74-53273-01	1
Battery adapter bracket	74-53723-01	1
Screw, 6-32 pan-head	90-10089-03	4
Keypnut, 8-32	90-06563-00	4
Foam air baffle	74-51474-01	1

## Installation

A front slide mounting kit (2T-BA370-KS) is required for installing a front slide mounted BA370 shelf. Table 2-3 lists the components included in the 2T-BA370-KS front slide mounting kit.

**Table 2-3 2T-BA370-KS Front Slide Mounting Kit Contents**

<b>Description</b>	<b>Part Number</b>	<b>Quantity</b>
Left flange mounting bracket	74-53286-01	1
Right flange mounting bracket	74-53271-01	1
Screw, 8-32 machine	90-06035-03	8
Lock washer	90-06634-00	12
Chassis slide assembly	12-45999-01	1 pair
Slide mounting bracket (LF)	74-53270-01	1
Slide mounting bracket (RF)	74-53270-02	1
Slide mounting bracket (LR)	74-53287-01	1
Slide mounting bracket (RR)	74-53287-02	1
Screw, 8-32 pan-head	90-06038-01	8
Flat washer	90-06660-00	14
Split washer, 8-32	90-06690-00	8
Nut, 8-32 hex	90-06561-00	8
Screw, 8-32 pan-head	90-06037-01	10
Bar nut	74-51756-01	4
Screw, 10-32 shoulder cap	12-24007-02	4
Split washer, 10-32	90-07797-00	4
U-nut, 10-32	90-07786-01	46
Screw, 10-32 truss-head	90-00063-39	46
Tray	70-33692-01	1
Battery mounting bracket	74-53273-01	1
Battery adapter bracket	74-53723-01	1
Screw, 6-32 pan-head	90-10089-03	4
Kepnut, 8-32	90-06563-00	10
Foam air baffle	74-51474-01	1

## Installation

**Table 2-3 (Cont.) 2T-BA370-KS Front Slide Mounting Kit Contents**

Description	Part Number	Quantity
Interlock actuator	74-53275-01	1
Interlock rod	74-53274-01	1
Stabilizer bracket	74-48996-01	1
Actuator latch	74-48997-02	1
Stabilizer bracket nut plate	74-48998-01	1
Set screw, 6-32	90-06291-10	2
Clamp, cable	90-07082-00	6
Bracket, H7600	74-53301-01	2

A rear fixed mounting kit (2T-BA370-KR), along with the field mounting kit, is required for installing a rear fixed mounted BA370 shelf. Table 2-4 lists the components included in the 2T-BA370-KR rear fixed mounting kit.

**Table 2-4 2T-BA370-KR Rear Fixed Mounting Kit Contents**

Description	Part Number	Quantity
Left rear extender bracket	74-53272-02	1
Right rear extender bracket	74-53272-01	1
Left flange mounting bracket	74-53286-01	1
Right flange mounting bracket	74-53271-01	1
Screw, 8-32 machine	90-06035-03	8
Lock washer	90-06634-00	12
U-nut, 10-32	90-07786-01	40
Screw, 10-32 truss-head	90-00063-39	44
Battery mounting bracket	74-53273-01	1
Battery adapter bracket	74-53723-01	1
Screw, 6-32 pan-head	90-10089-03	4
Keypnut, 8-32	90-06563-00	4
Foam air baffle	74-51474-01	1

## Installation

An optional front door and bezel kit (2T-BA370-BD (Blue)/GD (Gray)/WD (White)) is available for the front fixed and slide mounted BA370 shelves that are installed in H9A10 and H9A15 cabinets that do not have a front door. .

Table 2-5 lists the components included in the optional front door and bezel kit.

**Table 2-5 Optional 2T-BA370-BD/GD/WD Front Door and Bezel Kit Contents**

Description	Part Number	Quantity
Door assembly (Gray) or	70-31470-01	1
Door assembly (Blue) or	70-31470-02	1
Door assembly (White)	70-33718-01	1
Tray bezel (Gray) or	74-53276-01	1
Tray bezel (Blue) or	74-53276-02	1
Tray bezel (White)	74-53276-03	1
Bottom door hinge	74-50680-01	1
Top door hinge	74-50679-01	1
Door latch	74-50681-01	1
Screw, 10-32 truss-head	90-00063-39	6
Bezel bracket	74-51754-01	2
U-nut, 10-32	90-07786-01	4

## 2.3 Site Preparation

The installation instructions that follow assume that:

- Power down and disconnect electrical power from any existing BA370 shelves or other equipment that is presently installed in the cabinet.
- All cables that you plan to connect to the BA370 shelf are in place and clearly labeled.
- The system is located in an area that provides sufficient clearance for ventilation and servicing. A clearance of 61 cm (24 in.) at the rear and 129.6 cm (51 in.) at the front of the cabinet is required for service.

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### Caution

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Do not impede airflow by obstructing the front and rear of the cabinet.  
Exceeding internal thermal limits can affect system reliability.

---



## Installation

- Adjust the leveler feet downward so that the cabinet is level and the load is removed from the casters.

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### Caution

---

Ensure that the leveler feet extend enough to carry the load of the cabinet so that the casters spin freely. If not, the stability of the cabinet may be compromised.

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- Fully extend the stabilizer bar(s) and adjust the feet at the end of the stabilizer bar(s) until they touch the floor.

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### WARNING

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**The stabilizer bar(s) must be fully extended before any system is extended out of the cabinet on its slides or a heavy system is installed in the top of the cabinet to prevent the cabinet from tipping over.**

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### WARNING

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**The BA370 StorageWorks shelf can weigh over 45.36 kg (100 lb). Use sufficient personnel or the proper lifting equipment to remove the BA370 shelf from the shipping carton and for installing the BA370 shelf in the cabinet.**

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### WARNING

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**If one or two BA370 StorageWorks shelves are installed in the top of an H9A15 cabinet and no equipment of any substantial weight is being installed below the BA370 StorageWorks shelves, a weight kit (PN H9C10-MC) must be installed in the bottom of the cabinet to prevent the cabinet from being top heavy.**

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## 2.4 DS-BA370-AA StorageWorks Shelf Preparation

Before installing the BA370 shelf in the cabinet, some components need to be removed in order to reduce the weight of the shelf. Remove the following components:

- Remove the six fan assemblies from the rear of the BA370 shelf.

## Installation

- Remove all power supplies from the BA370 shelf.
- Remove all controller modules from the BA370 shelf.
- Remove any disk drives from the BA370 shelf.

## 2.5 Installing the BA370 StorageWorks Shelf

The following sections contain the procedures for the three ways of mounting the BA370 shelf in an H9A10 or H9A15 cabinet.

### 2.5.1 Front Fixed Mounting

The front fixed mounting is used when there are only going to be front mounted BA370 shelves in the cabinet and requires the use of the 2T-BA370-FI field mounting kit and the 2T-BA370-KF front fixed mounting kit. The standard depth H9A10 cabinet can have one front fixed mounted BA370 shelf in the top of the cabinet. The standard depth H9A15 cabinet can have two front fixed mounted BA370 shelves in the front of the cabinet.

The following sections contain the procedures for fixed mounting the BA370 shelf in the front of an H9A10 or H9A15 cabinet.

#### 2.5.1.1 Installation Area and Rail-Hole Pattern

The front fixed mounted BA370 StorageWorks shelf requires 80.0 cm (31.5 in.) of vertical space or 54 contiguous holes in a 48.26-cm (19-in.) cabinet with an EIA rail-hole pattern.

The holes in the EIA rail-hole pattern rails follow a pattern of 1.27 cm (0.50 in.), 1.59 cm (0.625 in.), and 1.59 cm (0.625 in.). This pattern is called a *set* and is repeated for the length of the cabinet rails.

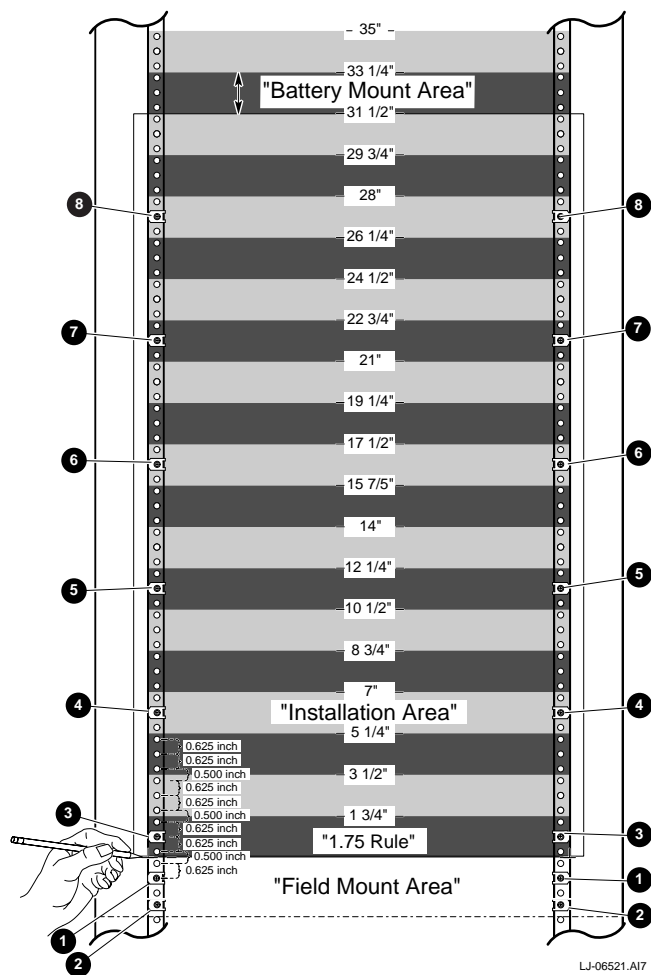
To determine the installation area, perform the following steps at the front cabinet rails (refer to Figure 2-1).

1. If the BA370 shelf is being installed in the top of the cabinet, measure down 80.0 cm (31.5 in.) from the top of the cabinet. If the BA370 shelf is being installed below a previously installed shelf, measure down 80.0 cm (31.5 in.) from the bottom of the previously installed shelf.

If a battery mounting bracket is going to be installed on top of the BA370 shelf, measure down 84.46 cm (33.25 in.) from the top of the cabinet or from the bottom of the previously installed shelf.

2. At the measured point, make a mark between two holes that have a 1.27 cm (0.05 in.) space between them. This is the *starting point* of the installation area. The area above this mark is the *installation area*. The bottom hole of the installation area is identified as hole 1 of the installation area.
3. Repeat steps 1 and 2 for the same holes on the front of both front rails.

Figure 2-1 Front Fixed Installation Area and Rail-Hole Pattern



LJ-06521.AI7

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>❶ 2nd hole below installation area for U-nuts used to secure mounting rails to the front and side of the front rails.</li> <li>❷ 4th hole below installation area for U-nuts used to secure mounting rails to the front and side of the front rails</li> <li>❸ Hole 2 for installing U-nut used to secure the BA370 shelf to the front rail.</li> <li>❹ Hole 11 for installing U-nut used to secure the BA370 shelf to the front rail.</li> </ul> | <ul style="list-style-type: none"> <li>❺ Hole 20 for installing U-nut used to secure the BA370 shelf to the front rail.</li> <li>❻ Hole 29 for installing U-nut used to secure the BA370 shelf to the front rail.</li> <li>❼ Hole 38 for installing U-nut used to secure the BA370 shelf to the front rail.</li> <li>❽ Hole 47 for installing U-nut used to secure the BA370 shelf to the front rail.</li> </ul> |
|--|--|

## Installation

### 2.5.1.2 Installing the Field Mounting Kit

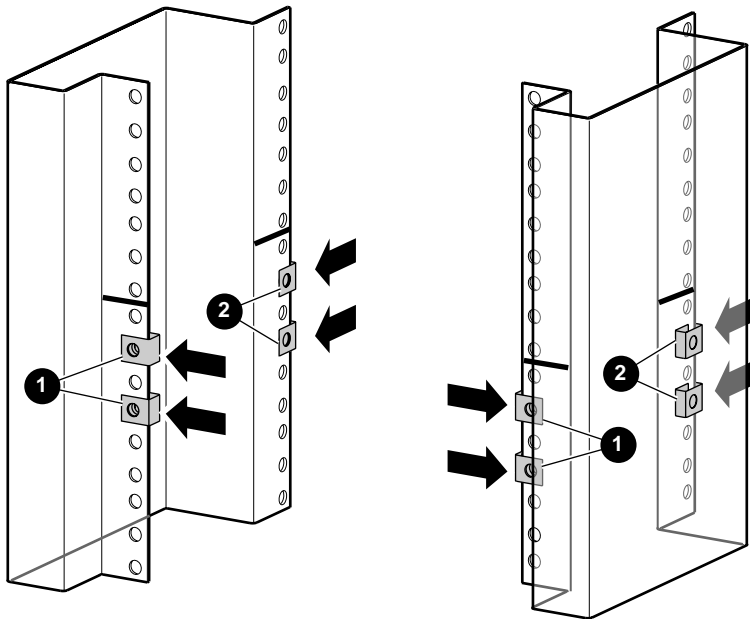
To install the 2T-BA370-FI field mounting kit, refer to Figure 2-2 through Figure 2-5 and proceed as follows:

1. Install a U-nut ❶ over the 2nd and 4th holes *below* the installation area on the front of the left and right front rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole (see Figure 2-2). Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.
2. Install a U-nut ❷ over the 2nd and 4th holes *below* the installation area on the side of the left and right front rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole (see Figure 2-2). Ensure that the threaded half of the U-nuts are toward the outside of the cabinet.
3. Remove the two screws ❸ that secure the removable mounting bracket ❹ to the left mounting rail ❺ and remove the removable mounting bracket (see Figure 2-3). Save these screws for reattaching the removable mounting bracket to the left mounting rail.
4. Align the 2nd and 4th holes from the top of the removable mounting bracket ❹ with the 2nd and 4th holes *below* the installation area on the side of the left front rail and secure the removable mounting bracket to the side of the left front rail with two 10-32 truss-head screws ❹ (see Figure 2-4).
5. Align the 2nd and 4th holes from the top of the fixed mounting bracket ❷ on the left mounting rail ❺ with the 2nd and 4th holes *below* the installation area on the front of the left front rail and secure the fixed mounting bracket ❷ to the front of the left front rail with two 10-32 truss-head screws ❸ (see Figure 2-5).
6. Use the two screws ❸ removed in step 3 to reattach the removable mounting bracket ❹ to the left mounting rail ❺ (see Figure 2-5).
7. Remove the two screws ❿ that secure the removable mounting bracket ❶ to the right mounting rail ❷ and remove the removable mounting bracket (see Figure 2-3). Save these screws for reattaching the removable mounting bracket to the right mounting rail.
8. Align the 2nd and 4th holes from the top of the removable mounting bracket ❶ with the 2nd and 4th holes *below* the installation area on the side of the right front rail and secure the removable mounting bracket ❶ to the side of the right front rail with two 10-32 truss-head screws ❸ (see Figure 2-4).
9. Align the 2nd and 4th holes from the top of the fixed mounting bracket ❸ on the right mounting rail ❷ with the 2nd and 4th holes *below* the installation area on the front of the right front rail and secure the fixed mounting bracket ❸ to the front of the right front rail with two 10-32 truss-head screws ❹ (see Figure 2-5).

## Installation

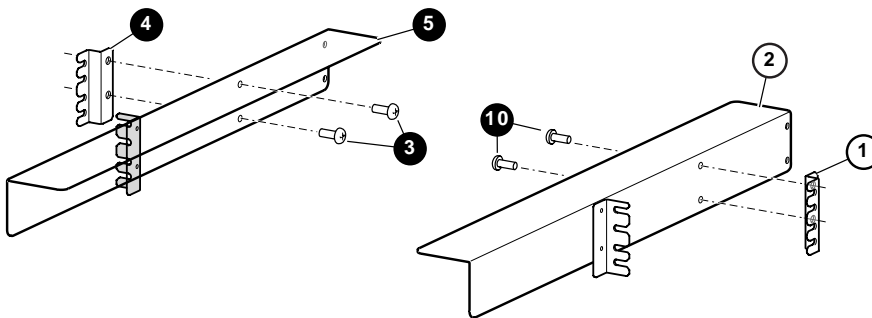
10. Use the two screws ⑩ removed in step 7 to reattach the removable mounting bracket to the right mounting rail (see Figure 2-5).

**Figure 2-2 Installing the Field Mounting Kit U-Nuts**



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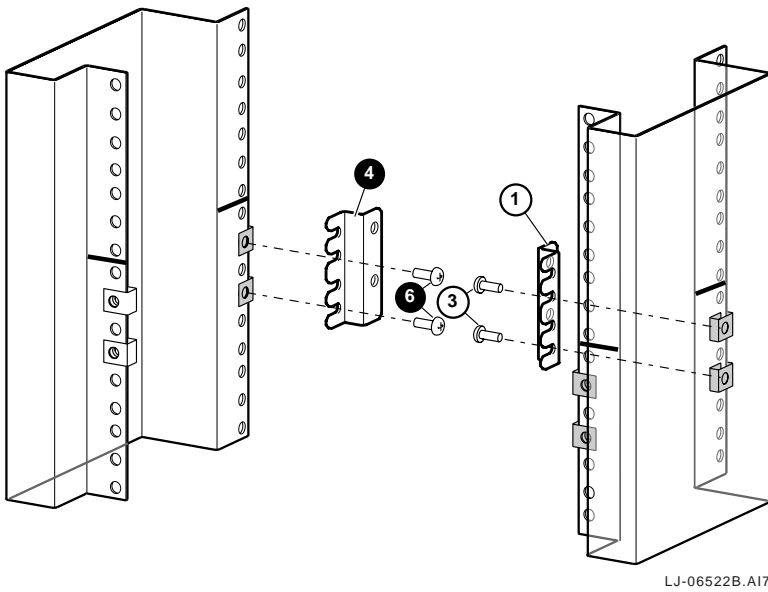
**Figure 2-3 Removing the Removable Mounting Brackets**



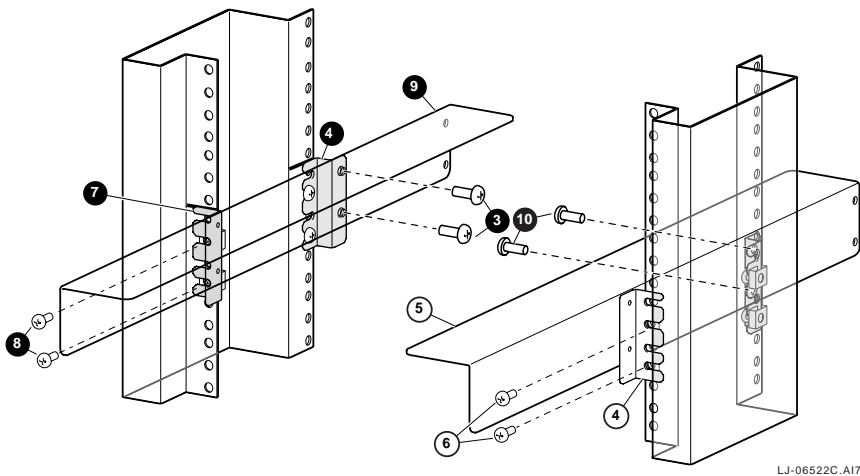
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## Installation

**Figure 2-4 Attaching Removable Mounting Brackets**



**Figure 2-5 Attaching the Mounting Rails**



### 2.5.1.3 Attaching Flange Mounting Brackets and Moving LEDs

To attach the left and right flange mounting brackets to the BA370 shelf and move the LEDs from the top of the shelf to the right flange mounting bracket, refer to Figure 2-6 and proceed as follows:

1. Align the top and bottom 2nd and 4th holes from the front edge of the right flange mounting bracket ❶ with the four holes in the right side of the BA370 shelf ❷ and secure the right flange mounting bracket to the right side of the BA370 shelf with four 8-32 machine screws ❸ and lock washers ❹.
2. Remove the two LEDs ❺ and holders ❻ from the LED bracket ❼ mounted at the top of the BA370 shelf.
3. Install the two LEDs ❺ and holders ❻ in the two holes located at the top of the right flange mounting bracket ❶.
4. Remove the two screws ❸ that secure the LED bracket ❼ to the top of the BA370 shelf and remove the LED bracket. This bracket is not used in the installation and may be discarded.

---

**Note**

If the optional front door and bezel kit is being installed, refer to Section 2.7 and install the bottom door hinge on the lower left side of the BA370 shelf before performing the next step.

---

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**Note**

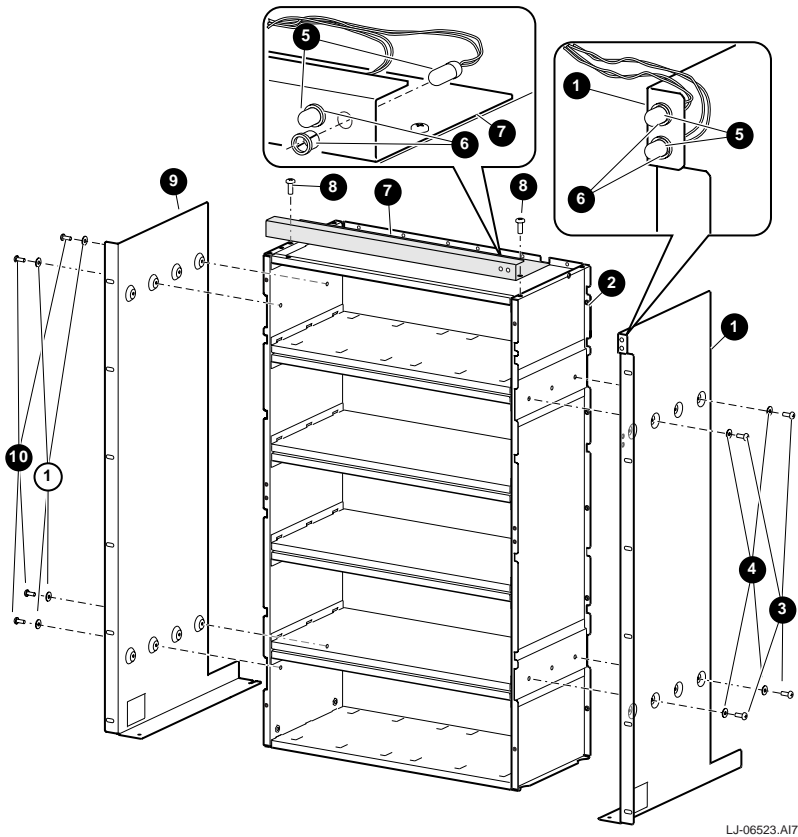
If the battery mounting bracket is being installed on the top of the BA370 shelf, refer to Section 2.6.1 and install the battery adapter bracket and the battery mounting bracket on the top of the BA370 shelf before performing the next step.

---

5. Align the top and bottom 2nd and 4th holes from the front edge of the left flange mounting bracket ❾ with the four holes in the left side of the BA370 shelf and secure the left flange mounting bracket to the left side of the BA370 shelf with four 8-32 machine screws ❿ and lock washers ①.

## Installation

**Figure 2-6 Attaching Flange Mounting Brackets and Moving LEDs**





#### 2.5.1.4 Installing the BA370 Shelf in the Cabinet

To install the BA370 shelf in the cabinet, refer to Figure 2-7 and proceed as follows:

1. Install a U-nut over the 2nd, 11th, 20th, 29th, 38th, and 47th holes of the installation area on the front of the left and right front rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole (see Figure 2-1). Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.

---

#### **WARNING**

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**The BA370 StorageWorks shelf can weigh over 45.36 kg (100 lb). Use sufficient personnel or the proper lifting equipment for installing the BA370 shelf in the cabinet.**

---

---

#### **Caution**

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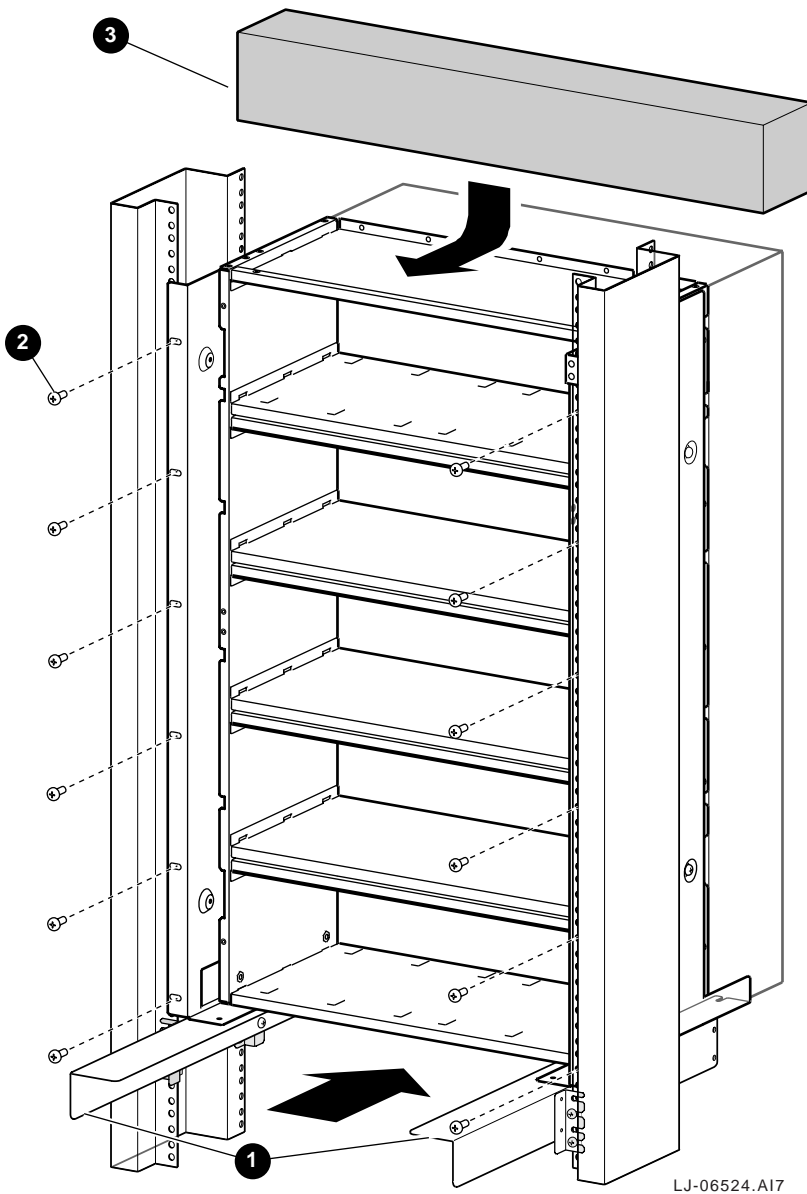
The weight of the BA370 shelf is concentrated in the area of the backplane at the rear of the shelf. Use care when lifting to prevent the shelf from tipping over and damaging the shelf.

---

2. Lift the BA370 shelf and set the shelf on the two mounting rails ❶.
3. Slide the BA370 shelf into the cabinet and secure the left and right flange mounting brackets to the left and right front rails with twelve 10-32 truss-head screws ❷.
4. Install the foam air baffle ❸ on the top front of the BA370 shelf and flush with the cabinet rails.
5. Refer to Section 2.5.1.2 and remove all parts of the field mounting kit.
6. Refer to Section 2.6 and install the battery mounting bracket.
7. Reinstall the six fan assemblies on the rear of the BA370 shelf, all power supplies in the BA370 shelf, all controller modules in the BA370 shelf, and any disk drives that were removed from the BA370 shelf.

## Installation

Figure 2-7 Installing the BA370 Shelf in the Cabinet



LJ-06524.A17

## 2.5.2 Front Slide Mounting

The front slide mounting is used when BA370 shelves are going to be front and rear mounted in the same cabinet and requires the use of the 2T-BA370-KS front slide mounting kit. This allows the front shelf to be extended from the cabinet to allow access to the rear of both shelves for maintenance. The extended depth H9A10 cabinet can have one front slide mounted BA370 shelf in the top of the cabinet. The extended depth H9A15 cabinet can have two front slide mounted BA370 shelves in the front of the cabinet.

The following sections contain the procedures for slide mounting the BA370 shelf in the front of an H9A10 or H9A15 cabinet.

### 2.5.2.1 Assembling the Slide Assemblies

The slide assemblies that are shipped with the slide mounting kit require that the slide mounting brackets be attached to the slide assemblies. Refer to the following procedure for assembling the right and left slide assembly using the slide mounting brackets included in the kit.

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#### Caution

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Using the specified slide mounting bracket part number for the slide assemblies is critical.

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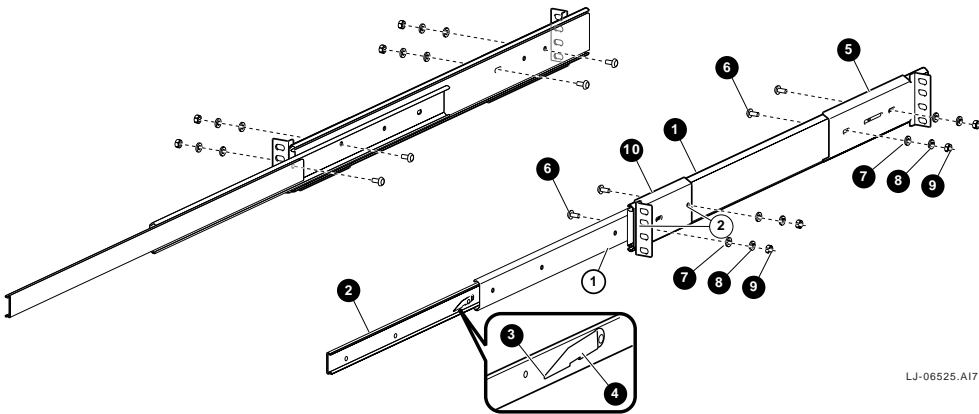
Refer to Figure 2-8 and assemble the right slide assembly as follows:

1. Find the right slide assembly ❶ that is shipped with the system. The right slide assembly is the slide assembly on which the front tip of the locking lever is pointing downward when the locking lever is oriented toward the right outside of the cabinet.
2. Pull out the inner race ❷ until it locks. Do not remove the inner race from the slide assembly at this time.
3. Orient the slide so that the front tip ❸ of the locking lever ❹ is pointing downward.
4. Slide the RR slide bracket ❺ (P/N 74-53287-02) onto the rear end of the right slide assembly ❶.
5. Attach the right rear slide bracket ❻ to the right slide assembly ❶ using the mounting holes shown in Figure 2-8 and two 8-32 screws ❼, flat washers ❼, split washers ❸, and nuts ❹, but *do not* tighten. The right rear slide bracket must be loose enough to adjust later.
6. Press up on the locking lever ❹, and pull the inner race ❷ out of the right slide assembly ❶. Set the inner race aside.

## Installation

- Slide the RF slide bracket ⑩ (P/N 74-53270-02) onto the front end of the right slide assembly ①.
- Pull out the inside slide ① about halfway, enough to align two half-inch access holes on the inside slide with the mounting holes ② on the slide assembly and the front slide bracket ⑩. The first hole on the front end of the right slide assembly aligns with the first hole on the right front slide bracket as shown in Figure 2-8.
- Attach the right front slide bracket ⑩ to the right slide assembly ① using the mounting holes shown in Figure 2-8 and two 8-32 screws ⑥, flat washers ⑦, split washers ⑧, and nuts ⑨. Tighten these two screws and nuts.
- Set this assembly aside.

**Figure 2-8 Assembling the Slide Assemblies**



LJ-06525.A17

## Installation

Refer to Figure 2-8 and assemble the left slide assembly as follows:

1. Find the left slide assembly that is shipped with the system. The left slide assembly is the slide assembly on which the front tip of the locking lever is pointing downward when the locking lever is oriented toward the left outside of the cabinet.
2. Pull out the inner race until it locks. Do not remove the inner race from the slide assembly at this time.
3. Orient the slide so that the front tip of the locking lever is pointing downward.
4. Slide the LR slide bracket (P/N 74-53287-01) onto the rear end of the left slide assembly.
5. Attach the left rear slide bracket to the left slide assembly using the mounting holes shown in Figure 2-8 and two 8-32 screws, flat washers, split washers, and nuts, but *do not* tighten. The left rear slide bracket must be loose enough to adjust later.
6. Press up on the locking lever, and pull the inner race out of the left slide assembly. Set the inner race aside.
7. Slide the LF slide bracket (P/N 74-53270-01) onto the front end of the left slide assembly.
8. Pull out the inside slide about halfway, enough to align two half-inch access holes on the inside slide with the mounting holes on the slide assembly and the front slide bracket. The first hole on the front end of the left slide assembly aligns with the first hole on the left front slide bracket as shown in Figure 2-8.
9. Attach the left front slide bracket to the left slide assembly using the mounting holes shown in Figure 2-8 and two 8-32 screws, flat washers, split washers, and nuts. Tighten these two screws and nuts.
10. Set this assembly aside.

## Installation

### 2.5.2.2 Installation Area and Rail-Hole Pattern

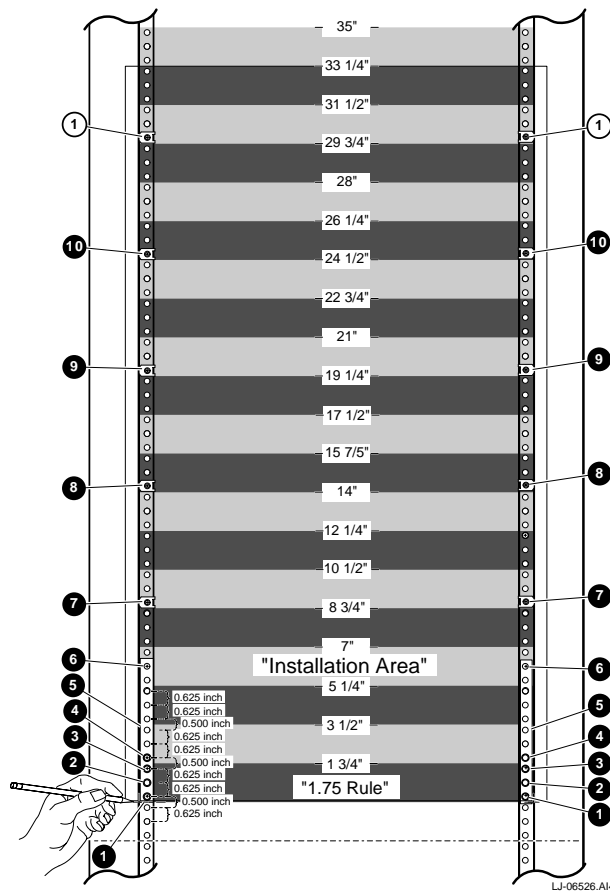
The front slide mounted BA370 StorageWorks shelf requires 88.9 cm (35 in.) of vertical space or 60 contiguous holes in a 48.26-cm (19-in.) cabinet with an EIA rail-hole pattern.

The holes in the EIA rail-hole pattern rails follow a pattern of 1.27 cm (0.50 in.), 1.59 cm (0.625 in.), and 1.59 cm (0.625 in.). This pattern is called a *set* and is repeated for the length of the cabinet rails.

To determine the installation area, perform the following steps at the front cabinet rails (refer to Figure 2-9).

1. If the BA370 shelf is being installed in the top of the cabinet, measure down 88.9 cm (35 in.) from the top of the cabinet. If the BA370 shelf is being installed below a previously installed shelf, measure down 88.9 cm (35 in.) from the bottom of the previously installed shelf.
2. At the measured point, make a mark between two holes that have a 1.27 cm (0.05 in.) space between them. This is the *starting point* of the installation area. The area above this mark is the *installation area*. The bottom hole of the installation area is identified as hole 1 of the installation area.
3. Repeat steps 1 and 2 for the same holes on the front of both front and rear rails.

Figure 2-9 Front Slide Installation Area and Rail-Hole Pattern



- ❶ Hole 1 for attaching slide mounting brackets.
- ❷ Hole 2 for attaching slide mounting brackets.
- ❸ Hole 3 for attaching slide mounting brackets.
- ❹ Hole 4 for attaching slide mounting brackets.
- ❺ Bar nut used to secure left and right slide assemblies to the front and rear rails.
- ❻ Hole 11 for temporarily securing bar nut to rails.
- ❼ Hole 16 for installing U-nut used to secure the BA370 shelf to the front rail.
- ❸ Hole 25 for installing U-nut used to secure the BA370 shelf to the front rail.
- ❹ Hole 34 for installing U-nut used to secure the BA370 shelf to the front rail.
- ❺ Hole 43 for installing U-nut used to secure the BA370 shelf to the front rail.
- ❻ Hole 52 for installing U-nut used to secure the BA370 shelf to the front rail.

## Installation

### 2.5.2.3 Installing the Slide Assemblies

Refer to the following procedures for attaching the right and left slide assemblies to the cabinet rails.

To attach the right slide assembly to the cabinet rails, refer to Figure 2-10 and proceed as follows:

1. Determine the proper mounting holes for the right slide mounting brackets. The proper mounting holes are the 1st, 2nd, 3rd, and 4th holes of the installation area (see Figure 2-9).
2. Locate the right slide assembly.
3. Place the right front slide mounting bracket on the inside of the right front rail and align the bottom four holes of the bar nut ❶ with the four slide mounting bracket holes and with the 1st, 2nd, 3rd, and 4th holes of the installation area on the right front rail.

---

#### Note

---

The four holes in the short offset part of the bar nut should be aligned with the slide mounting bracket holes and the right front rail holes.

---

4. Install a 10-32 truss-head screw ❷ in the 11th hole of the installation area to temporarily secure the bar nut to the right front rail, but *do not* tighten.
5. Install a 10-32 shoulder cap screw ❸ and split washer ❹ in the 2nd hole of the installation area to secure the right front slide mounting bracket to the right front rail, but *do not* tighten.
6. Install three 10-32 truss-head screws ❷ in the 1st, 3rd, and 4th holes of the installation area to secure the right front slide mounting bracket and bar nut to the right front rail, but *do not* tighten.
7. Remove the 10-32 truss-head screw that was installed in the 11th hole of the installation area to temporarily secure the bar nut to the right front rail.
8. Place the right rear slide mounting bracket on the inside of the right rear rail and align the bottom four holes of the bar nut ❶ with the four slide mounting bracket holes and with the 1st, 2nd, 3rd, and 4th holes of the installation area on the right rear rail.



## Installation

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### Note

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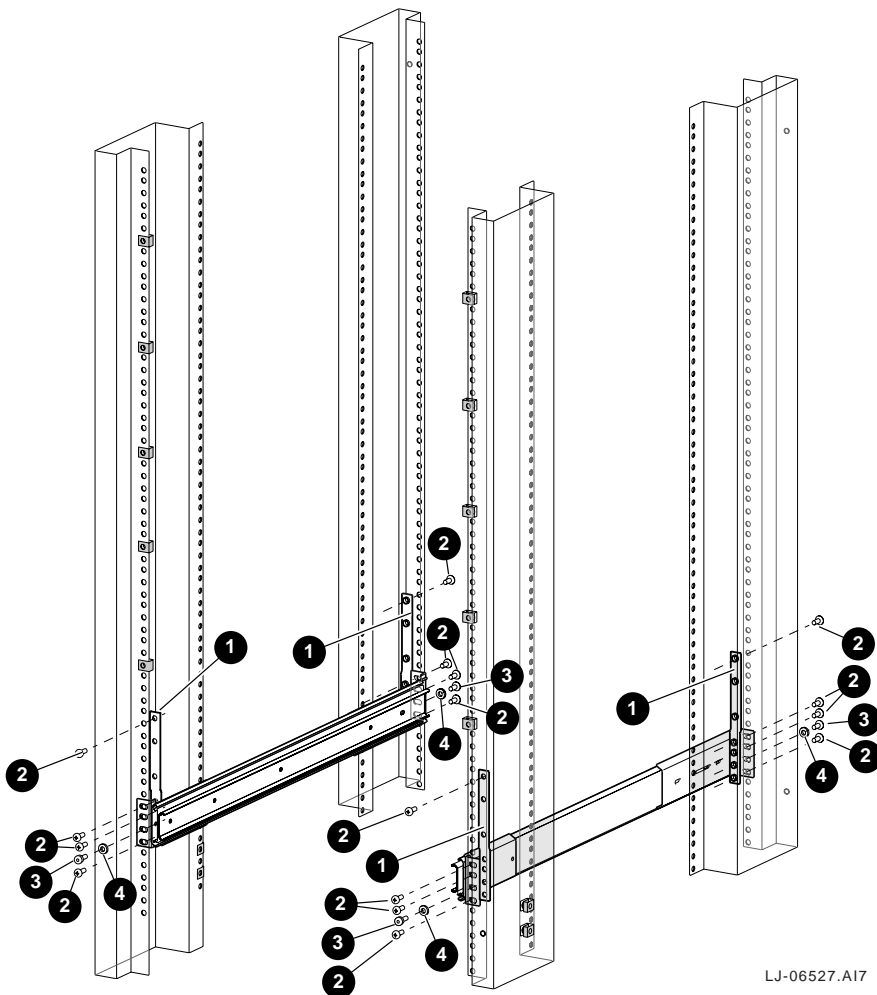
The four holes in the short offset part of the bar nut should be aligned with the slide mounting bracket holes and the right rear rail holes..

---

9. Install a 10-32 truss-head screw ② in the 11th hole of the installation area to temporarily secure the bar nut to the right rear rail, but *do not* tighten.
10. Install a 10-32 shoulder cap screw ③ and split washer ④ in the 2nd hole of the installation area to secure the right rear slide mounting bracket to the right rear rail, but *do not* tighten.
11. Install three 10-32 truss-head screws ② in the 1st, 3rd, and 4th holes of the installation area to secure the right rear slide mounting bracket and bar nut to the right rear rail, but *do not* tighten.
12. Remove the 10-32 truss-head screw that was installed in the 11th hole of the installation area to temporarily secure the bar nut to the right rear rail.
13. Tighten the two 8-32 screws and nuts that secure the right rear slide mounting bracket to the right slide assembly (shown in Figure 2-8).

## Installation

**Figure 2-10 Attaching the Slide Assemblies to the Cabinet Rails**



To attach the left slide assembly to the cabinet rails, refer to Figure 2-10 and proceed as follows:

1. Determine the proper mounting holes for the left slide mounting brackets. The proper mounting holes are the 1st, 2nd, 3rd, and 4th holes of the installation area (see Figure 2-9).

## Installation

2. Locate the left slide assembly.
3. Place the left front slide mounting bracket on the inside of the left front rail and align the bottom four holes of the bar nut ❶ with the four slide mounting bracket holes and with the 1st, 2nd, 3rd, and 4th holes of the installation area on the left front rail.

---

### Note

---

The four holes in the short offset part of the bar nut should be aligned with the slide mounting bracket holes and the left front rail holes.

---

4. Install a 10-32 truss-head screw ❷ in the 11th hole of the installation area to temporarily secure the bar nut to the left front rail, but *do not* tighten.
5. Install a 10-32 shoulder cap screw ❸ and split washer ❹ in the 2nd hole of the installation area to secure the left front slide mounting bracket to the left front rail, but *do not* tighten.
6. Install three 10-32 truss-head screws ❷ in the 1st, 3rd, and 4th holes of the installation area to secure the left front slide mounting bracket and bar nut to the left front rail, but *do not* tighten.
7. Remove the 10-32 truss-head screw that was installed in the 11th hole of the installation area to temporarily secure the bar nut to the left front rail.
8. Place the left rear slide mounting bracket on the inside of the left rear rail and align the bottom four holes of the bar nut ❶ with the four slide mounting bracket holes and with the 1st, 2nd, 3rd, and 4th holes of the installation area on the left rear rail.

---

### Note

---

The four holes in the short offset part of the bar nut should be aligned with the slide mounting bracket holes and the left rear rail holes..

---

## Installation

9. Install a 10-32 truss-head screw ❷ in the 11th hole of the installation area to temporarily secure the bar nut to the left rear rail, but *do not* tighten.
10. Install a 10-32 shoulder cap screw ❸ and split washer ❹ in the 2nd hole of the installation area to secure the left rear slide mounting bracket to the left rear rail, but *do not* tighten.
11. Install three 10-32 truss-head screws ❷ in the 1st, 3rd, and 4th holes of the installation area to secure the left rear slide mounting bracket and bar nut to the left rear rail, but *do not* tighten.
12. Remove the 10-32 truss-head screw that was installed in the 11th hole of the installation area to temporarily secure the bar nut to the left rear rail.
13. Tighten the two 8-32 screws and nuts that secure the left rear slide mounting bracket to the left slide assembly (shown in Figure 2-8).

### 2.5.2.4 Attaching Inner Races to Tray

To attach the inner slide races to the tray, refer to Figure 2-11 and proceed as follows:

---

**Caution**

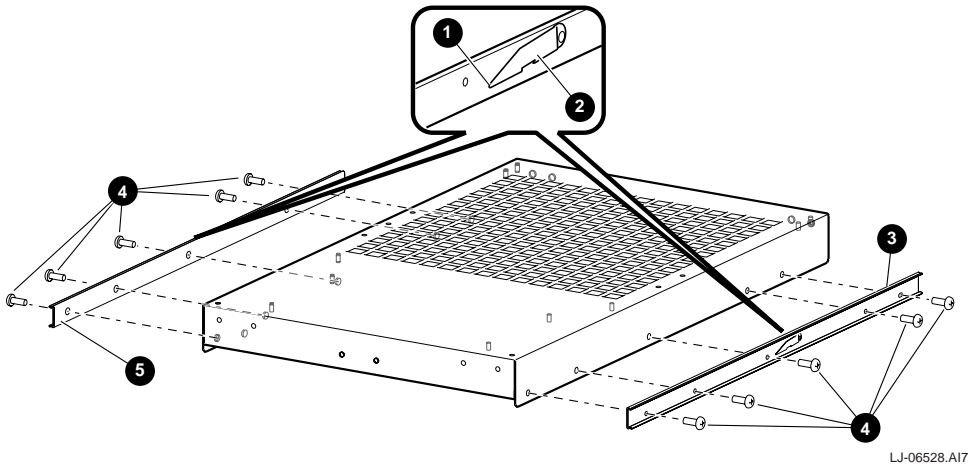
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When performing this procedure, ensure that the front tip ❶ (shown in Figure 2-11) points downward and the locking lever ❷ points toward the front of the system. Otherwise, the slide will be damaged when the system is installed on the slide assemblies.

---

1. Attach the right inner slide race ❸ to the right side of the tray (as viewed from the front) using five 8-32 pan-head screws ❹.
2. Attach the left inner slide race ❺ to the left side of the tray (as viewed from the front) using five 8-32 pan-head screws ❹.

**Figure 2-11 Attaching the Inner Slide Races to the Tray**



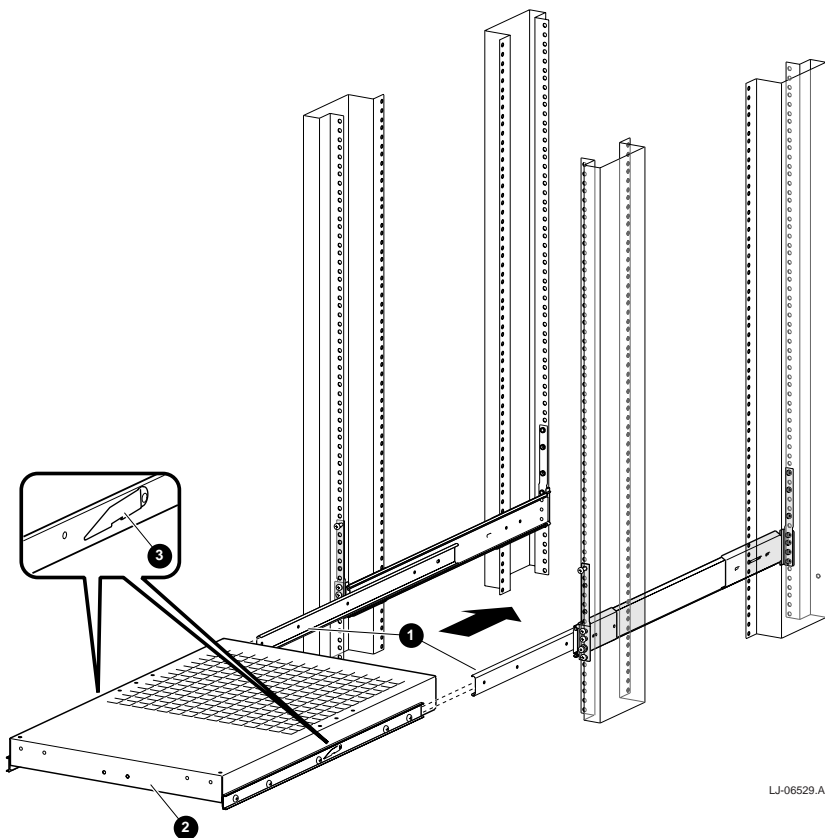
## Installation

### 2.5.2.5 Installing Tray on Slides

To mount the tray on the slides, refer to Figure 2-12 and proceed as follows:

1. Pull both equipment slides **1** out fully to their locked positions.
2. Lift the tray **2** and position it so that the inner slide races fit into the front end of the slides.
3. Push the tray into the slides until it stops. Push up on the two locking levers **3** and then push the tray into the cabinet.
4. Securely tighten the four 10-32 shoulder cap screws that secure the slides to the cabinet rails.
5. Securely tighten the twelve 10-32 truss-head screws that secure the slides and bar nuts to the cabinet rails. Torque these screws to 34 +/- 1 inch-pounds.

**Figure 2-12 Mounting the Tray on the Slides**



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### 2.5.2.6 Attaching Flange Mounting Brackets and Moving LEDs

To attach the left and right flange mounting brackets to the BA370 shelf and move the LEDs from the top of the shelf to the right flange mounting bracket, refer to Figure 2-13 and proceed as follows:

1. Align the top and bottom 2nd and 4th holes from the front edge of the right flange mounting bracket ❶ with the four holes in the right side of the BA370 shelf ❷ and secure the right flange mounting bracket to the right side of the BA370 shelf with four 8-32 machine screws ❸ and lock washers ❹.
2. Remove the two LEDs ❺ and holders ❻ from the LED bracket ❼ mounted at the top of the BA370 shelf.
3. Install the two LEDs ❺ and holders ❻ in the two holes located at the top of the right flange mounting bracket ❶.
4. Remove the two screws ❸ that secure the LED bracket ❼ to the top of the BA370 shelf and remove the LED bracket. This bracket is not used in the installation and may be discarded.

---

**Note**

If the optional front door and bezel kit is being installed, refer to Section 2.7 and install the bottom door hinge on the lower left side of the BA370 shelf before performing the next step.

---

---

**Note**

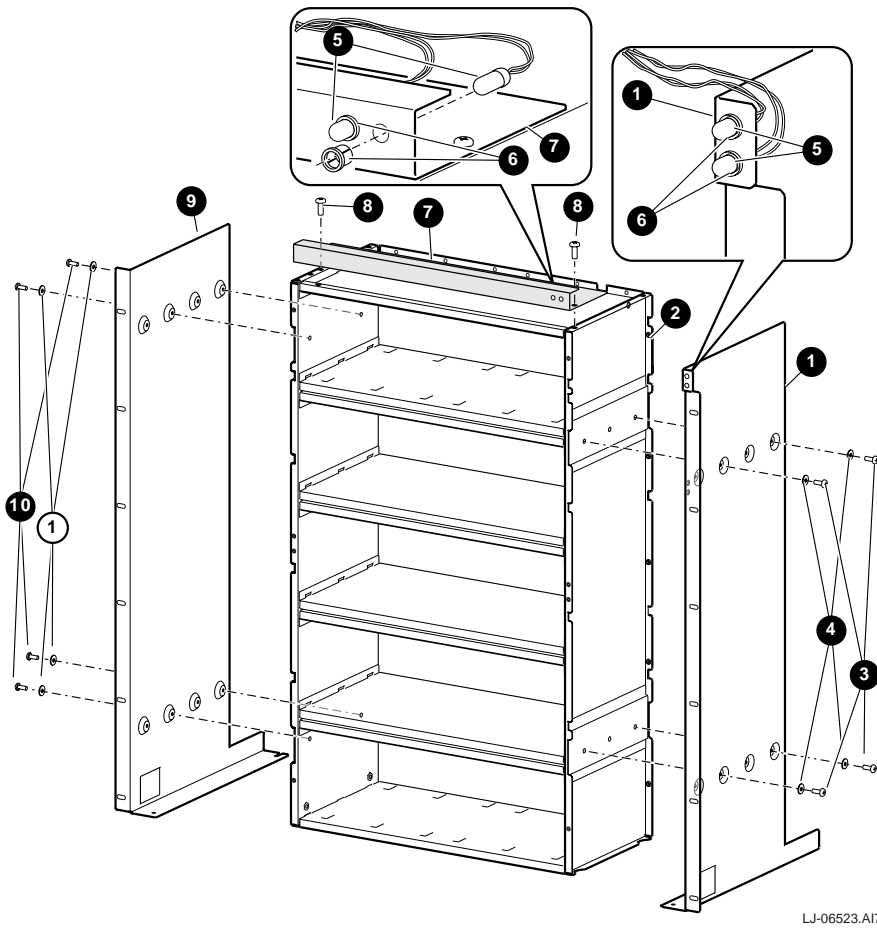
If the battery mounting bracket is being installed on the top of the BA370 shelf, refer to Section 2.6.1 and install the battery adapter bracket and the battery mounting bracket on the top of the BA370 shelf before performing the next step.

---

5. Align the top and bottom 2nd and 4th holes from the front edge of the left flange mounting bracket ❾ with the four holes in the left side of the BA370 shelf and secure the left flange mounting bracket to the left side of the BA370 shelf with four 8-32 machine screws ❿ and lock washers ①.

## Installation

**Figure 2-13 Attaching Flange Mounting Brackets and Moving LEDs**





### 2.5.2.7 Securing BA370 Shelf to Tray

To mount the BA370 shelf on the tray, refer to Figure 2-14 and proceed as follows:

---

**WARNING**

---

**The stabilizer bar(s) must be fully extended before any system is extended out of the cabinet on its slides or a heavy system is installed in the top of the cabinet to prevent the cabinet from tipping over.**

---

---

**WARNING**

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**The BA370 StorageWorks shelf can weigh over 45.36 kg (100 lb). Use sufficient personnel or the proper lifting equipment to install the BA370 shelf on the tray.**

---

---

**Caution**

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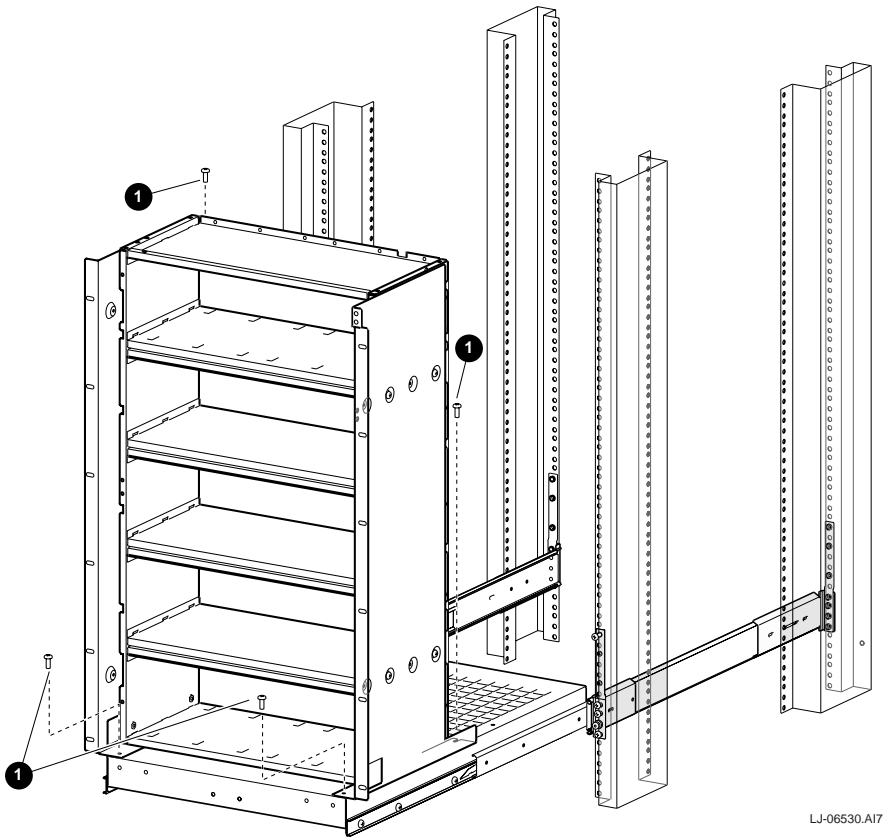
The weight of the BA370 shelf is concentrated in the area of the backplane at the rear of the shelf. Use care when lifting to prevent the shelf from tipping over and damaging the shelf.

---

1. Pull the tray out fully to its locked position.
2. Lift the BA370 shelf and position it on the tray so that the four holes in the bottom flanges of the left and right flange mounting brackets are aligned with the four holes in the top of the tray.
3. Secure the BA370 shelf to the tray with four 10-32 truss-head screws **①**.

## Installation

**Figure 2-14 Mounting the BA370 Shelf on the Tray**



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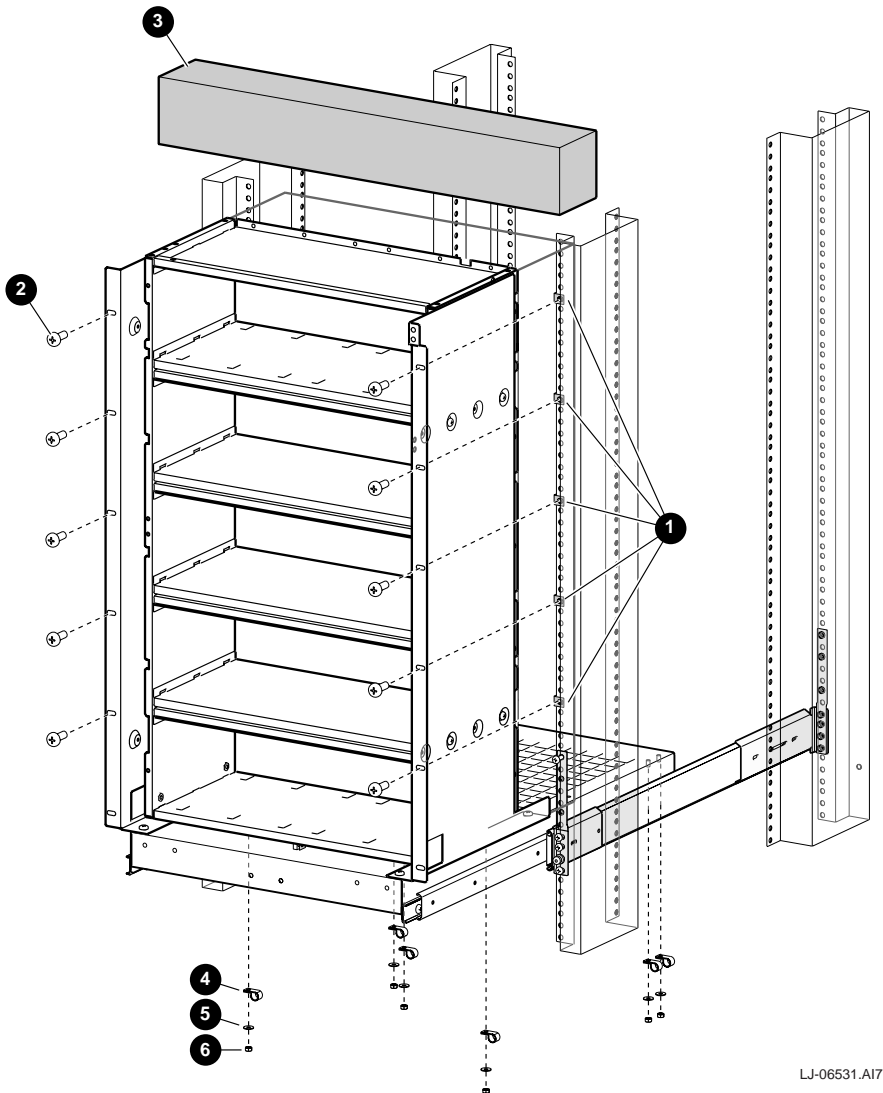
### 2.5.2.8 Securing the BA370 Shelf in the Cabinet

To secure the BA370 shelf in the cabinet, refer to Figure 2-15 and proceed as follows:

1. Install a U-nut ❶ over the 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the front of the left and right front rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole ( see Figure 2-15). Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.
2. Push up on the two locking levers and then push the tray and BA370 shelf into the cabinet.
3. Secure the left and right flange mounting brackets to the left and right front rails with ten 10-32 truss-head screws ❷.
4. Install the foam air baffle ❸ on the top front of the BA370 shelf and flush with the cabinet rails.
5. Refer to Section 2.6 and install the battery mounting bracket.
6. Reinstall the six fan assemblies on the rear of the BA370 shelf, all power supplies in the BA370 shelf, all controller modules in the BA370 shelf, and any disk drives that were removed from the BA370 shelf.
7. To route the cables from the front of the BA370 shelf, use the six cable clamps ❹, flat washers ❺, and 8-32 kepnuts ❻ to secure the cables along the bottom left and right sides of the tray.

## Installation

**Figure 2-15 Securing the BA370 Shelf in the Cabinet**



LJ-06531.AI7

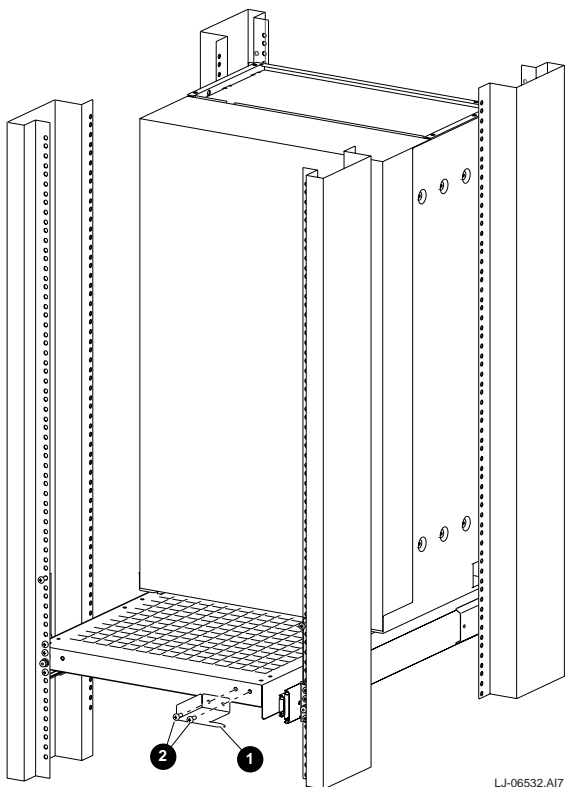
### 2.5.2.9 Installing Interlock Actuator, Actuator Latch, Bracket, and Rod

The interlock system helps prevent cabinet instability by allowing only one slide mounted unit at a time to be pulled out of the cabinet. The interlock system consists of a vertical rod on which are mounted actuator latches for each product installed in the cabinet. These actuator latches engage the interlock actuator on the rear of each slide tray. When a rackmount system is pulled out of the cabinet, the actuator latches rotate to prevent any other rackmount system that has an interlock actuator bracket from being pulled out of the cabinet.

#### Installing the Interlock Actuator

To install the interlock actuator, refer to Figure 2-16 and mount the interlock actuator ❶ on the rear of the tray using two 10-32 truss-head screws ❷.

**Figure 2-16 Installing the Interlock Actuator**



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## Installation

### Installing the Top Actuator Latch, Bracket, and Rod

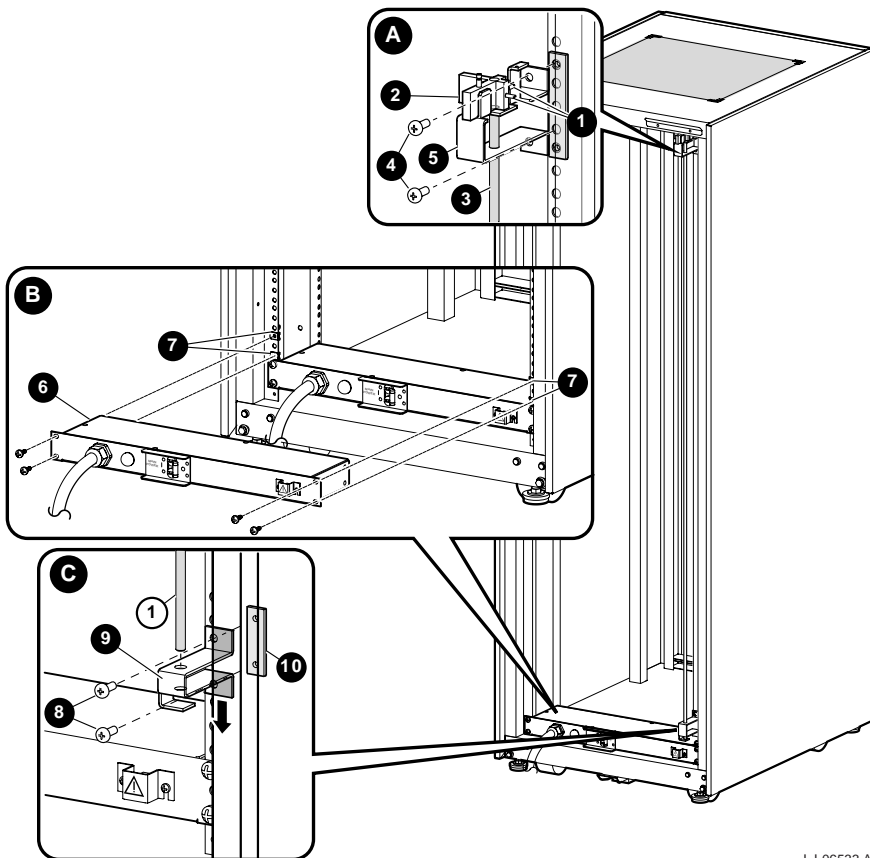
The first front slide mounted BA370 shelf is installed in the top front of the cabinet. Refer to Figure 2-17, Figure 2-18, and the following procedure to install the top actuator latch, stabilizer bracket, and interlock rod.

1. Loosen the two 6-32 set screws ❶ that secure the actuator latch ❷ to the interlock rod ❸ located at the top left rear of the cabinet (see Figure 2-17).
2. Remove the two 10-32 screws ❹ that secure the top stabilizer bracket ❺ to the top left rear of the cabinet (see Figure 2-17).
3. Slide the actuator latch and stabilizer bracket off of the top end of the interlock rod.
4. Remove the interlock rod from the bottom mounting bracket.
5. Remove the top H7600 power distribution unit ❻ from the U-nuts ❼ at the bottom rear of the cabinet (see Figure 2-17) and refer to Section 2.8 to reinstall it in the bottom front of the cabinet.
6. Remove the two 10-32 screws ❽ that secure the bottom mounting bracket ❾ to the bottom left rear of the cabinet, move the bottom mounting bracket down 3 holes (1.75 in.), and secure the bottom mounting bracket ❾ with the two 10-32 screws ❽ and bar nut ❿ (see Figure 2-17).
7. Insert the short interlock rod ⓫ that comes with the front slide mounting kit into the bottom mounting bracket (see Figure 2-17).
8. Slide the stabilizer bracket ❺ onto the top of the short interlock rod ⓫ (see Figure 2-18).
9. Slide the actuator latch ❷ onto the top of the short interlock rod ⓫ (see Figure 2-18).
10. Remove the top and bottom 10-32 truss-head screws ⓬ from the top left rear slide mounting bracket ⓭ and secure the stabilizer bracket to the left rear rail using these holes and 10-32 truss-head screws ⓬ (see Figure 2-18).
11. Position the actuator latch to properly engage the interlock actuator on the rear of the top BA370 tray and tighten the two 6-32 set screws ❶ to secure the latch (see Figure 2-18).

In Figure 2-18, the expanded view (D) shows the position of the actuator latches when all systems are pushed into the cabinet. The expanded view (E) shows the position of all actuator latches after one system has been pulled out.

## Installation

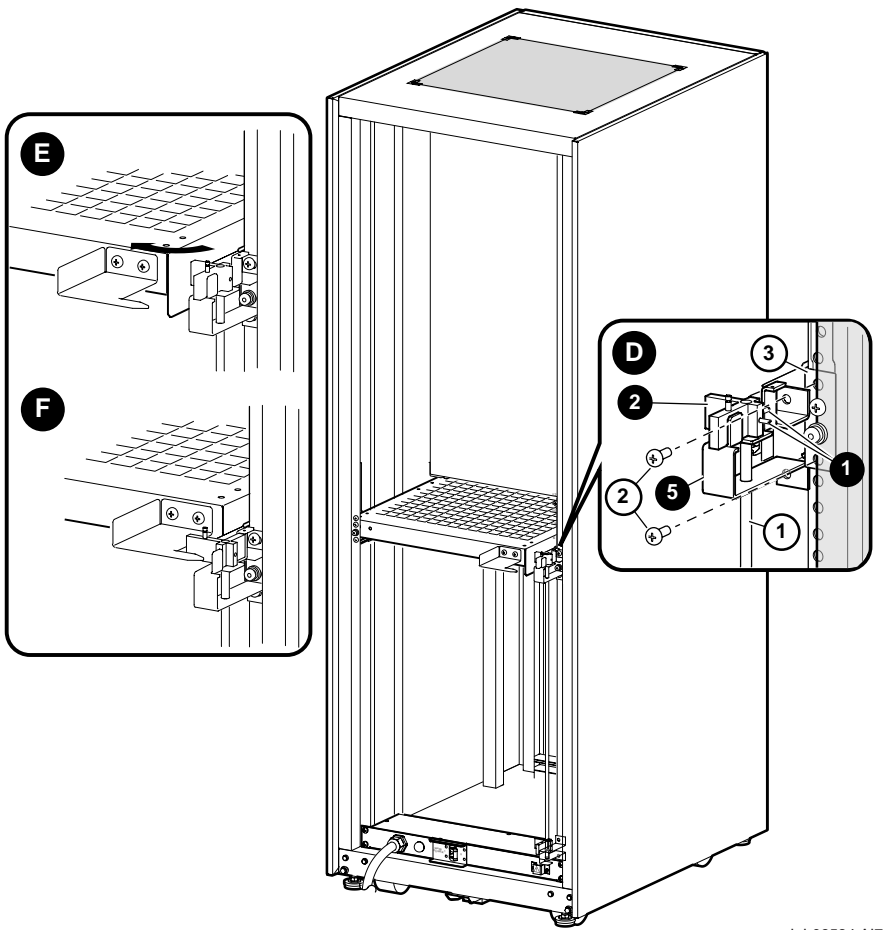
**Figure 2-17 Removing the Top Actuator Latch, Bracket, and Long Rod**



LJ-06533.A17

## Installation

**Figure 2-18 Reinstalling the Top Actuator Latch and Bracket**



LJ-06534.A17



## Installation

### Installing the Bottom Actuator Latch and Bracket

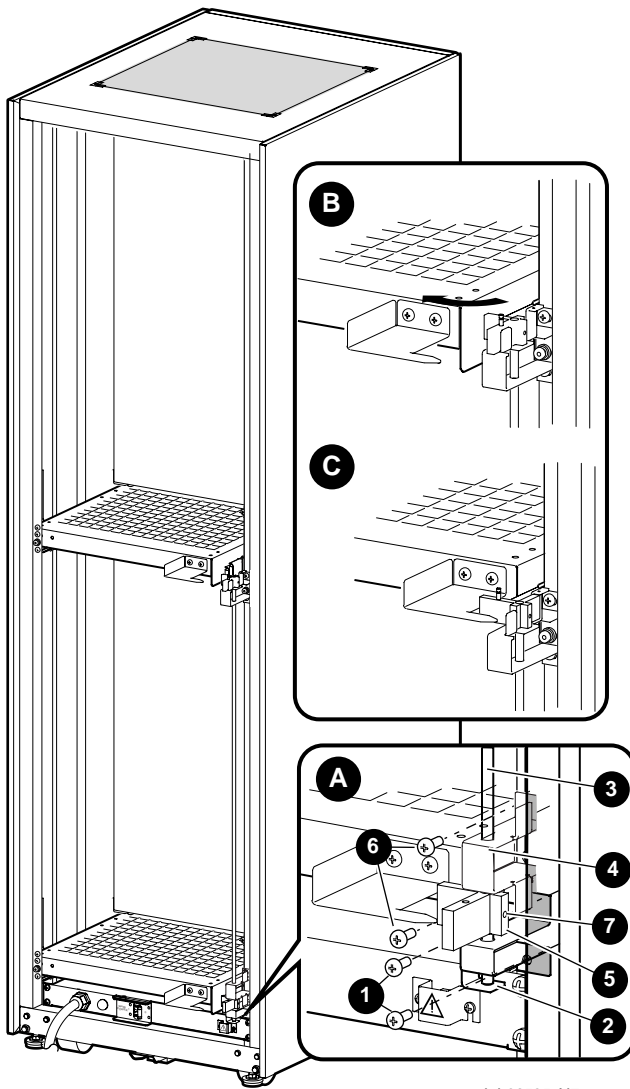
The second front slide mounted BA370 shelf is installed in the bottom front of the cabinet. Refer to Figure 2-19 and use the following procedure to install the bottom actuator latch and stabilizer bracket.

1. Remove the screws ❶ securing the bottom mounting bracket ❷ to the cabinet.
2. Slide the mounting bracket ❷ off the bottom of the interlock rod ❸.
3. Slide the stabilizer bracket ❹ for the bottom BA370 shelf onto the bottom of the interlock rod.
4. Slide the actuator latch ❺ for the bottom BA370 shelf onto the bottom of the interlock rod.
5. Replace the bottom mounting bracket ❷ and install the screws ❶ removed in step 1 but *do not* tighten them.
6. Remove the top and bottom 10-32 truss-head screws ❻ from the bottom left rear slide mounting bracket and secure the stabilizer bracket to the left rear rail using these holes and 10-32 truss-head screws.
7. Position the actuator latch to properly engage the interlock actuator on the rear of the bottom BA370 tray and tighten the two 6-32 set screws ❼ to secure the latch.
8. Now tighten the screws to secure the bottom mounting bracket.

In Figure 2-19, the expanded view (B) shows the position of the actuator latches when all systems are pushed into the cabinet. The expanded view (C) shows the position of all actuator latches after one system has been pulled out.

## Installation

**Figure 2-19 Installing the Bottom Actuator Latch, Bracket, and Rod**



### 2.5.3 Rear Fixed Mounting

The rear fixed mounting is used for all rear mounted BA370 shelves in the cabinet and requires the use of the 2T-BA370-FI field mounting kit and the 2T-BA370-KR rear fixed mounting kit. The extended depth H9A10 cabinet can have one rear fixed mounted BA370 shelf in the top of the cabinet. The extended depth H9A15 cabinet can have two rear fixed mounted BA370 shelves in the rear of the cabinet.

The following sections contain the procedures for fixed mounting the BA370 shelf in the rear of an H9A10 or H9A15 cabinet.

#### 2.5.3.1 Installation Area and Rail-Hole Pattern

The rear fixed mounted BA370 StorageWorks shelf requires 84.46 cm (33.25 in.) of vertical space or 57 contiguous holes in a 48.26-cm (19-in.) cabinet with an EIA rail-hole pattern.

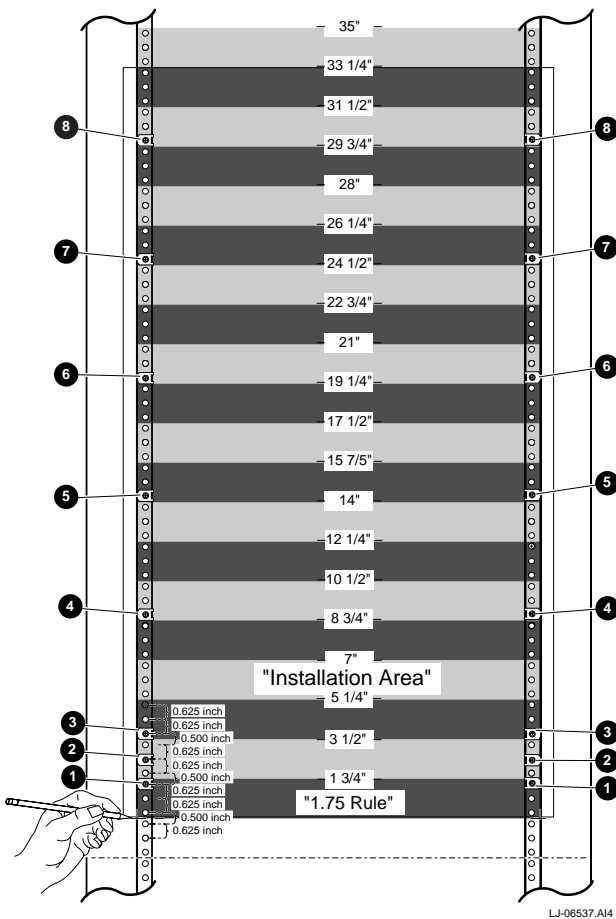
The holes in the EIA rail-hole pattern rails follow a pattern of 1.27 cm (0.50 in.), 1.59 cm (0.625 in.), and 1.59 cm (0.625 in.). This pattern is called a *set* and is repeated for the length of the cabinet rails.

To determine the installation area, perform the following steps at the rear cabinet rails (refer to Figure 2-20).

1. If the BA370 shelf is being installed in the top of the cabinet, measure down 84.46 cm (33.25 in.) from the top of the cabinet. If the BA370 shelf is being installed below a previously installed shelf and a front slide mounted shelf is installed in the top front of the cabinet, measure down 88.9 cm (35 in.) from the bottom of the previously installed shelf.
2. At the measured point, make a mark between two holes that have a 1.27 cm (0.05 in.) space between them. This is the *starting point* of the installation area. The area above this mark is the *installation area*. The bottom hole of the installation area is identified as hole 1 of the installation area.
3. Repeat steps 1 and 2 for the same holes on the front of both rear rails.

## Installation

**Figure 2-20 Rear Fixed Installation Area and Rail-Hole Pattern**



- |  |   |
|--|---|
| <p>❶ Hole 3 for U-nuts used to secure mounting rails to the front of the rear extender brackets and side of the rear rails.</p> <p>❷ Hole 5 for U-nuts used to secure mounting rails to the front of the rear extender brackets and side of the rear rails</p> <p>❸ Hole 7 for installing U-nuts used to secure the rear extender brackets to the side and front of the rear rails.</p> <p>❹ Hole 16 for installing U-nuts used to secure the rear extender brackets to the side and front of the rear rails</p> | <p>❺ Hole 25 for installing U-nuts used to secure the rear extender brackets to the side and front of the rear rails</p> <p>❻ Hole 34 for installing U-nuts used to secure the rear extender brackets to the side and front of the rear rails</p> <p>❼ Hole 43 for installing U-nuts used to secure the rear extender brackets to the side and front of the rear rails</p> <p>❽ Hole 52 for installing U-nuts used to secure the rear extender brackets to the side and front of the rear rails</p> |
|--|---|

### 2.5.3.2 Installing the Rear Extender Brackets

To install the rear extender brackets, refer to Figure 2-21 and proceed as follows:

1. Install twelve U-nuts ❶ over the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the front of the left and right rear rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole (see Figure 2-20). Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.

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#### Note

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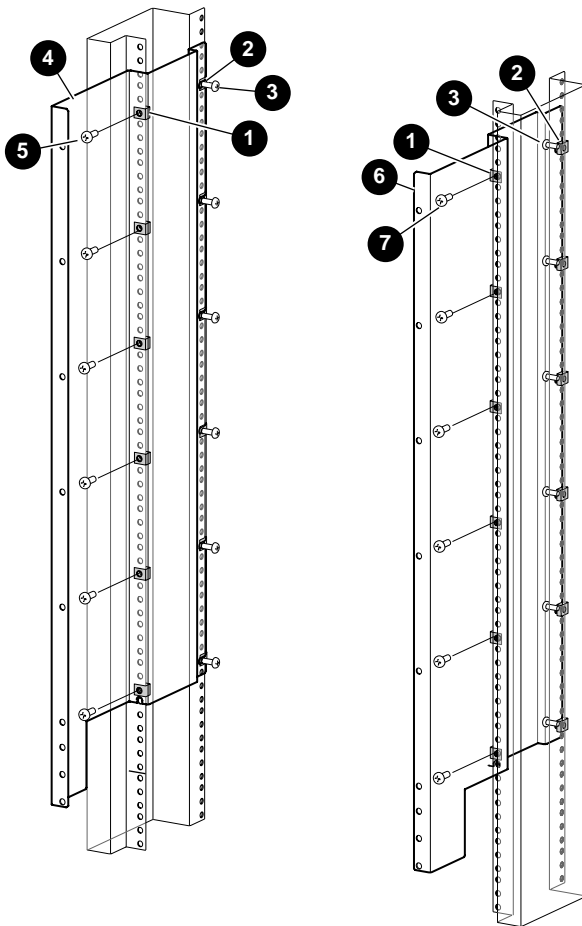
If a front slide mounted BA370 shelf is installed in the top front of the cabinet, U-nuts are not required for the 7th hole on the front of the left and right rear rails. The bar nuts used to secure the slide assemblies to the rear rails are used for these holes.

---

2. Install twelve U-nuts ❷ over the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the side of the left and right rear rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole (see Figure 2-20). Ensure that the threaded half of the U-nuts are toward the outside of the cabinet.
3. Start twelve 10-32 truss-head screws ❸ in the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the side of the left and right rear rails. Do not tighten these screws. Leave them loose.
4. Slide the six notches on the rear edge of the left rear extender bracket ❹ onto the six loose 10-32 truss-head screws ❸ that were started in the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the side of the left rear rail.
5. Align the six holes on the left rear extender bracket center flange with the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the front of the left rear rail and secure the left rear extender bracket to the front of the left rear rail with six 10-32 truss-head screws ❺. At this time, tighten the six 10-32 truss-head screws ❸ on the side of the left rear rail.
6. Slide the six notches on the rear edge of the right rear extender bracket ❻ onto the six loose 10-32 truss-head screws ❸ that were started in the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the side of the right rear rail.
7. Align the six holes on the right rear extender bracket center flange with the 7th, 16th, 25th, 34th, 43rd, and 52nd holes of the installation area on the front of the right rear rail and secure the right rear extender bracket to the front of the right rear rail with six 10-32 truss-head screws ❽. At this time, tighten the six 10-32 truss-head screws ❸ on the side of the right rear rail.

## Installation

**Figure 2-21 Installing the Rear Extender Brackets**



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### 2.5.3.3 Installing the Field Mounting Kit

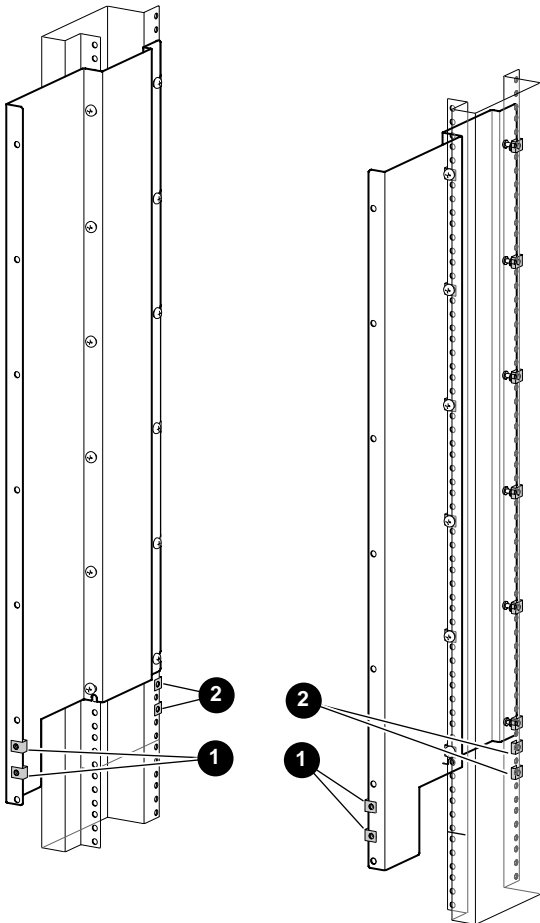
To install the 2T-BA370-FI field mounting kit, refer to Figure 2-22 through Figure 2-25 and proceed as follows:

1. Install a U-nut ❶ over the 2nd and 3rd holes from the bottom on the front of the left and right rear extender brackets by sliding the U-nut over the edge of the bracket and aligning it with the hole (see Figure 2-22). Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.
2. Install a U-nut ❷ over the 3rd and 5th holes of the installation area on the side of the left and right rear rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole (see Figure 2-22). Ensure that the threaded half of the U-nuts are toward the outside of the cabinet.
3. Remove the two screws ❸ that secure the removable mounting bracket ❹ to the left mounting rail ❺ and remove the removable mounting bracket (see Figure 2-23). Save these screws for reattaching the removable mounting bracket to the left mounting rail.
4. Align the 1st and 3rd holes from the top of the removable mounting bracket ❶ with the 3rd and 5th holes ❷ of the installation area on the side of the left rear rail and secure the removable mounting bracket to the side of the left rear rail with two 10-32 truss-head screws ❸ (see Figure 2-24).
5. Align the 1st and 3rd holes from the top of the fixed mounting bracket ❹ on the left mounting rail ❺ with the 2nd and 3rd holes from the bottom on the front of the left rear extender bracket ❻ and secure the fixed mounting bracket to the front of the left rear extender bracket with two 10-32 truss-head screws ❼ (see Figure 2-25).
6. Use the two screws ❸ removed in step 3 to reattach the removable mounting bracket ❹ to the left mounting rail ❺ (see Figure 2-25).
7. Remove the two screws ❽ that secure the removable mounting bracket ❶ to the right mounting rail ❿ and remove the removable mounting bracket (see Figure 2-23). Save these screws for reattaching the removable mounting bracket to the right mounting rail.
8. Align the 1st and 3rd holes from the top of the removable mounting bracket with the 3rd and 5th holes of the installation area on the side of the right rear rail and secure the removable mounting bracket ❶ to the side of the right rear rail with two 10-32 truss-head screws ❸ (see Figure 2-24).
9. Align the 1st and 3rd holes from the top of the fixed mounting bracket ❹ on the right mounting rail ❿ with the 2nd and 3rd holes from the bottom on the front of the right rear extender bracket Ⓣ and secure the fixed mounting bracket to the front of the right rear extender bracket with two 10-32 truss-head screws ❼ (see Figure 2-25).

## Installation

10. Use the two screws ③ removed in step 7 to reattach the removable mounting bracket ① to the right mounting rail ⑤ (see Figure 2-25).

**Figure 2-22 Installing the Field Mounting Kit U-Nuts**

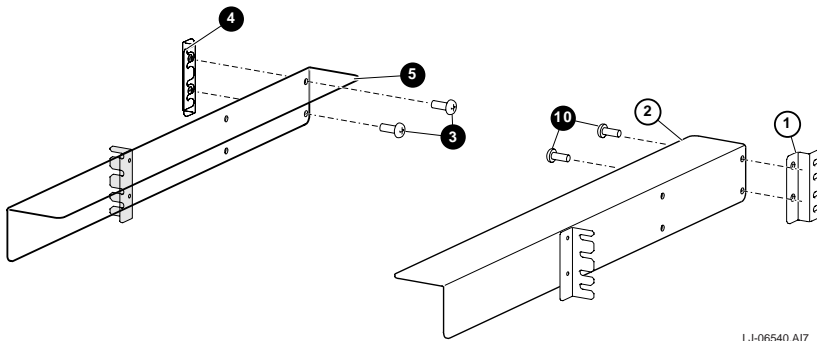


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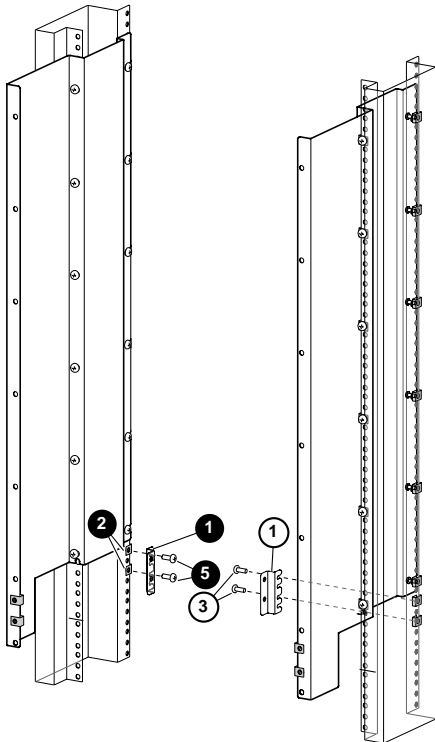
## Installation

**Figure 2-23 Removing the Removable Mounting Brackets**



LJ-06540.A17

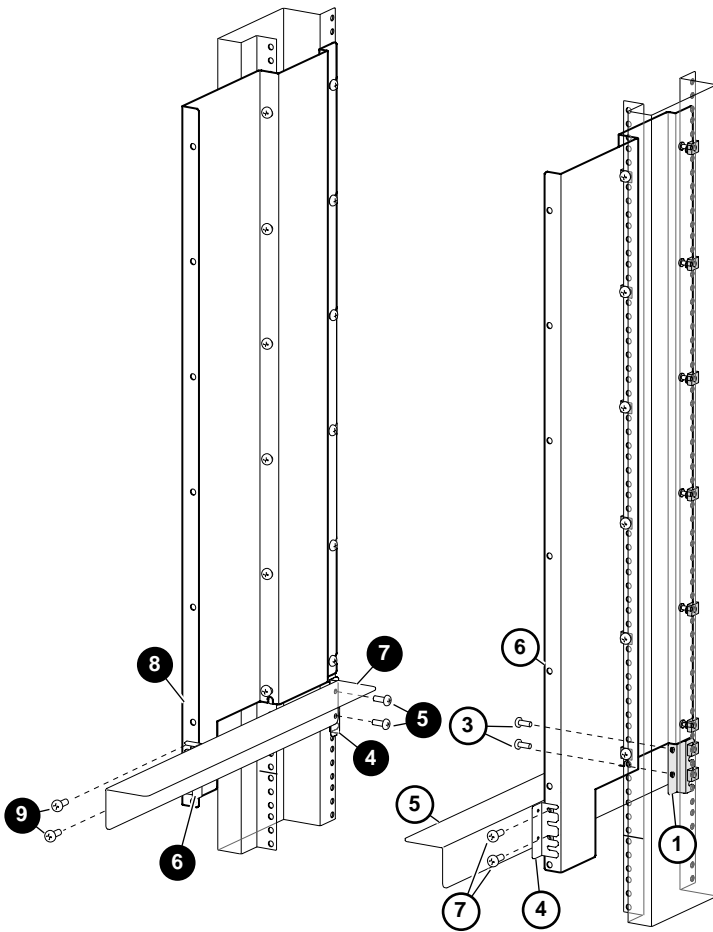
**Figure 2-24 Attaching the Removable Mounting Brackets**



LJ-06541.A17

## Installation

**Figure 2-25 Attaching the Mounting Rails**



LJ-06542.AI7

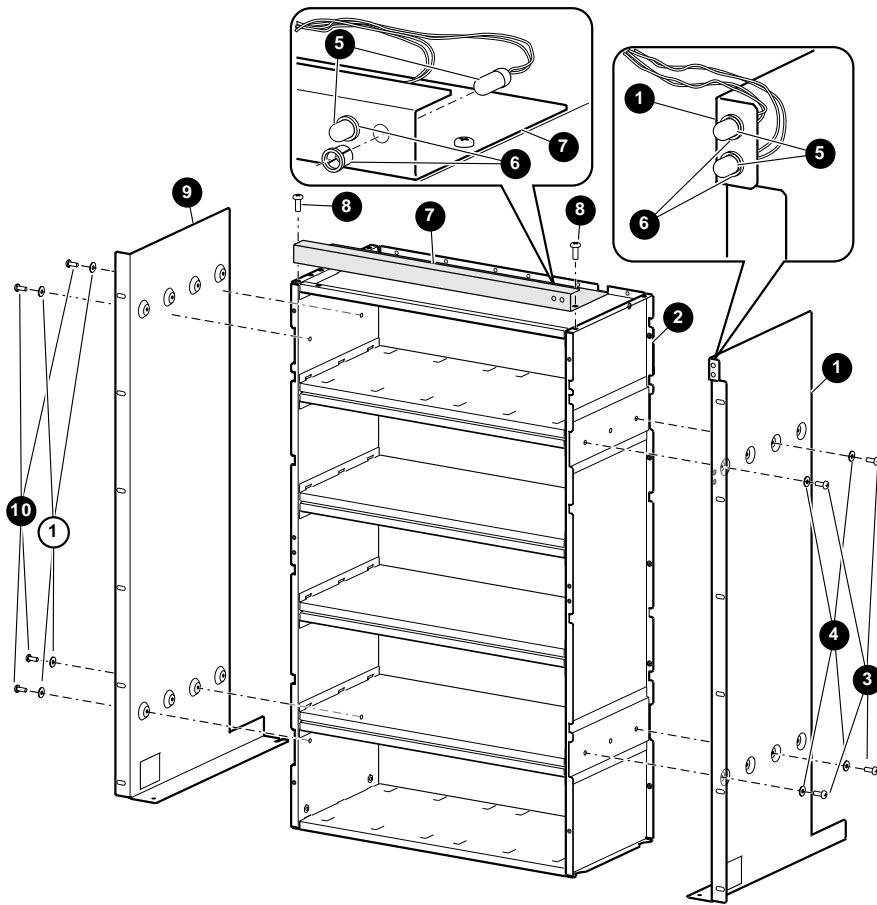
### 2.5.3.4 Attaching Flange Mounting Brackets and Moving LEDs

To attach the left and right flange mounting brackets to the BA370 shelf and move the LEDs from the top of the shelf to the right flange mounting bracket, refer to Figure 2-26 and proceed as follows:

1. Align the top and bottom 1st and 3rd holes from the front edge of the right flange mounting bracket ❶ with the four holes in the right side of the BA370 shelf ❷ and secure the right flange mounting bracket to the right side of the BA370 shelf with four 8-32 machine screws ❸ and lock washers ❹.
2. Remove the two LEDs ❺ and holders ❻ from the LED bracket ❼ mounted at the top of the BA370 shelf.
3. Install the two LEDs ❺ and holders ❻ in the two holes located at the top of the right flange mounting bracket ❶.
4. Remove the two screws ❸ that secure the LED bracket ❼ to the top of the BA370 shelf and remove the LED bracket. This bracket is not used in the installation and may be discarded.
5. Align the top and bottom 1st and 3rd holes from the front edge of the left flange mounting bracket ❽ with the four holes in the left side of the BA370 shelf and secure the left flange mounting bracket to the left side of the BA370 shelf with four 8-32 machine screws ❿ and lock washers ①.

## Installation

**Figure 2-26 Attaching Flange Mounting Brackets and Moving LEDs**



LJ-06543.A17

### 2.5.3.5 Installing the BA370 Shelf in the Cabinet

To install the BA370 shelf in the cabinet, refer to Figure 2-27 and Figure 2-28 and proceed as follows:

1. Install a U-nut ❶ over the six holes on the front of the left and right rear extender brackets by sliding the U-nut over the edge of the bracket and aligning it with the hole (see Figure 2-27). Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.

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#### WARNING

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**The BA370 StorageWorks shelf can weigh over 45.36 kg (100 lb). Use sufficient personnel or the proper lifting equipment for installing the BA370 shelf in the cabinet.**

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#### Caution

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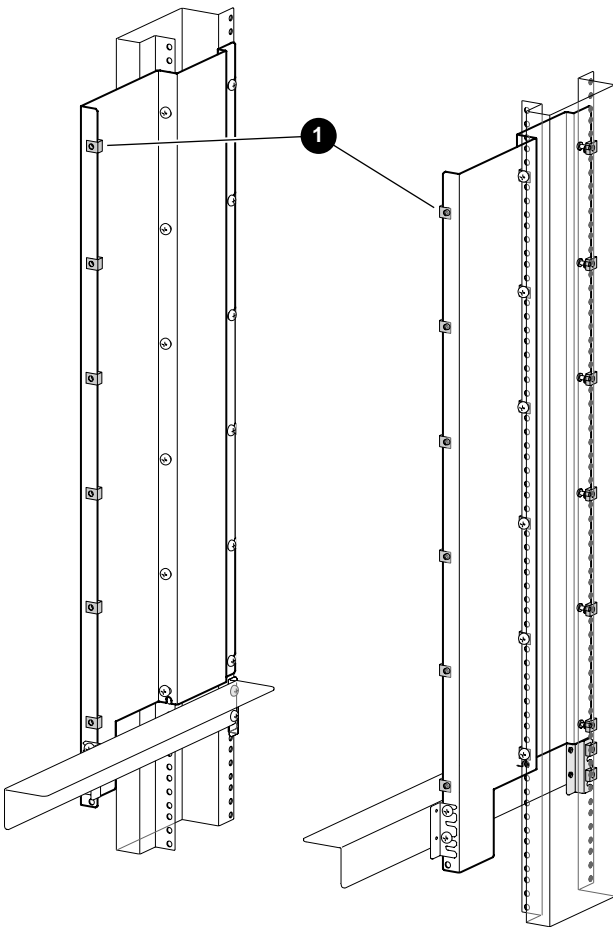
The weight of the BA370 shelf is concentrated in the area of the backplane at the rear of the shelf. Use care when lifting to prevent the shelf from tipping over and damaging the shelf.

---

2. Lift the BA370 shelf ❶ and set the shelf on the two mounting rails ❷ (see Figure 2-28).
3. Slide the BA370 shelf into the cabinet and secure the left and right flange mounting brackets ❸ to the left and right rear extender brackets ❹ with twelve 10-32 truss-head screws ❺ (see Figure 2-28).
4. Refer to Section 2.5.3.3 and remove all parts of the field mounting kit.
5. Install the foam air baffle ❻ on the top front of the BA370 shelf and flush with the cabinet rails (see Figure 2-28).
6. Refer to Section 2.6 and install the battery mounting bracket.
7. Reinstall the six fan assemblies on the rear of the BA370 shelf, all power supplies in the BA370 shelf, all controller modules in the BA370 shelf, and any disk drives that were removed from the BA370 shelf.

## Installation

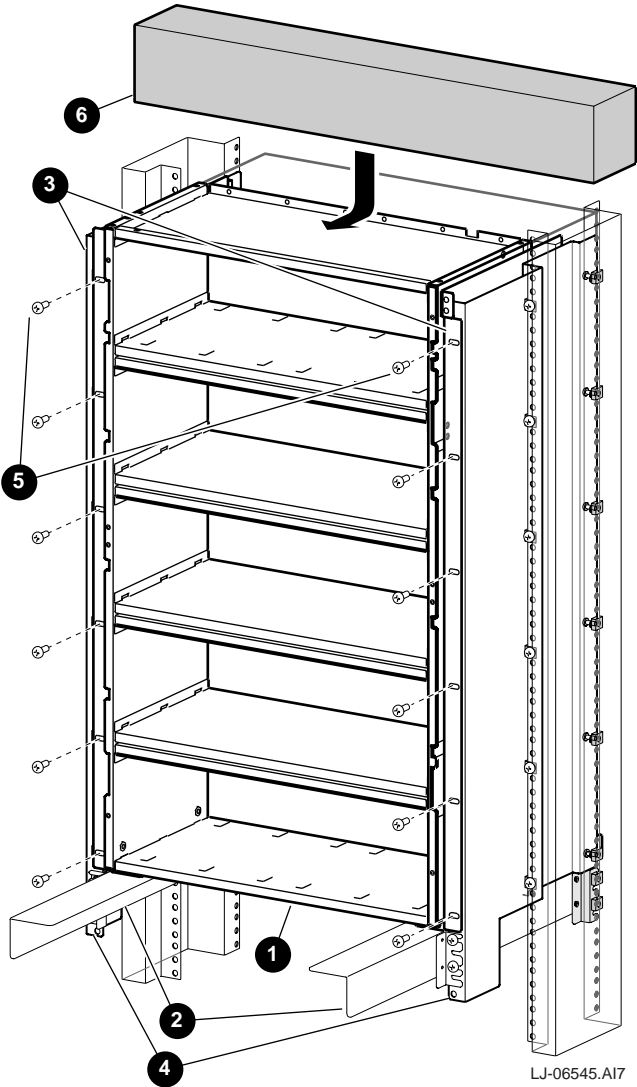
**Figure 2-27 Installing U-Nuts on the Rear Extender Brackets**



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Installation

Figure 2-28 Installing the BA370 Shelf in the Cabinet



LJ-06545.A17

## Installation

### 2.6 Installing the Battery Mounting Bracket

The battery mounting bracket that is used to hold the backup batteries for the BA370 shelf can be mounted in one of three ways. Refer to the following sections for the three different mounting procedures.

#### 2.6.1 Mounting on Top of BA370 Shelf

The battery mounting bracket can be mounted on the top of the front fixed or front slide mounted BA370 shelf. To install the battery mounting bracket on top of the BA370 shelf, refer to Figure 2-29 and proceed as follows:

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#### Note

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If the optional front door and bezel kit is being installed, refer to Section 2.7.1 and install the front door on the BA370 shelf before installing the battery mounting bracket on top of the BA370 shelf.

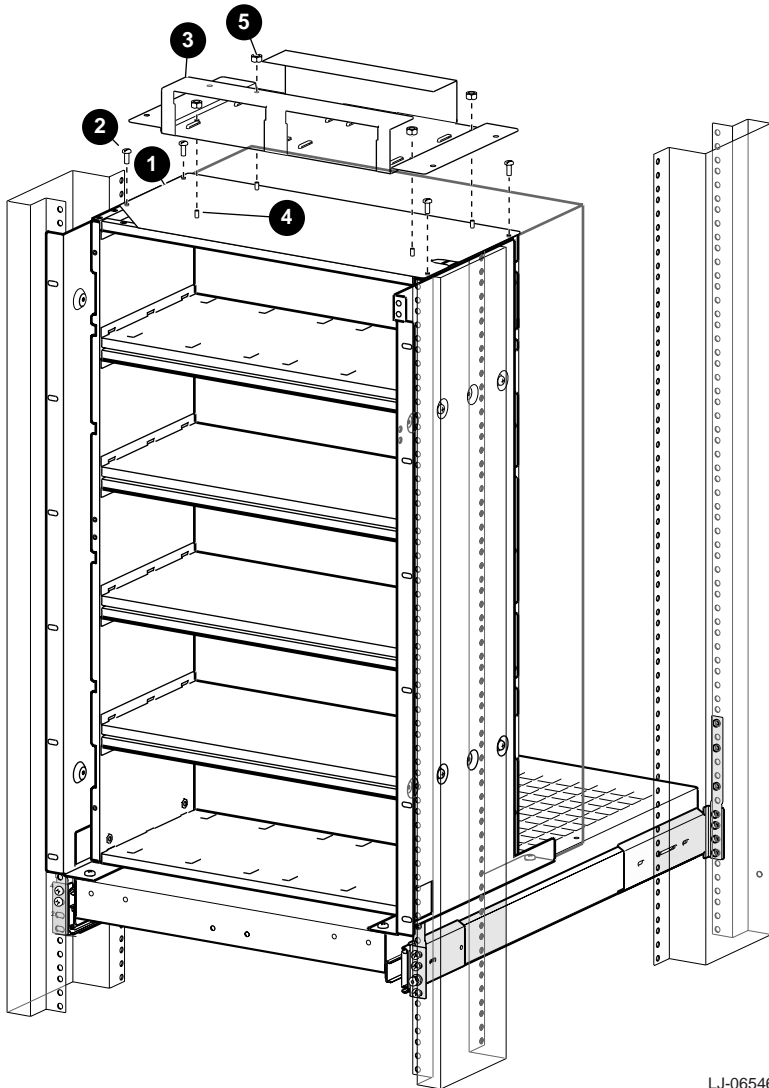
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1. Secure the battery adapter bracket ❶ to the top of the BA370 shelf with four 6-32 pan-head screws ❷.
2. Align the four holes in the battery mounting bracket ❸ with the four studs ❹ on the battery adapter bracket and set the battery mounting bracket on the battery adapter bracket.
3. Secure the battery mounting bracket ❸ to the battery adapter bracket ❶ with four 8-32 kepnuts ❺.



## Installation

Figure 2-29 Mounting Battery Mounting Bracket on Top of BA370 Shelf



LJ-06546.AI7

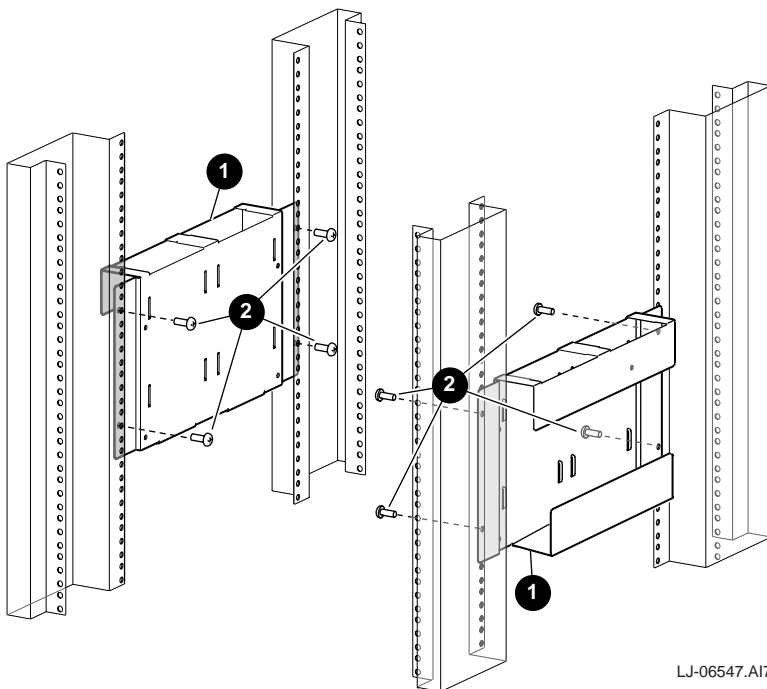
## Installation

### 2.6.2 Mounting Inside Cabinet Between Front and Rear Rails

To install the battery mounting bracket inside the cabinet between the front and rear rails, refer to Figure 2-30 and proceed as follows:

1. Place the battery mounting bracket **1** inside the cabinet between the front and rear rails. Ensure that the flanges on the battery mounting bracket are behind the sides (toward the outside of the cabinet) of the front and rear rails.
2. Align the four holes in the battery mounting bracket flanges with two available holes in the side of the rear rail and the same two available holes in the side of the front rail.
3. Secure the battery mounting bracket **1** to the sides of the front and rear rails with four 10-32 truss-head screws **2**.

**Figure 2-30 Mounting Battery Mounting Bracket Between Front and Rear Rails**



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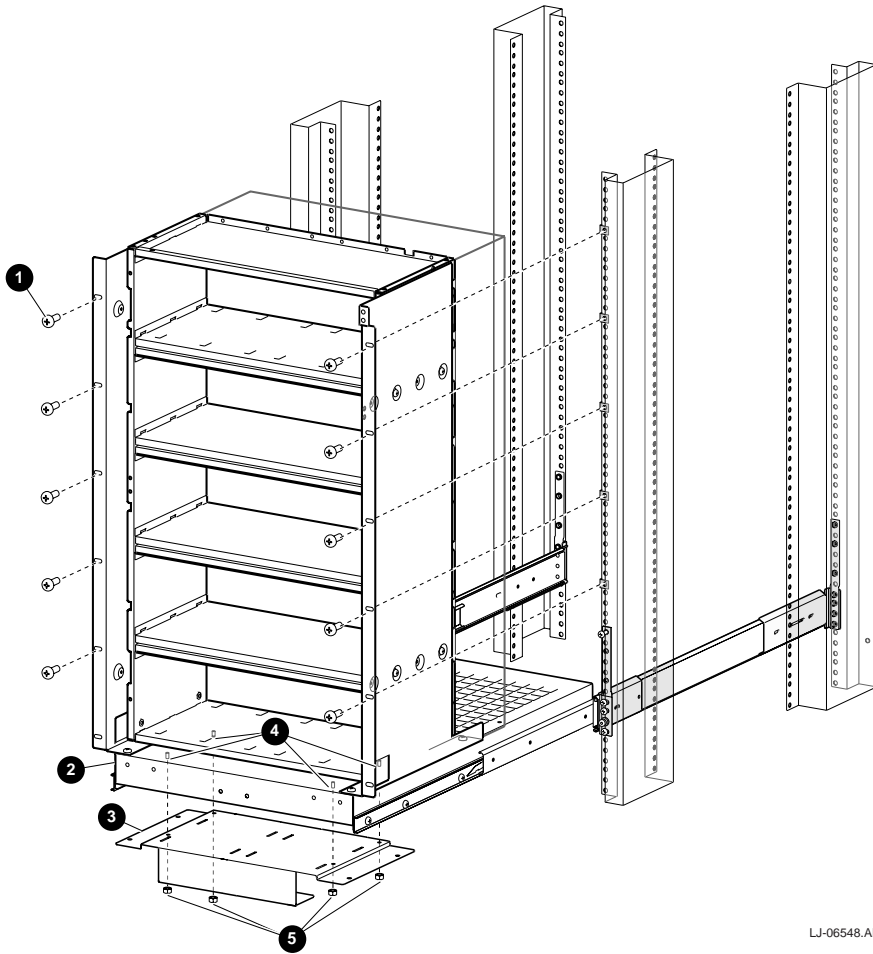
### 2.6.3 Mounting on Bottom of Tray

The battery mounting bracket can be mounted on the bottom of the tray on the front slide mounted BA370 shelf. To install the battery mounting bracket on the bottom of the tray, refer to Figure 2-31 and proceed as follows:

1. If the BA370 shelf is secured in the cabinet, remove the twelve 10-32 truss-head screws ❶ that secure the left and right flange mounting brackets to the left and right front rails.
2. Pull the tray ❷ and BA370 shelf out of the cabinet to the locked position.
3. Align the four holes in the battery mounting bracket ❸ with the four studs ❹ on the bottom of the tray and push the battery mounting bracket onto the bottom of the tray.
4. Secure the battery mounting bracket to the bottom of the tray with four 8-32 kepnuts ❺.

## Installation

**Figure 2-31 Mounting Battery Mounting Bracket on Bottom of Tray**



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## 2.7 Installing Optional Front Door and Bezel Kit

The optional front door and bezel kit is available for front fixed and slide mounted BA370 shelves that are installed in H9A10 and H9A15 cabinets that do not have a front door. The front door is installed on the BA370 shelf. The bezel is installed on the front of the tray in the front slide mounted shelves and on the front rails below the front fixed mounted BA370 shelves.

### 2.7.1 Installing the Front Door

To install the front door, refer to Figure 2-32 and proceed as follows:

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**Note**

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The bottom door hinge *must* be installed on the lower left side of the BA370 shelf before the left flange mounting bracket is attached to the shelf.

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**Note**

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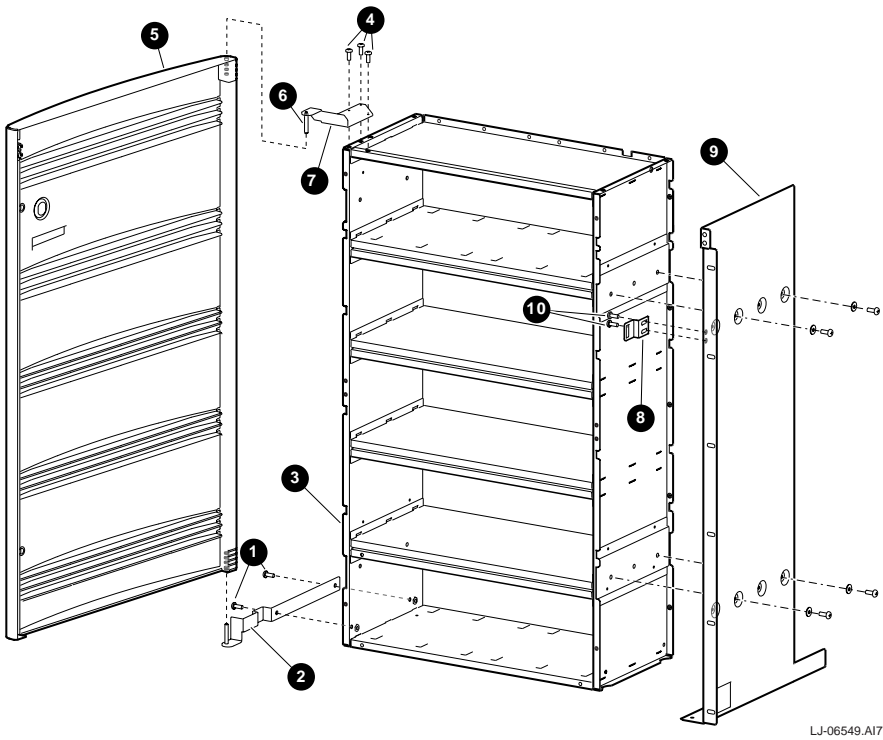
If the battery mounting bracket is being installed on top of the BA370 shelf, the front door *must* be installed before installing the battery mounting bracket.

---

1. Remove two screws ❶ from the lower left side of the BA370 shelf and use these screws to secure the bottom door hinge ❷ to the lower left side of the shelf ❸.
2. Remove three screws ❹ from the top left front of the BA370 shelf.
3. Set the door assembly ❺ on the bottom door hinge ❷.
4. Insert the pivot pin ❻ on the top door hinge ❼ into the hole at the top left corner of the door assembly and, while holding the door assembly in place, align the three holes in the top door hinge with the three holes that were left by the screws removed in step 2.
5. Secure the top door hinge ❼ to the top left front of the BA370 shelf with the three screws ❹ that were removed in step 2.
6. Secure the door latch ❽ to the inside of the right flange mounting bracket ❾ with two 10-32 truss-head screws ❿.

## Installation

**Figure 2-32 Installing the Front Door**



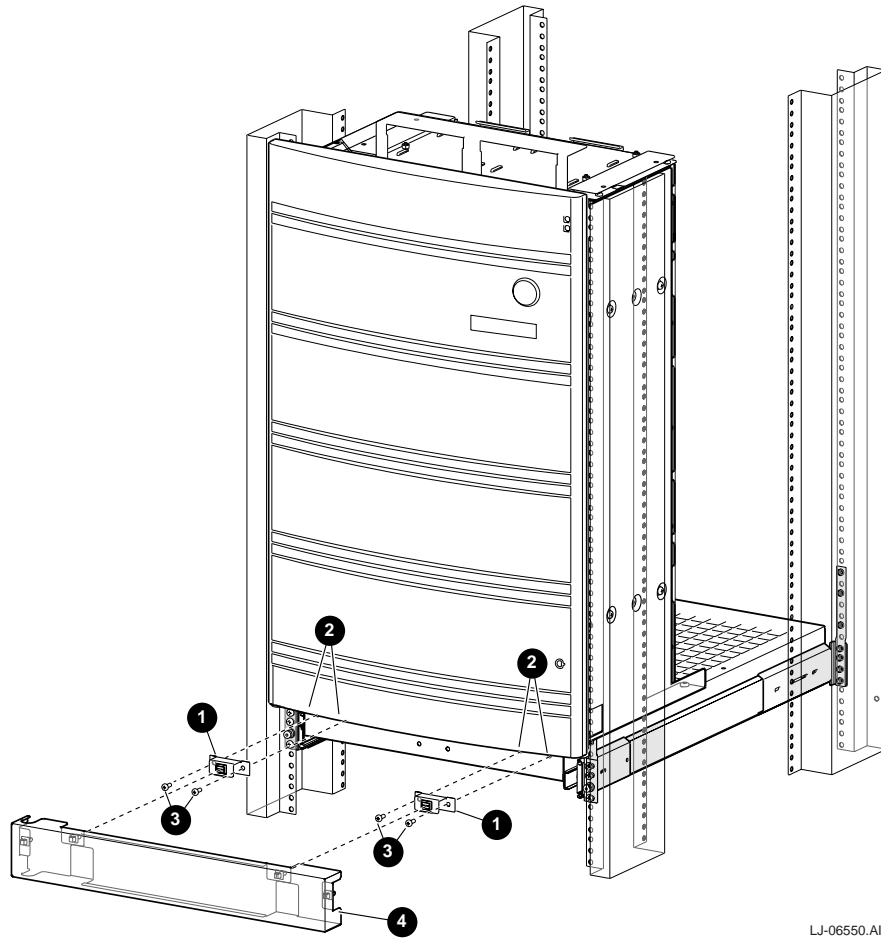
### 2.7.2 Installing the Bezel on the Tray

The bezel is installed on the front of the tray on a front slide mounted BA370 shelf. To install the bezel on the front of the tray, refer to Figure 2-33 and proceed as follows:

1. Align a bezel bracket ❶ with the two horizontal holes ❷ on the left front of the tray and secure the bezel bracket to the tray with two 10-32 truss-head screws ❸.
2. Align a bezel bracket ❶ with the two horizontal holes ❷ on the right front of the tray and secure the bezel bracket to the tray with two 10-32 truss-head screws ❸.
3. Align the two strikes on the bezel ❹ with the two latches on the bezel brackets ❶.
4. Press the bezel onto the latches until the two strikes snap into the two latches.

## Installation

**Figure 2-33 Installing the Bezel on the Tray**



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### 2.7.3 Installing the Bezel on the Front Rails

The bezel is installed on the front rails below a front fixed mounted BA370 shelf. To install the bezel on the front rails, refer to Figure 2-34 and proceed as follows:

1. Install a U-nut ❶ over the 2nd and 5th holes below the front fixed mounted BA370 shelf on the front of the left and right front rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole. Ensure that the threaded half of the U-nuts are toward the inside of the cabinet.
2. Align a bezel bracket ❷ with the 2nd and 5th holes below the front fixed mounted BA370 shelf on the front of the left front rail and secure the bezel bracket to the rail with two 10-32 truss-head screws ❸.
3. Align a bezel bracket ❷ with the 2nd and 5th holes below the front fixed mounted BA370 shelf on the front of the right front rail and secure the bezel bracket to the rail with two 10-32 truss-head screws ❸.
4. Align the two strikes on the bezel ❹ with the two latches on the bezel brackets ❷.
5. Press the bezel onto the latches until the two strikes snap into the two latches.

## Installation

**Figure 2-34 Installing the Bezel on the Front Rails**



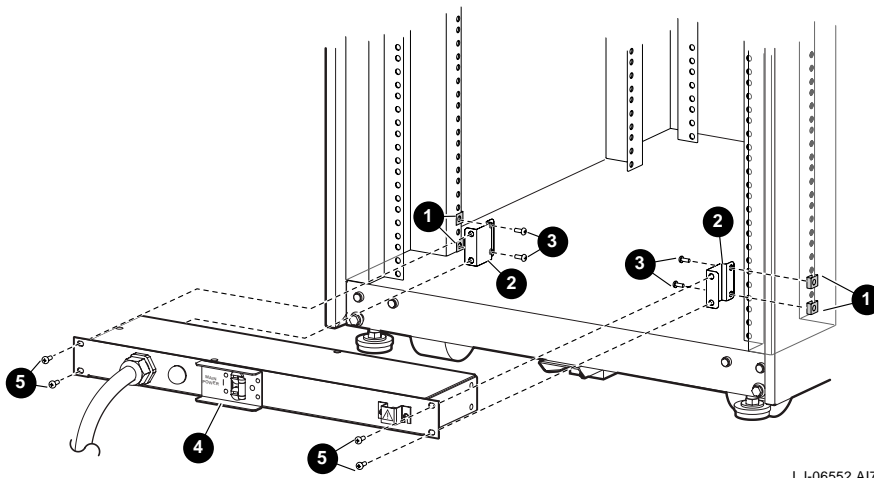
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## 2.8 Installing H7600 Front Mounting Brackets

If a front slide mounted BA370 shelf is installed in an H9A10 or H9A15 cabinet, the top H7600 power distribution unit must be moved from the bottom rear of the cabinet to the bottom front of the cabinet. This must be done to allow for the installation of the interlock rod and brackets. Two H7600 brackets are included in the front slide mounting kit for this purpose. To install the H7600 brackets on the front rails, refer to Figure 2-35 and proceed as follows:

1. Install a U-nut **1** over the 1st and 3rd holes from the bottom of the cabinet on the side of the left and right front rails by sliding the U-nut over the edge of the cabinet rail and aligning it with the hole. Ensure that the threaded half of the U-nuts are toward the outside of the cabinet.
2. Align an H7600 bracket **2** with the 1st and 3rd holes from the bottom of the cabinet on the side of the left front rail and secure the H7600 bracket to the rail with two 10-32 truss-head screws **3**.
3. Align an H7600 bracket **2** with the 1st and 3rd holes from the bottom of the cabinet on the side of the right front rail and secure the H7600 bracket to the rail with two 10-32 truss-head screws **3**.
4. Slide the H7600 PDU **4** into the bottom front of the cabinet and secure the PDU flanges to the H7600 brackets **2** with four 10-32 truss-head screws **5**.

**Figure 2-35** Installing the H7600 Front Mounting Brackets



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