

H9A11 Cabinet

Installation/Owner's Guide

Part Number: EK-H9A11-IN. B01

June 1999

**Compaq Computer Corporation
Houston, Texas**

June 1999

COMPAQ COMPUTER CORPORATION SHALL NOT BE LIABLE FOR TECHNICAL OR EDITORIAL ERRORS OR OMISSIONS CONTAINED HEREIN, NOR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FURNISHING, PERFORMANCE, OR USE OF THIS MATERIAL. THIS INFORMATION IS PROVIDED "AS IS" AND COMPAQ COMPUTER CORPORATION DISCLAIMS ANY WARRANTIES, EXPRESS, IMPLIED OR STATUTORY AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, GOOD TITLE AND AGAINST INFRINGEMENT.

This publication contains information protected by copyright. No part of this publication may be photocopied or reproduced in any form without prior written consent from Compaq Computer Corporation.

© 1999 Compaq Computer Corporation.
All rights reserved.

The software described in this guide is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of the agreement.

Compaq and the Compaq logo are registered in United States Patent and Trademark Office.

Other product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

Table of Contents

Preface

Overview	v
Intended Audience	v
How to Use This Guide	v
Organization	vi
Conventions	vi
Safety Symbol	vi
Reader's Comments	vii

1 Introduction

1.1 Description	1-1
1.2 Specifications	1-3

2 Installation

2.1 Introduction	2-1
2.2 Tools Required	2-1
2.3 Site Planning	2-1
2.4 Unpacking	2-3
2.5 Installation Procedures	2-9
2.5.1 Removing and Replacing the Rear Lift-Off Door	2-10
2.5.2 Removing and Replacing the Front Filler Panels	2-12
2.5.3 Pulling Out and Adjusting the Stabilizer Bar	2-14
2.5.4 Removing and Replacing the Power Distribution Unit	2-16

A Field Replaceable Units (FRUs)

Figures

Figure 1-1 H9A11 Cabinet 1–2

Figure 2-1 Unpacking the Cabinet 2–4

Figure 2-2 Installing the Ramps..... 2–6

Figure 2-3 Deskidding the Cabinet 2–8

Figure 2-4 Removing and Replacing the Rear Lift-Off Door 2–11

Figure 2-5 Removing and Replacing the Front Filler Panels..... 2–13

Figure 2-6 Pulling Out and Adjusting the Stabilizer Bar..... 2–15

Figure 2-7 Removing and Replacing the Power Distribution Unit 2–17

Tables

Table A-1 Field Replaceable Units (FRUs).....A–1

Preface

Overview

This guide provides the information necessary to install the H9A11 Cabinet. This guide *does not* provide information concerning systems that can be installed in the cabinet. For information concerning systems installed in the cabinet, refer to the respective documentation shipped with the system.

Intended Audience

The instructions in this guide are for Compaq Customer Service representatives and customer maintenance personnel who are familiar with computer hardware and operating systems. Personnel should be experienced and trained in installing computer and related equipment.

How to Use This Guide

Read all of this guide before installing the H9A11 Cabinet. As mentioned earlier, for information concerning systems installed in the cabinet, refer to the respective documentation shipped with the system.

Before installation, review the warranty. The terms of the warranty agreement with Compaq may require that a qualified Compaq Customer Service 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 H9A11 Cabinet features and specifications.

Chapter 2, Installation -- Provides site preparation, unpacking, and installation information.

Appendix A, Field Replaceable Units (FRUs) -- Provides a list of the field replaceable units (FRUs) for the H9A11 Cabinet.

Conventions

The following conventions are used in this guide:

Convention	Meaning
Note	A note calls the reader's attention to important information.
Caution	Cautions provide information to prevent damage to equipment or software. Read these carefully.
WARNING	A warning contains information essential to the safety of personnel.

Safety Symbol

The following symbol appears on the power distribution unit. Please review its definition below:



This Dangerous Voltage warning symbol indicates a risk of electric shock and indicates hazards from dangerous voltage.

Reader's Comments

Compaq welcomes your comments on this or any other manual. You can send your comments to Compaq in the following ways:

- Internet electronic mail: *reader-comments@digital.com*
- Mail:

Compaq Computer Corporation

Information Design

PKO3-2/21J

129 Parker Street

Maynard, MA 01754-2199

For additional information, call 1-800-282-6672.

1

Introduction

1.1 Description

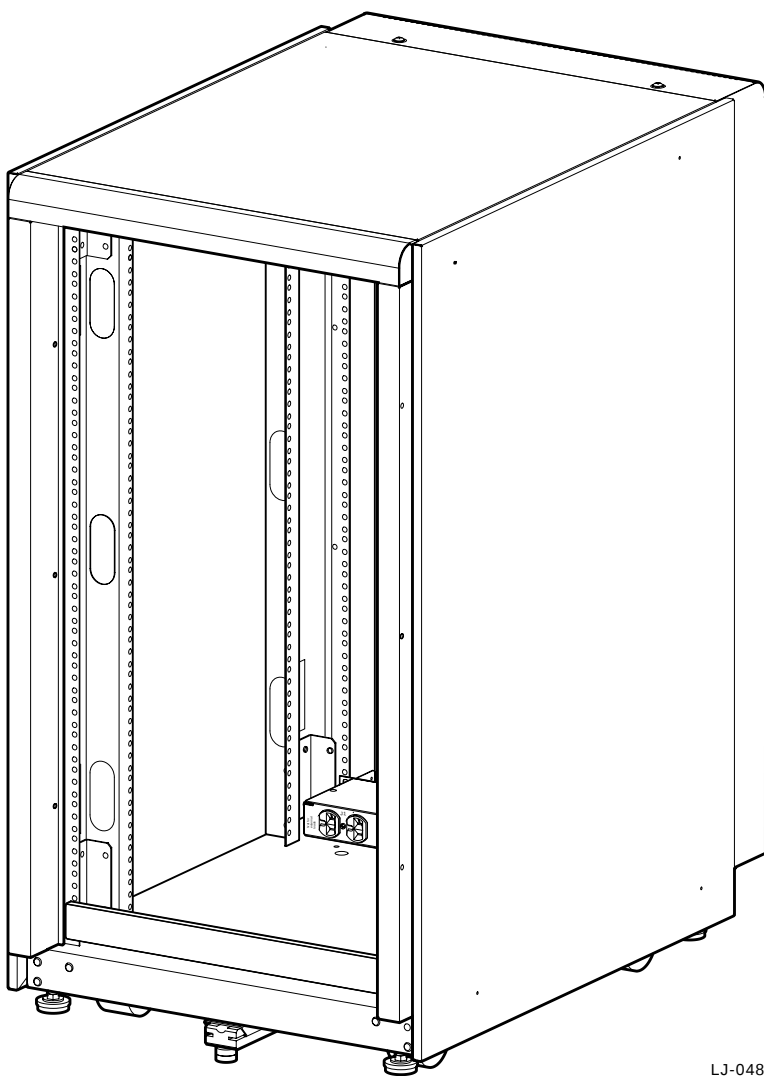
The H9A11 Cabinet (Figure 1-1) is a low-cost, computer-equipment enclosure system that meets the Electronic Industries Association (EIA) standard 310C and the International Electrotechnical Commission (IEC) 297 standards and can accommodate fixed or slide-mounted chassis that fit into a standard 48.26-cm (19-in.) rack.

The cabinet has the following factory installed features:

- Equipment mounting rails with the EIA universal rail-hole pattern
- Front trim kit that provides a finished look to the front opening of the cabinet
- Vented rear lift-off door
- Nonvented top cover
- Four nonlocking casters that facilitate the placement of the cabinet. The front two casters swivel. The rear two casters are fixed.
- Adjustable leveling feet that are used to stabilize and secure the cabinet at the installation site.
- Stabilizer bar that is used to provide cabinet stability when installing or sliding equipment out of the cabinet.
- A single-phase H7600-AA (120 Vac), H7600-AB (240 Vac), or H7600-DB (240 Vac) power distribution units (PDU) --- Each H7600-AA/AB power distribution unit provides ten (10) ac power outlets and each H7600-DB power distribution unit provides twelve (12) ac power outlets.

Introduction

Figure 1-1 H9A11 Cabinet



LJ-04803

Introduction

1.2 Specifications

Specifications for the H9A11 Cabinet are as follows:

Physical

Height, overall	110.0 cm (43.31 in.)
Width, overall	60.0 cm (23.60 in.)
Depth, overall	86.0 cm (33.86 in.)
Maximum vertical rackmounting space	93.35 cm (36.75 in.)
Maximum vertical rackmounting space (with power distribution unit installed)\	88.9 cm (35.00 in.)
Horizontal rack width	Standard 48.26-cm (19-in.)
Weight	
- Cabinet with power distribution unit	80.74 kg (178 lb)
- Cabinet with power distribution unit plus packing material	103.42 kg (228 lb)
- Fully configured (filled) cabinet	Up to 420.94 kg (928 lb)
- Fully configured (filled) cabinet plus packing material	Up to 443.62 kg (978 lb)
Casters, swivel, nonlocking:	
Diameter:	7.62 cm (3 in.)
Maximum capacity:	225 kg (500 lb)
Casters, fixed, nonlocking:	
Diameter:	7.62 cm (3 in.)
Maximum capacity:	225 kg (500 lb)
Enclosure finish	Painted

Electrical

AC input voltage for H7600-AA PDU	100 to 120 Vac, single-phase, 3-wire
AC input voltage for H7600-AB PDU	220 to 240 Vac, single-phase, 3-wire
AC input voltage for H7600-DB PDU	200 to 240 Vac, single-phase, 3-wire
AC load	24 A per H7600-AA PDU 16 A per H7600-AB/DB PDU
Input line frequency range	47 to 63 Hz
Input power at full load	2.88 kVA per H7600-AA PDU 3.84 kVA per H7600-AB/DB PDU

Introduction

Power cord (attached)	H7600-AA - 120 Vac with L5-30P connector
	H7600-AB - 240 Vac with L6-20P connector
	H7600-DB - 240 Vac with IEC 309 connector

2

Installation

2.1 Introduction

This chapter provides the following information:

- Tools Required (Section 2.2)
- Site Planning (Section 2.3)
- Unpacking (Section 2.4)
- Installation Procedures (Section 2.5)

2.2 Tools Required

The tools needed to install the H9A11 Cabinet are:

- Utility knife
- Phillips screwdriver
- 5/8-inch box wrench or adjustable wrench

2.3 Site Planning

The cabinet requires a space of 60.0 cm (23.60 in.) by 86.0 cm (33.86 in.). In addition, the cabinet requires a clearance of 91.44 cm (36.00 in.) at both the front and rear of the cabinet for service. This may be greater depending on the distance that a system may be slid out of the cabinet.

Installation

WARNING

High Leakage Current --- An insulated earthing conductor that is identical in size, insulation material, and thickness to the earthed and unearthed branch-circuit supply conductors (except that it is green with or without one or more yellow stripes) is to be installed as part of the branch circuit that supplies the unit or system. The earthing conductor described is to be connected to earth at the service equipment or, if supplied by a separately derived system, at the supply transformer or motor-generator set.

The attachment-plug receptacles in the vicinity of the unit or system are all to be of an earthing type, and the earthing conductors serving these receptacles are to be connected to earth at the service equipment.

WARNING

Use sufficient personnel when unloading the cabinet from the pallet or moving the cabinet to a new location. The cabinet weighs 80.74 kg (178 lb) empty, and can weigh up to 420.94 kg (928 lb) fully configured.

For site preparation details concerning the system devices installed or the systems to be installed in the cabinet, refer to the documentation for those systems.

2.4 Unpacking

The cabinet is shipped on a wooden pallet. Proceed as follows to unpack the cabinet:

1. Position the pallet with the cabinet in an area that provides sufficient workspace for unpacking. Ensure that there is sufficient clearance in front of the pallet (marked with a large F) to roll the cabinet down the ramps.
2. Refer to Figure 2-1. Cut and remove the plastic wrapping ❶ that secures the corner posts ❷ and the carton ❸ to the cabinet. The carton contains the two ramps.
3. Remove the corner posts ❷ and the carton ❸ from the pallet ❹.

Caution

In the next step, take care not to damage the cabinet finish when removing the shrinkwrap.

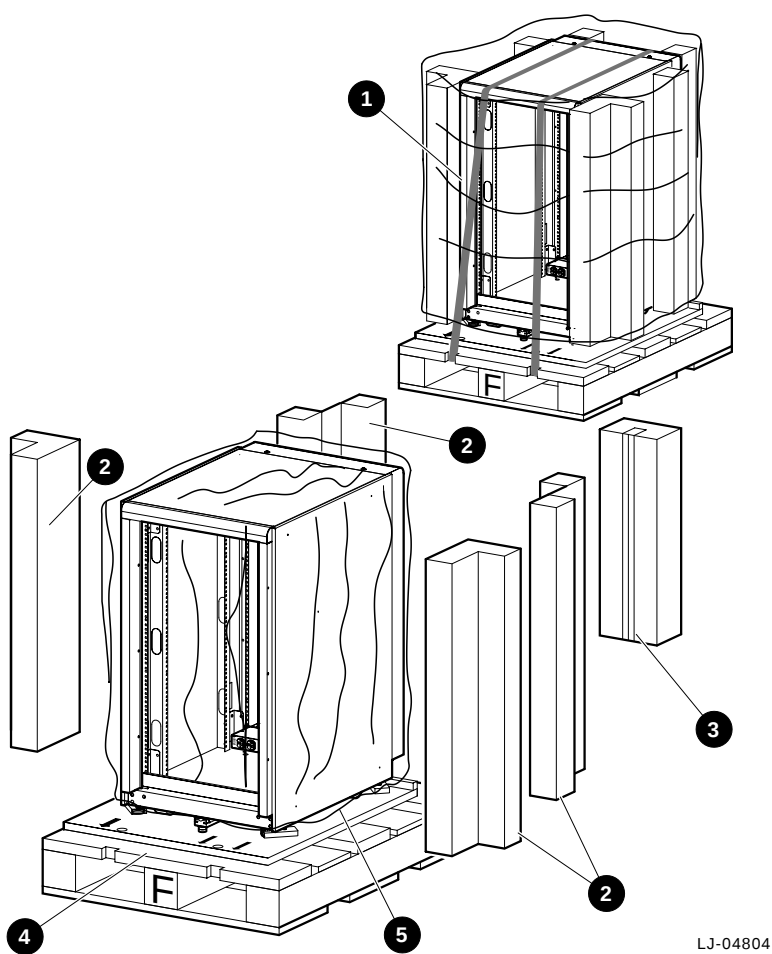
4. Remove the plastic bag ❺ covering the cabinet.
5. Check the cabinet and the associated equipment for any external damage. Report any damage to Compaq Customer Service or a Compaq sales office and to the responsible freight carrier.

Note

Keep all packing material and receipts in case a damage claim is filed.

Installation

Figure 2-1 Unpacking the Cabinet



Installation

6. Refer to Figure 2-2. Remove the four shipping bolts ⑥ and brackets ⑦ that secure the four cabinet leveler feet ⑧ to the pallet ④.

Note

The ramps attach to the front of the pallet. Therefore, the cabinet will have to be rolled frontwards down the ramps.

7. Remove the ramps ⑨ from the shipping carton and set the ramps in the holes ⑩ provided at the front of the pallet ④. Ensure that the arrows ① on the ramps match the pallet arrows ② as shown in Figure 2-2.

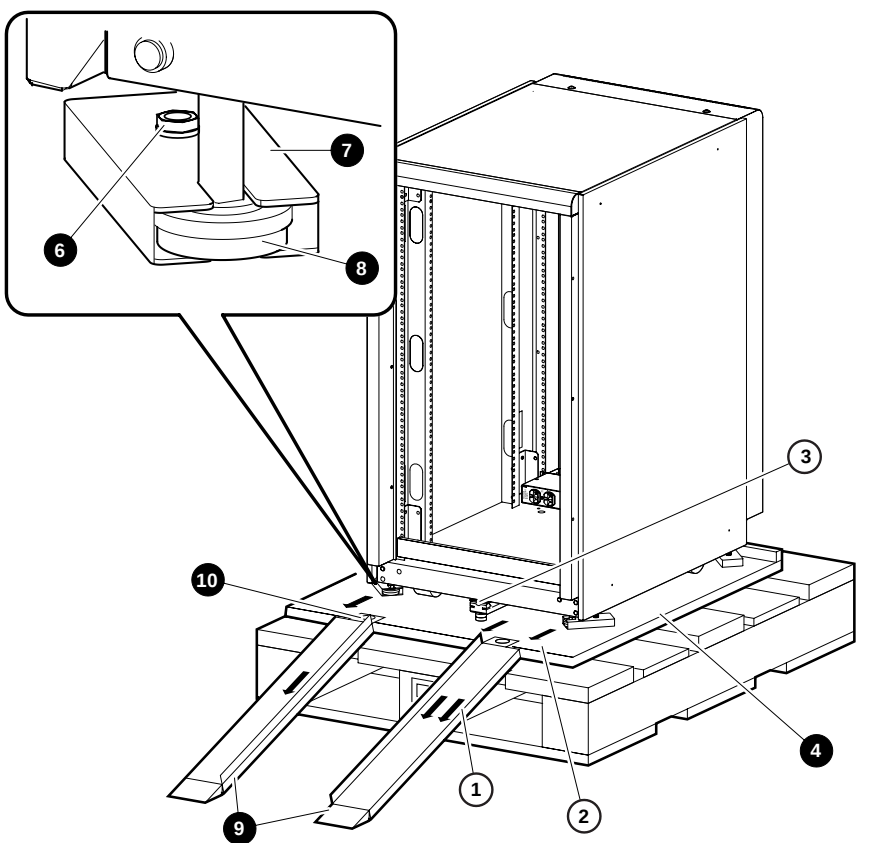
Caution

In the next step, the leveler feet must be fully retracted to prevent contact with the ramp or the floor when the cabinet is unloaded from the pallet.

8. Adjust the four cabinet leveler feet ⑧ and the leveler foot on the stabilizer bar ③ to the maximum upward position.

Installation

Figure 2-2 Installing the Ramps



LJ-04805

WARNING

In the following step, use sufficient personnel to move the cabinet off the pallet. The cabinet weighs 80.74 kg (178 lb) empty, and can weigh up to 420.94 kg (928 lb) fully configured.

If equipment is installed in the cabinet, the cabinet may become top heavy and could accelerate rapidly down the ramps if not restrained. Be prepared to guide and control the motion of the cabinet.

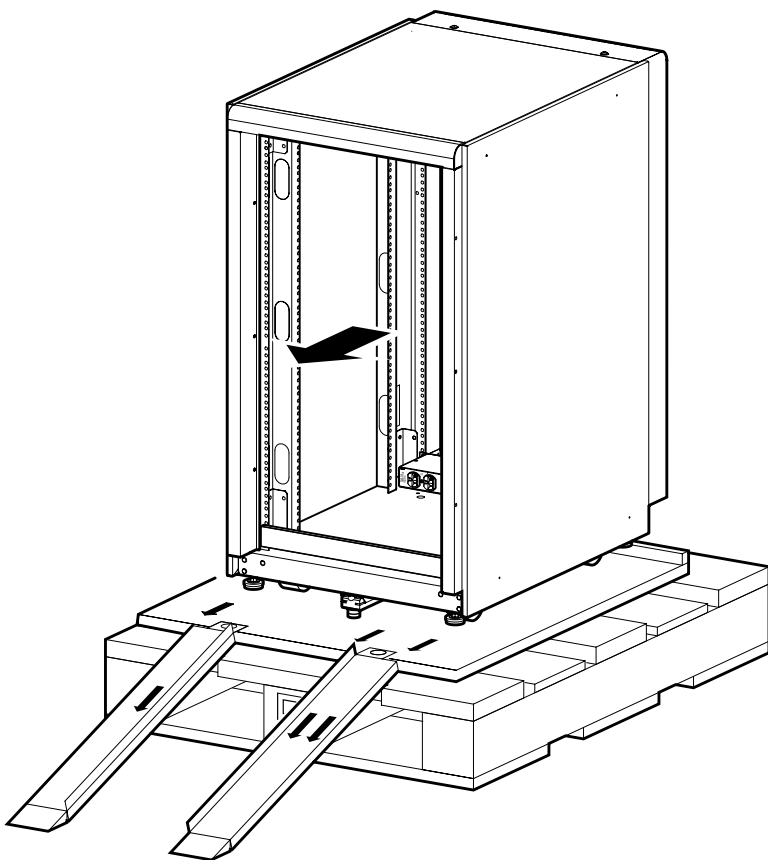
9. Refer to Figure 2-3 and roll the cabinet down the ramps using sufficient personnel for safety.
10. Wheel the cabinet to the desired location.
11. Adjust the leveler feet downward so that the cabinet is level and the load is removed from the casters.

Caution

Ensure that the leveler feet extend enough to carry the load of the cabinet so that the casters spin freely. If not, damage to the casters will result over an extended period of time.

Installation

Figure 2-3 Deskidding the Cabinet



LJ-04806

2.5 Installation Procedures

During the installation of the cabinet, one or more of the following procedures may be needed:

- Removing and Replacing the Rear Lift-Off Door (Section 2.5.1)
- Removing and Replacing the Front Filler Panels (Section 2.5.2)
- Pulling Out and Adjusting the Stabilizer Bar (Section 2.5.3)
- Removing and Replacing the Power Distribution Unit (Section 2.5.4)

Installation

2.5.1 Removing and Replacing the Rear Lift-Off Door

The rear lift-off door provides access into the rear of the cabinet. To remove the rear lift-off door, refer to Figure 2-4 and proceed as follows:

Removal

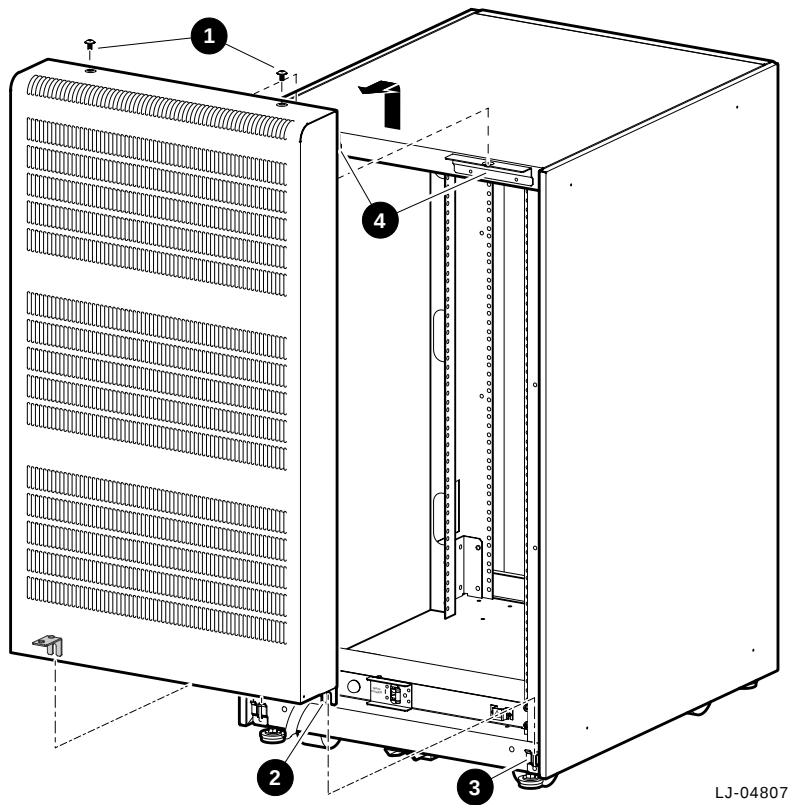
1. Remove the two Phillips-head screws ❶ that secure the rear lift-off door to the two brackets ❷ at the top rear of the cabinet.
2. Grasp both sides of the rear lift-off door about midway up the door. Then lift the door up until the securing tabs ❸ on the rear lift-off door come out of the tab catches ❹ on the cabinet.
3. Lift the door off and away from the cabinet.
4. Place the rear lift-off door aside and out of the way.

Replacement

To replace the rear lift-off door, reverse the removal procedure, steps 1 through 4.

Installation

Figure 2-4 Removing and Replacing the Rear Lift-Off Door



Installation

2.5.2 Removing and Replacing the Front Filler Panels

To remove a front filler panel, refer to Figure 2-5 and proceed as follows:

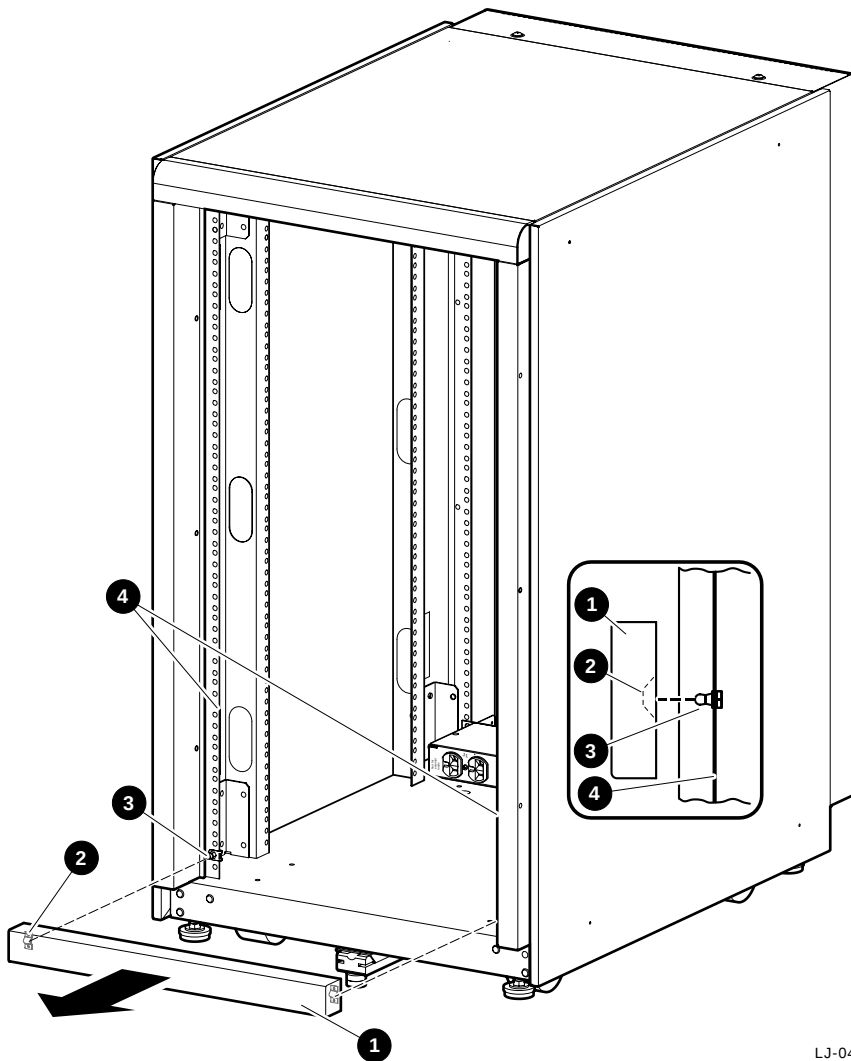
Removal

Grasp the front filler panel ❶ on both sides and then pull straight back away from the cabinet.

Replacement

To replace a front filler panel ❶, align the sockets ❷ on the front filler panel (refer to the exploded view) with the appropriate ball studs ❸ on the rails ❹ and push the panel into place.

Figure 2-5 Removing and Replacing the Front Filler Panels



LJ-04808

Installation

2.5.3 Pulling Out and Adjusting the Stabilizer Bar

The stabilizer bar ❶ pulls straight out from the bottom front of the cabinet ❷ as shown in Figure 2-6. When the stabilizer bar is fully extended, adjust the foot ❸ at the end of the stabilizer bar until it touches the floor.

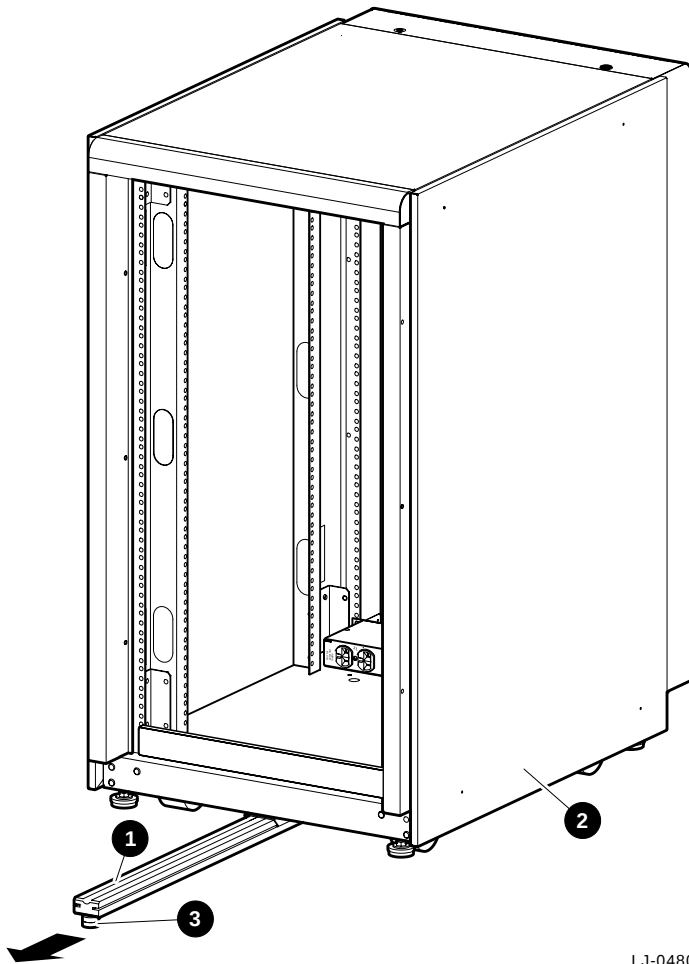
WARNING

The stabilizer bar must be fully extended before any system is extended out of the cabinet on its slides.

The H9A11 Cabinet can hold various system configurations. The amount of force required to tip or make the cabinet unstable differs with each configuration.

Installation

Figure 2-6 Pulling Out and Adjusting the Stabilizer Bar



LJ-04809

2.5.4 Removing and Replacing the Power Distribution Unit

WARNING

There can be one or more PDUs per cabinet. Ensure that all systems installed in the cabinet are turned off as described in the system documentation *before* performing the following procedure.

To remove a power distribution unit, refer to Figure 2-7 and proceed as follows:

Removal

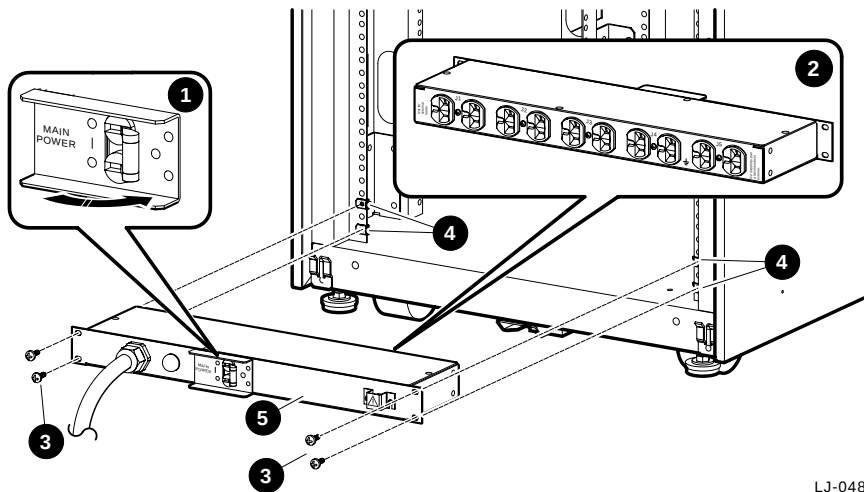
1. If the cabinet contains an operating system, turn off the system as described in the system documentation.
2. Remove the two Phillips-head screws that secure the rear lift-off door to the two brackets at the top rear of the cabinet, and lift the door off of the cabinet (refer to Section 2.5.1).
3. Set the Main Power switch ❶ on all power distribution units to the off (O) position.
4. Disconnect the power distribution units from the ac power source.
5. Remove the bottom front filler panel (refer to Section 2.5.2). This provides access to the ac outlets on the power distribution units.
6. Note and record the power cord connections to the outlets ❷ at the rear of the failed power distribution unit. Then unplug the power cords from that power distribution unit.
7. At the rear of the cabinet, remove the four (4) 10-32 truss-head screws ❸ that secure the power distribution unit ❹ to the rear rails (via the four (4) 10-32 clip nuts ❺).
8. Pull out the power distribution unit ❹ and remove it from the cabinet.

Replacement

To replace a power distribution unit, reverse the removal procedure, steps 2 through 8, then follow the power-on procedure in the system documentation.

Installation

Figure 2-7 Removing and Replacing the Power Distribution Unit



LJ-04810

A

Field Replaceable Units (FRUs)

Table A-1 lists the field replaceable units (FRUs) for the H9A11 cabinet.

Table A-1 Field Replaceable Units (FRUs)

Description	Part Number
Power distribution unit, 100 to 120 Vac	H7600-AA
Power distribution unit, 200 to 240 Vac	H7600-AB
Power distribution unit, 200 to 240 Vac	H7600-DB

