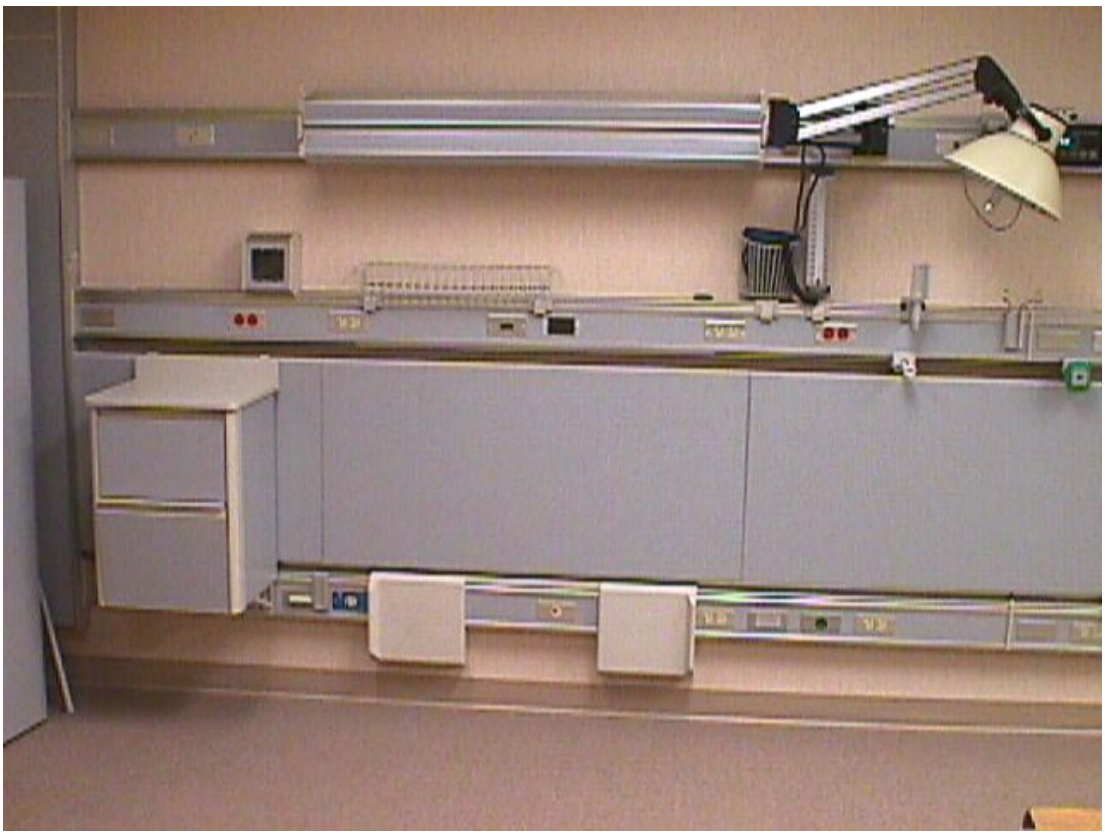
SERVICE MANUAL

Horizon® Headwall System

From Hill-Rom®



Product No. P1000

For Parts Or Technical Assistance
USA 1-800-445-3720 Canada 1-800-267-2337

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Horizon Headwall System Service Manual

Revisions

Revision Letter	Pages Affected	Date
Original Issue		March, 1988
A	All pages affected	September, 1996

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Second Edition

First Printing 1988

Printed in the USA

The information contained in this manual is subject to change without notice. Hill-Rom makes no commitment to update or keep current, the information contained in this manual.

The only product warranty intended by Hill-Rom is the express, written warranty accompanying the bill of sale to the original purchaser. Hill-Rom makes no other warranty, express or implied, and in particular, makes no warranty of merchantability or fitness for any particular purpose.

Additional copies of this manual can be obtained from Hill-Rom.

Table of Contents

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Chapter 1 Introduction

Chapter Contents

NOTES:

Purpose of this Manual

This manual provides the information required for Hill-Rom Horizon Headwall System normal operation and maintenance. It also includes a complete parts list for ordering replacement components. The parts list is located in chapter 5.

Who Should Use this Manual

This manual is intended to be used by facility authorized maintenance personnel only. Failure to observe this restriction can result in serious damage to material and/or severe injury to people.

Organization of this Manual

This manual contains seven chapters.

Chapter 1. Introduction

You are currently reading chapter 1. Chapter 1 is an introduction to this manual and to the features and capabilities of the Horizon Headwall System. The operational specifications for the unit, label location, and safety tips are also included.

Chapter 2. Troubleshooting Procedures

This chapter is used to identify a suspected problem. It is used to isolate an identified problem to a faulty component or subassembly. Repair Analysis Procedures (RAPs) have been developed for most problems.

Chapter 3. Theory of Operation

This chapter provides operational description of major subsystems in the Horizon Headwall System. This chapter also contains illustrations that display the location of plugs/jacks and distribution diagrams for AC/DC power.

Chapter 4. Removal, Replacement, and Adjustment Procedures

This chapter contains the instructions for repair/adjustments of the replaceable parts in the Horizon Headwall System.

Chapter 5. Parts List

Chapter 5 contains Hill-Rom's warranty, replacement part ordering procedure, exchange policy, illustrated parts lists, and general service information.

Chapter 6. General Procedures

This chapter contains general care and preventive maintenance procedures. It also contains a list of tools required for maintenance and repair.

Chapter 7. Accessories

This revision of the *Horizon Headwall System Service Manual* does not contain any additional information for accessories.

Typographical Conventions Used in this Manual

The manual contains different typographical conventions designed to enhance readability and understanding of its content.

- Standard text—used for standard text throughout the manual.
- **Boldface text**—emphasizes a work or phrase.
- **NOTE:**—sets apart special information or important instruction clarification.
- The symbol below highlights a WARNING or CAUTION:

Figure 1-1. Warning and Caution Symbol

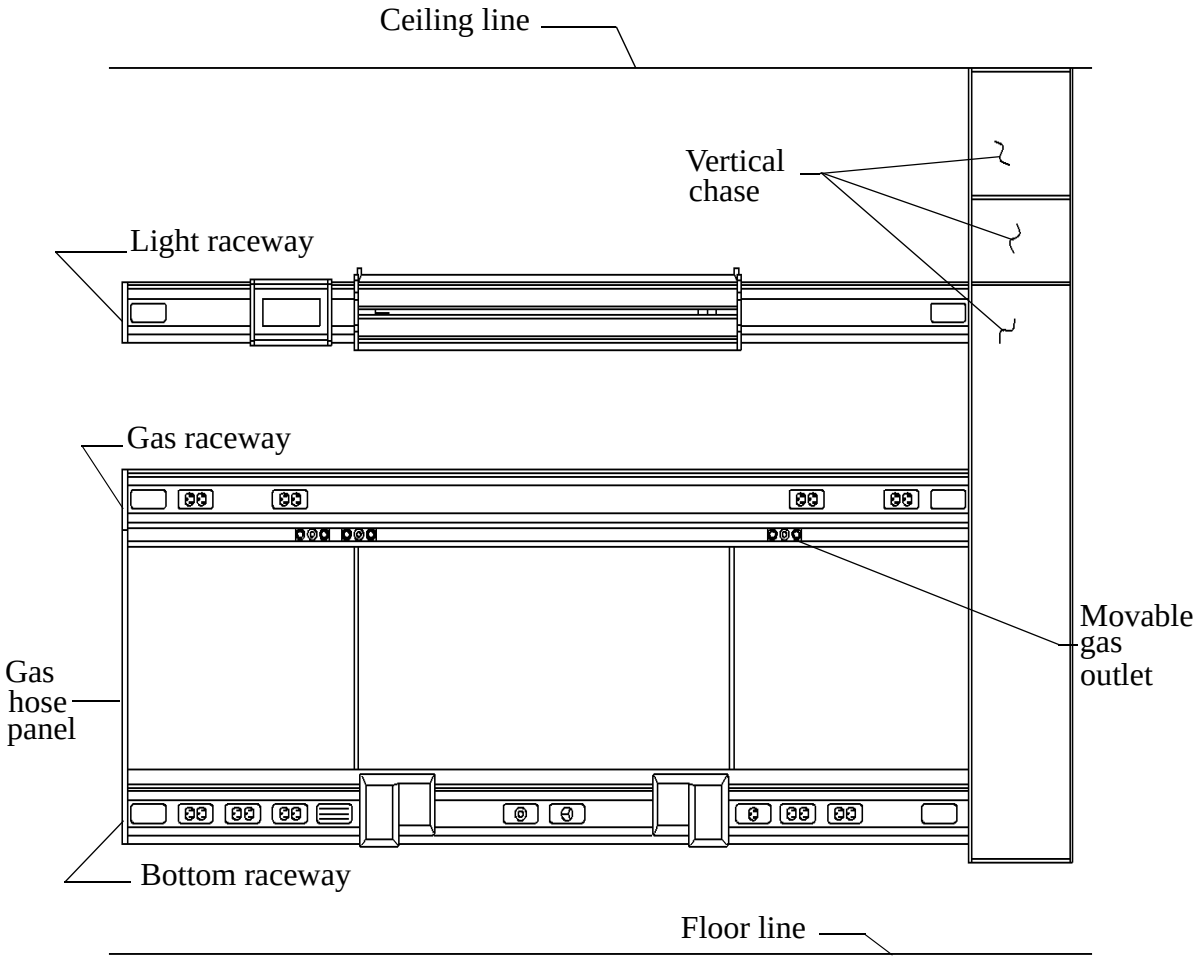
  - A WARNING identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
  - A CAUTION points out special procedures or precautions that service personnel must follow to avoid equipment damage.
- The symbol below highlights an electrical shock hazard WARNING:

Figure 1-2. Electrical Shock Hazard Warning

Introduction to the Horizon Headwall System

General Information

Figure 1-3. Horizon Headwall System



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For over 30 years, Hill-Rom has been producing products that aid in the efficient care of patients and reduce nursing burdens for many facets of healthcare. Today, with improvements in technology and changes in the way healthcare is delivered, Hill-Rom is designing products to continuously meet the changing needs of the healthcare industry.

The Horizon Headwall System of flexible services is the solution to changes in patient acuity levels, hospital occupancy rate, and technology. This flexibility is demonstrated in the ability of the Horizon Headwall System to quickly add or relocate medical gas services on the raceway as various needs arise.

The Horizon Headwall System eliminates the cluttered look of current headwalls and offers a clean, contemporary environment. The unit accepts new equipment that may not have been planned for and provides physical support of secondary equipment, brackets, shelves, and other patient headwall-related items.

The Horizon Headwall System consists of a vertical chase for delivery of power and gas services from the ceiling to the raceways. The raceways carry power lines and support auxiliary equipment. The area under the gas raceway contains the piping for medical gases.

System Features

The Horizon Headwall System maintains flexibility in hospital room services, quickly and at a low cost. The system offers:

- Low voltage power service
- Normal power service
- Emergency power service
- Multiple variable gas outlets
- Flexible storage cabinetry
- Reduced clutter around the bed and placement of equipment at convenient working levels for staff
- Variable total length to meet requirements of larger open areas
- Flexibility for the hospital room to be upgraded to a more sophisticated level of care
- Adaptability for new services without the need to break into walls or reconstruct the room

Specifications

The following tables contain specifications of the Horizon Headwall System.

Table 1-1. Chase Specifications

Feature	Dimension
Depth	4 1/2" (114 mm)
Width	13" (330 mm)
Height	Adjustable from ceiling to 10" (254 mm) above floor

Table 1-2. Raceway Specifications (available to the left or right side of chase)

Feature	Dimension
Depth	2 9/16" (65 mm)
Width	36", 48", 60", 84", 96", and 108", variable up to 336" (914 mm, 1219 mm, 1524 mm, 2133 mm, 2438 mm, 2743 mm, and 8534 mm)
Height	6 1/2" (165 mm)
Panel depth	3/4" (19.1 mm)

Table 1-3. Electrical Specifications

Description	Specification
Voltage	109 - 125V AC at 50 - 60Hz
Phases	1 and 3
Wire–standard and emergency power	Type AWT/MTW Stranded copper 600V Flame retardant Heat resistant
Wire–power circuits/lighting circuits	12 AWG (color coded per wiring diagram)
Wire–ground conductor	12 AWG Stranded copper Green
Wire–raceway ground conductor	10 AWG to terminate at the service chase ground bus
Grounding and bonding	Each receptacle must have a grounding conductor terminated at the raceway grounding post next to the service chase.

Table 1-4. Receptacle Specifications

Description	Specification
Hospital grade receptacle	Three pole Three wire grounded Hospital grade is indicated by green dot on the face of the receptacle.
Single phase	2 wires plus ground
Three phase	3 wires plus ground
Voltage	125V AC
Amperage	20 amp
Receptacle color	Ivory = standard power duplex Red = emergency power duplex (critical branch) Black = locking single Orange = isolated ground

Table 1-5. Medical Gas/Vacuum Manifold

Description	Specification
Check valves	DISS indexed
Copper tubing	ASTM-B-88
Inner diameter–oxygen and air tubing	1/2" (12.7 mm)
Inner diameter–vacuum tubing	3/4" (19.1 mm)
Brazing	Silver alloy
Minimum melting point–brazing	1000°F (538°C)
Pressure test	150 psi (1034.2 kPa)
Pressure test certification	MFPA-56F and or contractual documents

Table 1-6. Optional Equipment and Devices

Description	Specification
Chart light	Switched 7 watt 120V bulb
Night light	Switched (SPST or 3-way) or continuous burn 7 watt 120V bulb
TeleMate™ provision	Standard telephone jack
Code blue emergency call button	Contractor provides name and number of code blue equipment to be used.
Nurse call station	2, 5, or 8 gang opening Contractor supplies name and number of equipment to be used.
STAT Clock/Timer (967B) provision (connector on back)	Black plastic housing 9 1/4" (235 mm) wide 4 3/4" (121 mm) high 4 1/2" (114 mm) deep
Chase-mounted low voltage controller	120V AC 240V AC 277V AC
Switches	Quiet action 120V AC 15 amp 120V AC 20 amp Framed rocker (SPST or 3-way)

UL Classification

Horizon Headwall System

Sections and units UL category = QQXX

Isolated power wall modules UL category = KEXS

Model Identification

Table 1-7. Model Identification

Model Number	Description
P1000	Horizon Headwall System

Safety Tips

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 2-1 on page 2-11). Failure to follow this procedure could cause serious injury and damage to the equipment.

SHOCK HAZARD:
Locate the involved building standard/emergency circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 2-1 on page 2-11). Lock out and tag out the breaker. Failure to follow this procedure could cause serious injury and damage to the equipment.

SHOCK HAZARD:
Use care when checking live voltages. Do not touch live terminals, wires, and ground. Failure to use caution will cause serious electrical shock injury.

WARNING:
Only facility authorized maintenance personnel should troubleshoot the Horizon Headwall System.

WARNING:
When following these procedures you must adhere to the “Infection Control Policies and Procedures” outlined in the *Exposure Control Plan*. Not following these procedures could cause the spread of infection.

CAUTION:
Do not use harsh cleaners, solvents, or detergents.

Warning and Caution Labels

Figure 1-4. Warning and Caution Labels

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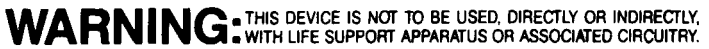

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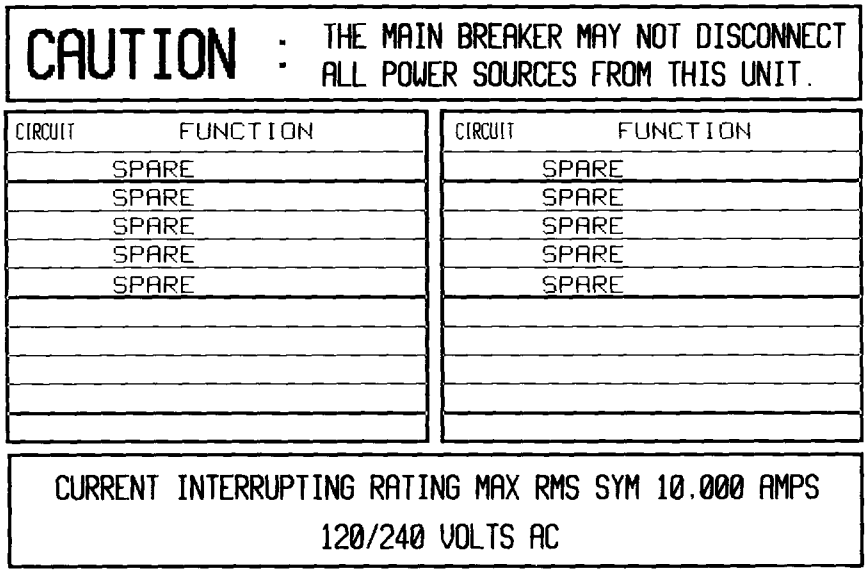

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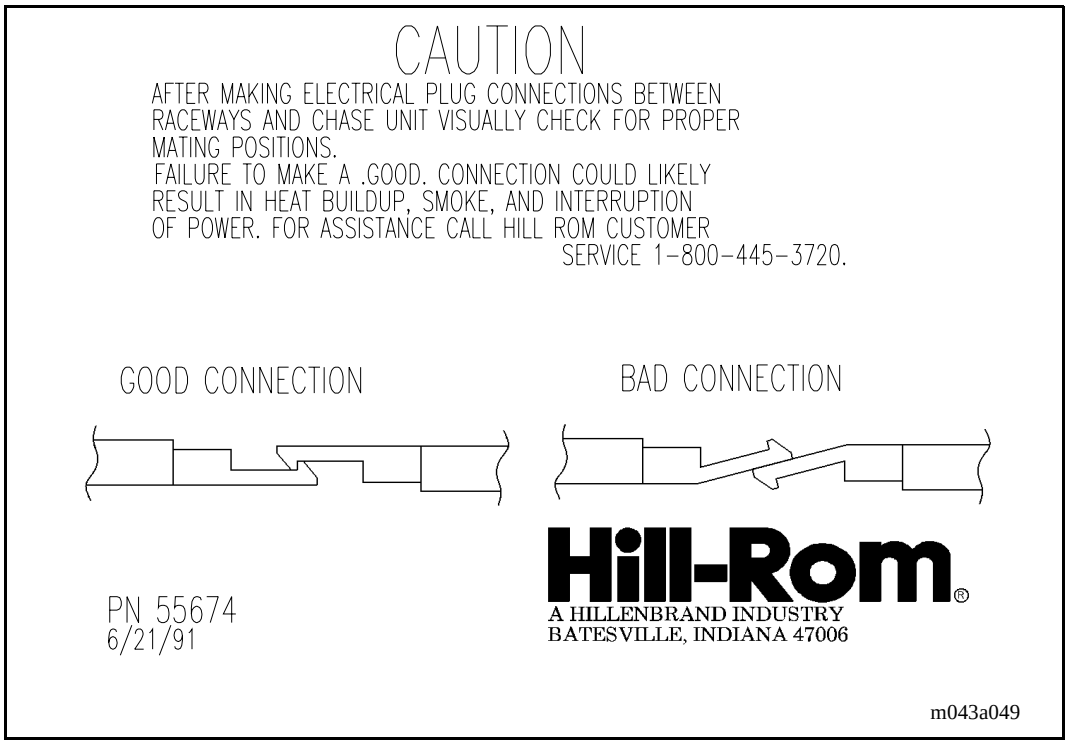
CAUTION
AFTER MAKING ELECTRICAL PLUG CONNECTIONS BETWEEN RACEWAYS AND CHASE UNIT VISUALLY CHECK FOR PROPER MATING POSITIONS.
FAILURE TO MAKE A .GOOD. CONNECTION COULD LIKELY RESULT IN HEAT BUILDUP, SMOKE, AND INTERRUPTION OF POWER. FOR ASSISTANCE CALL HILL ROM CUSTOMER SERVICE 1-800-445-3720.
GOOD CONNECTION
BAD CONNECTION
PN 55674
6/21/91
Hill-Rom
A HILLENBRAND INDUSTRY
BATESVILLE, INDIANA 47006
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NOTES:

Chapter 2 Troubleshooting Procedures

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Chapter Contents

NOTES:

Getting Started

Begin each procedure in this chapter with step 1. Follow the sequence outlined (each step assumes the previous steps are correct). Each step is the normal operational event of the product and can be confirmed by answering Y (yes) or N (no) to the statement. Your response will lead to another step in the procedure, a repair analysis procedure (RAP), or a component replacement. If more than one component is listed, replace them in the order given.

Start with **Initial Actions** to begin gathering information about the problem.

Perform the **Function Checks** to isolate/identify a problem and to verify repair after completing each corrective action (replacing or adjusting a part, seating a connector, etc.).

Perform the **Final Actions** after the Function Checks to verify the repair.

If troubleshooting procedures do not isolate the problem, call Hill-Rom Technical Support at (800) 445-3720 for assistance.

WARNING:
Only facility authorized maintenance personnel should troubleshoot the Horizon Headwall System.

Initial Actions

Initial Actions are used to gather information from the operators concerning problems with the Horizon Headwall System. Note symptoms or other information concerning the problem that the operator identifies. This information helps identify the probable cause.

1. Someone who can explain the problem is available.

   Yes **No**
   ↓ → Go to “Function Checks” on page 2-4.

2. Ask that person to demonstrate or explain the problem. The problem can be duplicated.

   Yes **No**
   ↓ → Go to “Function Checks” on page 2-4.

3. The problem is a result of improper operator action.

   Yes **No**
   ↓ → Go to "Function Checks" on page 2-4.

4. Instruct the operators to refer to the procedures in the *Horizon Headwall System In-Service Manual*. Perform the "Function Checks" on page 2-4 to ensure proper operation of the Horizon Headwall System.

Function Checks

1. Initial actions have been performed.

   Yes **No**
   ↓ → Go to "Initial Actions" on page 2-3.

2. The hospital unit is plugged into an appropriate power source, and the switch is turned on.

   Yes **No**
   ↓ → Plug the unit into an appropriate power source, and turn on the switch.

3. The bed receptacle or indicator is operative.

   Yes **No**
   ↓ → Go to RAP 2.1 on page 2-6.

4. The chart light is operational.

   Yes **No**
   ↓ → Go to RAP 2.2 on page 2-7.

5. The timed light switch operates correctly.

   Yes **No**
   ↓ → Go to RAP 2.8 on page 2-15.

6. The dimmer switch is operational.

   Yes **No**
   ↓ → Go to RAP 2.4 on page 2-9.

7. The standard/emergency duplex electrical receptacle is operative.

   Yes **No**
   ↓ → Go to RAP 2.6 on page 2-12.

8. The indirect and read light operate correctly.

   Yes **No**
   ↓ → Go to RAP 2.7 on page 2-13.

Final Actions

1. Complete the required preventive maintenance procedures. See “Preventive Maintenance Schedule” on page 6-4.

2. Complete all required administrative tasks.

2.1 Bed Receptacle or Indicator Is Inoperative

1. The building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to ON.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to ON.

3. The Specialite fixture moves freely when lifted from the bottom.

   Yes **No**
   ↓ → Go to step 6.

4. Voltage is present at the purple wire connector of the Specialite pigtail on the gas raceway.

   Yes **No**
   ↓ → Go to *Specialite Manual* Man046.

5. The voltage reads good, on a low impedance voltage tester, between the short slot and the ground terminal of the receptacle.

   Yes **No**
   ↓ → Go to step 8.

6. Voltage is present at the terminals on the receptacle.

   Yes **No**
   ↓ → Go to step 7.

7. Replace the bed receptacle. See “Bed Receptacle” on page 4-6.

8. The voltage reads good, on a low impedance voltage tester, between the short slot and the long slot in the receptacle.

   Yes **No**
   ↓ → Go to step 9.

9. Voltage is present at the terminals on the receptacle.

   Yes **No**
   ↓ → Go to step 11.

10. Replace the receptacle. See “Bed Receptacle” on page 4-6.

11. Voltage is present at the circuit breaker.

12. Go to “Final Actions” on page 2-5.

2.2 Chart Light Does Not Come On

1. The building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

3. The chart light is operative.

   Yes **No**
   ↓ → Replace the chart light bulb. See “Night Light or Chart Light Bulb” on page 4-18. If this solves the problem, go to step 4. Otherwise, proceed to step 5.

4. Go to “Final Actions” on page 2-5.

5. Check for continuity in the chart light switch as follows:

   a. Set the involved circuit breaker to the OFF position.

   b. Remove the chart light switch from the gas raceway. See “Chart Light Switch” on page 4-20.

   c. Disconnect the wires, and set the switch to ON.

6. The ohmmeter reads continuity between the switch terminals.

   Yes **No**
   ↓ → Replace the chart light switch. See “Chart Light Switch” on page 4-20.

7. Go to “Final Actions” on page 2-5.

2.3 Night Light Does Not Come On

1. The building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

3. The night light is operative.

   Yes **No**
   ↓ → Go to step 4.

4. Voltage is present at the lamp socket.

   Yes **No**
   ↓ → Go to step 6.

5. Replace the night light bulb. See “Night Light or Chart Light Bulb” on page 4-18.

SHOCK HAZARD:
Use care when checking live voltages. Do not touch live terminals, wires, and ground. Failure to use caution will cause serious electrical shock injury.

6. Voltage is present at the lug and terminal of the circuit breaker.

   Yes **No**
   ↓ → Go to “Circuit Breaker Is Inoperative” on page 2-16.

7. Continuity is present in the wires between the circuit breaker and the night light.

   Yes **No**
   ↓ → Repair or replace the wiring.

8. Go to “Final Actions” on page 2-5.

2.4 Dimmer Switch Will Not Operate The Light

1. The building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

3. Position the dimmer switch in full clockwise and back to full counterclockwise direction. The light brightens/dims.

   Yes **No**
   ↓ → Go to step 4.

SHOCK HAZARD:
Use care when checking for live voltages. Do not touch live terminals, wires, and ground. Failure to use caution will cause serious electrical shock injury.

4. Voltage is present at the terminal screws on the dimmer switch.

   Yes **No**
   ↓ → Go to step 6.

5. Replace the dimmer switch. See “Dimmer Switch” on page 4-10.

6. Voltage is present at the circuit breaker.

   Yes **No**
   ↓ → Go to “Circuit Breaker Is Inoperative” on page 2-16.

7. Continuity is present in the wires between the circuit breaker and the dimmer switch.

   Yes **No**
   ↓ → Repair or replace the wires.

8. Go to “Final Actions” on page 2-5.

2.5 Line Voltage Switch Will Not Operate Attached Device

SHOCK HAZARD:
Use care when checking live voltages. Do not touch live terminals, wires, and ground. Failure to use caution will cause serious electrical shock injury.

1. Check for voltage at the line voltage switch terminals as follows:
   a. Remove the line voltage switch from the raceway. See “Line Voltage Switch” on page 4-12.
   b. Voltage is present at the terminals on the switch (before the wires are removed).

   Yes ↓ **No** → Go to step 5.

2. Check for continuity in the line voltage switch as follows:

SHOCK HAZARD:
Locate the involved building standard/emergency circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 2-1 on page 2-11). Lock out and tag out the breaker. Failure to follow this procedure could cause serious injury and damage to the equipment.

   a. Set the Horizon Headwall System circuit breaker (lower panel) to the OFF position.
   b. Remove the wires from the switch terminals.
   c. Place the removed switch in the ON position.

3. The line voltage switch has continuity between the power terminals.

   Yes ↓ **No** → Replace the switch with a new switch. See “Line Voltage Switch” on page 4-12.

4. Go to “Final Actions” on page 2-5.

5. Reset the applicable Horizon Headwall System circuit breaker back to the ON position.

6. Check for voltage at the circuit breaker as follows:
   a. Remove the circuit breaker. See “Circuit Breaker (Standard/Emergency Power)” on page 4-22.

b. Leave the wires connected to the circuit breaker.

SHOCK HAZARD:
Use care when checking live voltages. Do not touch live terminals, wires, and ground. Failure to use caution will cause serious electrical shock injury.

7. Voltage is present between the lug and terminal of the circuit breaker.

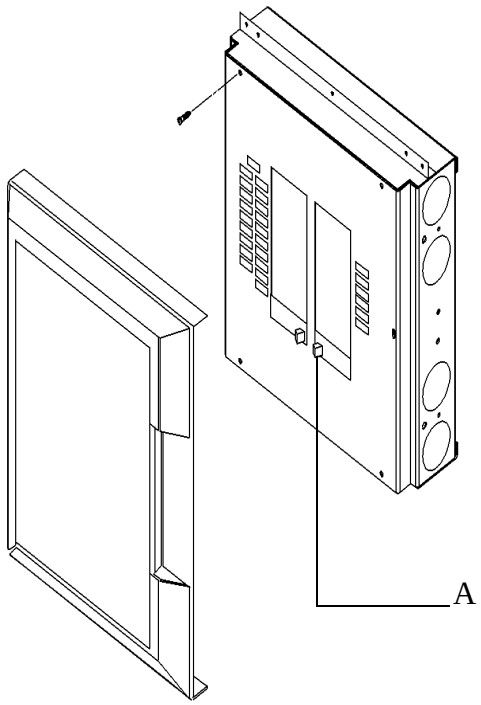
   Yes **No**
   ↓ → Go to "Circuit Breaker Is Inoperative" on page 2-16.

8. Continuity is present in the wires between the circuit breaker and the line voltage switch.

   Yes **No**
   ↓ → Repair or replace the wiring.

9. Go to "Final Actions" on page 2-5.

Figure 2-1. Standard/Emergency Circuit Breaker Box



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2.6 Duplex Electrical Receptacle—Standard/Emergency Is Inoperative

SHOCK HAZARD:
Use care when checking live voltages. Do not touch live terminals, wires, and ground. Failure to use caution will cause serious electrical shock injury.

1. The building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

3. The receptacle is working.

   Yes **No**
   ↓ → Go to step 5.

4. Go to “Final Actions” on page 2-5.

5. The voltage reads good, on a low impedance voltage tester, between the short slot and the ground terminal. Also, the voltage reads good between the short slot and long slot.

   Yes **No**
   ↓ → Go to step 7.

6. Go to “Final Actions” on page 2-5.

7. Voltage is present at the terminals on the receptacle.

   Yes **No**
   ↓ → Go to “Circuit Breaker Is Inoperative” on page 2-16.

8. Replace the receptacle. See “Duplex Receptacle” on page 4-3.

9. Go to “Final Actions” on page 2-5.

2.7 Indirect/Read Light (Low Voltage Controller) Will Not Function

1. The involved building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

2. The involved Horizon Headwall System circuit breaker (lower panel) is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to ON.

3. Press the indirect/read light switch momentarily, and release it. The indirect light turns ON.

   Yes **No**
   ↓ → Go to step 6.

4. Press the indirect/read light switch momentarily, and release it. The read light turns ON, and the indirect light turns OFF.

   Yes **No**
   ↓ → Go to step 10.

5. Go to “Final Actions” on page 2-5.

6. The voltmeter reads good, on a low impedance voltage tester, from the yellow wire to the ground (see figure 2-2 on page 2-14).

   Yes **No**
   ↓ → Go to step 8.

7. Go to “Final Actions” on page 2-5.

8. The voltmeter reads 11V DC from the red wire to the ground.

   Yes **No**
   ↓ → Replace the low voltage controller. See “Low Voltage Controller” on page 4-24.

9. The problem is in the indirect/read light switch. Refer to the *Specialite Patient Light Service Manual*.

10. The voltmeter reads good, on a low impedance voltage tester, from the white wire to the ground.

    Yes **No**
    ↓ → Go to step 12.

11. The low voltage controller is good.

2

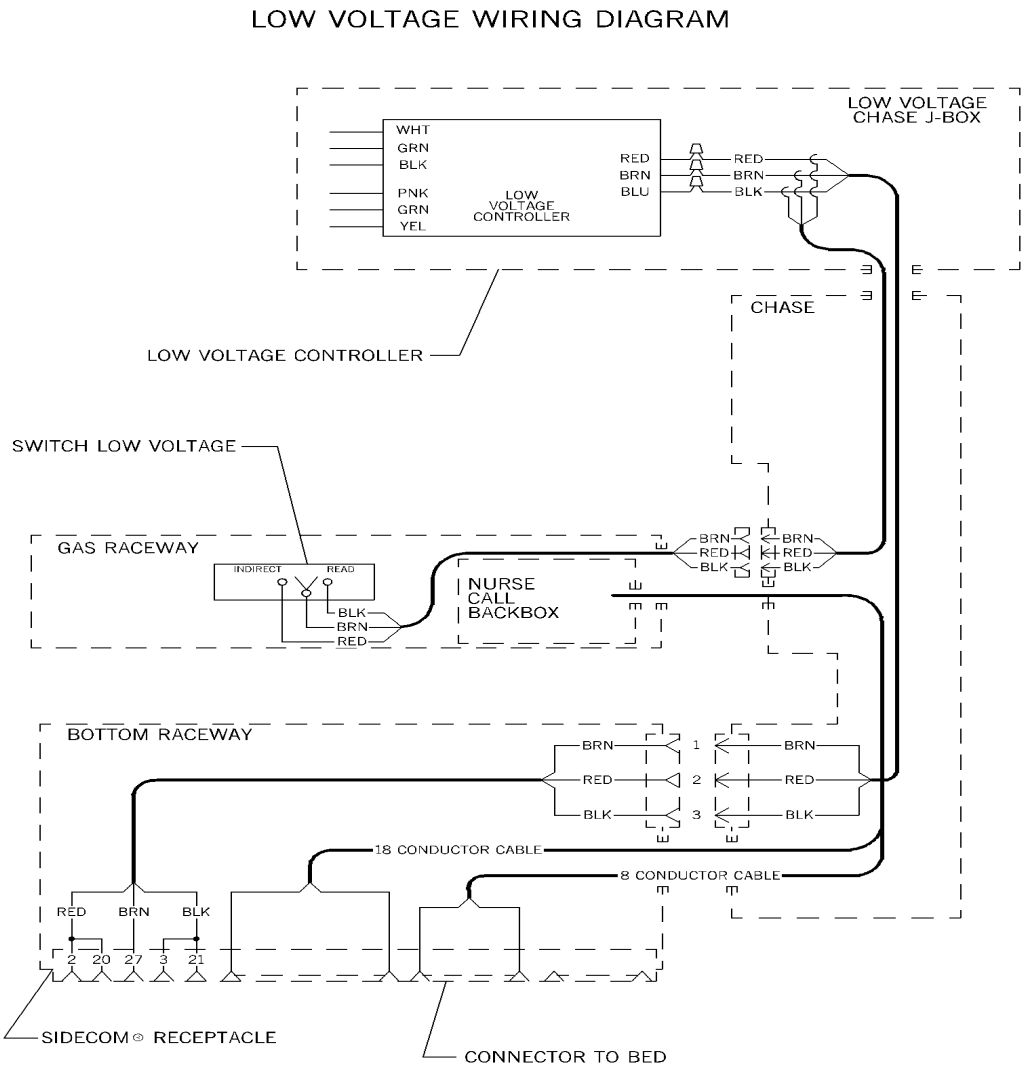
12. The voltmeter reads 11V DC from the blue wire to the ground.

    Yes ↓

    No → Replace the low voltage controller (see figure 4-12 on page 4-25).

13. The problem is in the indirect/read light switch. Refer to the *Specialite Patient Light Service Manual*.

Figure 2-2. Low Voltage Control Circuits



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2.8 Timed Light Switch and Toggle Switch Do Not Operate Properly

1. The building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to ON.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to ON.

3. Place the toggle switch in the ON position. The lights turn ON.

   Yes **No**
   ↓ → Replace the toggle switch. See “Timed Light Switch and Toggle Switch” on page 4-27.

4. Place the toggle switch in the OFF position. The lights turn OFF at the setting of the timer (0–15 minutes).

   Yes **No**
   ↓ → Replace the timed light switch. See “Timed Light Switch and Toggle Switch” on page 4-27.

5. Go to “Final Actions” on page 2-5.

2.9 Circuit Breaker Is Inoperative

1. The involved building circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the breaker to the ON position.

2. The Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the breaker to the ON position.

3. The circuit breaker is operative.

   Yes **No**
   ↓ → Go to step 5.

4. Go to “Final Actions” on page 2-5.

SHOCK HAZARD:
Locate the involved building standard/emergency circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 2-1 on page 2-11). Lock out and tag out the breaker. Failure to follow this procedure could cause serious injury and damage to the equipment.

5. Check for continuity in the circuit breaker as follows:
   a. Set the involved building circuit breaker to the OFF position.
   b. Remove the Horizon Headwall System circuit breaker. See “Circuit Breaker (Standard/Emergency Power)” on page 4-22.
   c. Continuity exists between each the breaker lug and the breaker terminal.

      Yes **No**
      ↓ → Replace the circuit breaker with a new circuit breaker.

   d. Continuity exists in the wires from the circuit breaker to the equipment.

      Yes **No**
      ↓ → Replace or repair the wires from the circuit breaker to the equipment.

6. Go to “Final Actions” on page 2-5.

2.10 Specialite Patient Light Provision (Standard Power) Does Not Come On

1. The involved building circuit breaker is the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to ON.

2. The involved Horizon Headwall System circuit breaker is in the ON position.

   Yes **No**
   ↓ → Reset the circuit breaker to the ON position.

3. The light is operational.

   Yes **No**
   ↓ → Go to step 5.

4. Go to “Final Actions” on page 2-5.

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 2-1 on page 2-11). Failure to follow this procedure could cause serious injury and damage to the equipment.

5. Test for continuity in the Specialite Patient Light provision wires as follows:
   a. Locate and set the involved Horizon Headwall System circuit breaker to the OFF position.
   b. Disconnect the Specialite Patient Light connector at the upper raceway.
   c. Disconnect the Specialite Patient Light connector at the J-box on the hospital bed.

6. Continuity exists in the black, pink, and yellow wires.

   Yes **No**
   ↓ → Replace or repair the wire and or connections as needed.

7. Refer to the *Specialite Service Manual* to diagnose and repair the Specialite Patient Light.

8. Refer to the *SideCom Communication System Service Manual* to diagnose and repair that system.

NOTES:

Chapter 3
Theory of Operation

Chapter Contents

3

NOTES:

Voltage Distribution

Figure 3-1. AC Voltage Distribution to Breaker Panels

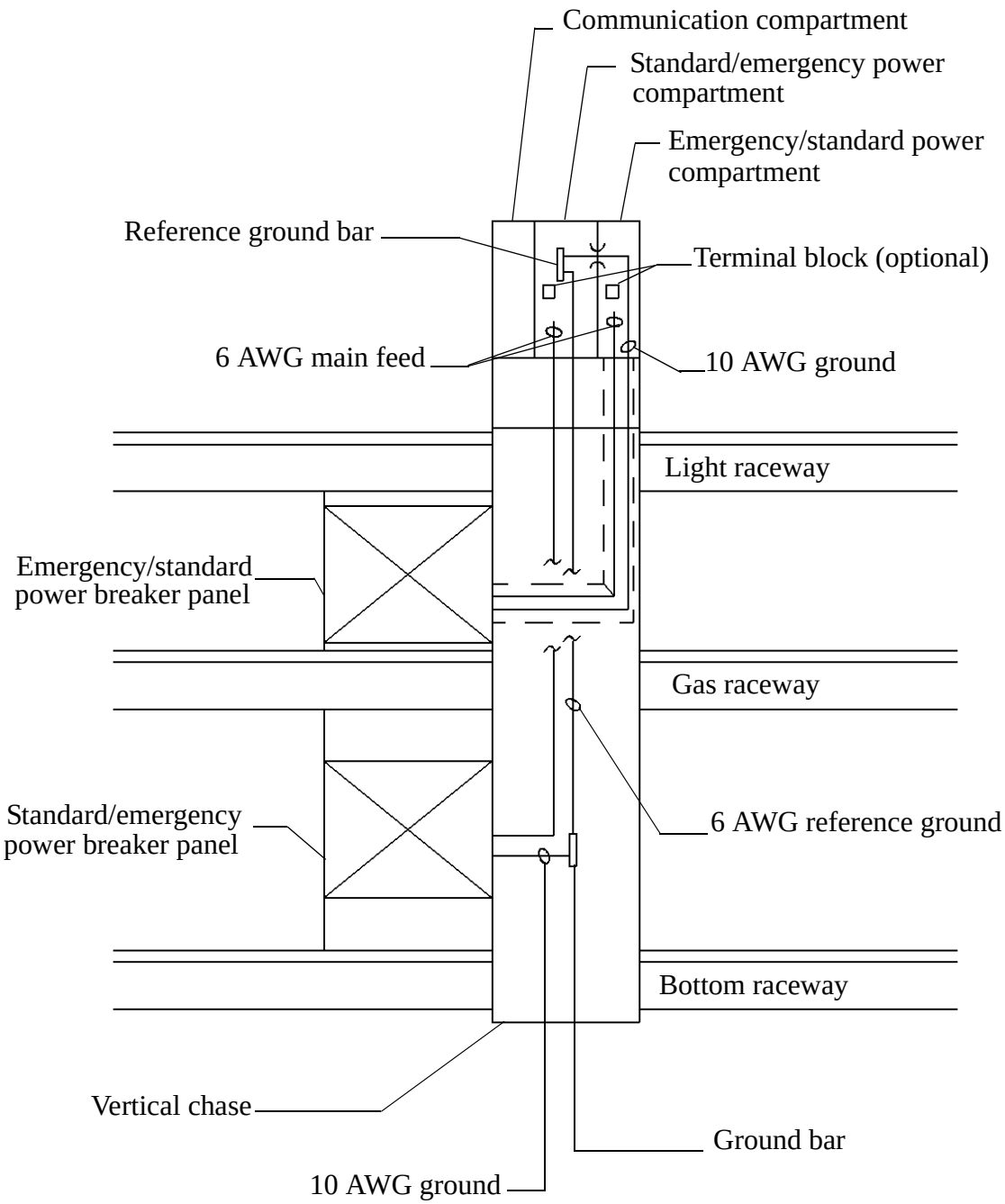

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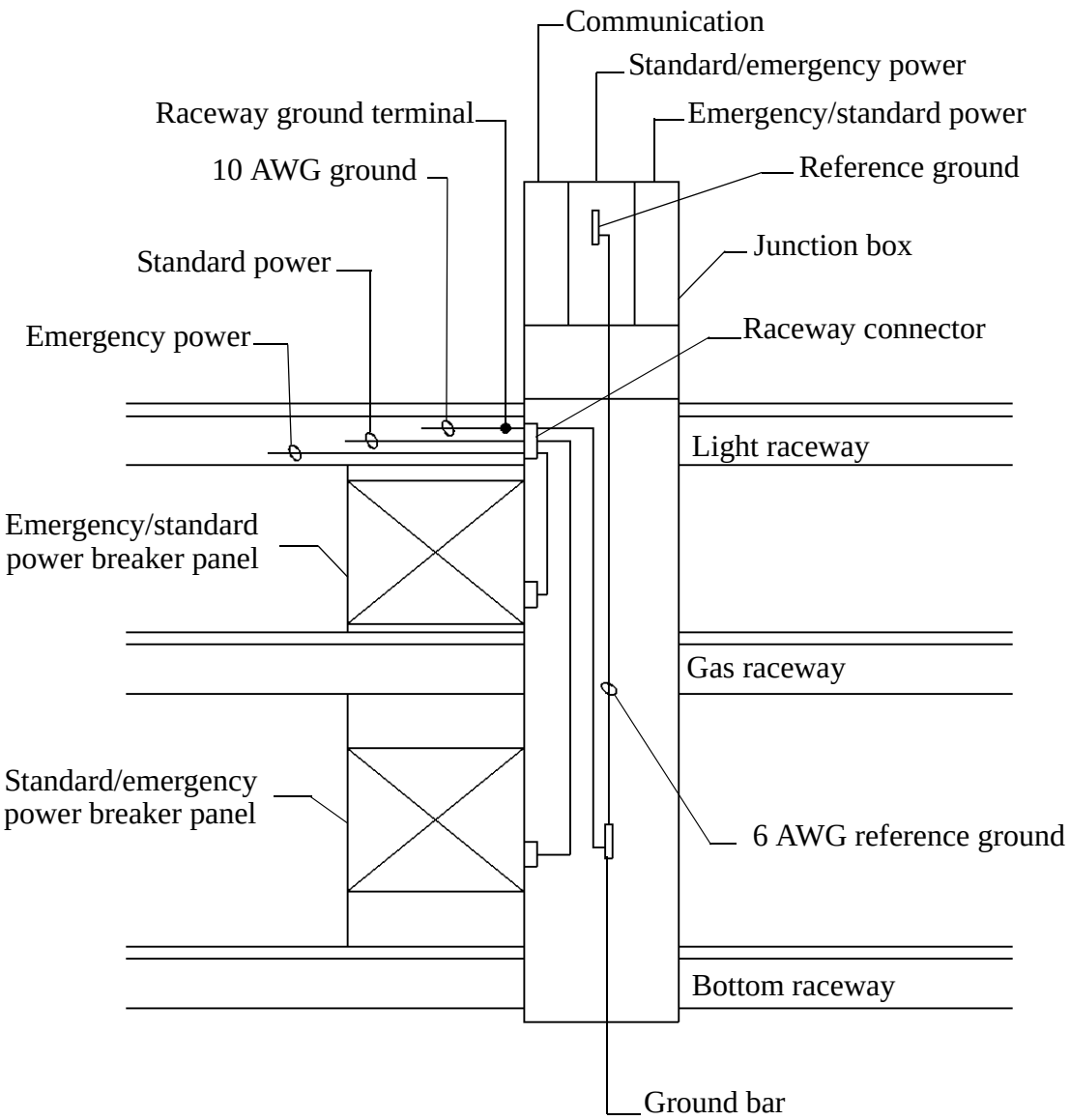
Figure 3-2. AC Voltage Distribution to Raceways



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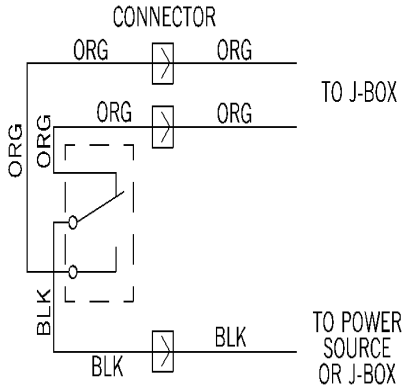
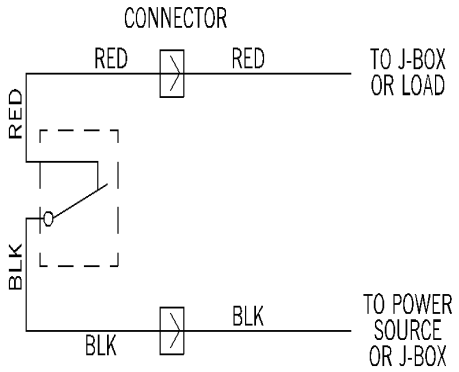
Electrical Switches

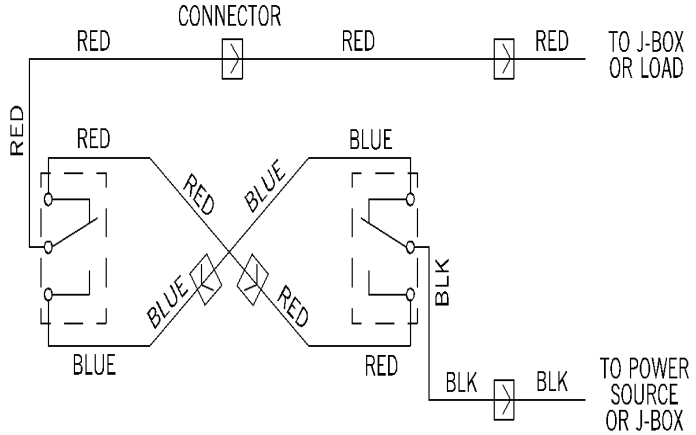
Figure 3-3. Wiring Diagrams



TYPICAL GND PWR
SINGLE 3-WAY
HORIZON



TYPICAL GND PWR
SINGLE SPST



TYPICAL GND PWR
SINGLE 3-WAY
HORIZON

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3

Figure 3-4. Ground Power Receptacles

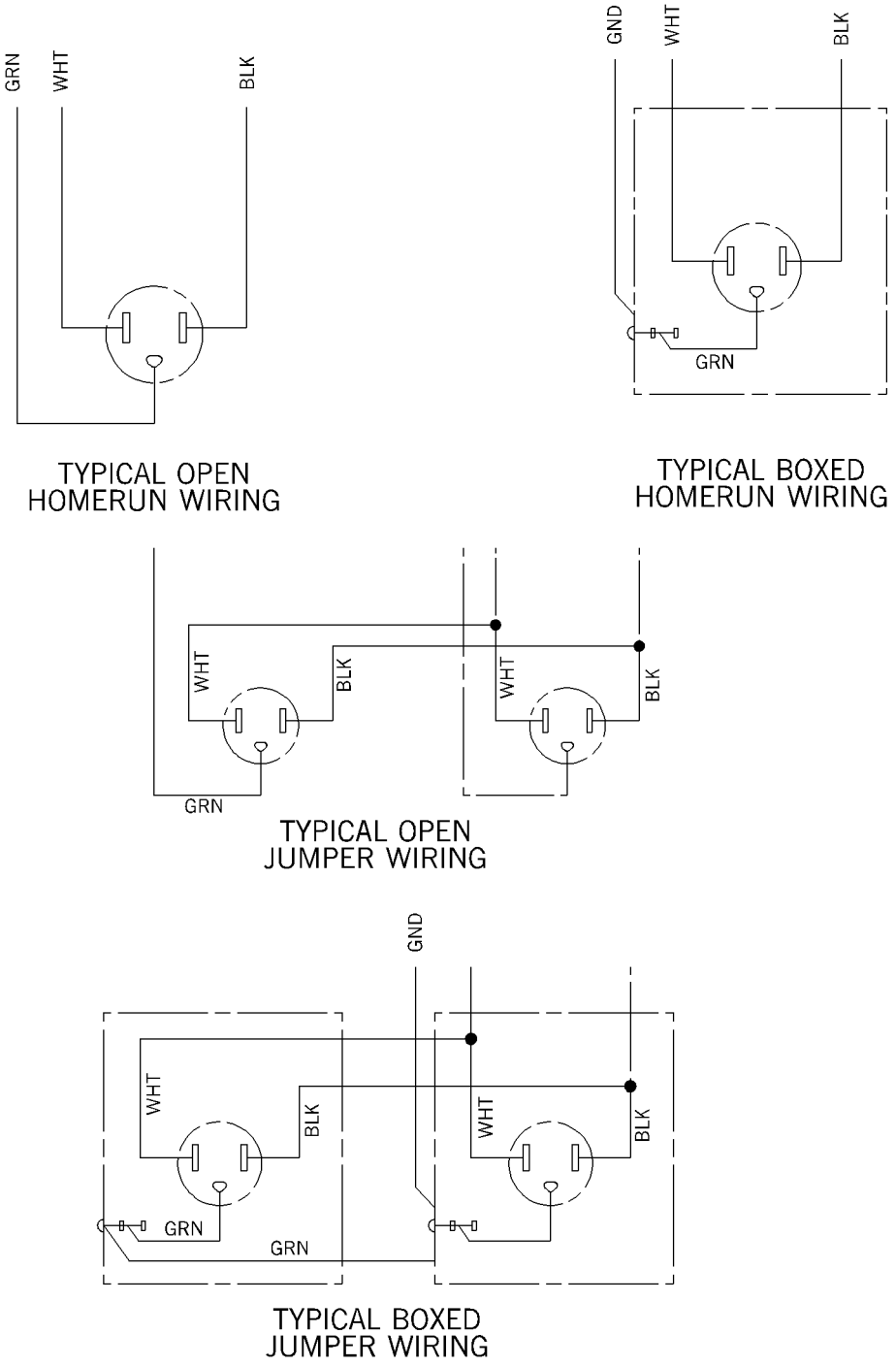

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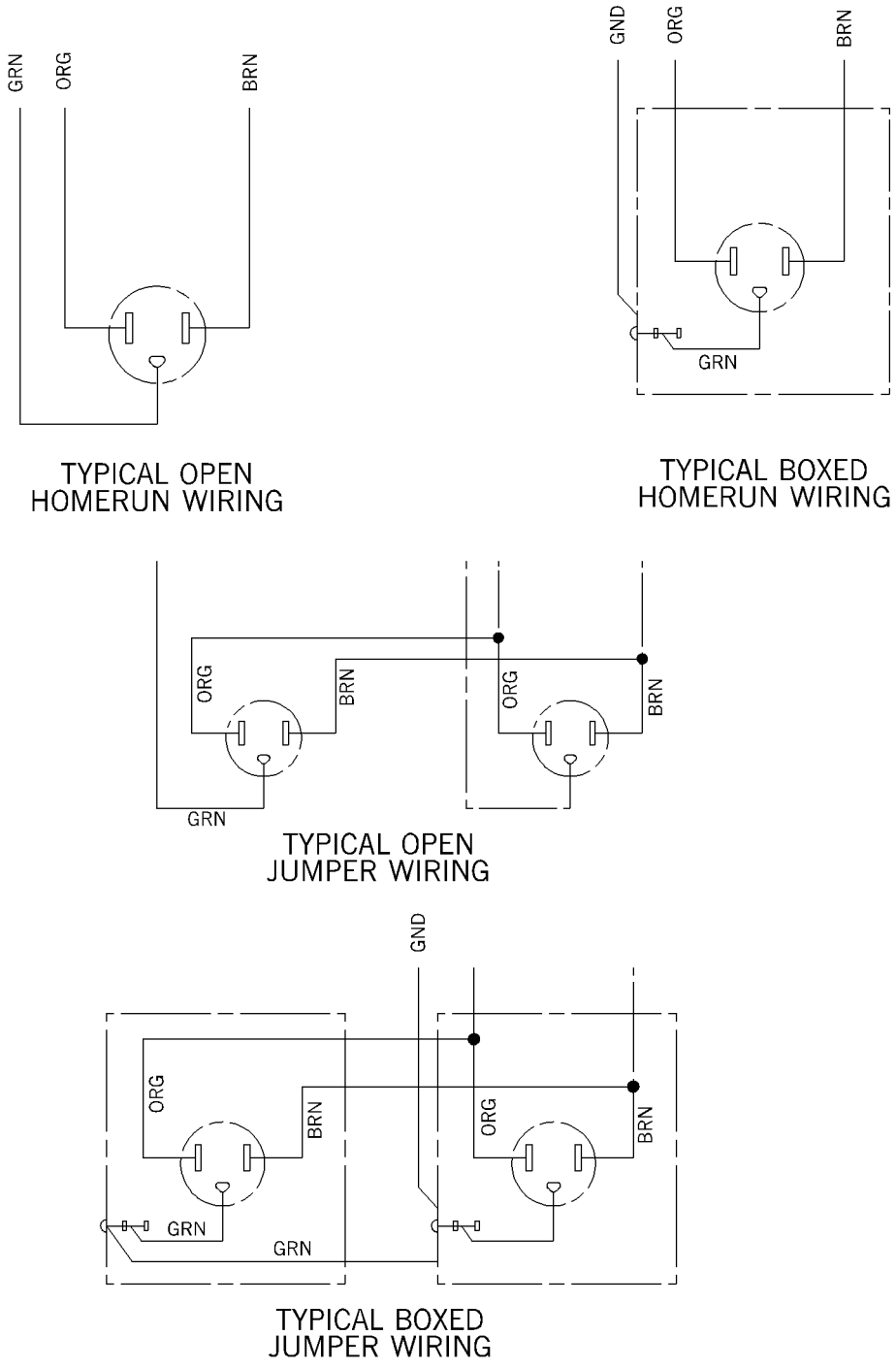
Figure 3-5. Isolated Power Receptacles



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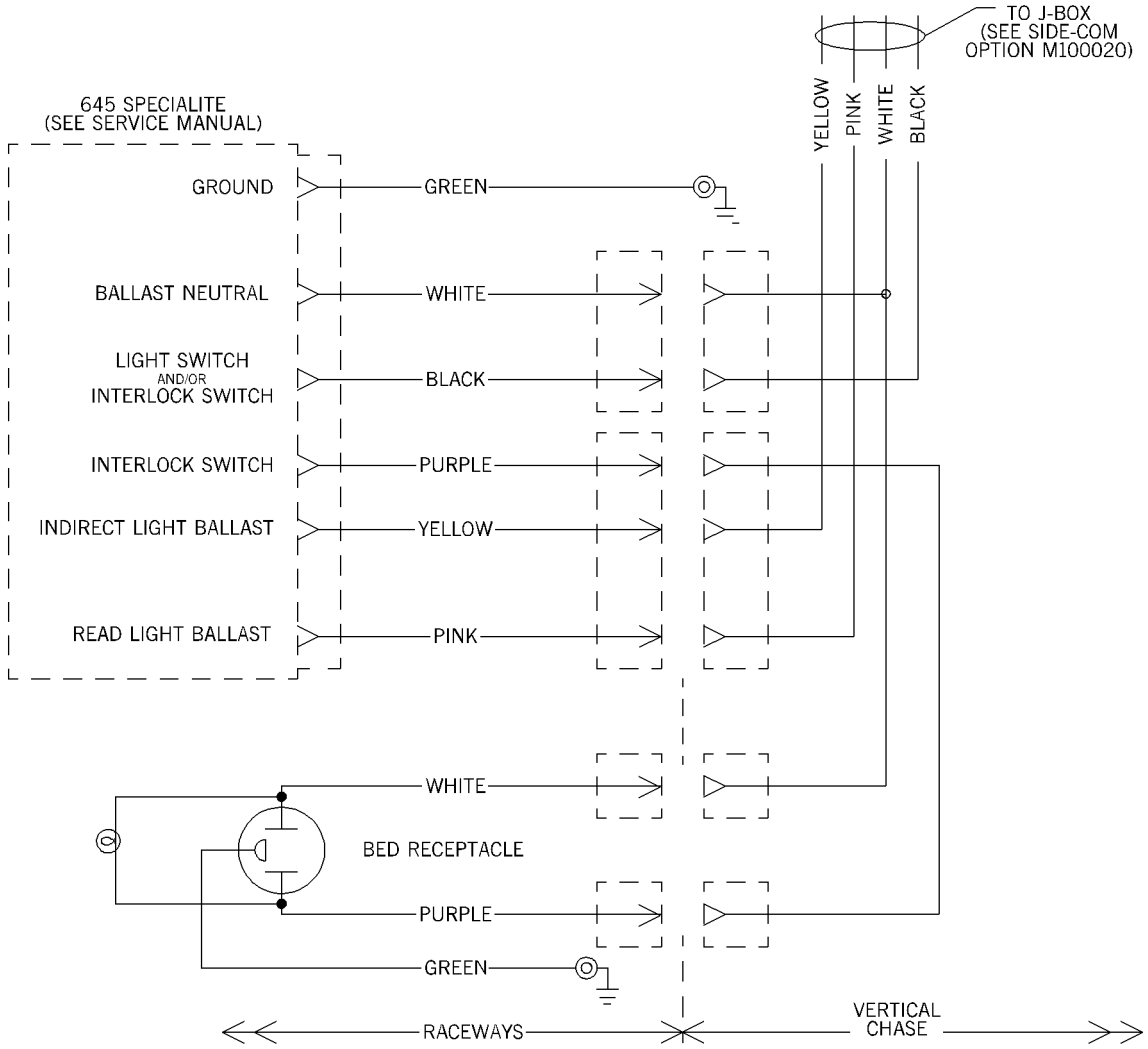
Specialite Patient Light

Figure 3-6. Specialite Patient Light Wiring Diagram



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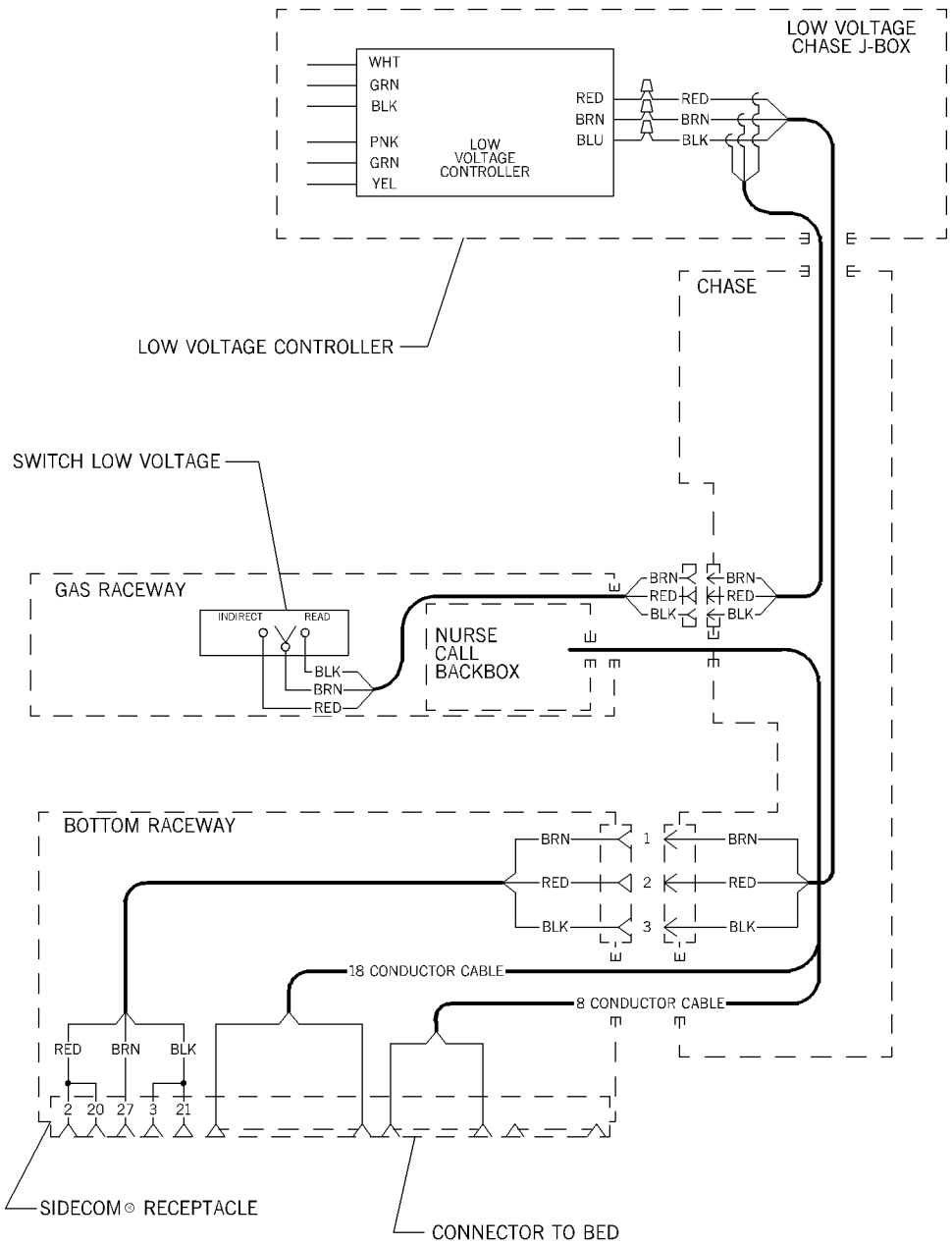
Low Voltage Controller

Figure 3-7. Low Voltage Controller Wiring Diagram



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Chase Theory

Chase

The vertical service chase carries medical gases, standard power, emergency power, and communications cabling from the ceiling to multiple wall-mounted raceways. The vertical chase consists of three modules: a power distribution wireway, an expansion module to accommodate varying ceiling heights, and a main junction box module for incoming electrical services.

The vertical chase will normally have an upper and a lower circuit breaker box attached. The upper circuit breaker box supplies emergency power. The lower circuit breaker supplies standard power.

Medical Gases

One-half inch (12.7 mm) inside diameter copper tubing carries the oxygen and air. Three-quarter inch (190 mm) inside diameter copper tubing carries the vacuum.

Standard Power

Standard power is available through the lower circuit breaker box and into all three raceways. Ivory receptacles are used for the standard power outlets.

Emergency Power

Emergency power is available through the upper circuit breaker box and into all of the raceways. Red receptacles are used for the emergency power outlets.

Communications/Low Voltage

Communications are carried by low voltage.

Chapter 4
Removal, Replacement, and Adjustment Procedures

Chapter Contents

4

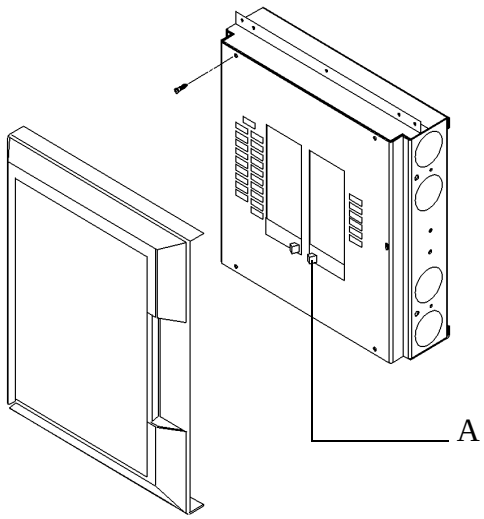
4

4.1 Duplex Receptacle

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

Figure 4-1. Standard/Emergency Circuit Breaker Box



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1. Turn off power at the appropriate circuit breaker (A) (lower breaker box for the ivory receptacle or upper breaker box for the red receptacle), and tag the breaker box out-of-service.

2. Remove the screws (B) from the duplex receptacle faceplate (C) (see figure 4-2 on page 4-4).

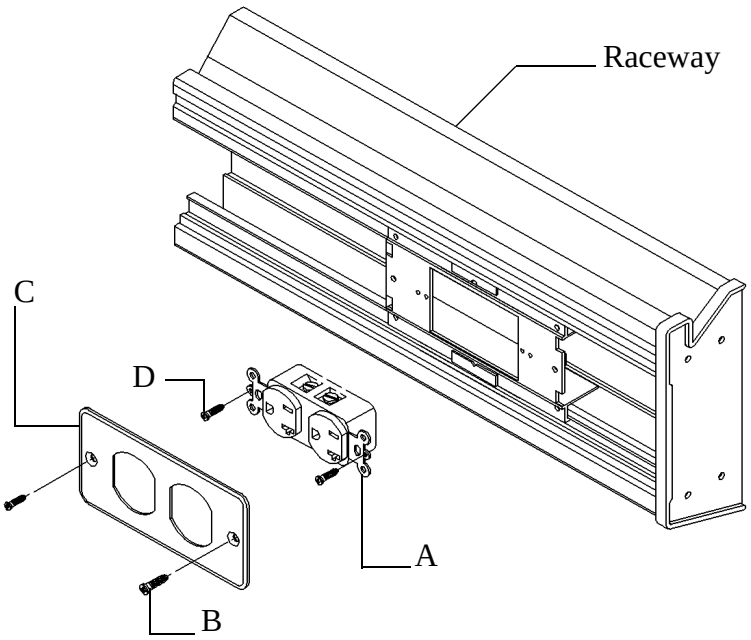
3. Remove the faceplate (C).

4. Remove the duplex receptacle attaching screws (D).

5. Pull the receptacle (A) out of the opening in the device plate.

6. Loosen the screws holding the wires.
7. Note the colors of the wires and their location.
8. Remove the wires from the terminals.

Figure 4-2. Duplex Receptacle Removal



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Replacement

1. Replace the color coded wires at their original terminals (see figure 4-2 on page 4-4).
2. Tighten the terminal screws.
3. Push the receptacle (A) into the device plate.
4. Install the duplex receptacle attaching screws (D).
5. Tighten the screws (D).
6. Install the faceplate (C) onto the device plate, and tighten the screws (B).

7. Remove the out-of-service tags, and turn the circuit breaker on.

8. Test the receptacle for availability of power. See “Duplex Electrical Receptacle—Standard/Emergency Is Inoperative” on page 2-12.

4.2 Bed Receptacle

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Locate the bed receptacle circuit breaker panel. Reset the circuit breaker (A) to the OFF position, and tag the breaker box out-of-service.

NOTE:
Find the standard breaker box just above the lower raceway (A). The standard breaker box mounts on the vertical chase.

2. Remove the faceplate screws and the faceplate (D) (see figure 4-3 on page 4-7).

3. Remove the faceplate (D) from the device plate.

4. Leave the indicator in position on the faceplate (D).

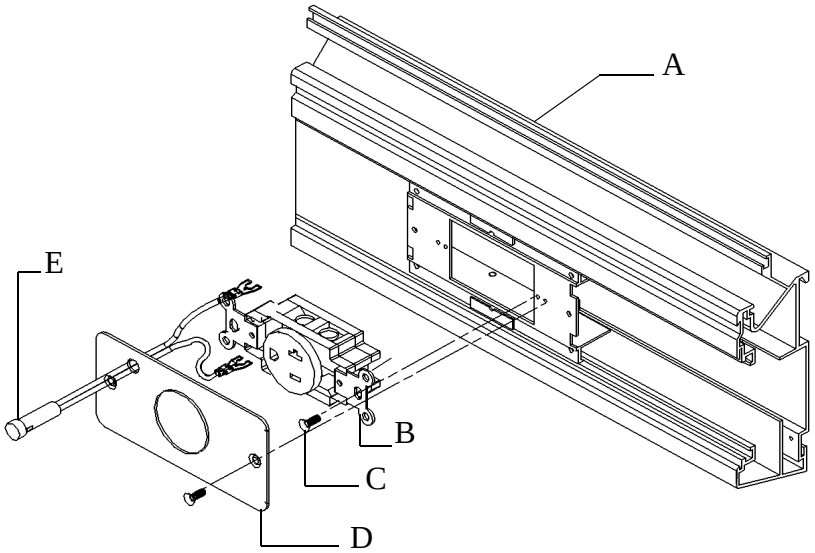
5. Loosen the receptacle screws (C) until the receptacles (B) can be lifted away from the device plate.

6. Note and record the positions of the color coded wires.

7. Loosen the screws holding the wires.

8. Remove the power supply and indicator wires from the receptacle (B).

Figure 4-3. Bed Receptacle Removal



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Replacement

1. Place the indicator and power supply wires onto the receptacle terminal screws.
2. Tighten the terminal screws.
3. Align the receptacle (B) with the retaining holes in the device plate.
4. Install and tighten the two receptacle-retaining fasteners into the device plate.
5. Insert the faceplate (D) and indicator (E) onto the device plate.
6. Install and tighten the two faceplate screws to secure the faceplate (D) on the device plate.
7. Set the circuit breaker to the ON position, test the receptacle (B) for power, and remove the out-of-tag service tags.
8. Test the receptacle for availability of power. See “Bed Receptacle or Indicator Is Inoperative” on page 2-6.

4.3 Single Receptacle

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Locate the circuit breaker (A), set the involved breaker to the OFF position, and tag the breaker box out-of-service.

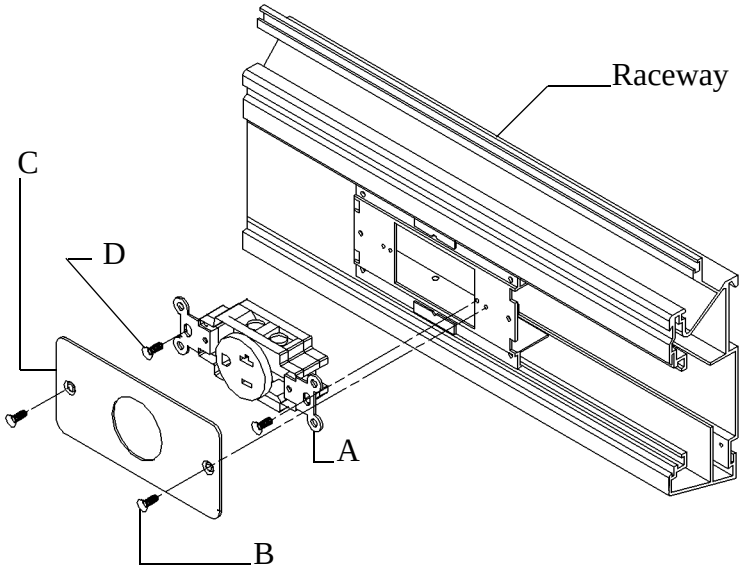
2. Remove the screws (B) and the faceplate (C) from the single receptacle device plate (see figure 4-4 on page 4-9).

3. Loosen the receptacle screws (D) until the receptacle (A) will lift away from the device plate.

4. Note and record the positions of the color coded wires.

5. Unscrew the wire terminal screws just enough to remove the wires from the receptacle (A).

Figure 4-4. Single Receptacle Removal



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Replacement

1. Install the color coded wires to the proper terminals on the new receptacle (A).
2. Tighten the terminal screws on the receptacle (A).
3. Align the receptacle screws (D) with the holes in the device plate, and install the receptacle (A) on the device plate.
4. Install the faceplate (C) and the screws (B) on the device plate.
5. Set the circuit breaker to the ON position, and remove the out-of-service tags.
6. Test the receptacle (A) for power. See “Duplex Electrical Receptacle—Standard/Emergency Is Inoperative” on page 2-12.

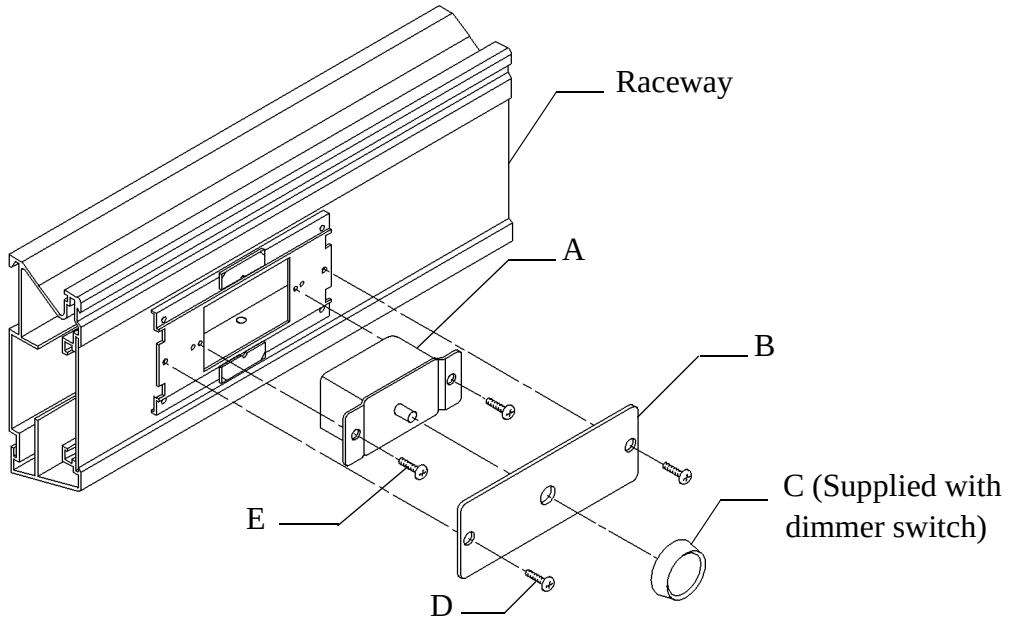
4.4 Dimmer Switch

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Locate the dimmer switch circuit breaker (A) in the standard power (lower panel) breaker panel box, set it to the OFF position, and tag the breaker box out-of-service.
2. Remove the dimmer switch button (C).
3. Remove the faceplate screws (D) and the faceplate (B) (see figure 4-5 on page 4-11).
4. Take out the switch device plate retaining screws (E), and remove the switch (A).
5. Record the positions of the color coded wires on the switch terminals.
6. Loosen the terminal screws on the switch, and remove the wires from the switch (A).

Figure 4-5. Dimmer Switch Removal



m043a032

Replacement

1. Place the color coded wires in their original positions on the switch.
2. Tighten the terminal screws to hold the wires firmly in place.
3. Install the switch (A) on the device plate, and tighten the retaining screws (E).
4. Place the faceplate (B) on the device plate, and install the retaining screws (D).
5. Install the dimmer switch button (C) on the shaft.
6. Set the switch circuit breaker to the ON position, and test to see if the switch (A) is working. See “Dimmer Switch Will Not Operate The Light” on page 2-9.

4.5 Line Voltage Switch

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Locate the line voltage switch circuit breaker (A) in the standard power breaker panel (lower panel), set it to the OFF position, and tag the breaker box out-of-service.

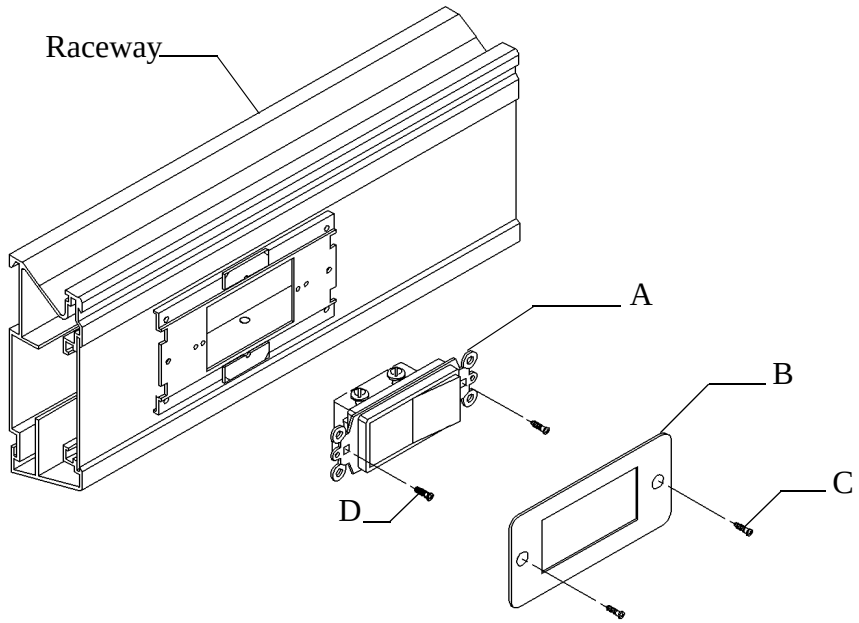
2. Remove the faceplate screws (C) and the faceplate (B) (see figure 4-6 on page 4-13).

3. Take out the switch device plate retaining screws (D), and remove the switch (A).

4. Record the positions of the color coded wires on the switch terminals.

5. Loosen the terminal screws on the switch (A) and remove the wires from the switch (A).

Figure 4-6. Line Voltage Switch Removal



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Replacement

1. Place the color coded wires in their original positions on the switch (A).
2. Tighten the terminal screws to hold the wires firmly in place.
3. Install the switch (A) on the device plate. Install and tighten the retaining screws (D).
4. Place the faceplate (B) on the device plate, and install the retaining screws (C).
5. Set the circuit breaker to the ON position, remove the out-of-service tags, and test the operation of the switch (A). See “Line Voltage Switch Will Not Operate Attached Device” on page 2-10.

4.6 Ground Jack Receptacle

Removal

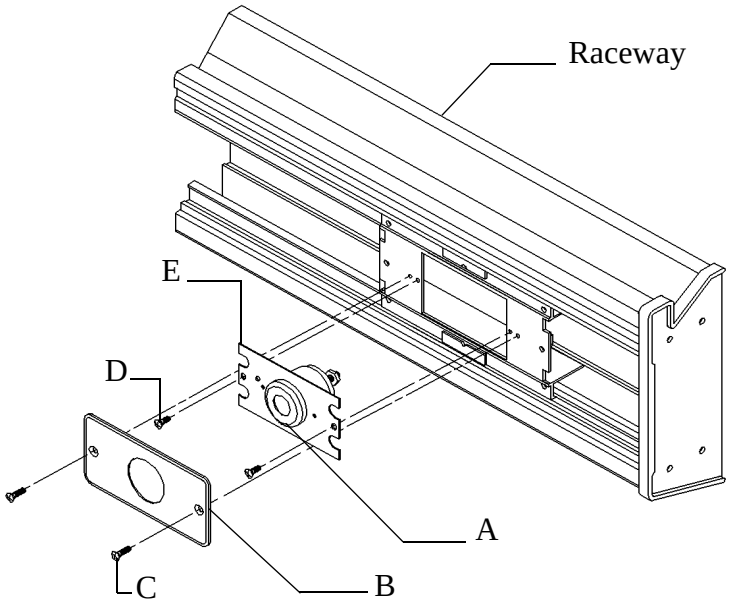
1. Remove the screws (C) and the faceplate (B) from the ground jack receptacle device plate (see figure 4-7 on page 4-14).

2. Loosen the ground mounting plate screws (D) until the mounting plate (E) will lift away from the device plate.

3. Unscrew the ground wire fastener just enough to remove the ground wire from the receptacle (A).

4. Remove the attaching screws (D) and lift the ground receptacle (A) from the ground mounting plate.

Figure 4-7. Ground Jack Receptacle Removal



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Replacement

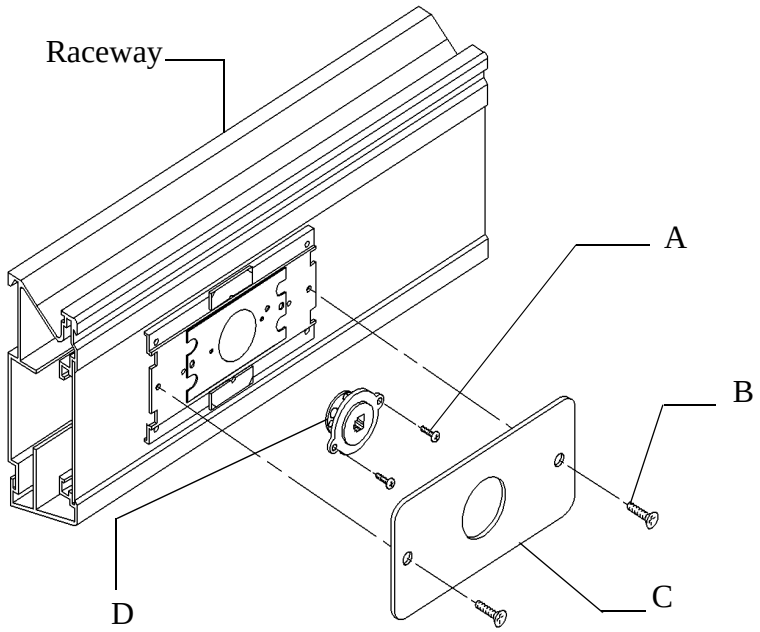
1. Install the ground receptacle (A) into the ground mounting plate. Place the ground wire on the terminal, and tighten the fastener to hold it in place.
2. Align the ground plate screws with the holes in the device plate, and install the ground plate on the device plate.
3. Install the faceplate (B) and screws (C) on the device plate.
4. Test for availability of ground with a ground test light.

4.7 Telephone Receptacle

Removal

1. Remove the screws (B) and the telemate faceplate (C) from the device plate (see figure 4-8 on page 4-16).
2. Loosen the phone plate screws (A) until the phone plate will lift away from the device plate.
3. Remove the telephone interface connector from the back of the modular phone receptacle (D).
4. Remove the attaching screws (A) and lift the modular phone receptacle from the phone plate.

Figure 4-8. Telephone Receptacle Removal



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Replacement

1. Install a modular phone receptacle (D) into the phone plate.
2. Place the phone wire interface into the back of the modular phone receptacle (D).
3. Align the phone plate screws (A) with the holes in the device plate, and install the phone plate on the device plate.
4. Install the TeleMate faceplate (C) and screws (B) on the device plate.
5. Check the modular phone receptacle (D) for correct phone function.

4.8 Night Light or Chart Light Bulb

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Locate the standard power circuit breaker (lower panel), and set the involved breaker to the OFF position.

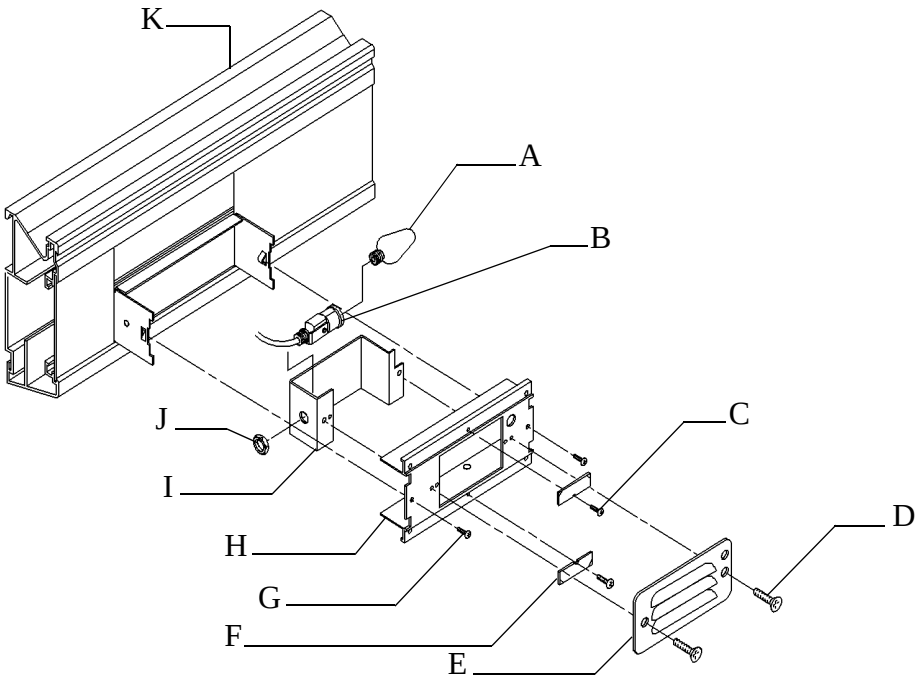
2. Remove the screws (D) and the chart or night light faceplate (E) from the device plate (see figure 4-9 on page 4-19).

3. Remove the lock screws (C) and lock plates (F) from the night light housing (I).

4. Take the device plate attaching screws (G) from the backbox, and remove the device plate (H) from the raceway (K).

5. Remove the light bulb (A) from the fixture (B).

Figure 4-9. Night Light or Chart Light Bulb



Replacement

1. Install the new light bulb (A) in the fixture (B).
2. Insert the device plate attaching screws (G) and the device plate (H) on the backbox.
3. Install the lock plate (F), device plate (H), and attaching screws (C) on the chart or night light housing (I).
4. Install the screws (D) and faceplate (E) on the device plate (H).
5. Set the circuit breaker to the ON position.
6. Check the night light to see if it is working.

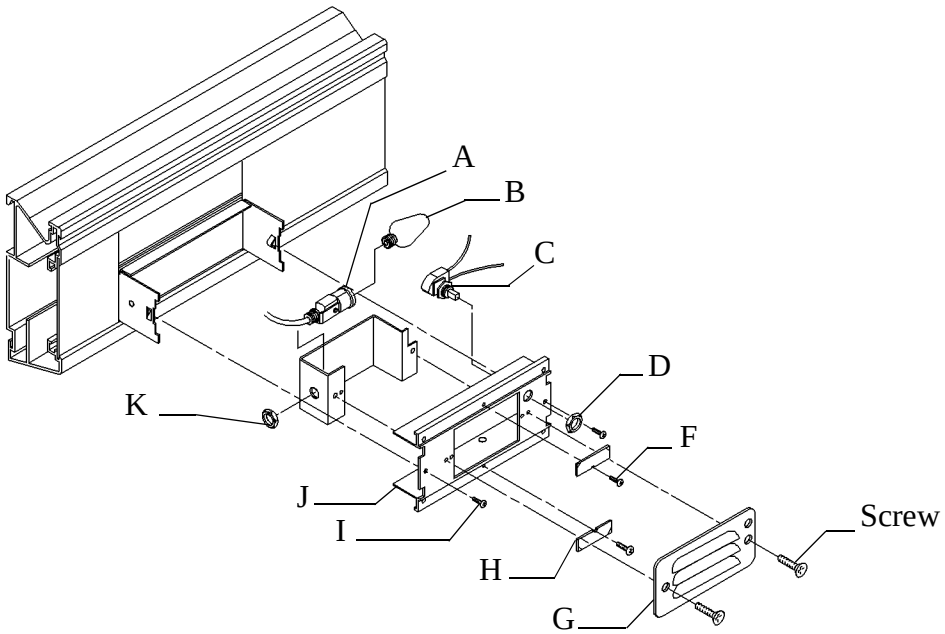
4.9 Chart Light Switch

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Locate the standard power circuit breaker (lower panel), set the involved breaker to the OFF position, and tag the breaker box out-of-service.
2. Remove the screws (F) and the chart light faceplate (G) from the device plate (J) (see figure 4-10 on page 4-21).
3. Take off the hex nut (K) from the base of the switch (C).
4. Remove the two retaining screws from the chart light switch (C).
5. Lift the switch (C) away from the device plate (J).
6. Remove the switch (C) wires from the power supply connectors.

Figure 4-10. Chart Light Switch Removal



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Replacement

1. Install the power wires on the switch (C).
2. Insert the switch (C) into the device plate (J) and install the attaching screws (I).
3. Install the hex nut (K) on the base of the switch shaft.
4. Install the screws (F) and faceplate (G) on the device plate (J).
5. Set the circuit breaker to the ON position, and remove the out-of-service tags.
6. Turn the switch on to see if the chart light is working.

4.10 Circuit Breaker (Standard/Emergency Power)

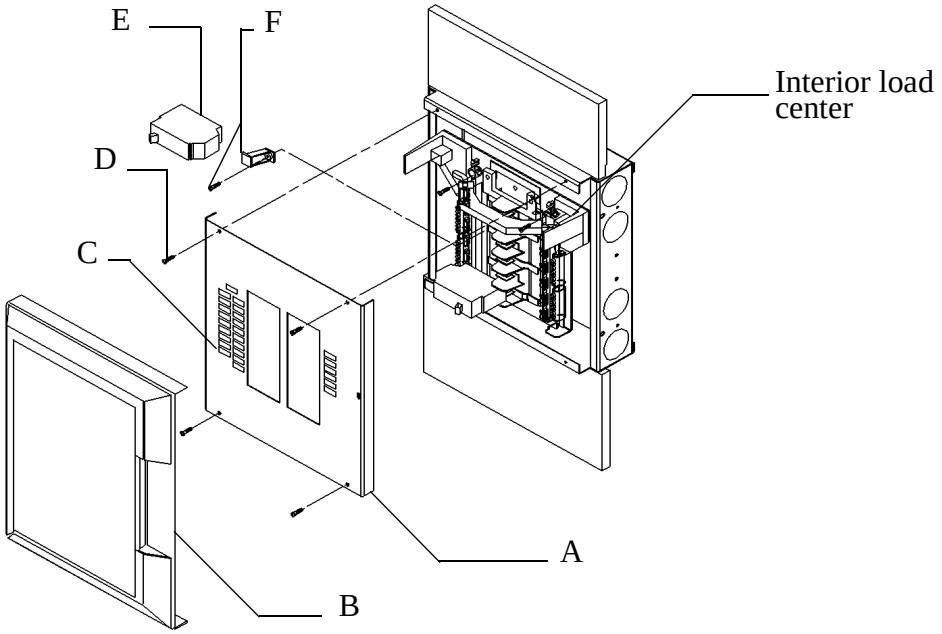
Removal

NOTE:
The emergency power circuit breaker is similar.

SHOCK HAZARD:
Locate the involved building standard/emergency circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Lockout and tagout the breaker. Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Make note of the position of the Horizon Headwall System circuit breaker to be replaced (see figure 4-11 on page 4-23).
2. Remove the breaker cover assembly (B) and the dead front panel (A).
3. Remove the retaining screw and kit (F) for the malfunctioning circuit breaker (E) (for main breaker only).
4. Lift the breaker (E) from the breaker box.
5. Note the color coding and placement of the wires in the circuit breaker (E).
6. Remove one, two, or three wires from the one pole, two pole, or three pole breaker (E).

Figure 4-11. Circuit Breaker (Standard/Emergency Power)



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4

Replacement

1. Install the color coded wires in the circuit breaker (E) in their original places.
2. Align the breaker (E) and the retaining kit (F) (if equipped) to install the screw that holds the breaker (E) in place.
3. Install the dead front panel (A) and breaker cover assembly (B).
4. Remove the lockout and tagout from the building circuit breaker, and set the building circuit breaker back to the ON position.
5. Check the Horizon Headwall System circuit breaker for proper functionality in its circuit.

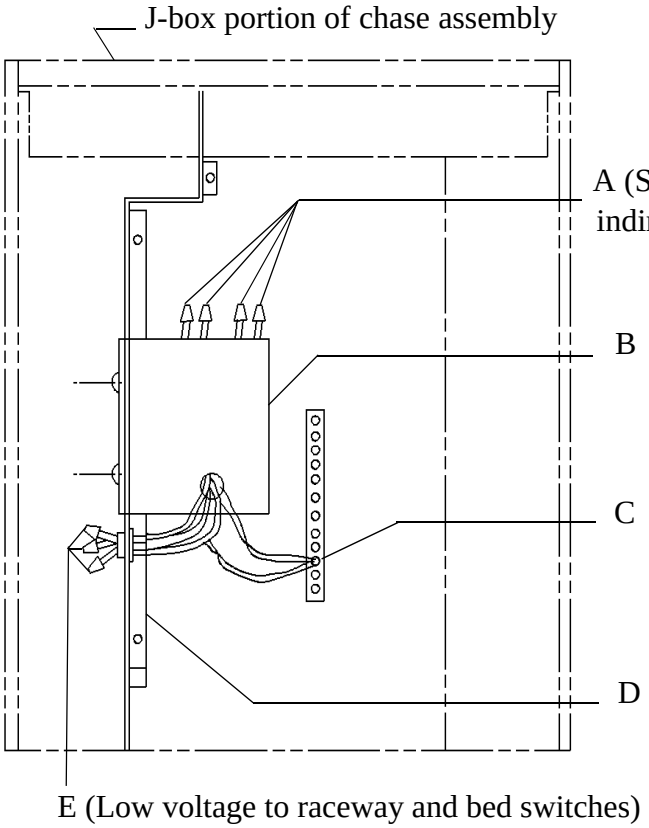
4.11 Low Voltage Controller

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker(A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Remove the three wire nuts (E) from the wire joints leading to the raceway and bed switches (see figure 4-12 on page 4-25).
2. Separate the three wire joints (E).
3. Remove the four wire nuts (A) from the wires on the high voltage side of the controller.
4. Separate the four wires.
5. Loosen the two screws from the reference ground (C), and remove the two ground wires.
6. Remove the controller mounting screws and the controller (B) from the barrier (D).

Figure 4-12. Low Voltage Controller Removal



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Replacement

NOTE:
Before replacing the low voltage controller, check the following resistances between the output leads:

- 120V AC 500 Ohms, plus or minus 100 Ohms
- 240V AC 1800 Ohms, plus or minus 100 Ohms
- 277V AC 2500 Ohms, plus or minus 100 Ohms

1. Align the low voltage controller (B) with mounting screw holes on the barrier (D).
2. Install the mounting screws.
3. Insert the two ground wires in the reference ground (C), and tighten the screws.

4. Connect the four wires to the high voltage side of the controller (A).
5. Install the four wire nuts (A).
6. Connect the three wires to the wires leading to the raceway and bed switches (E).
7. Install the three wire nuts (E).
8. Remove the lockout and tagout from the building circuit breaker, and set the building circuit breaker back to the ON position.
9. Test the low voltage controller (B) for power availability.

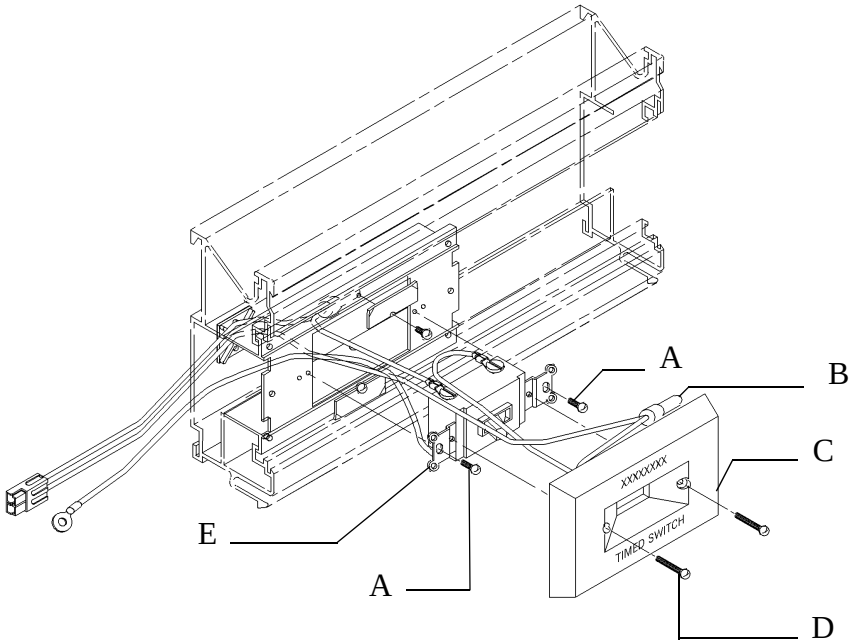
4.12 Timed Light Switch and Toggle Switch

Removal

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

1. Turn power OFF at the standard power circuit breaker (lower breaker panel), and tag the breaker box out-of-service.
2. Remove the timed light switch mounting screws (D).
3. Pull the timed light switch (C) away from the device plate.
4. Remove the wire nut (B) from the timed light switch ground wire.
5. Remove the two toggle switch mounting screws (A).
6. Pull the toggle switch (E) away from the device plate.
7. Loosen the screws holding the power supply wires and timed light switch wire.
8. Remove the wires from the toggle switch (E).

Figure 4-13. Timed Light Switch and Toggle Switch



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4

Replacement

1. Connect the power supply wires to the toggle switch screws.
2. Tighten the screws.
3. Connect the timed light switch ground wire to the toggle switch screw.
4. Tighten the screw.
5. Insert the toggle switch (E) in the device plate, and align the screw holes.
6. Install the two toggle switch mounting screws (A).
7. Connect the timed light switch ground wire with the wire nut (B).

8. Install the timed light switch (C) in the device plate.

9. Install the timed light switch mounting screws (D).

10. Remove the out-of-service tags from the standard circuit breaker, and set the circuit breaker back to the ON position.

11. Test the timed light switch and toggle switch for power availability.

Adjustment

NOTE:
The timed light switch is adjustable to either 0 to 15 minutes or 0 to 30 minutes. Adjustments may be set from 0 to 30 minutes.

1. Remove the cover.

2. Find the potentiometer on the back of the cover.

3. Adjust the potentiometer to the desired setting between 0 and 30 minutes.

4. Replace the cover and check for the proper delay after switching the light off.

NOTES:

Chapter 5
Parts List

Chapter Contents

5

Warranty

Hill-Rom®,

A Hillenbrand Industry

LIMITED WARRANTY

Hill-Rom has a long tradition of providing superior quality products and service to our customer. Our goal is "Total Customer Satisfaction." In that spirit, Hill-Rom is proud to offer the following warranty.

GENERAL WARRANTY:

Hill-Rom warrants to the original purchaser that its products shall be free from defects in material and workmanship for a period of one (1) year after date of delivery. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be defective. In addition to the foregoing one year warranty, Hill-Rom warrants to the original purchaser that the frame and welds on its beds will be free from structural defects for the life of the bed. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE. HILL-ROM'S OBLIGATION UNDER THESE WARRANTIES SHALL NOT INCLUDE ANY LIABILITY FOR LOSS OF PROFITS, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAYS. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply. If requested by Hill-Rom, products or parts for which a warranty claim is made shall be returned prepaid to Hill-Rom's factory. Any improper or negligent use, any alterations or repairs not in accordance with Hill-Rom's manuals or performed by others in such manner as in Hill-Rom's judgment affects the product materially and adversely, shall void these warranties. No employee or representative of Hill-Rom is authorized to change these warranties in any way or grant any other warranty. These warranties shall not apply outside the United States. These warranties provide specific legal rights; however, there may be other available rights, which vary from state to state.

PART AVAILABILITY POLICY: Hill-Rom will supply parts for new products for fifteen (15) years from date of last manufacture, and on remanufactured products for ten (10) years from date of sale.

OUT OF WARRANTY EXCHANGE POLICY: After the expiration of the original warranty, upon request, Hill-Rom will ship as a replacement, rebuilt electric motors, control boards, and air compressors for like units returned to Hill-Rom by the original purchaser for forty percent (40%) of the then-current new price. The exchange price is a substantial savings to the hospital as compared to the price of a new motor, control boards, and air compressors. The replacement motors, control boards and air compressors will carry a new one (1) year parts warranty.

SPECIFIC WARRANTIES:

MATTRESS WARRANTIES:

DYNAMICAIRE™ SLEEP SURFACE: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. After the expiration of this warranty, the surface components may be purchased at 50% of the then-current price during the third, fourth and fifth years after date of delivery. (Continued)

COMFORTLINE® MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. After the expiration of this warranty, the mattress components may be purchased at 50% of the then-current price during the third, fourth and fifth years after date of delivery.

ZONEAIRE® SLEEP SURFACE: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. After the expiration of this warranty, the surface components may be purchased at 50% of the then-current price during the third, fourth and fifth years after date of delivery. Electromechanical components (compressor, valves, printed circuit boards, hoses and couplers) are warranted to be free from defects in material and workmanship for a period of one (1) year from date of delivery.

INNERSPRING MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for the following specified periods from date of delivery. SureRest® III: Twelve (12) year prorated warranty; SureRest II: Ten (10) year prorated warranty; SureRest I: Five (5) year prorated warranty.

PERINATAL MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of one (1) year, when used with proper draping practices, from date of delivery.

FOAM MATTRESS: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery.

COMPOSER™ COMMUNICATION SYSTEM WARRANTIES:

COMPOSER HARDWARE WARRANTIES: Hill-Rom warrants to the original purchaser that the hardware components of the COMposer shall be free from defects in material and workmanship for a period of one (1) year after the date of system certification. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be inoperable.

COMPOSER SOFTWARE WARRANTIES: Hill-Rom warrants to the original purchaser that the physical diskettes on which COMposer system software is distributed shall be free from defects in material and workmanship for a period of sixty (60) days from the date of delivery. The entire and exclusive remedy available to the purchaser under this warranty is limited to replacement of inoperable diskettes and shall not extend to any claim for or right to recover any damages, including but not limited to, loss of profit, data or use of the software, or special, incidental or consequential damages, or other similar claims.

COMPOSER EXPENDABLES WARRANTIES: Hill-Rom warrants for sixty (60) days the expendable parts such as locator badge batteries and dome light incandescent bulbs.

OTHER WARRANTIES:

EXPENDABLES WARRANTIES: A sixty (60) day limited warranty applies to expendable parts such as overhead fluorescent tubes, heating elements and temperature probes.

UPGRADE KIT WARRANTIES: Hill-Rom warrants to the original purchaser that its product shall be free from defects in material and workmanship for a period of one (1) year from date of delivery. The warranty on existing product is not affected. A Product Assurance and/or Preventive Maintenance contract will be offered at the time of installation for a pre-determined fee. This will act to advise the customer of the condition of Hill-Rom products being upgraded along with specific parts and PM recommendations.

FOR PARTS AND SERVICE UNDER THESE WARRANTIES: Call Hill-Rom Technical Support Department at (800) 445-3720, Monday through Friday. In order to expedite service, we request you furnish the following information: customer identification number, product model number, serial number, and description of problem. A qualified Specialist will provide, via telephone, troubleshooting assistance for hospital personnel and provide necessary parts to make repairs. If telephone troubleshooting determines the need for on-site technical service, a qualified Territory Service Representative will be dispatched. Replacement of non-technical items will be the responsibility of the customer. These warranties do not cover failures due to misuse, abuse, neglect or lack of routine maintenance, which are the responsibility of the owner.

Revised November 1, 1995

Ordering Service Parts

Use the parts lists in this service manual to identify the part numbers you require.

Call your Technical Customer Support Specialist at the Hill-Rom Technical Support Department—phone (800) 445-3720. To help expedite the processing of your parts order, please have your six-digit customer account number, purchase order number, and product number available for the Technical Customer Support Specialist when you call.

NOTE:
You will find the product number listed along with each part number in this chapter.

For your convenience, Hill-Rom provides a telefax number to promptly order parts, request part prices and availability, or to follow up on a service order. The telefax number is (812) 934-8472.

We suggest a minimum of $40.00 when placing orders for service parts. This will help prevent an increase in the cost of processing your service order.

Terms:

- Net 30 days.
- F.O.B. Batesville, Indiana.
- Shipping charges are prepaid and added to the invoice.
- All service orders are shipped UPS ground, unless you specifically request an alternative method.

Address all inquiries to:

Hill-Rom Company
1069 State Route 46 E
Batesville, Indiana 47006-9167
Attention: Technical Support—Parts

Address all return goods to:

Hill-Rom Company
Distribution Center Door D23
County Road 300E
Batesville, Indiana 47006-9167
Attention: Service Stores

NOTE:
To eliminate possible delays or incorrect billings, **do not** return any items without a Return Material Authorization (RMA) number. A Return Material Authorization packet is included with each order when a return is requested. This packet includes an RMA number, instructions, and a shipping label. If misplaced, obtain an RMA number by phoning the Hill-Rom Technical Support Department at (800) 445-3720.

Exchange Policy

The following are Hill-Rom's policies for in-warranty and out-of-warranty exchanges.

In-Warranty Exchanges

Hill-Rom will request that parts/products be returned for inspection in some cases. When this occurs, you are expected to return parts/products within 30 days. If you fail to return the inoperative parts/products within the 30-day period, Hill-Rom will invoice your facility for the full selling price of the parts/products.

NOTE:
The preceding billing procedure **only** pertains to parts/products that Hill-Rom requests to be returned.

In some cases, the invoice sent with the parts will show the full selling price of the parts. This is for Hill-Rom's internal use only and should not be confused with the price you will actually pay.

Please do not return any parts without an RMA number. Hill-Rom will include a Return Material Authorization packet with the parts/products shipment when parts/products have been requested to be returned. If misplaced, obtain an RMA number by phoning the Hill-Rom Technical Support Department at (800) 445-3720.

Out-of-Warranty Exchanges

You are expected to return the inoperative parts/product to Hill-Rom within 30 days. Hill-Rom will include a Return Material Authorization packet with the parts/products shipment. If misplaced, obtain an RMA number by phoning the Hill-Rom Technical Support Department at (800) 445-3720. If you fail to return the equipment within 30 days, Hill-Rom will invoice your facility for **the difference between the exchange price and the new price of the part**.

Recommended Spare Parts

There are no recommended spare parts for the Horizon Headwall System.

Chase Assembly

Figure 5-1. Chase Assembly

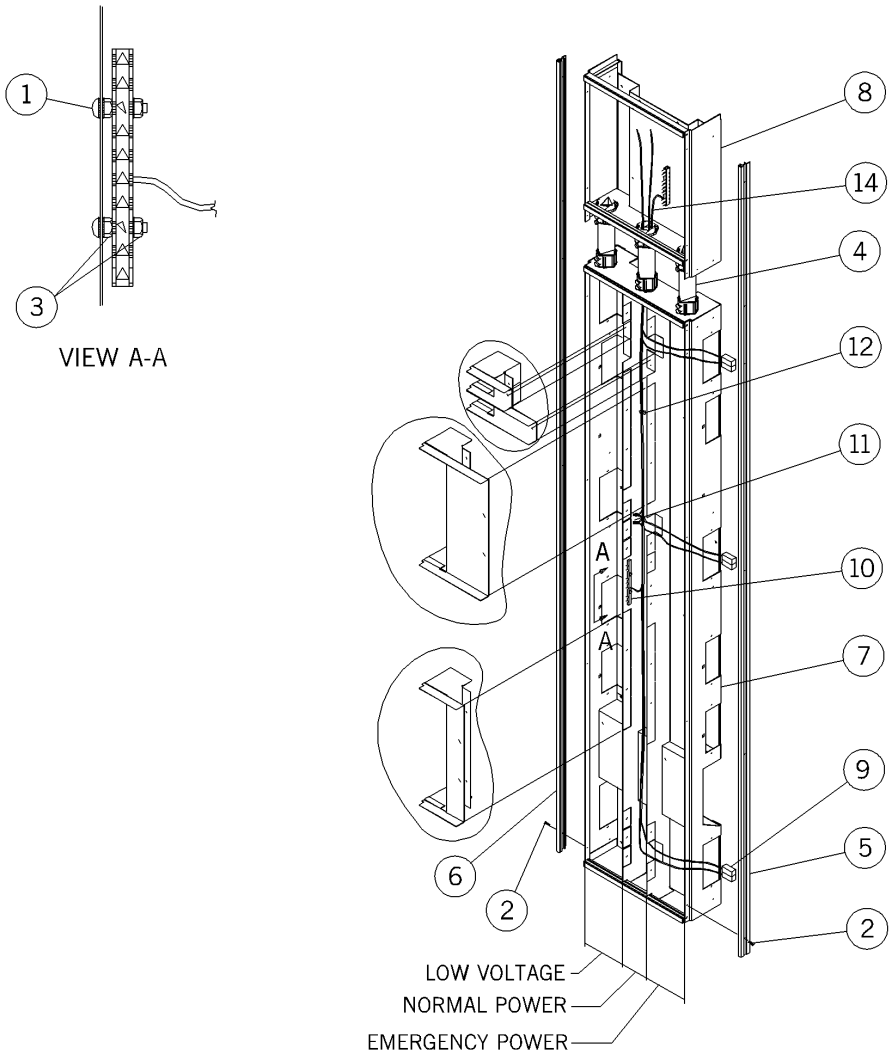

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Table 5-1. Chase Assembly

Item Number	Part Number	Quantity	Description
1	52243-07 (1000-00)	2	Screw
2	50891-06 (1000-00)	12	Screw
3	15250 (1000-00)	4	Locknut
4	SP268 (1000-00)	3	Conduit
5	SP250-2 (1000-00)	1	Upper corner trim—rh
6	SP250-1 (1000-00)	1	Upper corner trim—lh
7	56010 (1000-00)	1	Lower chase sub assembly
8	53330-02 (1000-00)	1	Upper chase sub assembly
9	51517-01 (1000-00)	19	Housing connector
10	56551 (1000-00)	1	Ground bar
11	15107 (1000-00)	6	Wire joint
12	52553 (1000-00)	10	Wire tie
13	52566 (1000-00)	As Required	Label chase (not shown)

Chase Assembly (Isolated Power)

Figure 5-2. Chase Assembly (Isolated Power)

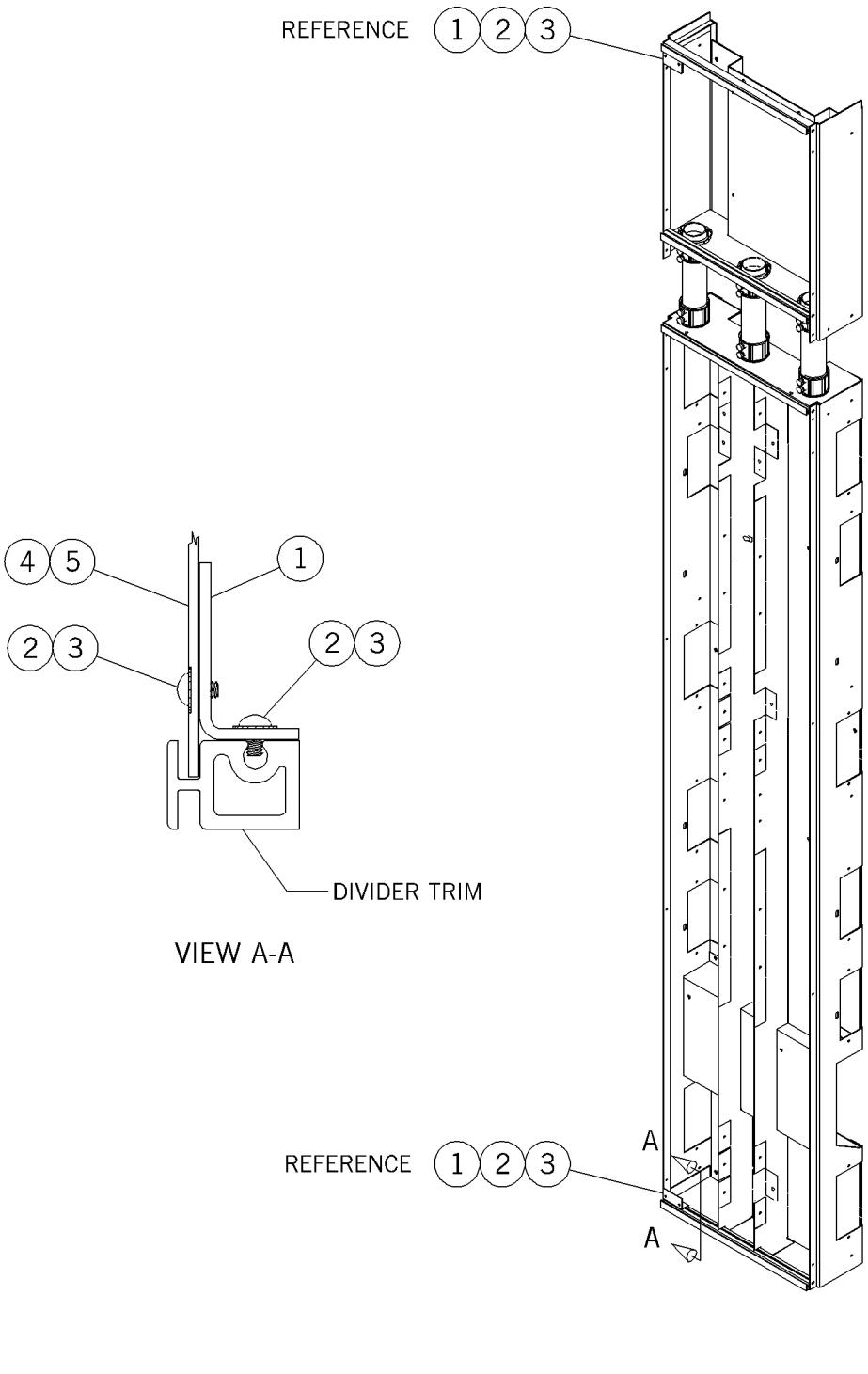

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Table 5-2. Chase Assembly (Isolated Power)

Item Number	Part Number	Quantity	Description
1	57293 (1000-00)	2	Panel grounding bracket
2	29591 (1000-00)	6	Screw
3	34084 (1000-00)	6	Lockwasher, exterior tooth
4	57297 (1000-00)*	1	Panel, isolated power, J-box
5	57298 (1000-00)*	1	Panel, isolated power, lower

* Specify high pressure laminate color.

Chase Panels and Trim

Figure 5-3. Chase Panels and Trim

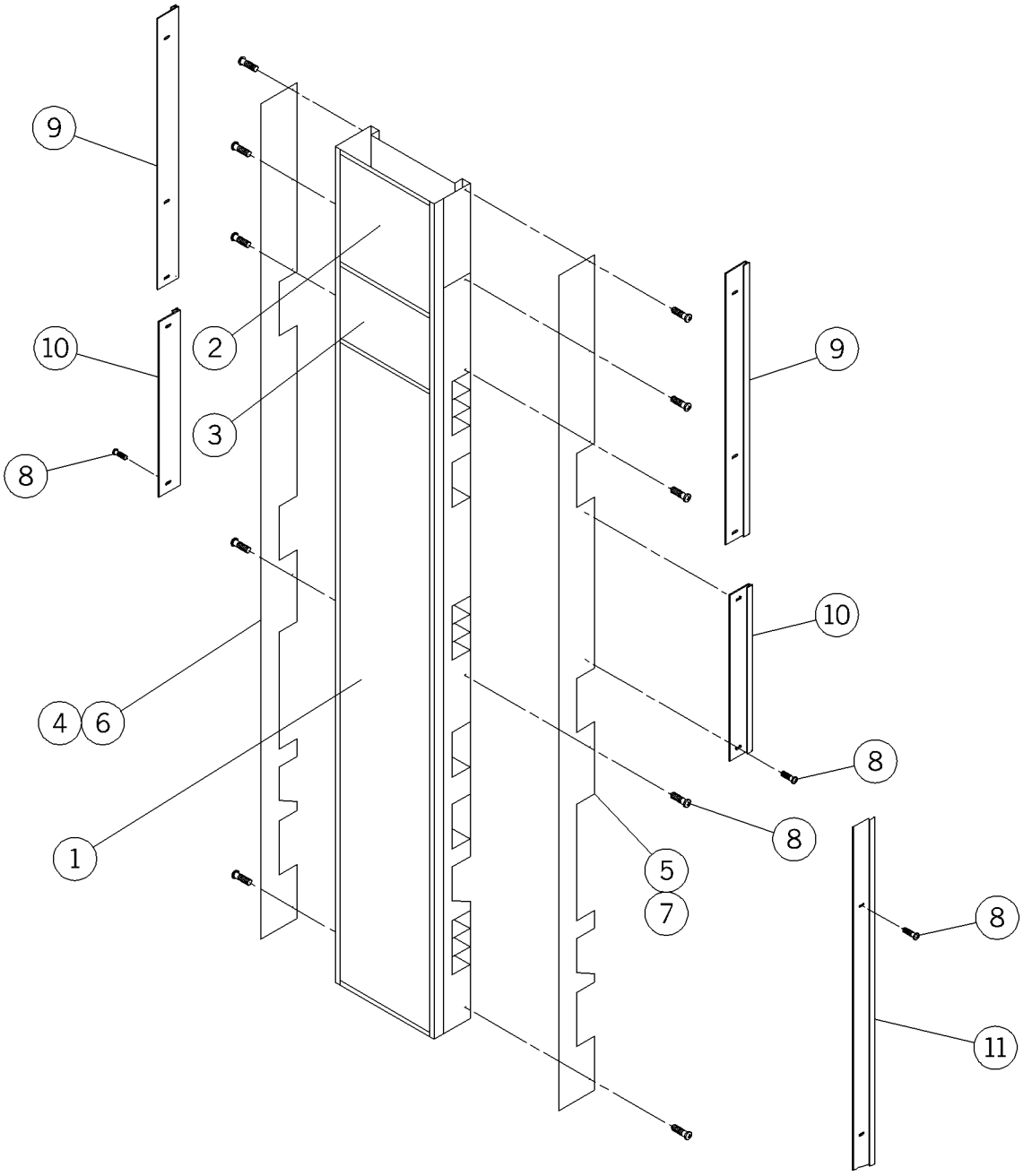

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Table 5-3. Chase Panels and Trim

Item Number	Part Number	Quantity	Description
1	52359 (1000-00)*	1	Panel—lower
2	52360 (1000-00)*	1	Panel, laminated—J-box
3	SP251 (1000-00)*	1	Panel, laminated—middle
4	SP253-1 (1000-00)*	1	Fascia—left side
5	SP253-2 (1000-00)*	1	Fascia—right side
6	SP253-3 (1000-00)*	1	Fascia—left side
7	SP253-4 (1000-00)*	1	Fascia—right side
8	53125-02 (1000-00)	10	Screw
9	SP401 (1000-00)	2	Trim, rear upper—3 rail
10	55891 (1000-00)	2	Trim, rear middle
11	55890 (1000-00)	2	Trim, rear lower

* Specify high pressure laminate color.

Light Raceway

Figure 5-4. Light Raceway

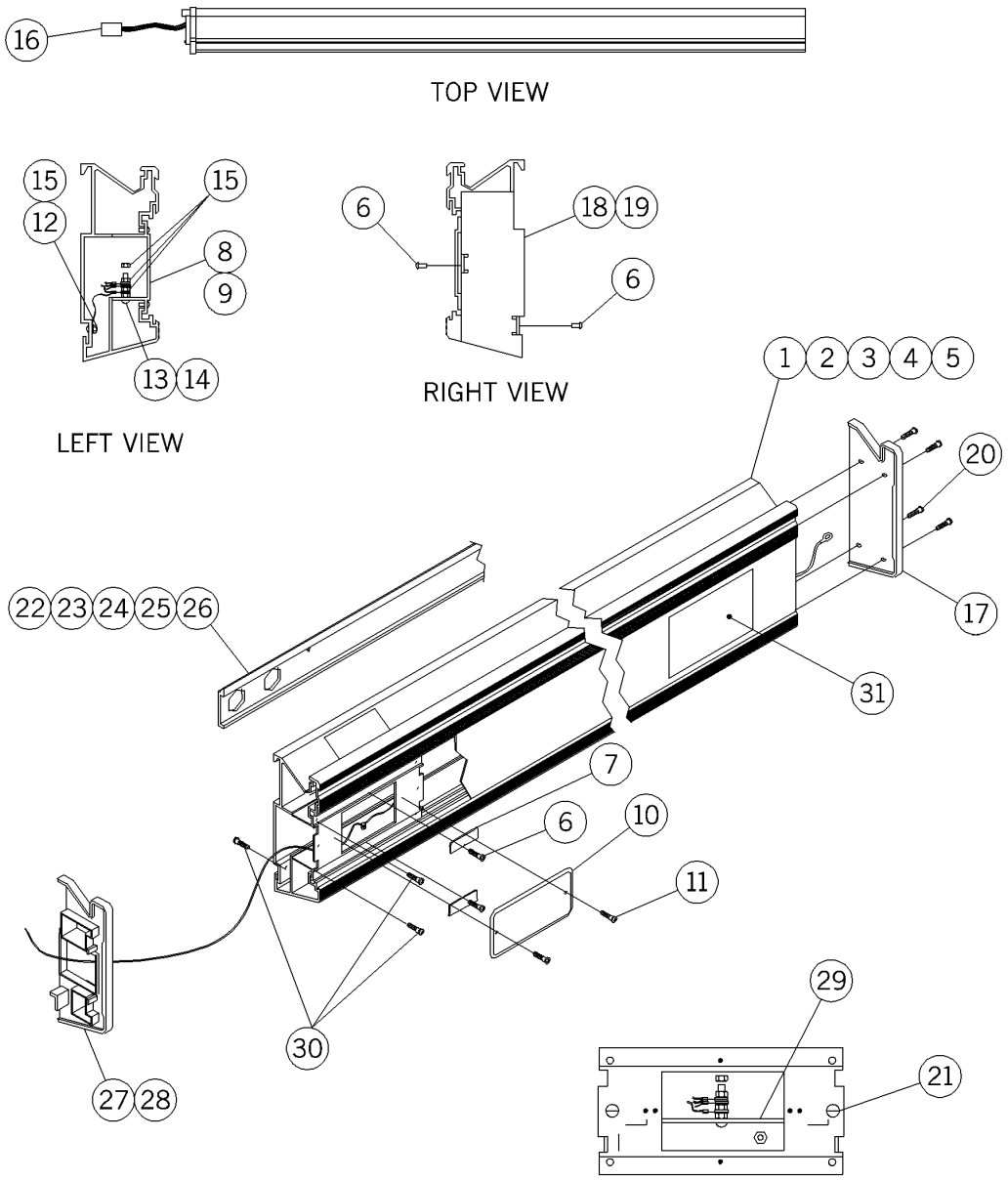

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Table 5-4. Light Raceway

Item Number	Part Number	Quantity	Description
1	5647301 (1000-00)	1	Gas raceway 3’
2	5647302 (1000-00)	1	Gas raceway 4’
3	5647303 (1000-00)	1	Gas raceway 5’
4	5647304 (1000-00)	1	Gas raceway 7’
5	5647305 (1000-00)	1	Gas raceway 8’
6	50891-02 (1000-00)	As required	Screw
7	52122 (1000-00)	2	Lock—device plate
8	52105 (1000-00)	1	Device plate—plain
9	52145 (1000-00)	1	Device plate—notched
10	52226 (1000-00)	1	Blank faceplate (almond)
11	50590 (1000-00)	2	Screw
12	52243-03 (1000-00)	1	Screw
13	52243-10 (1000-00)	1	Screw
14	52243-07 (1000-00)	2	Screw
15	15250 (1000-00)	As required	Locknut
16	51517-01 (1000-00)	As required	Housing—contact
17	54521 (1000-00)	1	End cap—raceway
18	52061 (1000-00)	1	End plate lh
19	52062 (1000-00)	1	End plate rh—primed
20	53125-02 (1000-00)	4	Screw
21	16115 (1000-00)	2	Screw
22	51519-04 (1000-00)	1	3' mounting bracket
23	51519-03 (1000-00)	1	4' mounting bracket
24	51519-06 (1000-00)	1	Mounting bracket
25	51519-01 (1000-00)	1	7' mounting bracket
26	51519-05 (1000-00)	1	Hanger mounting bracket—8'
27	54759 (1000-00)	1	Transition sleeve—gas
28	54758 (1000-00)	1	Transition sleeve—Specialite
29	55463 (1000-00)	1	Ground barrier
30	29590 (1000-00)	1	Screw
31	52465 (1000-00)	1	Label—raceway

Gas Raceway

Figure 5-5. Gas Raceway

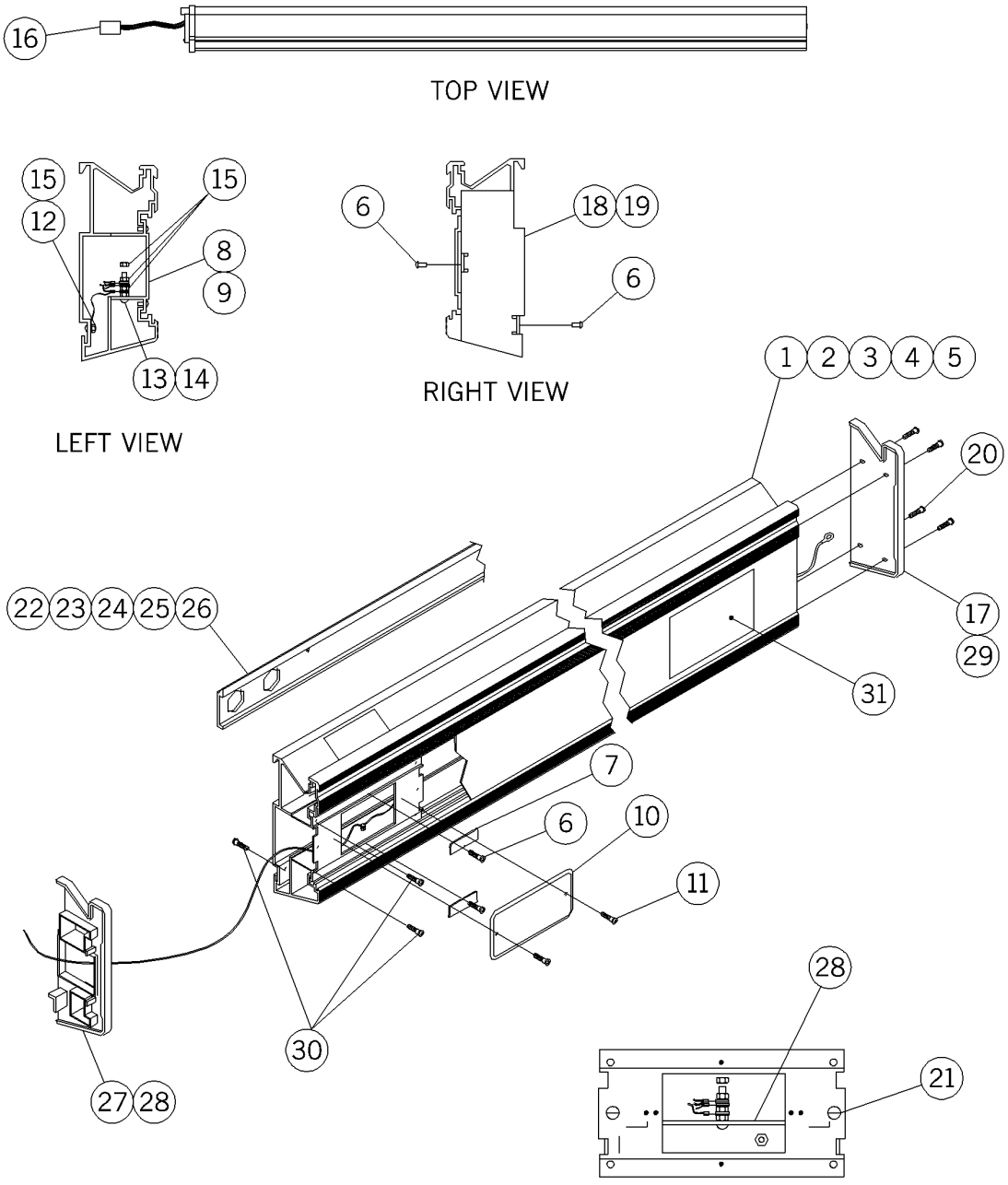

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Table 5-5. Gas Raceway

Item Number	Part Number	Quantity	Description
1	5647401 (1000-00)	1	Gas raceway 3’
2	5647402 (1000-00)	1	Gas raceway 4’
3	5647403 (1000-00)	1	Gas raceway 5’
4	5647404 (1000-00)	1	Gas raceway 7’
5	5647405 (1000-00)	1	Gas raceway 8’
6	50891-02 (1000-00)	As required	Screw
7	52122 (1000-00)	2	Lock—device plate
8	52105 (1000-00)	1	Device plate—plain
9	52145 (1000-00)	1	Device plate—notched
10	52226 (1000-00)	1	Blank faceplate (almond)
11	50590 (1000-00)	2	Screw
12	52243-03 (1000-00)	1	Screw
13	52243-10 (1000-00)	1	Screw
14	52243-07 (1000-00)	2	Screw
15	15250 (1000-00)	As required	Locknut
16	51517-01 (1000-00)	As required	Housing—contact
17	54754-01 (1000-00)	1	End cap—gas raceway
18	52061 (1000-00)	1	End plate lh
19	52062 (1000-00)	1	End plate rh—primed
20	53125-02 (1000-00)	4	Screw
21	16115 (1000-00)	2	Screw
22	51519-04 (1000-00)	1	3' mounting bracket
23	51519-03 (1000-00)	1	4' mounting bracket
24	51519-06 (1000-00)	1	Mounting bracket
25	51519-01 (1000-00)	1	7' mounting bracket
26	51519-05 (1000-00)	1	Hanger mounting bracket—8'
27	54759 (1000-00)	1	Transition sleeve—gas
28	55463 (1000-00)	1	Ground barrier
29	54754-02	1	End cap—gas raceway
30	29590 (1000-00)	1	Screw
31	52565 (1000-00)	1	Label—raceway

Bottom Raceway

Figure 5-6. Bottom Raceway

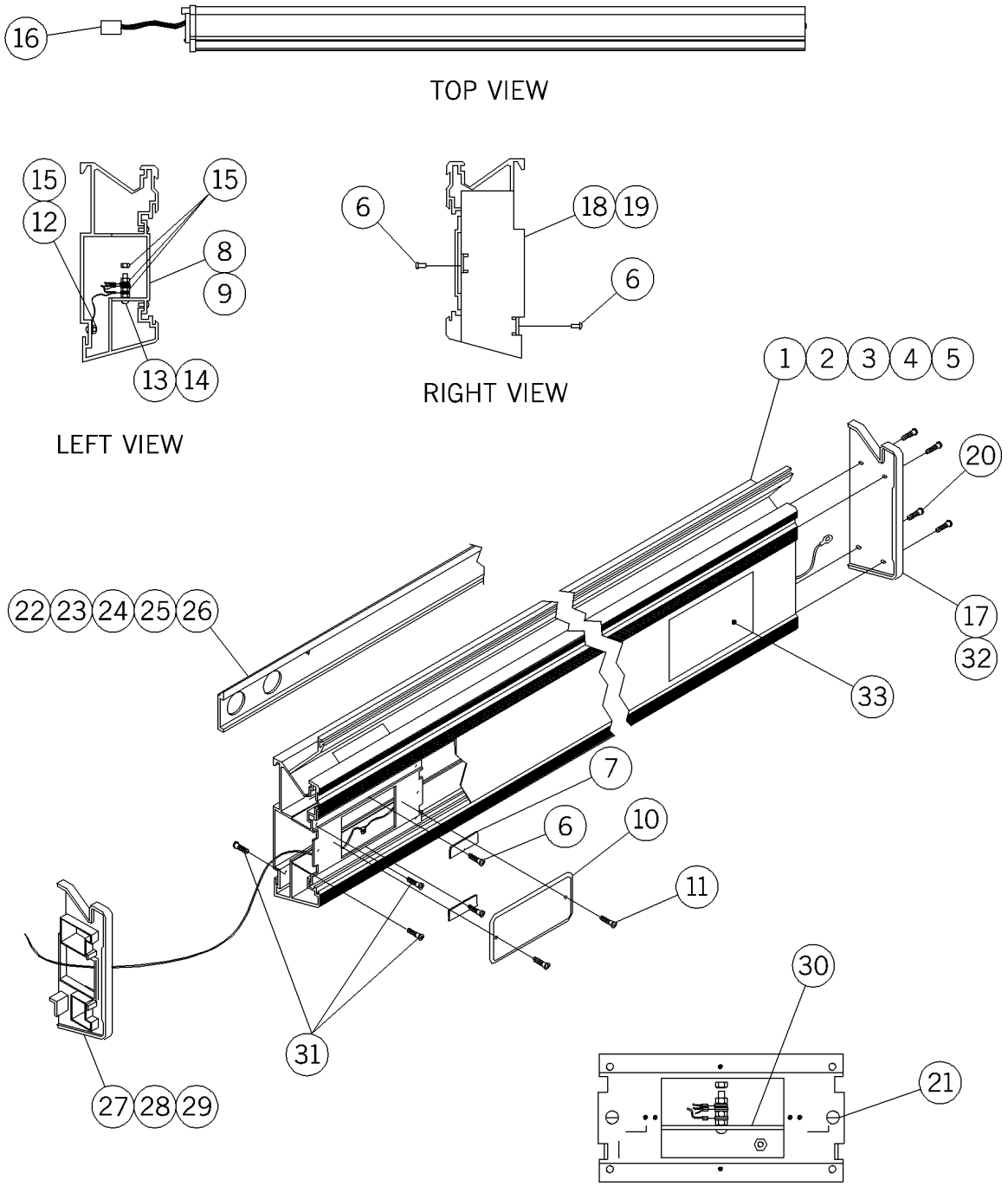

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Table 5-6. Bottom Raceway

Item Number	Part Number	Quantity	Description
1	5647501 (1000-00)	1	Bottom raceway 3’
2	5647502 (1000-00)	1	Bottom raceway 4’
3	5647503 (1000-00)	1	Bottom raceway 5’
4	5647504 (1000-00)	1	Bottom raceway 7’
5	5647505 (1000-00)	1	Bottom raceway 8’
6	50891-02 (1000-00)	As required	Screw
7	52122 (1000-00)	2	Lock—device plate
8	52105 (1000-00)	1	Device plate—plain
9	52145 (1000-00)	1	Device plate—notched
10	52226 (1000-00)	1	Blank faceplate (almond)
11	50590 (1000-00)	2	Screw
12	52243-03 (1000-00)	1	Screw
13	52243-10 (1000-00)	1	Screw
14	52243-07 (1000-00)	2	Screw
15	15250 (1000-00)	As required	Locknut
16	51517-01 (1000-00)	As required	Housing contact
17	54755-01 (1000-00)	1	End cap—bottom raceway
18	52061 (1000-00)	1	End plate lh
19	52062 (1000-00)	1	End plate rh—primed
20	53125-02 (1000-00)	1	Screw
21	16115 (1000-00)	1	Screw
22	51519-04 (1000-00)	1	3' mounting bracket
23	51519-03 (1000-00)	1	4' mounting bracket
24	51519-06 (1000-00)	1	Mounting bracket
25	51519-01 (1000-00)	1	7' mounting bracket
26	51519-05 (1000-00)	1	Hanger mounting bracket—8'
27	54760 (1000-00)	1	Transition sleeve—bottom raceway
28	54761 (1000-00)	1	Transition sleeve—behind bumper
29	54762 (1000-00)	1	Transition sleeve—between bumper
30	55463 (1000-00)	1	Ground barrier
31	29590 (1000-00)	1	Screw
32	54755-02 (1000-00)	1	End cap—bottom raceway

Item Number	Part Number	Quantity	Description
33	52565 (1000-00)	1	Label—raceway

NOTES:

Raceway Fascia and Gas Excluder

Figure 5-7. Raceway Fascia and Gas Excluder

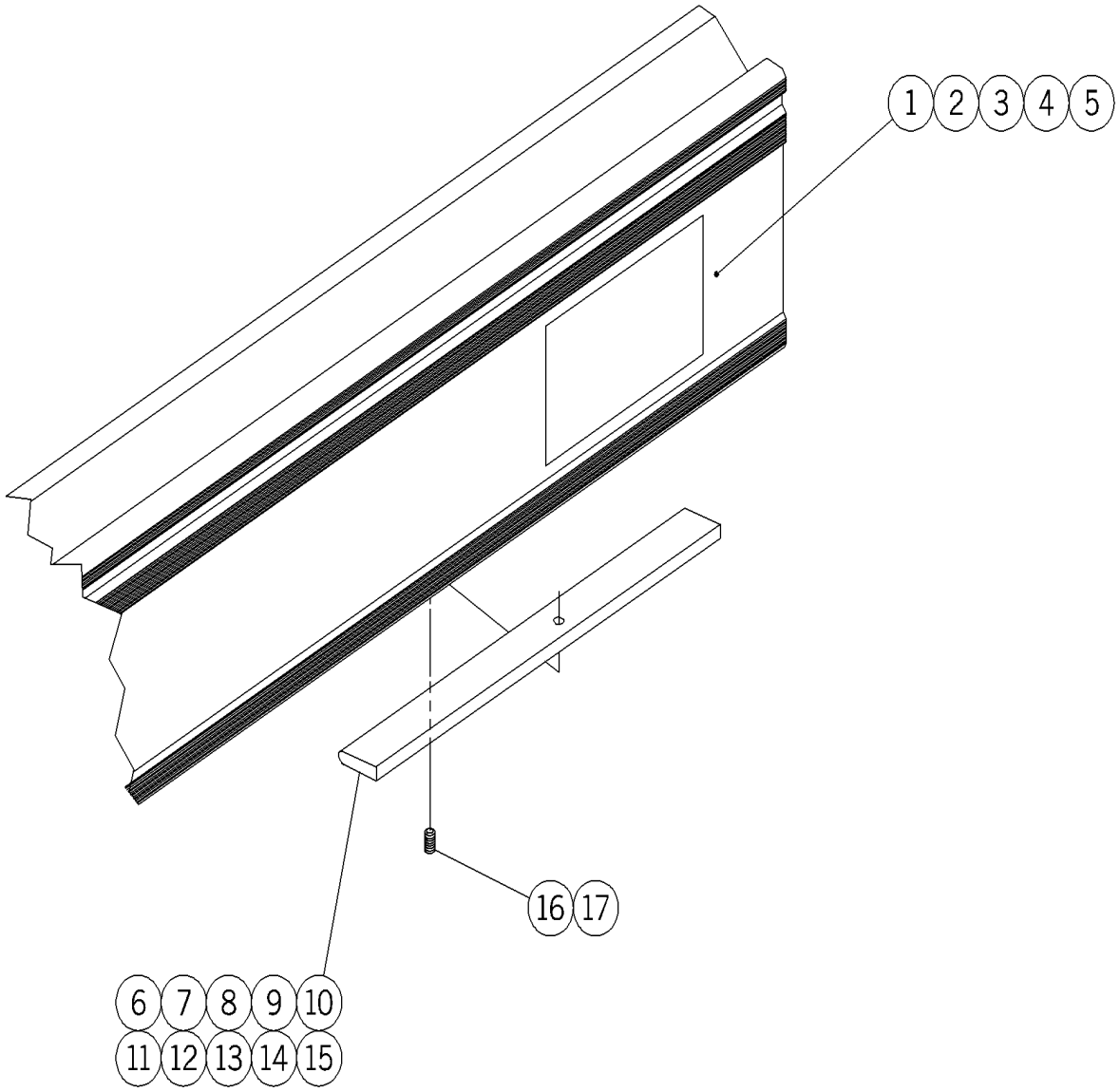

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Table 5-7. Raceway Fascia and Gas Excluder

Item Number	Part Number	Quantity	Description
1	SP26536 (1000-00)*	As required	Raceway fascia punched
2	SP26548 (1000-00)*	As required	Raceway fascia punched
3	SP26560 (1000-00)*	As required	Raceway fascia punched
4	SP26584 (1000-00)*	As required	Raceway fascia punched
5	SP26596 (1000-00)*	As required	Raceway fascia punched
6	52738 (1000-00)	1	Gas excluder
7	52738-04 (1000-00)	1	Gas excluder
8	52738-08 (1000-00)	1	Gas excluder
9	52738-12 (1000-00)	1	Gas excluder
10	52738-16 (1000-00)	1	Gas excluder
11	52738-20 (1000-00)	1	Gas excluder
12	52738-24 (1000-00)	1	Gas excluder
13	52738-28 (1000-00)	1	Gas excluder
14	52738-32 (1000-00)	1	Gas excluder
15	52738-36 (1000-00)	1	Gas excluder
16	52368 (1000-00)	1	Setscrew
17	54031 (1000-00)	As required	Sealant

*Specify high pressure laminate color.

Chase Breaker Panel

Figure 5-8. Chase Breaker Panel

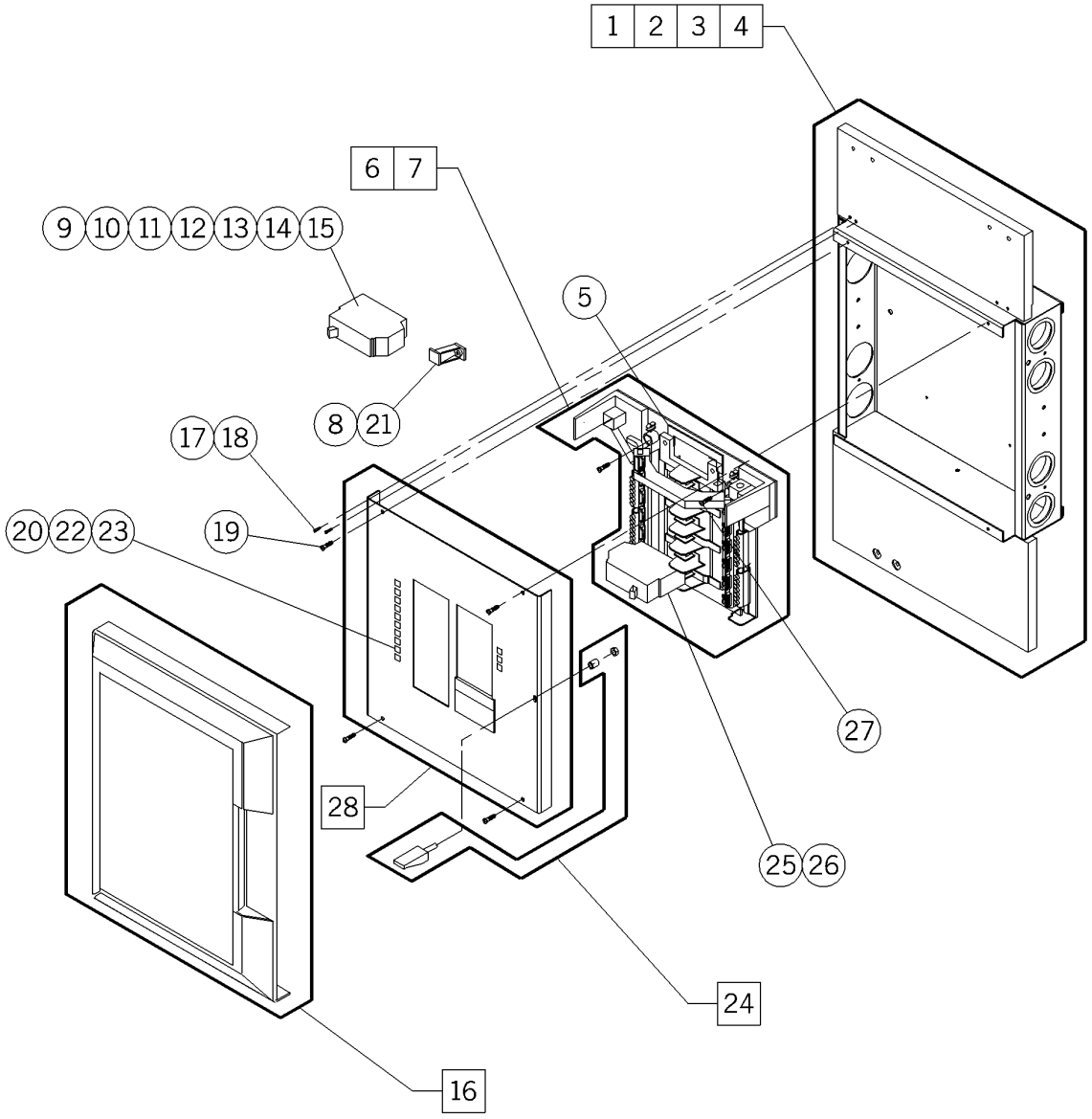

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Table 5-8. Chase Breaker Panel

Item Number	Part Number	Quantity	Description
1	54804 (1000-00)*	1	Circuit breaker panel, subassembly lower
2	54805 (1000-00)*	1	Circuit breaker panel, subassembly lower
3	54807 (1000-00)	1	Circuit breaker panel, subassembly upper
4	54808 (1000-00)	1	Circuit breaker panel, subassembly upper
5	58575 (1000-00)	As required	Tie bar, single pole main
6	5855612 (1000-00)	1	Circuit breaker 12 pole, 1 phase—interior
7	52712-12 (1000-000	1	Load center, 3 phase—interior
8	52706 (1000-00)‡	1	Retainer kit
9	50094-30 (1000-00)‡	1	Circuit breaker—1 pole 30 amp
10	50094-50 (1000-00)‡	1	Circuit breaker—1 pole
11	50096-30 (1000-00)‡	1	Circuit breaker—2 pole 30 amp
12	50096-50 (1000-00)‡	1	Circuit breaker—2 pole 50 amp
13	5009670 (1000-00)‡	1	Circuit breaker—2 pole 70 amp
14	50120-50 (1000-00)	1	Circuit breaker—3 pole
15	5012070 (1000-00)	1	Circuit breaker—2 pole 70 amp
16	54797 (1000-00)	1	Cover assembly
17	52945-01 (1000-00)	4	Screw (upper C.B. panel)
18	50891-07 (1000-00)	4	Screw (lower C. B. panel)
19	393 (1000-00)	4	Screw (dead front)
20	56085 (1000-00)	As required	Blank label
21	58574 (1000-00)	1	Retainer, back-fed main
22	29710 (1000-00)	As required	Label lighting
23	51367 (1000-00)	As required	Circuit number label
24	53856-01 (1000-00)	1	Latch swell
25	50111-15 (1000-00)	1	Circuit breaker—15 amp, 1 pole
26	50111-20 (1000-00)	1	Circuit breaker—20 amp, 1 pole

* Specify high pressure laminate color.

‡ Main breaker items (number 9 through 13) must be tied down with kit item (number 8).

Item Number	Part Number	Quantity	Description
27	50891-04 (1000-00)	4	Screw
28	53850 (1000-00)	1	Dead front assembly

* Specify high pressure laminate color.
‡ Main breaker items (number 9 through 13) must be tied down with kit item (number 8).

NOTES:

Timed Light Switch

Figure 5-9. Timed Light Switch

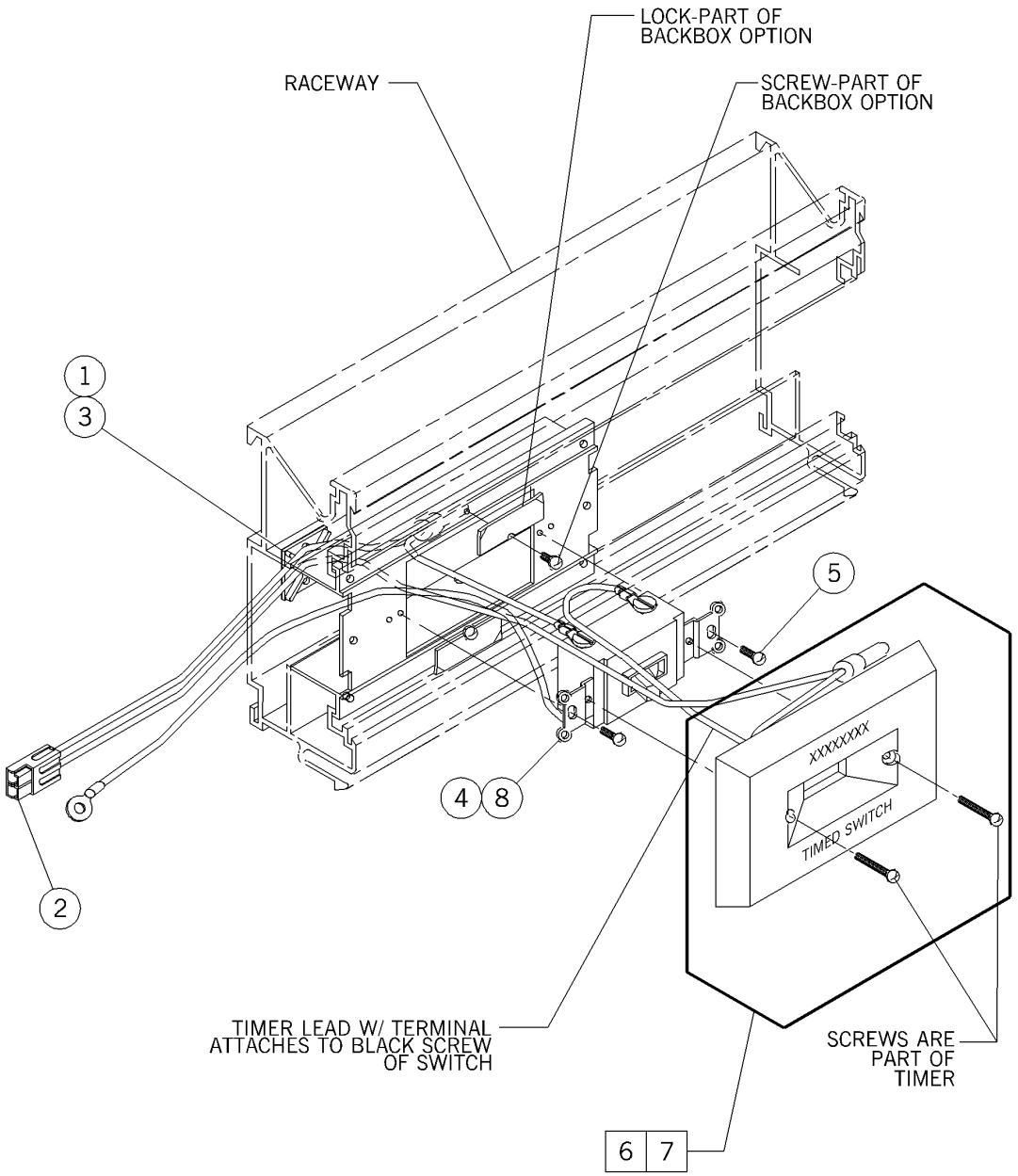

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Table 5-9. Timed Light Switch

Item Number	Part Number	Quantity	Description
1	52553 (1000-00)	1	Wire tie
2	51517-01 (1000-00)	2	Housing—contact
3	50128 (1000-00)	1	Wire tie mount
4	56284 (1000-00)	1	Switch, 3 way toggle
5	16115 (1000-00)	2	Screw
6	53888-01 (1000-00)	1	Timer assembly—engraved horizontal
7	53888-02 (1000-00)	1	Timer assembly—engraved vertical
8	54675 (1000-00)	1	Switch, 3 way, toggle red (20 amp)

Specialite Patient Light Provision (Standard/Emergency)

Figure 5-10. Specialite Patient Light Provision (Standard/Emergency)

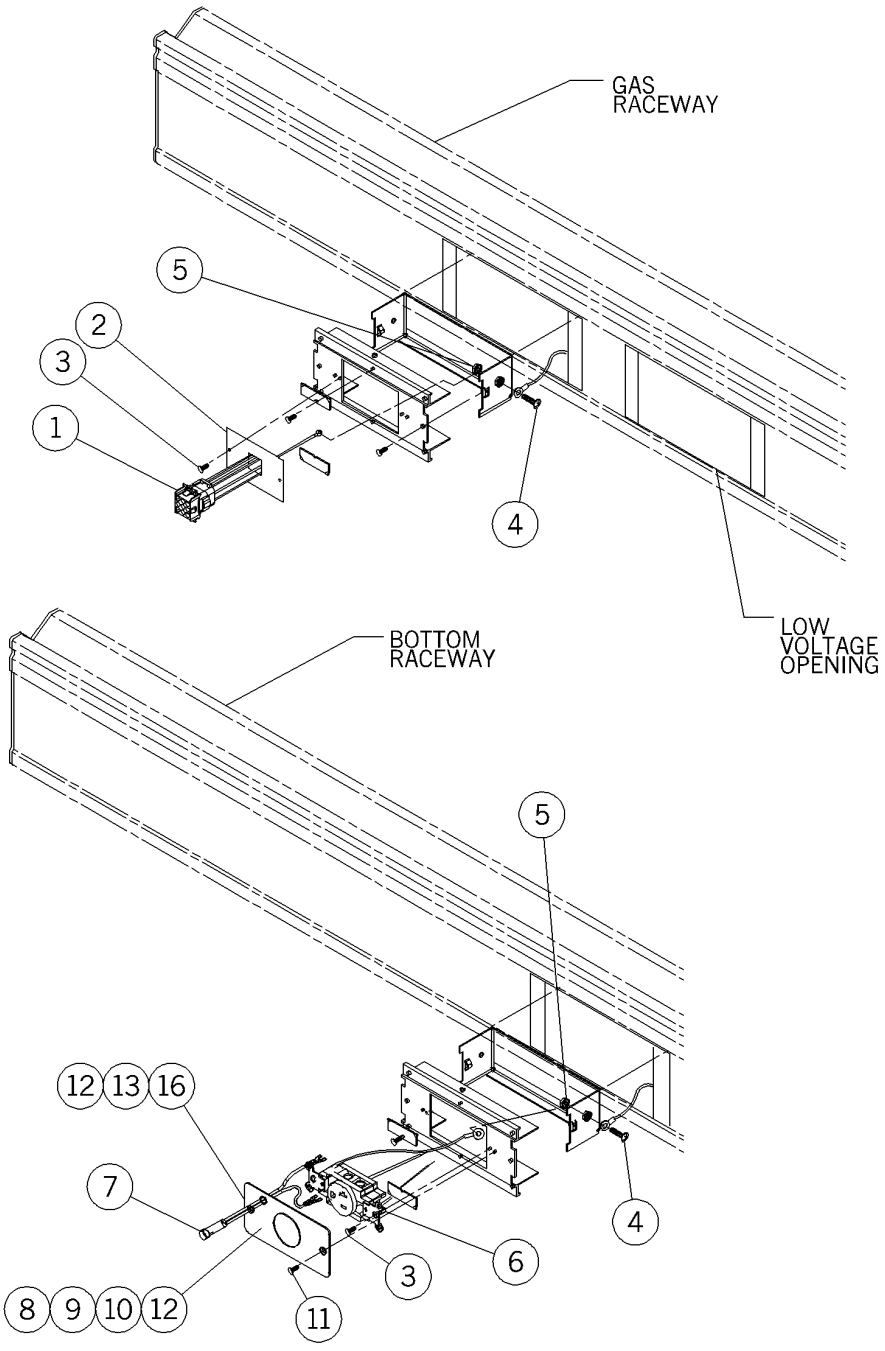

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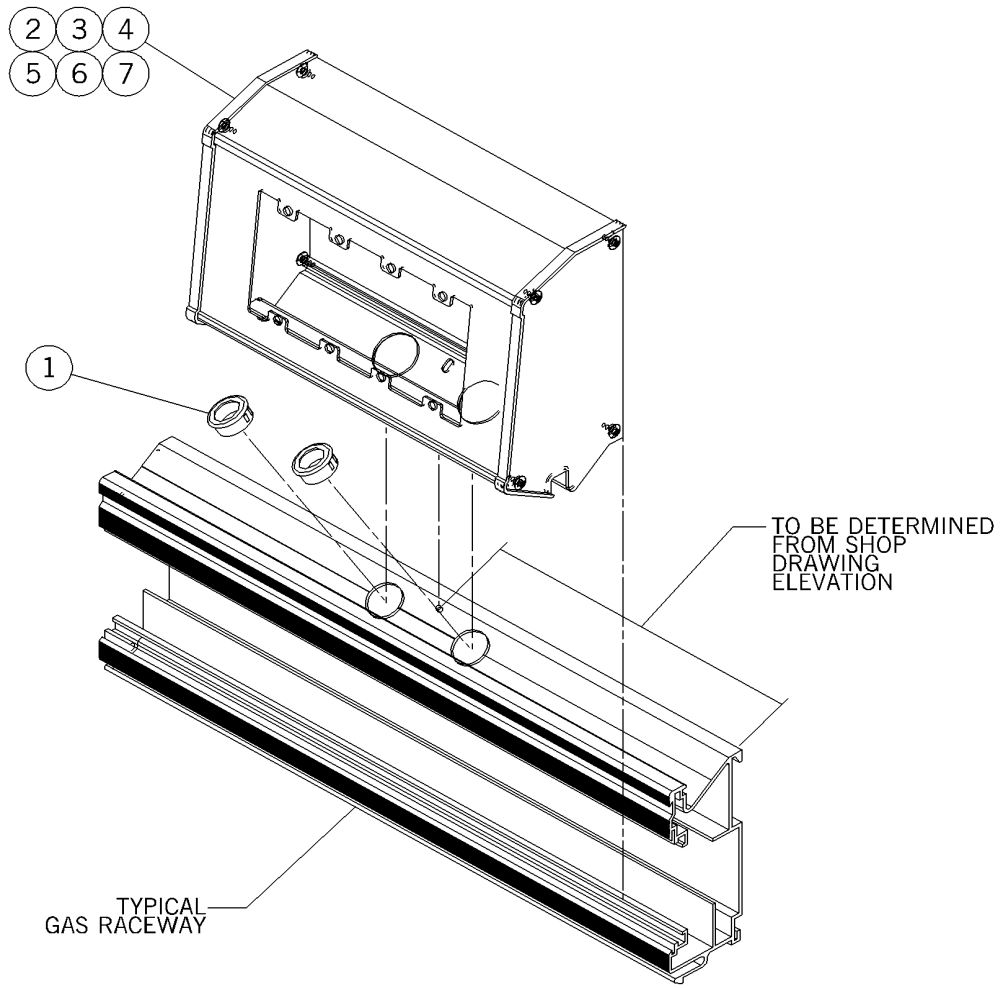
Table 5-10. Specialite Patient Light Provision (Standard Emergency)

Item Number	Part Number	Quantity	Description
1	57848 (1000-00)	1	Specialite—pigtail (emergency power)
2	51276 (1000-00)	1	Plate
3	16115 (1000-00)	4	Screw
4	52243-05 (1000-00)	2	Screw
5	15250 (1000-00)	4	Locknut
6	28438 (1000-00)	1	Outlet single, 20 amp, ivory
7	56597 (1000-00)	1	Indicator assembly
8	56417 (1000-00)	1	Faceplate—engraved
9	56418 (1000-00)	1	Faceplate—engraved
10	58175 (1000-00)	1	Bed receptacle label
11	50590 (1000-00)	2	Screw
12	58182 (1000-00)	1	Bed receptacle faceplate red

Nurse Call Backbox

Figure 5-11. Nurse Call Backbox



EDM SIZE (REF)		
NO. GANGS	"H"	"W"
2	6 7/8	5 13/16
3 THRU 5	6 7/8	11 3/16
6 THRU 8	6 7/8	16 5/8

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Table 5-11. Nurse Call Backbox

Item Number	Part Number	Quantity	Description
1	29587 (1000-00)	2	Snap bushing
2	52280-11 (1000-00)*	1	EDM assembly (2 gang—low voltage)
3	52280-12 (1000-00)*	1	EDM assembly (3 gang—low voltage)
4	52280-13 (1000-00)*	1	EDM assembly (4 gang—low voltage)
5	52280-14 (1000-00)*	1	EDM assembly (5 gang—low voltage)
6	52280-15 (1000-00)*	1	EDM assembly (6 gang—low voltage)
7	52280-16 (1000-00)*	1	EDM assembly (7 gang—low voltage)
8	52280-17 (1000-00)*	1	EDM assembly (8 gang—low voltage)

*Specify high pressure laminate color.

Chaseless Raceway—Standard and Isolated Power

Figure 5-12. Chaseless Raceway—Standard and Isolated Power

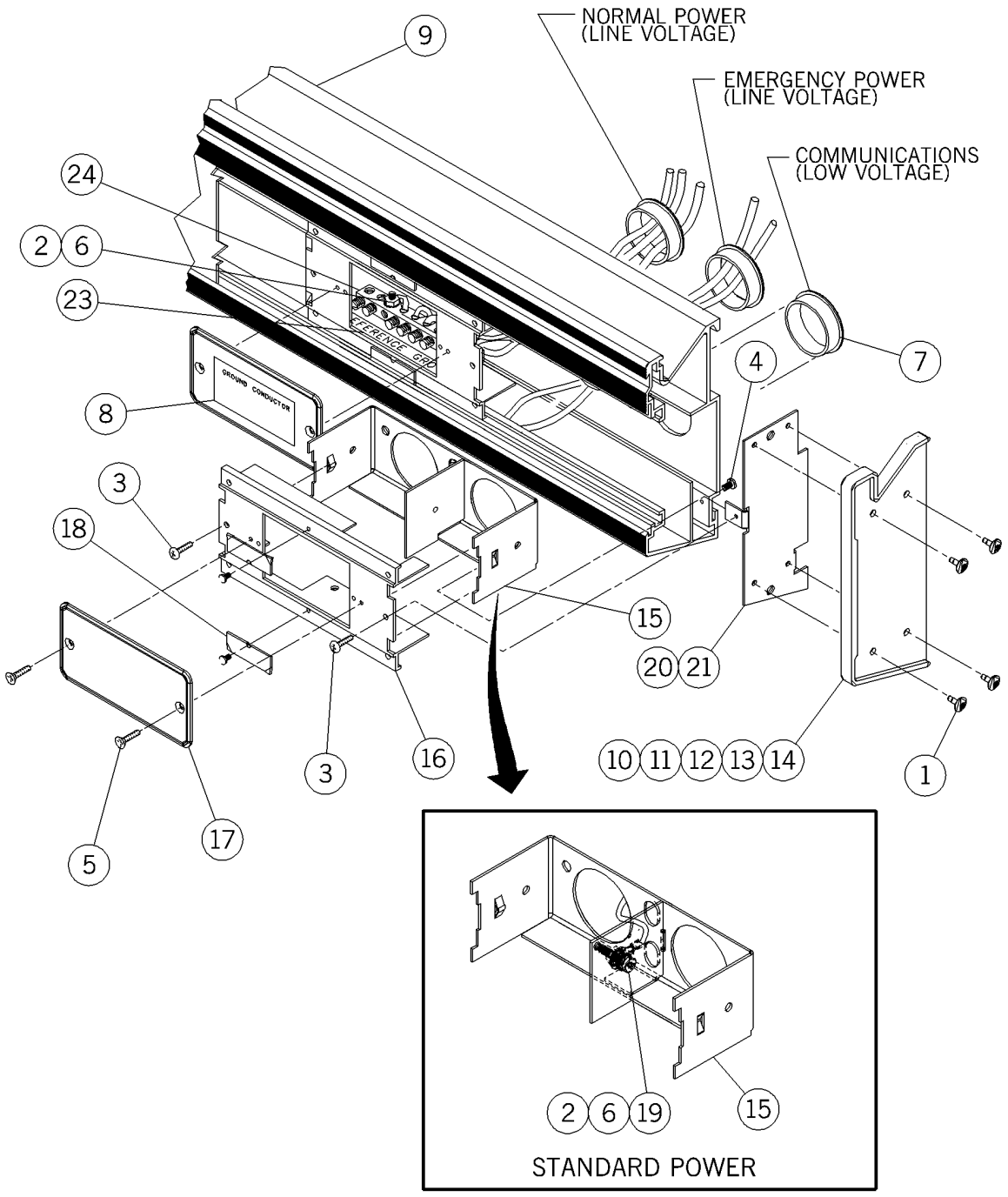

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Table 5-12. Chaseless Raceway—Standard and Isolated Power

Item Number	Part Number	Quantity	Description
1	53125-02 (1000-00)	4	Screw
2	52243-07 (1000-00)	2	Screw
3	50891-08 (1000-00)	2	Screw
4	50891-02 (1000-00)	3	Screw
5	50590 (1000-00)	2	Screw
6	15250 (1000-00)	4	Locknut
7	21352 (1000-00)	3	Snap bushing
8	52685 (1000-00)	1	Label—hook-up
9	SP280 (1000-00)	1	Back entry raceway, modified
10	54755-01 (1000-00)	1	Endcap—bottom raceway
11	54755-02 (1000-00)	1	Endcap—bottom raceway
12	54754-01 (1000-00)	1	Endcap—gas raceway
13	54754-02 (1000-00)	1	Endcap—gas raceway
14	54521 (1000-00)	1	Endcap—raceway
15	53023-01 (1000-00)	1	Barrier assembly
16	52666 (1000-00)	1	Access plate—lh
17	52226 (1000-00)	1	Blank faceplate (almond)
18	52122 (1000-00)	2	Lock—device plate
19	56765 (1000-00)	2	Ring terminal
20	52061 (1000-00)	1	End plate—lh
21	52062 (1000-00)	1	End plate—rh primed
22	53077 (1000-00)	1	Installation instruction (not shown)
23	32112 (1000-00)	1	Reference ground label
24	56551 (1000-00)	1	Ground bar

TeleMate/Phone Options

Figure 5-13. TeleMate/Phone Options

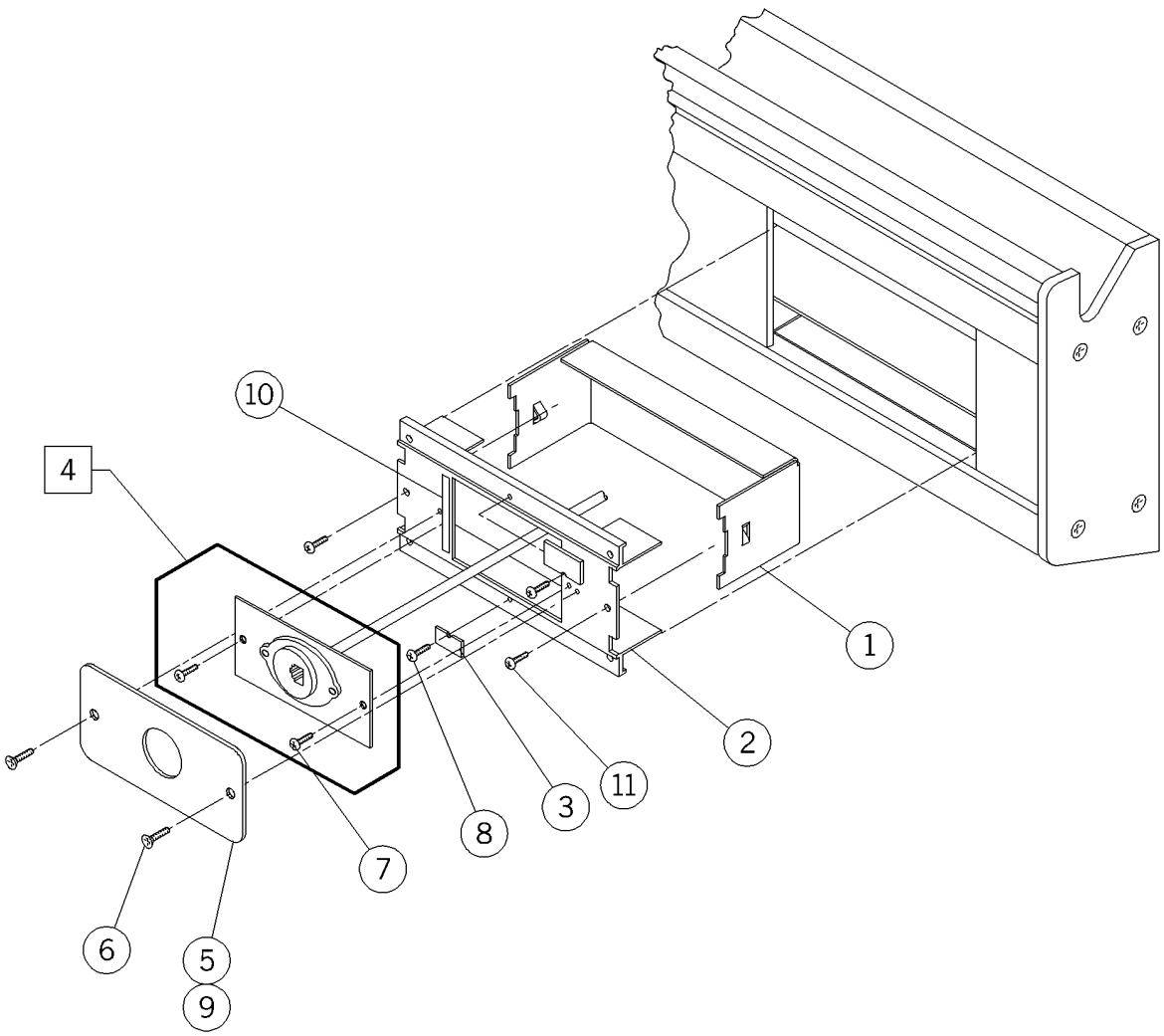

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Table 5-13. TeleMate/Phone Options

Item Number	Part Number	Quantity	Description
1	53164 (1000-00)	1	Backbox device—shallow
2	52145 (1000-00)	1	Device plate—notched
3	52122 (1000-00)	2	Lock—device plate
4	51757 (1000-00)	1	Phone receptacle assembly
5	52235 (1000-00)	1	Faceplate—TeleMate
6	50590 (1000-00)	2	Screw
7	16115 (1000-00)	2	Screw
8	50891-02 (1000-00)	2	Screw
9	52226 (1000-00)	1	Blank faceplate (almond)
10	55534 (1000-00)	1	Label, low voltage
11	50891-06 (1000-00)	2	Screw

Duplex Outlet Receptacles

Figure 5-14. Duplex Outlet Receptacles

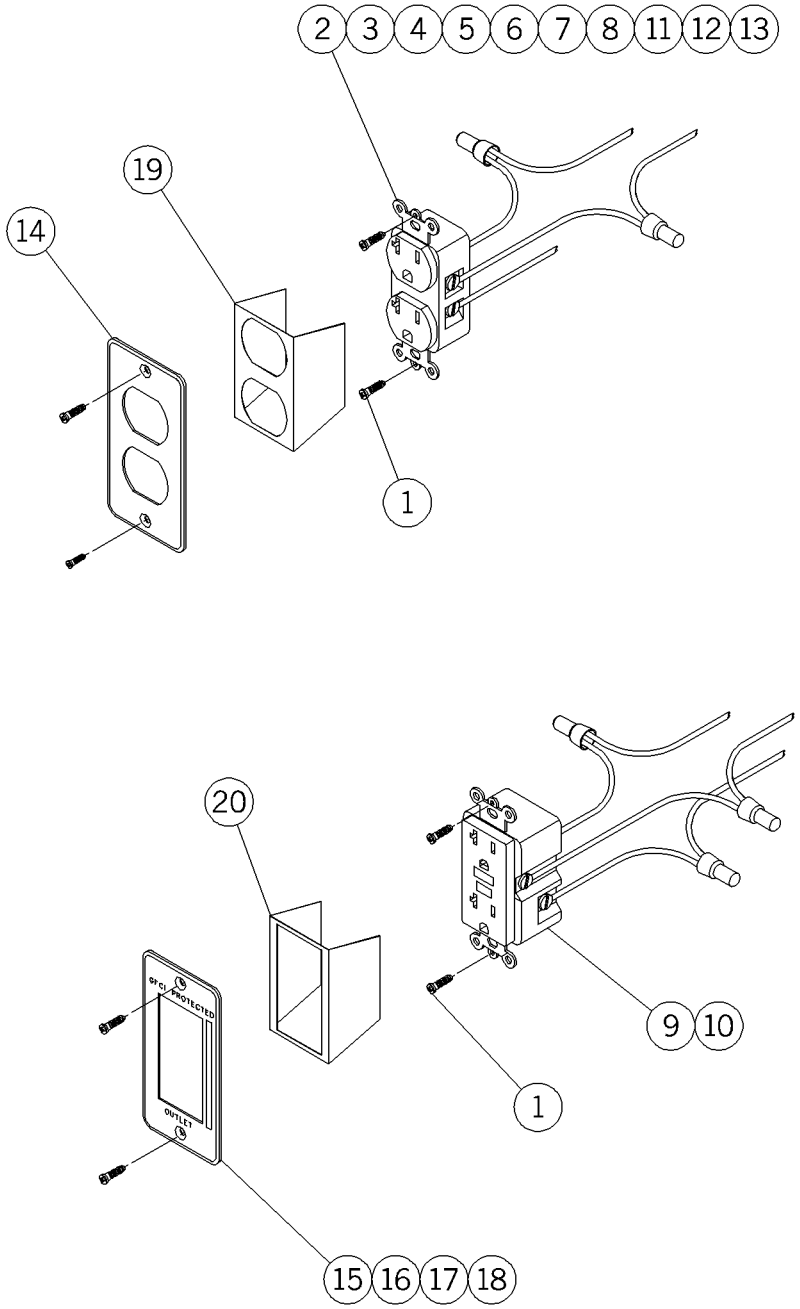

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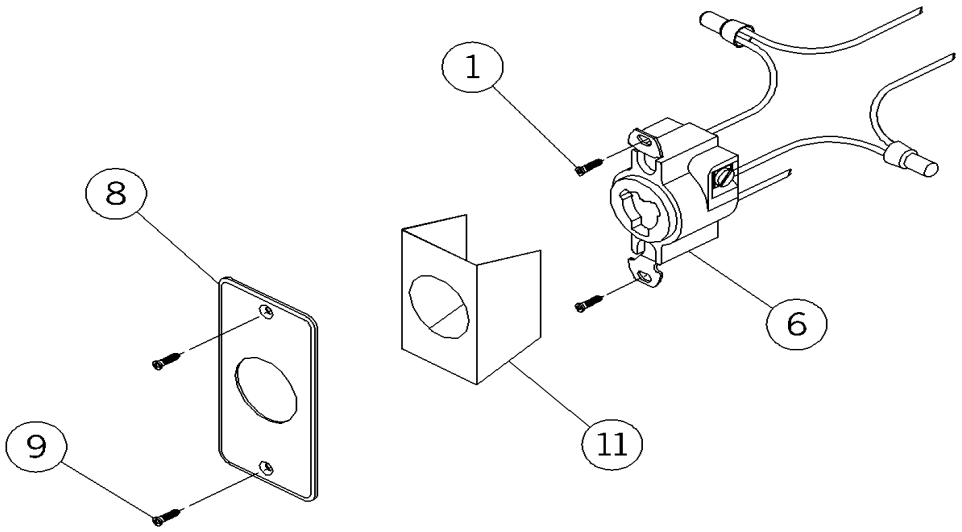
Table 5-14. Duplex Outlet Receptacles

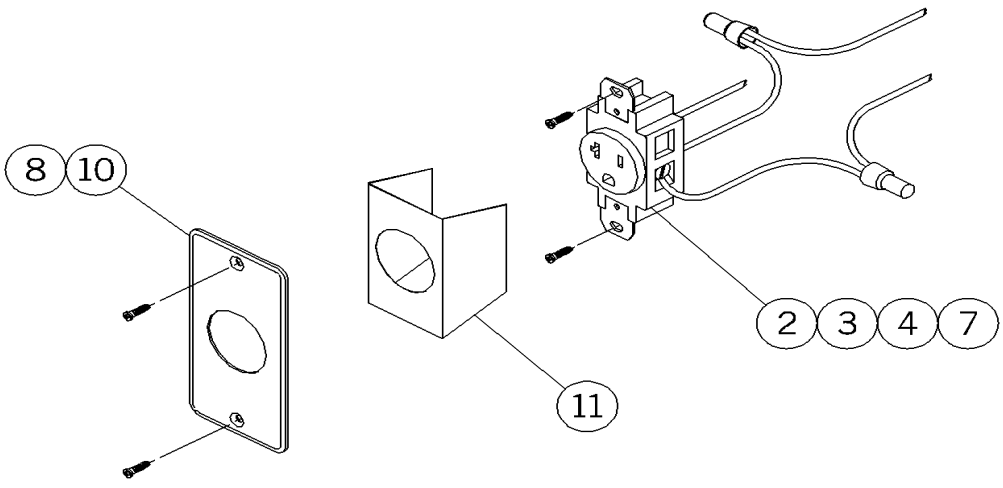
Item Number	Part Number	Quantity	Description
1	16115 (1000-00)	2	Screw
2	28439 (1000-00)	1	Outlet—duplex 20A (ivory)
3	51129 (1000-00)	1	Outlet—duplex 15A (ivory)
4	28436 (1000-00)	1	Outlet—duplex 20A (red)
5	51130 (1000-00)	1	Outlet—duplex 15A (red)
6	33798 (1000-00)	1	Outlet—duplex pediatric 15A (ivory)
7	33799 (1000-00)	1	Outlet—duplex pediatric 15A (red)
8	52412 (1000-00)	1	Outlet—duplex 15A—isolated power
9	51036 (1000-00)	1	Outlet—duplex GFCI, 20A (ivory)
10	54743 (1000-00)	1	Outlet—duplex GFCI, 20A (red)
11	55147 (1000-00)	1	Outlet—duplex 20A (neutral)
12	52414 (1000-00)	1	Outlet—duplex 20A (ivory) lighted
13	52413 (1000-00)	1	Outlet—duplex 15A (ivory) lighted
14	52227 (1000-00)	1	Duplex faceplate—almond
15	55207 (1000-00)	1	Label—GFCI warning
16	55166 (1000-00)	1	Faceplate, engraved GFCI
17	55167 (1000-00)	1	Faceplate, engraved GFCI
18	55168 (1000-00)	1	Faceplate, engraved GFCI
19	56598 (1000-00)	1	Insulator, duplex (optional)
20	56878 (1000-00)	1	Insulator, decorative style (optional)

Single Outlet Receptacles

Figure 5-15. Single Outlet Receptacles



TYPICAL HUBBELLOCK



TYPICAL SIMPLEX

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Table 5-15. Single Outlet Receptacles

Item Number	Part Number	Quantity	Description
1	16115 (1000-00)	2	Screw
2	28438 (1000-00)	1	Outlet—single 20A (ivory)
3	18061 (1000-00)	1	Outlet—single 15A (ivory)
4	28437 (1000-00)	1	Outlet—single 20A (red)
5	51042 (1000-00)	1	Outlet—single 15A (red)
6	18062 (1000-00)	1	Outlet—(twist lock 20A)
7	51024 (1000-00)	1	Outlet—single 15A (orange)
8	52228 (1000-00)	1	Simplex faceplate—almond
9	50590 (1000-00)	1	Screw
10	52229 (1000-00)	1	Faceplate, twist lock
11	56599 (1000-00)	1	Insulator, simplex (optional)

Line Voltage Switch

Figure 5-16. Line Voltage Switch

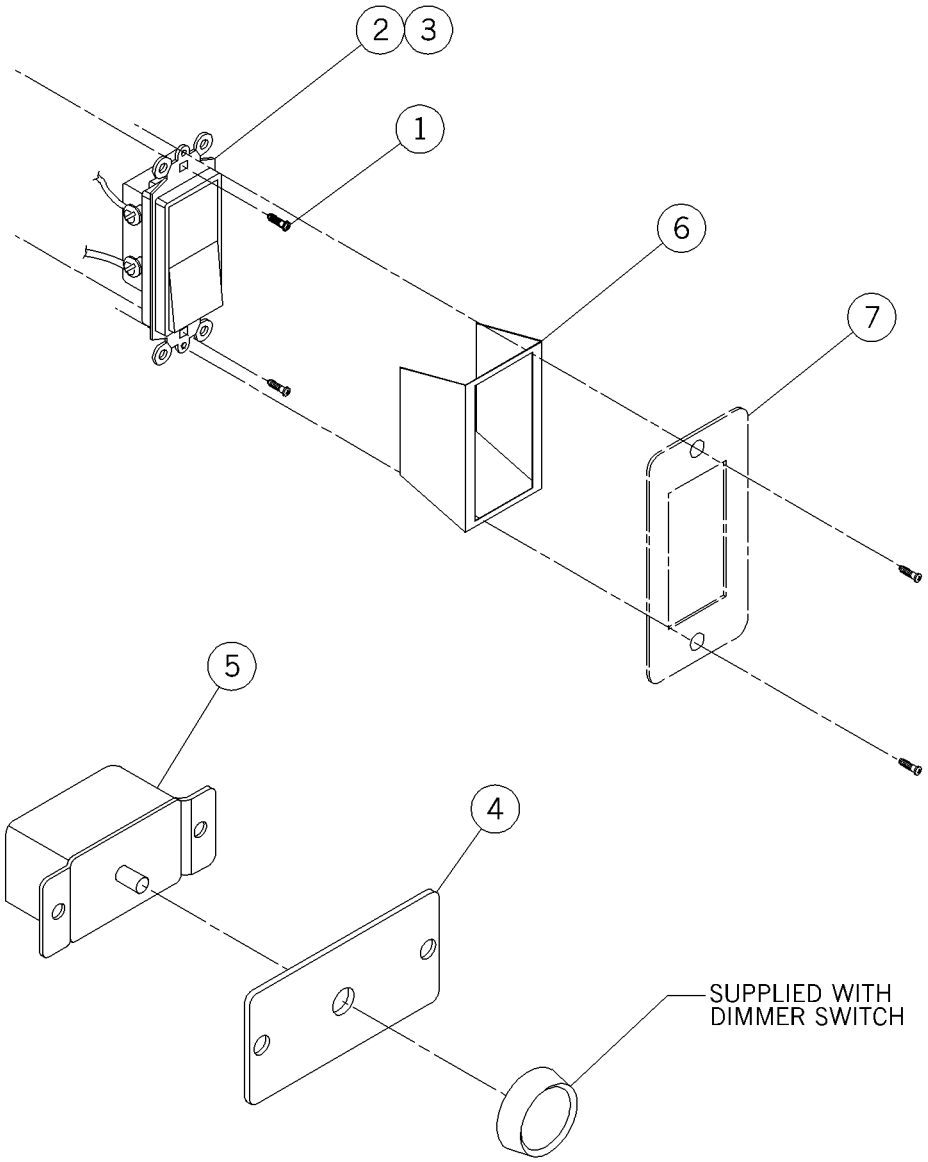

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Table 5-16. Line Voltage Switch

Item Number	Part Number	Quantity	Description
1	16115 (1000-00)	2	Screw
2	32232 (1000-00)	1	Switch
3	32233 (1000-00)	1	3 way switch
4	52836 (1000-00)	1	Faceplate, dimmer switch
5	28441 (1000-00)	1	Dimmer switch
6	56878 (1000-00)	1	Insulator, decorative style (optional)
7	52232 (1000-00)	1	Faceplate switch—almond

Ground Receptacles

Figure 5-17. Ground Receptacles

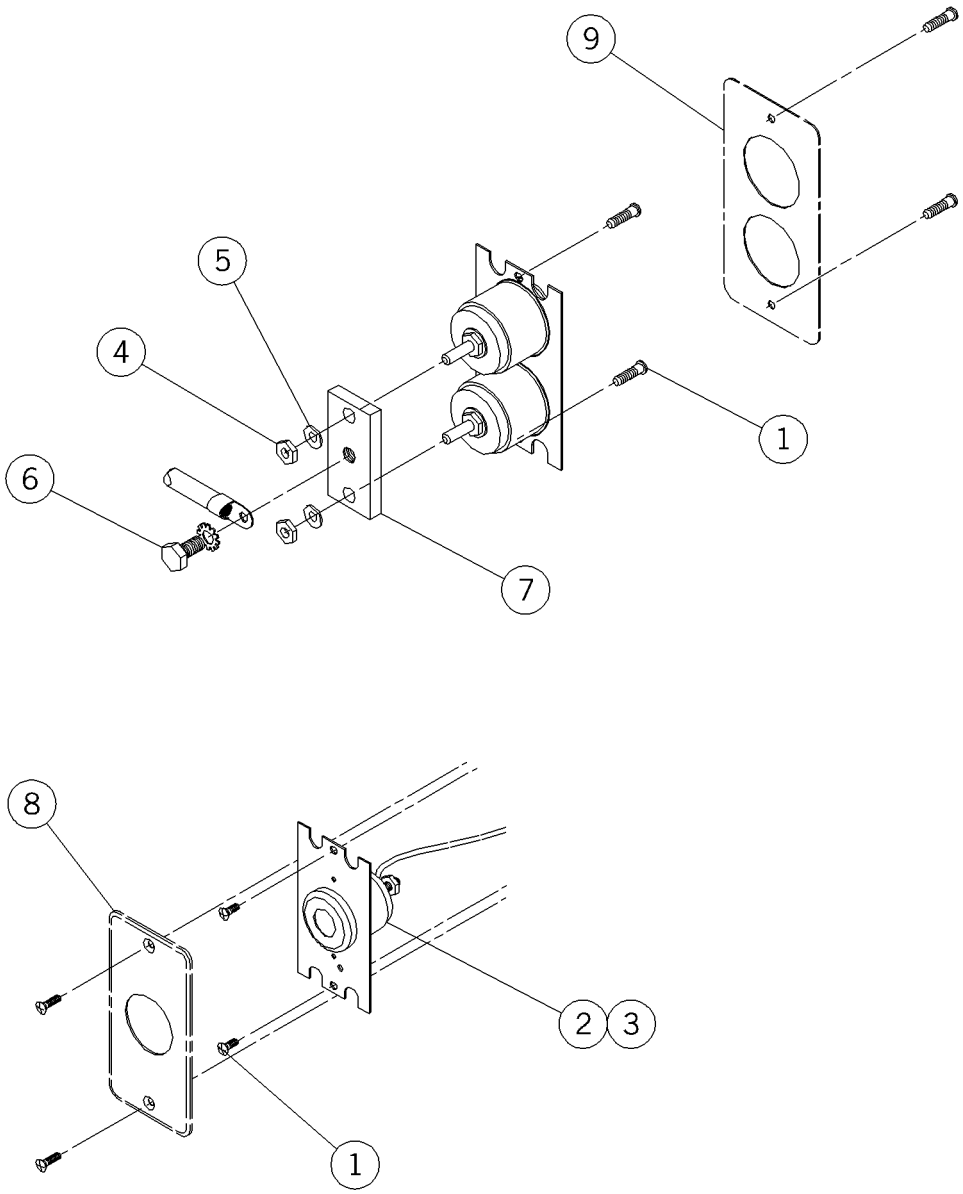

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Table 5-17. Ground Receptacles

Item Number	Part Number	Quantity	Description
1	16115 (1000-00)	As required	Screw
2	17111 (1000-00)	1	Ground receptacle, locking
3	56694 (1000-00)	1	Ground receptacle, non-locking
4	56827 (1000-00)	1	Spacer, ground receptacle
5	56825 (1000-00)	1	Lockwasher
6	50798 (1000-00)	1	Screw
7	56906 (1000-00)	1	Tie bar, dual ground (1) gang
8	52230 (1000-00)	1	Faceplate—ground receptacle—almond
9	56903 (1000-00)	1	Faceplate—dual ground

Night and Chart Lights

Figure 5-18. Night and Chart Lights

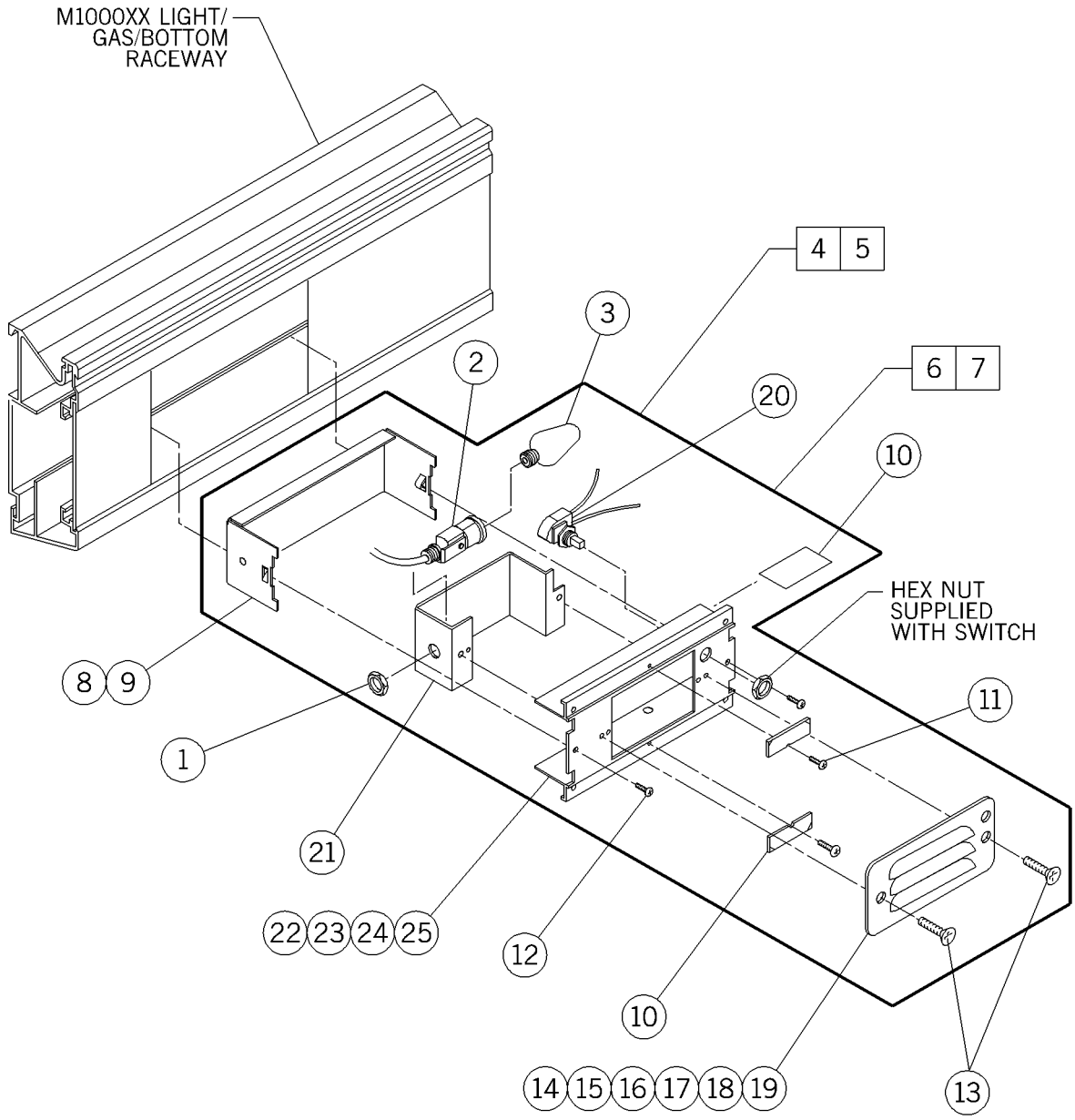

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Table 5-18. Night and Chart Lights

Item Number	Part Number	Quantity	Description
1	983 (1000-00)	1	Locknut
2	12379 (1000-00)	1	Night light socket
3	15418 (1000-00)	1	Night light bulb
4	52398-01 (1000-00)†	1	Night light assembly
5	5239802 (1000-00)†	1	Night light assembly—emergency power
6	5239201 (1000-00)**	1	Chart light assembly
7	5239202 (1000-00)**	1	Chart light assembly—emergency power
8	51029 (1000-00)	1	Device—backbox, deep
9	53164 (1000-00)	1	Device—backbox, shallow
10	52122 (1000-00)	2	Lock—device plate
11	50891-02 (1000-00)	2	Screw
12	50981-08 (1000-00)	2	Screw
13	50590 (1000-00)	2	Screw
14	53744 (1000-00)	1	Faceplate
15	52024 (1000-00)	1	Faceplate—chart light
16	51548 (1000-00)	1	Faceplate louvered—almond
17	57628 (1000-00)	1	Faceplate louvered
18	52234 (1000-00)	1	Faceplate—time cable
19	56794 (1000-00)	1	Gasket
20	50292 (1000-00)	1	Pushbutton switch
21	52397 (1000-00)	1	Device plate—night light
22	52446 (1000-00)	1	Device plate—night light
23	52070 (1000-00)	1	Device plate—chart light
24	52447 (1000-00)	1	Device plate—chart light

† Items 4 and 5 do not include items 10 and 20.
** Items 6 and 7 do include items 10 and 20.

Hose Panels

Figure 5-19. Hose Panels

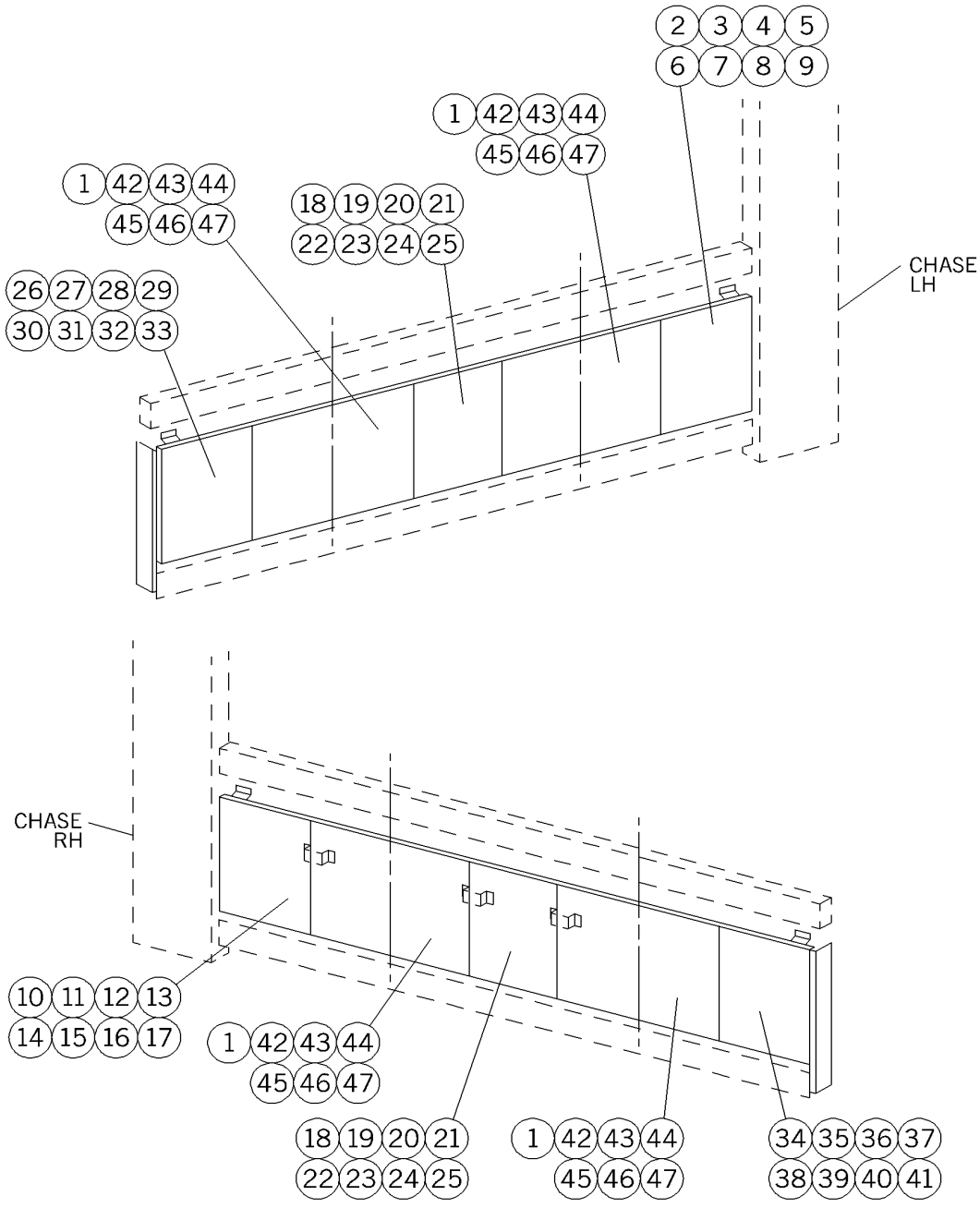

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Table 5-19. Hose Panels

Item Number	Part Number	Quantity	Description
1	54785 (1000-00)++	1	Manifold access panel 48"
2	54782-01 (1000-00)++	1	Hose panel assembly—6"
3	54782-02 (1000-00)++	1	Hose panel assembly—12"
4	54782-03 (1000-00)++	1	Hose panel assembly—18"
5	54782-04 (1000-00)++	1	Hose panel assembly—24"
6	54782-05 (1000-00)++	1	Hose panel assembly—30"
7	54782-06 (1000-00)++	1	Hose panel assembly—36"
8	54782-07 (1000-00)++	1	Hose panel assembly—42"
9	54782-08 (1000-00)++	1	Access panel
10	54783-01 (1000-00)++	1	Hose panel assembly—6"
11	54783-02 (1000-00)++	1	Hose panel assembly—12"
12	54783-03 (1000-00)++	1	Hose panel assembly—18"
13	54783-04 (1000-00)++	1	Hose panel assembly—24"
14	54783-05 (1000-00)++	1	Hose panel assembly—30"
15	54783-06 (1000-00)++	1	Hose panel assembly—36"
16	54783-07 (1000-00)++	1	Hose panel assembly—42"
17	54783-08 (1000-00)++	1	Hose panel assembly—48"
18	54784-01 (1000-00)++	1	Hose panel assembly 6"
19	54784-02 (1000-00)++	1	Hose panel assembly 12"
20	54784-03 (1000-00)++	1	Hose panel assembly 18"
21	54784-04 (1000-00)++	1	Hose panel assembly 24"
22	54784-05 (1000-00)++	1	Hose panel assembly 30"
23	54784-06 (1000-00)++	1	Hose panel assembly 36"
24	54784-07 (1000-00)++	1	Hose panel assembly 42"
25	54784-08 (1000-00)++	1	Hose panel assembly 48"
26	54777-01 (1000-00)++	1	Hose panel—6"
27	54777-02 (1000-00)++	1	Hose panel—12"
28	54777-03 (1000-00)++	1	Hose panel—18"
29	54777-04 (1000-00)++	1	Hose panel—24"
30	54777-05 (1000-00)++	1	Hose panel—30"

++ Specify wood and laminate finish.

Item Number	Part Number	Quantity	Description
31	54777-06 (1000-00)++	1	Hose panel—36"
32	54777-07 (1000-00)++	1	Hose panel—42"
33	54777-08 (1000-00)++	1	Hose panel—48"
34	54776-01 (1000-00)++	1	Hose panel—6"
35	54776-02 (1000-00)++	1	Hose panel—12"
36	54776-03 (1000-00)++	1	Hose panel—18"
37	54776-04 (1000-00)++	1	Hose panel—24"
38	54776-05 (1000-00)++	1	Hose panel—30"
39	54776-06 (1000-00)++	1	Hose panel—36"
40	54776-07 (1000-00)++	1	Hose panel—42"
41	54776-08 (1000-00)++	1	Hose panel—48"
42	54785-02 (1000-00)++	1	Manifold access panel—12"
43	54785-03 (1000-00)++	1	Manifold access panel—18"
44	54785-04 (1000-00)++	1	Manifold access panel—24"
45	54785-05 (1000-00)++	1	Manifold access panel—30"
46	54785-06 (1000-00)++	1	Manifold access panel—36"
47	54785-07 (1000-00)++	1	Manifold access panel—42"

++ Specify wood and laminate finish.

NOTES:

Manifold Tree

Figure 5-20. Manifold Tree

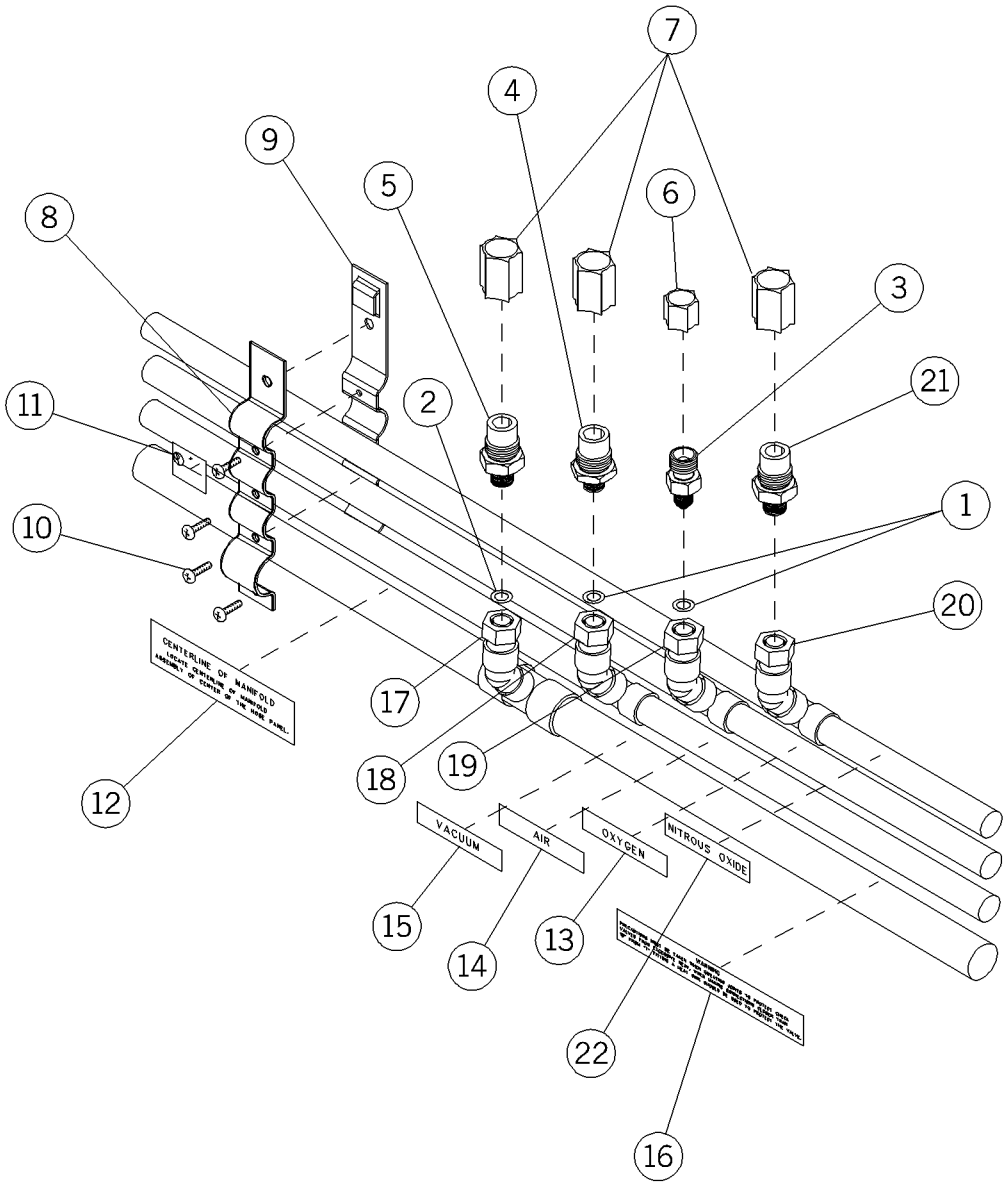

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Table 5-20. Manifold Tree

Item Number	Part Number	Quantity	Description
1	52955-12 (1000-00)	2	O-ring, gas seal, oxygen and air
2	52955-13 (1000-00)	1	O-ring, gas seal—vacuum
3	56975 (1000-00)	1	Fitting demand valve—oxygen
4	56974 (1000-00)	1	Fitting demand valve—air
5	56976 (1000-00)	1	Fitting demand valve—vacuum
6	51438 (1000-00)	1	Protective cap—oxygen
7	51435 (1000-00)	2	Protective cap—vacuum and air
8	52171 (1000-00)	2	Clamp
9	52172 (1000-00)	2	Bracket
10	52555-04 (1000-00)	8	Screw
11	53312 (1000-00)	1	U. L. label—gas distribution
12	52273 (1000-00)	1	Label, manifold placement
13	22453 (1000-00)	1	Label—oxygen
14	22454 (1000-00)	1	Label—air
15	22455 (1000-00)	1	Label—vacuum
16	52456 (1000-00)	1	Label—warning
17	53047 (1000-00)	1	Tee assembly—vacuum
18	53046 (1000-00)	1	Tee assembly—air
19	53045 (1000-00)	1	Tee assembly—oxygen
20	52416 (1000-00)	1	Tee assembly—nitrous oxide
21	52425 (1000-00)	1	Fitting, demand valve—nitrous oxide
22	52479 (1000-00)	1	Label—nitrous oxide

Low Voltage Switch

Figure 5-21. Low Voltage Switch

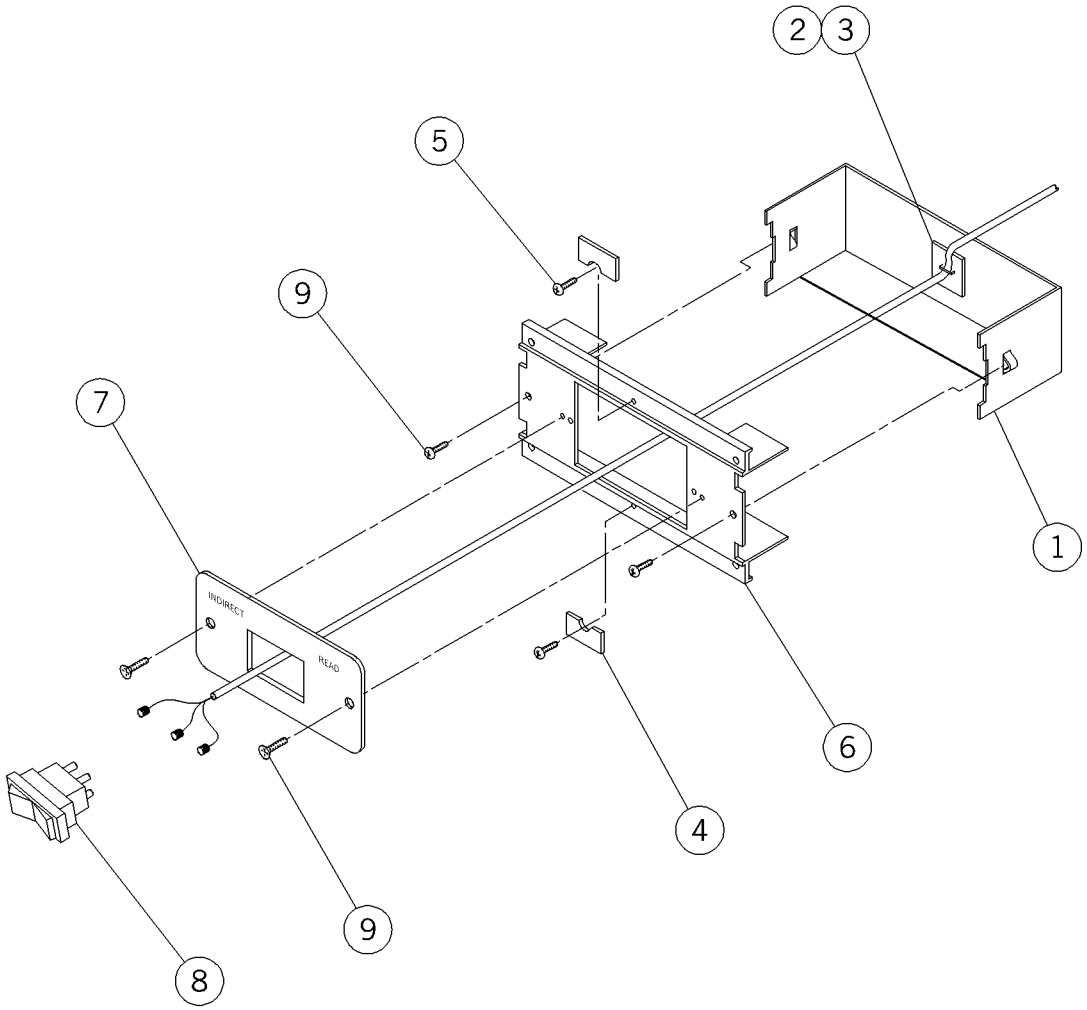

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Table 5-21. Low Voltage Switch

Item Number	Part Number	Quantity	Description
1	53164 (1000-00)	1	Backbox device—shallow
2	52553 (1000-00)	5	Wire tie
3	50128 (1000-00)	4	Mount, wire tie
4	52122 (1000-00)	2	Lock—device plate
5	50891-02 (1000-00)	2	Screw
6	52145 (1000-00)	1	Device plate—notched
7	52838 (1000-00)	1	Faceplate—read/indirect
8	53224 (1000-00)	1	Switch—modified
9	50590 (1000-00)	2	Screw

SideCom Communication System Receptacle

Figure 5-22. SideCom Communication System Receptacle

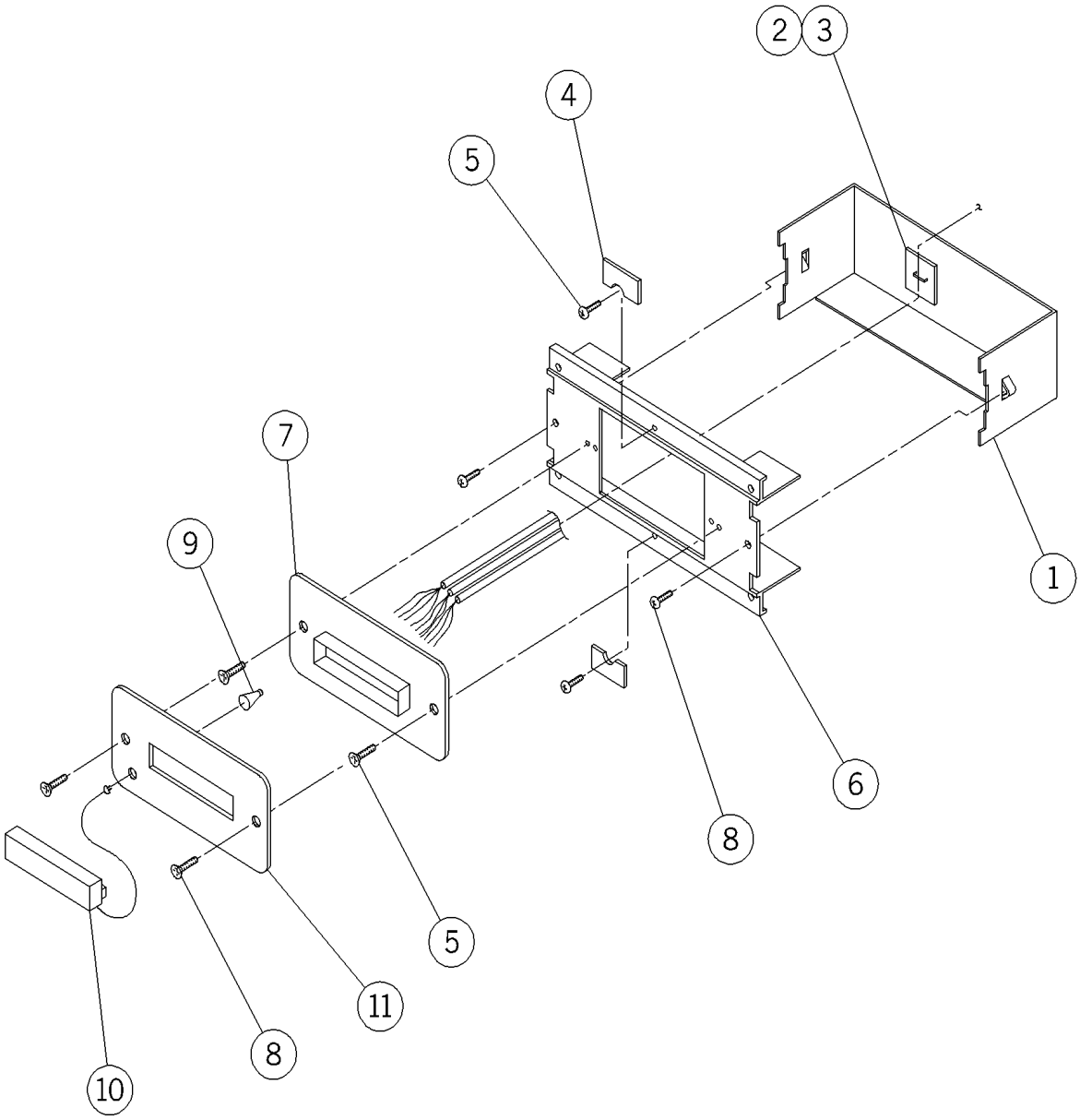

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Table 5-22. SideCom Communication System Receptacle

Item Number	Part Number	Quantity	Description
1	53164 (1000-00)	1	Backbox, device
2	52553 (1000-00)	5	Wire tie
3	50128 (1000-00)	4	Wire tie mount
4	52122 (1000-00)	2	Lock, device plate—notched
5	16115 (1000-00)	4	Screw
6	52145 (1000-00)	1	Device plate—notched
7	SP285 (1000-00)	1	Cable connector assembly
8	50590 (1000-00)	4	Screw
9	29246 (1000-00)	1	Sleeve
10	31591 (1000-00)	1	Dummy plug assembly
11	52231 (1000-00)	1	SideCom faceplate—almond

Low Voltage Controller

Figure 5-23. Low Voltage Controller

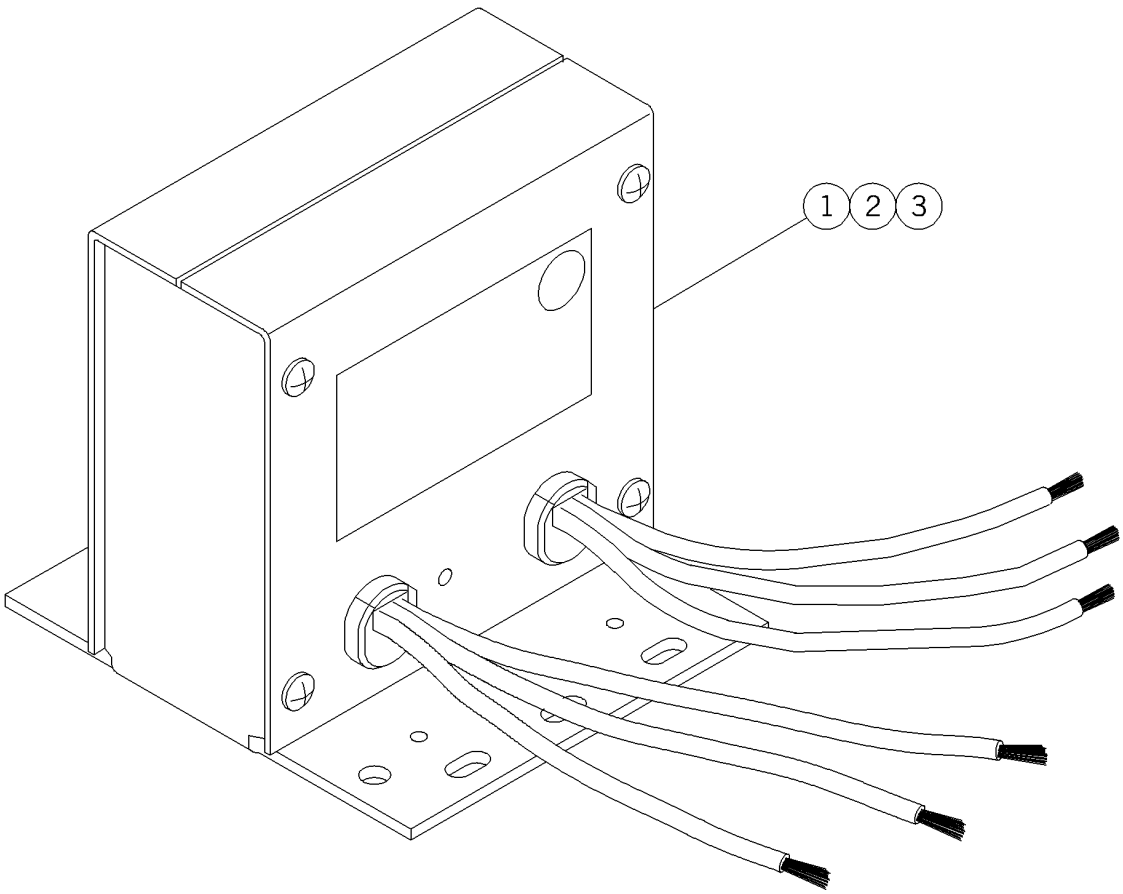

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Table 5-23. Low Voltage Controller

Item Number	Part Number	Quantity	Description
1	54632-01 (1000-00)	1	Controller, complete—120V
2	54632-02 (1000-00)	1	Controller, complete—240V
3	54632-03 (1000-00)	1	Controller, complete—277V

NOTES:

Chapter 6
General Procedures

Chapter Contents

6

NOTES:

Cleaning and Care

WARNING:
When following these procedures you must adhere to the “Infection Control Policies and Procedures” outlined in the *Exposure Control Plan*. Not following these procedures could cause the spread of infection.

SHOCK HAZARD:
Locate the involved power supply circuit breaker panel. Set the involved circuit breaker (A) to OFF (see figure 4-1 on page 4-3). Failure to follow this procedure could cause serious injury and damage to the equipment.

General Cleaning

Do not use excessive water. Clean the unit with a lightly dampened cloth and ordinary cleaners and disinfectants.

Use neutral soap suds and lukewarm water to remove soil or stains. Then, rinse with clean water and dry.

CAUTION:
Do not use harsh cleaners, solvents, or detergents.

Steam Cleaning

Do not use any steam cleaning device on the Horizon Headwall System. The excessive moisture can damage electrical components in the Horizon Headwall System.

Disinfection

Dilute disinfectants and/or germicides as specified on the manufacturer’s label.

Preventive Maintenance

The Horizon Headwall System must have an effective maintenance program. We recommend that you perform preventive maintenance and testing for Joint Commission on Accreditation of Health care Organizations (JCAHO) annually. This not only meets JCAHO requirements, but will help to ensure a long and productive life for the Horizon Headwall System. This will help minimize downtime due to excessive wear failures.

The preventive maintenance schedule that follows is intended to guide the technician through a normal preventive maintenance procedure on the Horizon Headwall System. Check each item on the schedule, and make any necessary adjustments during the preventive maintenance process.

The preventive maintenance schedule is intended to be used in conjunction with the preventive maintenance checklist following it. This checklist is designed to keep a running history of maintenance and subsequent repair costs for one individual Horizon Headwall System. However, the facility can modify this checklist or invent another to fit their needs. Keeping close records and maintaining the Horizon Headwall System and its accessories are two good ways of reducing downtime and at the same time, keeping the nursing staff happy and efficient.

Pay particular attention to the safety features regarding the Horizon Headwall System such as:

- Mounting configuration of the Horizon Headwall System
- Electrical receptacles
- Leaks in the gas delivery system

Preventive Maintenance Schedule

Table 6-1. Preventive Maintenance Schedule

Function	Procedure
Power cables	Inspect all cables for good condition and possible cracking or cuts or pinches in insulating coverings.
Circuit breakers	Turn the breaker off and on to check proper function.
Power indicator light	Check that the Bed receptacle indicator is on. See “Bed Receptacle or Indicator Is Inoperative” on page 2-6.
Electrical receptacles	Check all receptacles for proper ground conductor extractive force. The extraction force should be four ounces with a 0.184 (4.67 mm) diameter pin.

Function	Procedure
Electrical connections	Check all electrical connections for tightness and tighten as needed.
Ceiling support	Inspect the ceiling chase hanger bracket. Compare to the installation drawings provided by the manufacturer.
Gas supply conduit and hoses	Inspect all joints in the Horizon Headwall System for gas leaks. Inspect hoses for cracking, wear, collapse, or leakage.
Line isolation monitor (if equipped)	Test the function of the line isolation monitor monthly. See “Line Isolation Monitor Test” on page 6-7.
General appearance	Check cleanliness. See “Cleaning and Care” on page 6-3 if needed.

Preventive Maintenance Checklist

Table 6-2. Preventive Maintenance Checklist

Date																							
																							Function
Hill-Rom Company	**Manufacturer**																						Power cables
																							Circuit breakers
																							Power indicator light
																							Electrical receptacles
																							Electrical connections
	Model Number																						Ceiling support
																							Gas supply conduit & hoses
																							Overall appearance
	Serial Number																						
Total Charge for This Page																							Labor Time:
																							Repair Cost:
																							Inspected By:
																							Legend C=Clean A=Adjust R=Repair or Replace O=Okay N=Not Applicable **Remarks**

Tool and Supply Requirements

Tools that may be required for maintenance on the Horizon Headwall System are listed below:

- Flathead screwdriver
- Phillips head screwdriver
- Pliers
- Adjustable wrench
- Voltmeter
- Teflon tape

Line Isolation Monitor Test

To test the line isolation monitor alarm, press the test momentary contact switch for about 7 seconds. The following results indicate that the line isolation monitor is working properly:

- The meter goes into the alarm position (red zone).
- The output relay energizes.
- The green “safe” light is not illuminated.
- The red hazard LEDs (both L1 and L2) illuminate.

Installation and Post Installation Inspection

- Hill-Rom will supply the hanger bracket consisting of a steel wall plate and ceiling plate. The ceiling plate provides knockouts for building service connections to the vertical chase. Additional structural support bracketing and hardware (if required) may be purchased.
- Complete installation instructions are supplied with every Horizon Headwall System. These instructions take into account the variations in each system as ordered.
- In seismic code areas, contact Hill-Rom for additional information concerning installation.

- The mechanical contractor shall install and provide primary connections to the Horizon System medical gas manifold as detailed on the drawings. The mechanical contractor will perform and certify all pressure tests as required by NFPA 56F (non-flammable medical gas systems) and any local codes.
- The electrical contractor shall furnish and install conduit to the hanger bracket knockout plate with wiring. The contractor will make the connection of building services to the pre-wired junction box as shown in the electrical drawings in the installation instructions.
- After installation, the electrical contractor shall be responsible for checking the entire system for proper operation.
- Upon request, a Hill-Rom representative may periodically check with the contractor during initial installation and assist the contractor in final check to make certain the installation is in operating condition. (The final certification shall be the responsibility of the electrical and mechanical contractors for their portions of the installation.)

Chapter 7
Accessories

Chapter Contents

This revision of the *Horizon Headwall System Service Manual* does not contain any additional information for accessories.

NOTES: