

INSTALLATION INSTRUCTIONS



WITTRock
HEALTHCARE

Integris® 2002C Headwall w/ Integrated Bed Locator



Product No. P2002C/P0052B4

152449 REV 1

Integris® 2002C Headwall System and Integrated Bed Locator

Revisions

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Manufactured by:

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Table of Contents

Introduction	1
Order of Installation	5
Wall and Construction Type	6
Fastener Identification	8
Electrical and Medical Gas Drop Installation	10
Gas Manifold Installation	10
Headwall System Installation	13
Headwall System Hanger Bracket(s) Installation	13
Headwall System Section (One Section)	16
Attach the Headwall System to the Wall	17
Headwall System Sections (Multiple Sections)	19
End Cap Installation	20
Installation of Optional Integrated Bed Locator	21
Medical Gas Hose Connection	24
Hose Compartment Access	26

NOTES:

Introduction

This document describes how to install the Integris® 2002C Headwall System (A) and Integris® Integrated Bed Locator (P0052B4) (optional) (B) (see figure 1 on page 1).

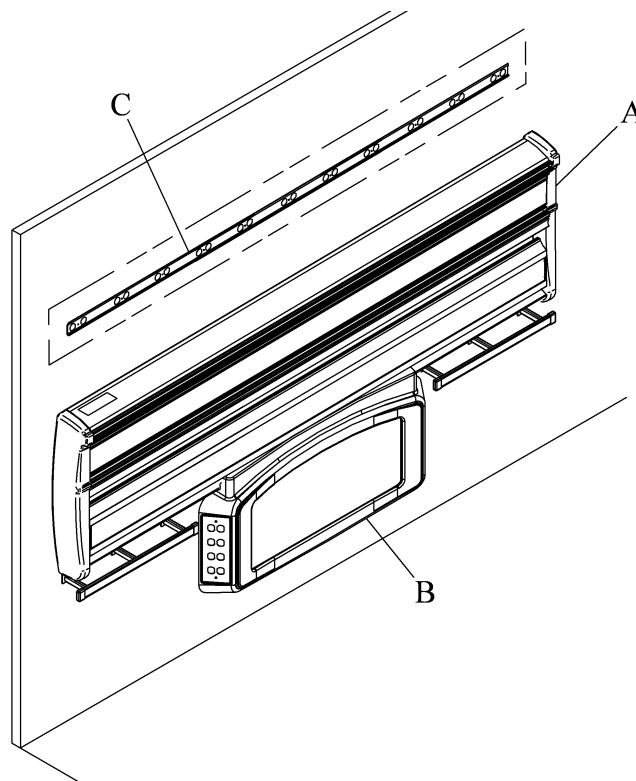
NOTE:

For installation of the Integris® Lite Rail (C), refer to the *Integris® Lite Rail Installation Instructions* (IS443).

NOTE:

The P0051 units are not approved for Isolated Power use.

Figure 1. Headwall System and Integrated Bed Locator



152449_1_002

Before the installation, carefully read all of the installation instructions for the components that you will install.



Make sure the facility medical gases, vacuum lines, and electrical lines have been routed to the general location for the headwall system installation, in accordance with the latest editions of these specifications, as well as all applicable national, state or provincial, and local codes.

For USA installations:

- National Fire Protection Association®¹ (NFPA) NFPA 99: *Standard For Health Care Facilities*
- NFPA 70: *National Electrical Code*®

For Canadian installations:

- Canadian Standards Association (CSA®²) CSA C22.1 and C22.2, Parts -1 and 2 of the *Canadian Electrical Code*
- Nonflammable Medical Gas Pipeline Systems must follow CSA Z7396.1: *Medical Gas Pipeline Systems - Part 1: Pipelines for Medical Gases and Vacuum*
- Anaesthetic Gas Scavenging Systems must follow CSA Z7396.2: *Medical Gas Pipeline Systems - Part 2: Anaesthetic Gas Scavenging Disposal Systems*
- CSA Z318.0: *Commissioning of Health Care Facilities*

NOTE:

Smoke index for the P2002C decorative plastic parts is 500 < Smoke Index < 999.

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2. CSA® is a registered trademark of Canadian Standards Association, Inc.



**Subject: Integris® 2002C Headwall System and Integrated Bed Locator
(P2002C/P0052B4)—Installation Instructions**

Tools required:	Standard drill/power screwdriver	#2 phillips head screwdriver
	1/4" diameter drill bit	15/16" diameter drill bit
	Medium screwdriver	Large screwdriver
	Ladder	7/8" spade bit
	11/32" open end wrench	1" spade bit
	5/16" hex nutdriver	Ratchet wrench
	3/8" hex nutdriver	Tape measure
	Level	Chalk line
	Rubber mallet or block and hammer	Adjustable wrench
	9/16" deep socket with 3" extension	

Parts required:	(1) 204615	Bag assembly, P2002C packing
	(2) 204665	Bag assembly, hanger, 6' - 7' - 8' - 9'
	(1) 206501	Transition cover assembly
	(1) 205945	Bag assembly, P2002
	(4) 12483	Lockwasher, #8, dish-type
	(10) 15250	Locknut, #8-32, washer base, keys
	(12) 5151701	Housing—contact
	(4) 5224307	Screw, #8-32 x 7/8"
	(4) 5294503	Screw, #6-20 x 1/4", truss head
	(2) 55736	Roll pin, 3/16" diameter
	(2) 5125900	Wire lead, green
	(2) 5207405	Wire lead, green—6"
	(3) 5254407	Wire lead—black
	(3) 5254408	Wire lead—white
	(2) 204015	Ground stud support
	(4) 5255505	Screw, #8-18 x 5/8", pan head
	and	
	(1) P0052B4	Integris® Integrated Bed Locator (optional)
	204615, Bag assembly, P2002C packing, includes these items:	
	(16) 5294503	Screw, #6-20 x 1/4", truss head
	(8) 5314301	Screw, #12—self-drilling, hex
	(8) 55138	Screw, #8-18, type AB, pan head

(8) 57185	E-Z Ancor® ¹ screw anchor
(4) 203644	Installation clip
(4) 204550WW	Bottom installation clip
204665, Bag assembly, hanger, 6' - 7' - 8' - 9', includes these items:	
(7) 21045	Screw, 3/8"-16 x 3", slotted round head, zinc-plated, full thread
(7) 21046	Toggle wing, 3/8"-16
(14) 5314301	Screw, #12—self-drilling, hex
(7) 29325PL	Stud guide—plated
205945, Bag assembly, P2002, includes these items:	
(1) 205935	Splice cover, top, complete
(1) 205933	Splice cover, lower, P2002, with adhesive
(4) 15250	Locknut, #8-32, washer base, keps
(4) 16115	Screw, #6 x 3/8", phillips head, flat head, zinc-plated
(2) 5224303	Screw, #8-32 x 1/2", pan head
(2) 20507601	Cover trim, 5 1/8"
(1) 204016*	Transition, fascia cover
151812, Bag assembly, bed locator, integrated, includes these items:	
(6) 5314301	Screw, #12—self-drilling, hex

* Specify high-pressure laminate color.

Reference documents: *Integris® Lite Rail Installation Instructions (IS443)*

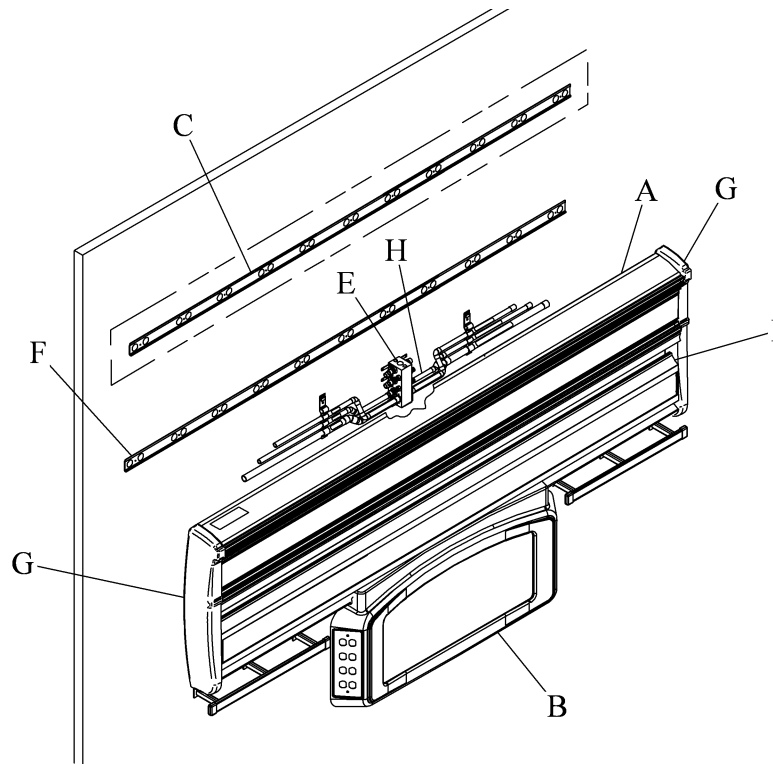
1. E-Z Ancor® is a registered trademark of Illinois Tool Works, Inc.

Order of Installation

These steps summarize the order of installation of the headwall system and related components:

1. Examine the wall and construction type (see “Wall and Construction Type” on page 6).

Figure 2. Component Identification



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NOTE:

The hanger bracket (C) for the Integris® Lite Rail (IS443) is shown for reference (see figure 2 on page 5).

2. Install the gas drops (D) (see figure 4 on page 11) and the gas manifold (E) (see figure 5 on page 12).
3. To install the headwall system (A) (see figure 2 on page 5) (referred to as raceway), do these steps:
 - a. Install the raceway hanger bracket (F) (see “Headwall System Hanger Bracket(s) Installation” on page 13).
 - b. Prepare to install one section of the raceway (A) (see “Headwall System Section (One Section)” on page 16).

- c. Attach the raceway (A) to the wall (see “Headwall System Installation” on page 13).
 - d. Prepare to install multiple sections of the raceway (A) (see “Headwall System Sections (Multiple Sections)” on page 19).
 - e. Install the end cap (G) (see “End Cap Installation” on page 20).
4. If applicable, install the integrated bed locator (B) (optional) (see “Installation of Optional Integrated Bed Locator” on page 21).
 5. Connect the medical gas hoses (H) (see “Medical Gas Hose Connection” on page 24).
 6. Access the hose compartment (I) (see “Hose Compartment Access” on page 26).

Wall and Construction Type



WARNING:

Install the headwall system and components in a manner that is applicable to the wall and construction type. Failure to do so could cause injury or equipment damage.

1. Refer to the local and state building codes and make sure of the wall and construction type:
 - **Seismic** walls are constructed to prevent damage from an earthquake.
 - **Non-seismic** walls are **not** constructed to prevent damage from an earthquake.
 - **Fire-rated** walls are constructed to prevent the movement of fire.
 - **Non-fire-rated** walls are **not** constructed to prevent the movement of fire.
2. Do **one** of these:
 - **Seismic** walls—Install the wall back plate. Refer to the Office of Statewide Health, Planning, and Development (OSHPD) approved drawings and the as-built drawings.

NOTE:

For **seismic** construction requirements, phone WittRock Healthcare Technical Support at 800-445-3720.

- **Non-seismic** walls (fire-rated and non-fire-rated)—Make sure the walls are constructed with at least 20-gauge steel studs 16" (41 cm) between the centerlines and have a minimum of 5/8" (16 mm) dry wall.

NOTES:

Fastener Identification

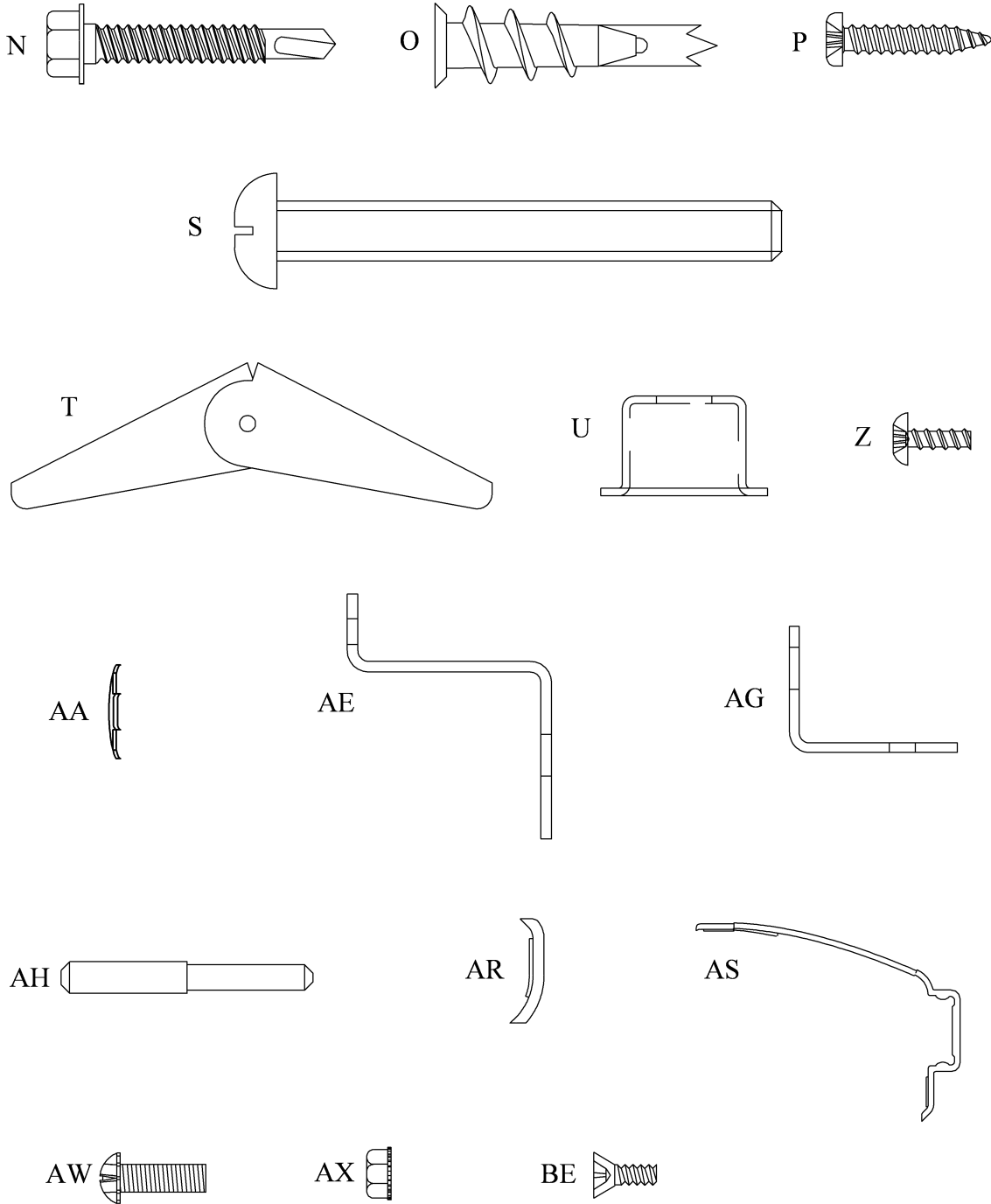
The fasteners in this document are referred to by callout letter (see table 1 on page 8 and see figure 3 on page 9).

Table 1: Fastener Callout Letters

Item Letter	Part Number	Description
N	5314301	Screw, #12—self-drilling, hex head
O	57185	E-Z Ancor® screw anchor
P	55138	Screw, #8-18, type AB, pan head
S	21045	Screw, 3/8"-16 x 3", slotted round head, zinc-plated, full thread
T	21046	Toggle wing, 3/8"-16
U	29325PL	Stud guide—plated
Z	5294503	Screw, #6-20 x 1/4", truss head
AA	12483	Lockwasher, #8, dish-type
AE	203644	Installation clip
AG	204550WW	Bottom installation clip
AH	55736	Roll pin, 3/16" diameter
AR	205933	Splice cover, lower, P2002, with adhesive
AS	205935	Splice cover, top, complete
AW	5224303	Screw, #8-32 x 0.5", pan head
AX	15250	Locknut, #8-32, washer base, keps
BE	16115	Screw, #6 x 3/8", phillips, flat head, zinc-plated

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Figure 3. Fasteners



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Electrical and Medical Gas Drop Installation



WARNING:

Install the headwall system and components in accordance with the manufacturer's installation instructions and all applicable national, state or provincial, and local codes. Failure to do so could cause injury or equipment damage.

1. Install the medical gas rough-ins in accordance with the NFPA 99 requirements (CSA Z7396.1 and Z7396.2 for Canada).
2. Refer to the headwall system as-built drawings to locate the bed centerline (J) (see figure 4 on page 11).
3. Make sure the distance between the centerline of the Integris® Lite Rail rough-in (K) and headwall rough-in (L) is 24 3/4" (62.87 cm).

Gas Manifold Installation

1. Refer to the as-built drawings for the correct location of the manifold (E) (see figure 5 on page 12).
2. Make a line for the bed centerline (J).
3. Make sure the electrical and medical gas rough-in locations are correct.
4. Align the manifold (E) with the bed centerline (J). Put the bottom of the manifold (E) 31 3/8" (79.69 cm) above the finished floor (M).
5. Do one of these to attach the manifold (E):
 - If the optional back plate is installed, use the self-drilling hex screws to attach the manifold (E) to the back plate.
 - If the optional back plate is not installed, use the E-Z Ancor®¹ screw anchors (O) and pan screws (P) to attach the manifold (E) to the wall.
6. When you connect the copper tube fittings (supplied by others) from the gas manifold assembly to the medical gas service drops, use a heat shield blanket to shield the wall and floor from the heat of the torch. Braze the medical-gas couplings to the facility medical-gas lines in accordance with NFPA 99 requirements.

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Figure 4. Electrical and Medical Gas Drop Installation

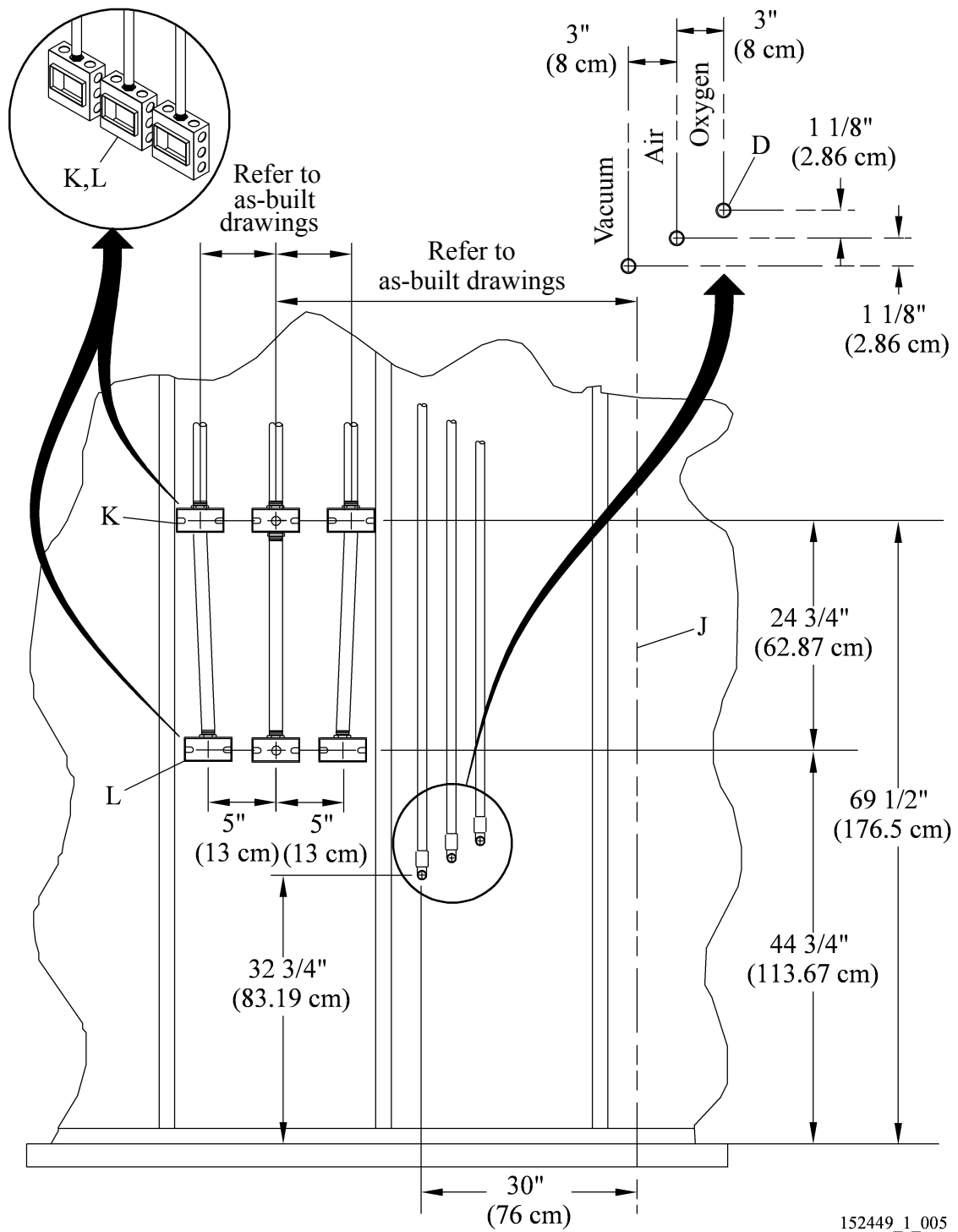
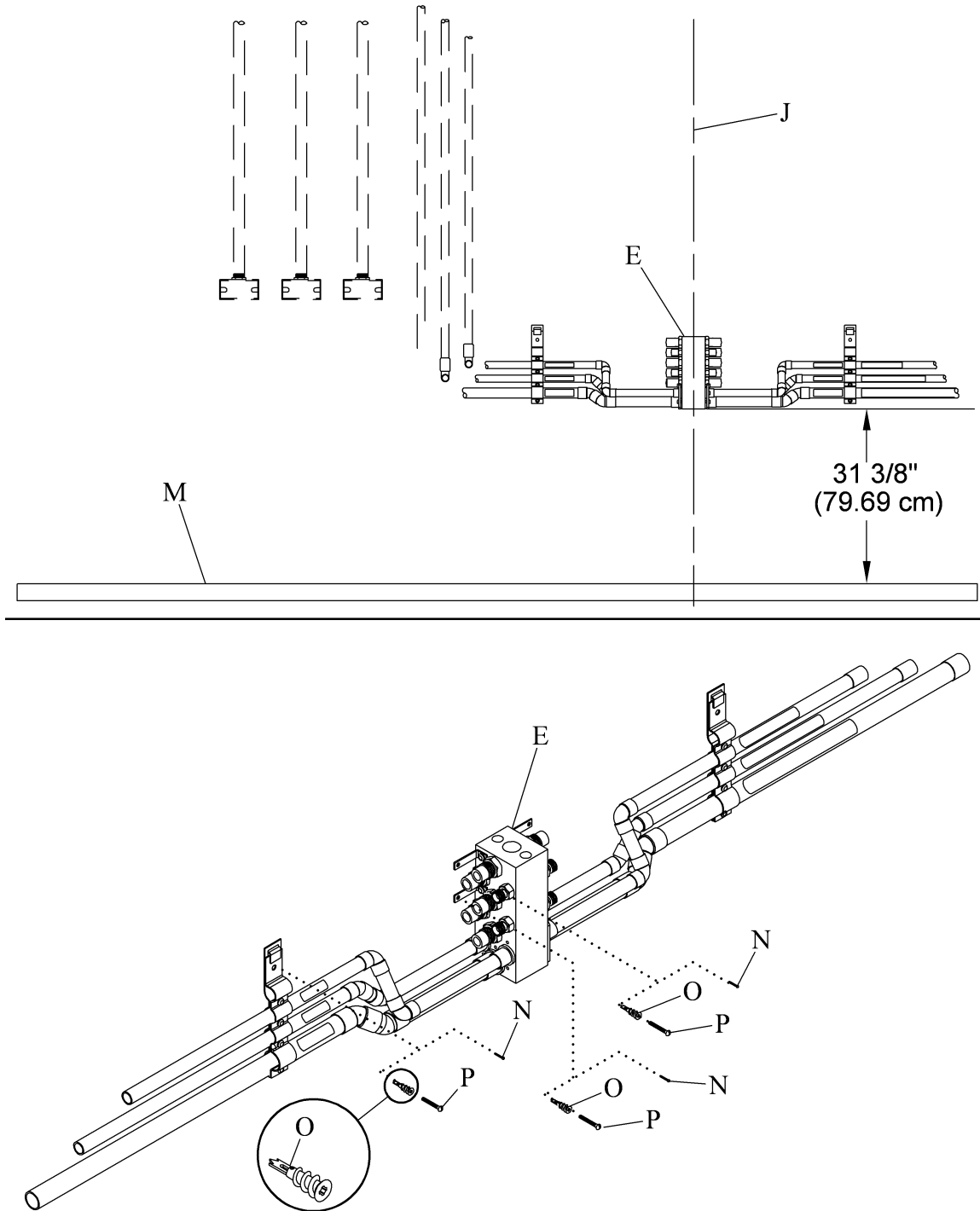


Figure 5. Gas Manifold Installation



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Headwall System Installation

Headwall System Hanger Bracket(s) Installation



SHOCK HAZARD:

Disconnect the electrical power from the facility wires. Failure to do so could cause injury or equipment damage.

NOTE:

When you install multiple headwall system sections, do not permit breaks between the hanger brackets to be in line with breaks between the headwall system sections.



WARNING:

Install the headwall system and components in a manner that is applicable to the wall and construction type. Failure to do so could cause injury or equipment damage.

1. Make sure the facility electrical power is removed from the wires.
2. Examine the wall and construction type (see “Wall and Construction Type” on page 6).
3. Refer to the as-built drawings to find the locations of line or wall boxes (Q) (see figure 6 on page 15).
4. Put the bottom of the raceway hanger bracket (F) 2 1/4" (5.72 cm) from the centerline of the wall box (Q) and 1" (3 cm) from the end of the raceway (A).
5. If the Integris® Lite Rail is to be installed, make sure the distance from the bottom of the raceway hanger bracket (F) to the bottom of the Integris® Lite Rail hanger bracket (C) is 23 13/16" (60.48 cm). Refer to the *Integris® Lite Rail Installation Instructions* (IS443).
6. Attach the hanger bracket(s) (F) and/or (C) to the wall:
 - a. For **non-seismic, non-fire-rated** walls, use the slotted round screws (S), toggle wings (T), and stud guides (U) (see figure 3 on page 9) to attach the hanger bracket (F) or (C) to the wall (see figure 6 on page 15).
 - b. On **fire-rated** and **seismic** walls, install the self-drilling hex head screws to attach the hanger bracket (F) or (C) to the wall stud or back plate.

- c. On **non-fire-rated** walls do these steps:
- Make marks on the wall to show the two pairs of 1" (3 cm) holes (R) in the raceway hanger bracket (F) and/or Integris® Lite Rail hanger bracket (C).
 - At each pair of marks, drill one 1" (3 cm) hole in the dry wall at a location that will permit easy access. If an obstacle or wall stud is in the way, drill where the other hole is identified.

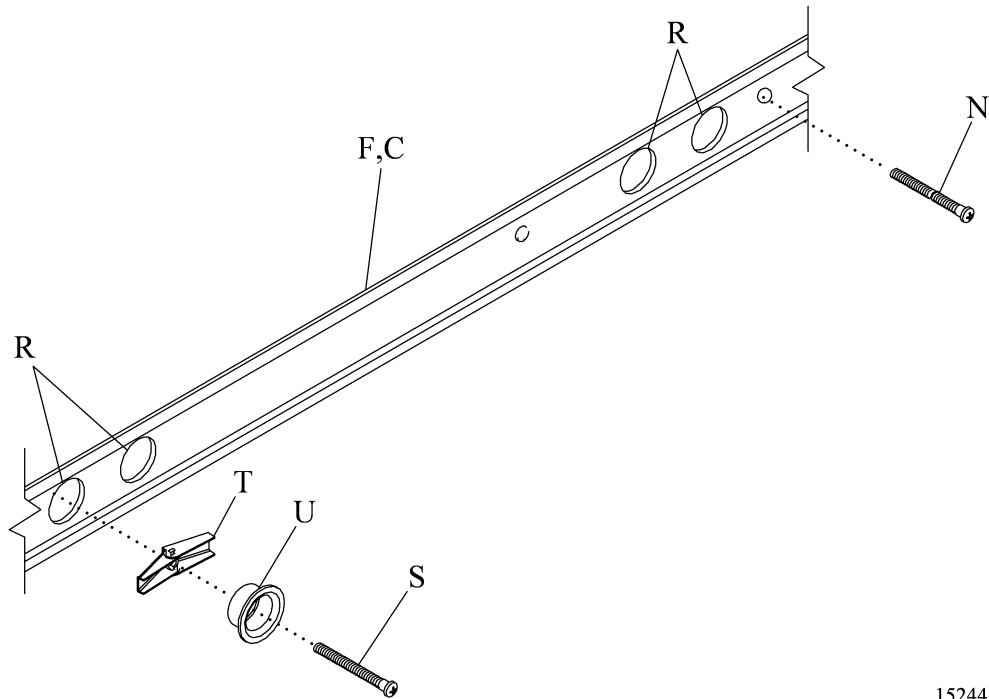
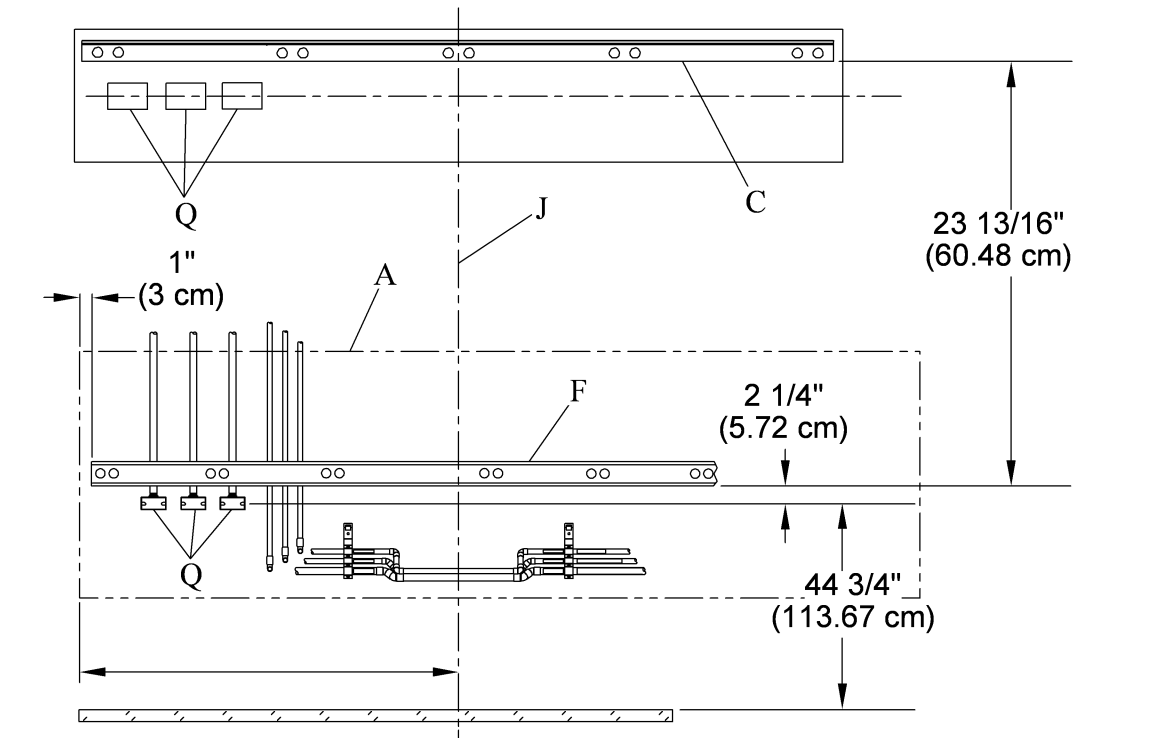


CAUTION:

When the installation requires extra hanger brackets, make sure that they are installed level with the first hanger bracket. Failure to do so could cause equipment damage.

7. Make sure the hanger bracket(s) (F) and/or (C) are level.
8. If the wall has more than 1/16" (1.5 mm) of waviness along the hanger bracket(s) (F) or (C), do these steps:
 - a. At the low spot(s), loosen the slotted round screws (S).
 - b. Put a shim behind the hanger bracket (F) and/or the Integris® Lite Rail hanger bracket (C).
 - c. Tighten the slotted round screws (S).

Figure 6. Headwall System Hanger Bracket(s) Installation

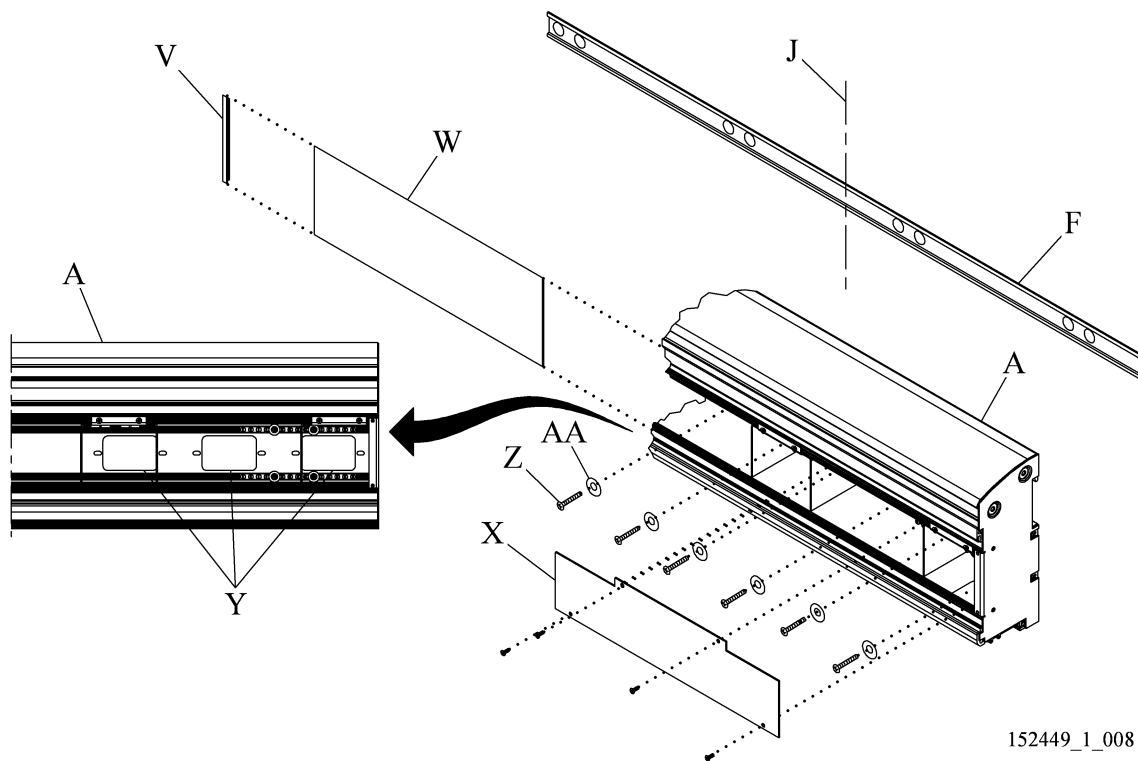


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Headwall System Section (One Section)

1. Put the raceway (A) on the floor (see figure 7 on page 16) and do these steps:
 - a. Remove the cover trim (V) from the fascia cover (W).
 - b. Lift to release the bottom edge of the fascia cover (W) and remove it.
 - c. Remove the junction box cover (X).

Figure 7. Headwall System Section (One Section)



2. Pull the wires from the electrical wall boxes through the holes (Y) in the rear of the raceway (A).
3. Install the raceway (A) on the hanger bracket (F). Align the raceway holes with the electrical wall boxes (Y).
4. Make sure that the raceway (A) is correctly positioned on the bed centerline (J).



WARNING:

Installation of the six truss head screws must comply with the requirements of the NEC®¹ Article 517, *Redundant Ground Requirements*. Failure to do so could cause injury.

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5. Install the six truss head screws (Z) and six lockwashers (AA) through the junction box portion of the raceway (A) and into the flanges of the electrical wall boxes (Y).
6. Make the electrical wire connections in accordance with NFPA 70 requirements (CSA C22.1 and C22.2 for Canada).
7. Install the junction box cover (X), fascia cover (W), and cover trim (V).

Attach the Headwall System to the Wall

1. Open the hose compartment (see “Hose Compartment Access” on page 26).

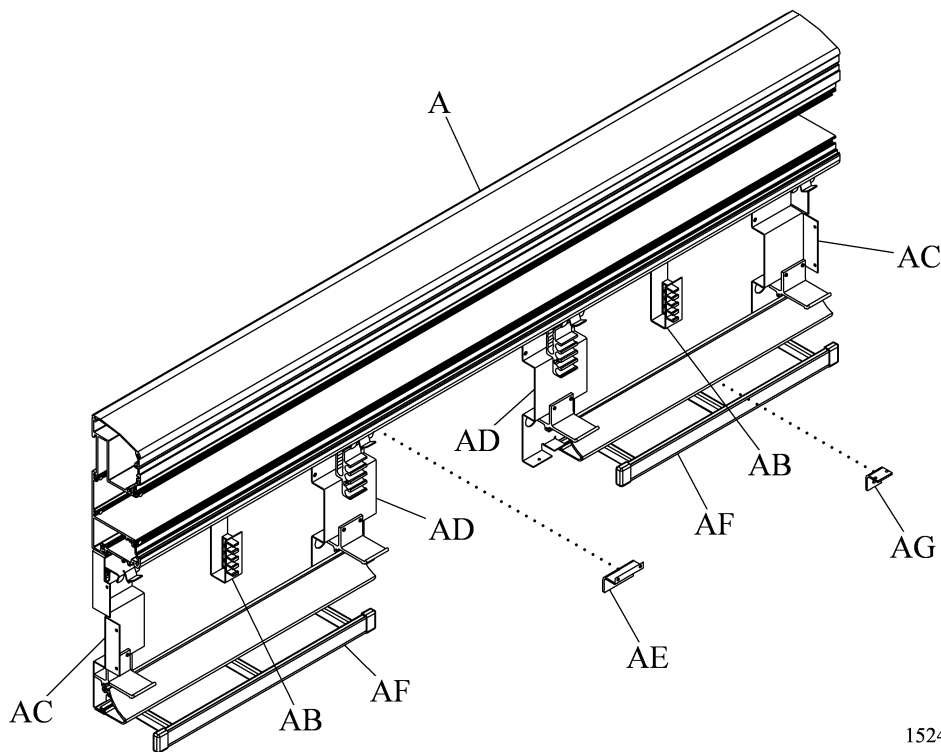


WARNING:

Attach the headwall system (or raceway) in a minimum of four places for each 84" (213 cm) length to prevent a collapse of the headwall system. Failure to do so could cause injury or damaged equipment.

2. Attach the raceway:
 - For **seismic** construction, use the self-drilling hex head screws to attach the hose clips (AB), end spreader bars (AC), and center spreader bars (AD) to the back plate (see figure 8 on page 17).

Figure 8. Attach the Headwall System



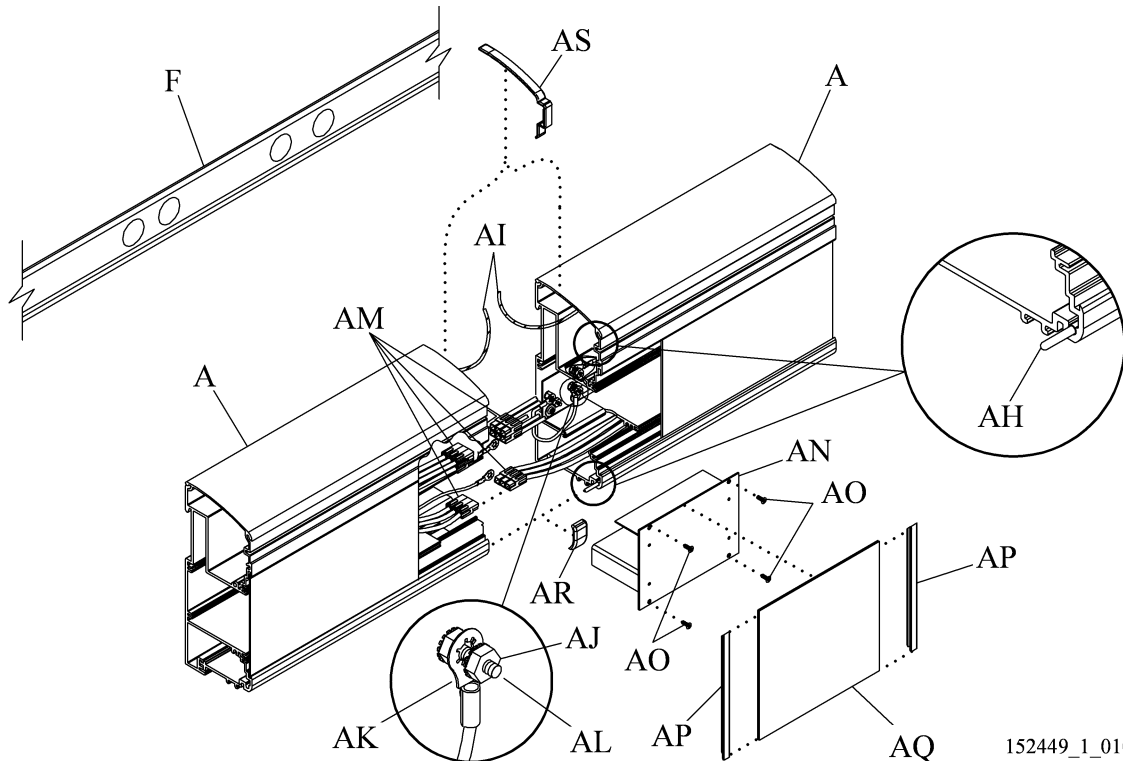
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- For **non-seismic** construction:
 - a. If the hose clips (AB), spreader bars (AC) and (AD) are aligned with the wall studs, use the self-drilling hex head screws to attach the items to the studs.
or
If less than four of the hose clips (AB), spreader bars (AC) and (AD) are aligned with the wall studs for a 84" (213 cm) length of headwall, do these steps:
 - Align the installation clips (AE) with the wall studs along the raceway.
 - Attach the installation clips (AE) to the raceway (A) with the truss head screws (Z).
 - Attach the installation clips (AE) to the wall with the self-drilling hex head screws.
- 3. Attach the accessory bar (AF) to the wall studs.
 - a. If the mount plate for the accessory bar (AF) aligns with the wall studs, attach it with the self-drilling hex head screws.
or
If the mount plate for the accessory bar (AF) does not align with the wall studs, do as these steps:
 - Attach the installation clip (AG) to the gas rail with the truss head screws (Z).
 - Attach the installation clip (AG) to the wall stud with the self-drilling hex head screws.
- 4. Go to “Medical Gas Hose Connection” on page 24.

Headwall System Sections (Multiple Sections)

1. Hang the next raceway (A) on the raceway hanger bracket (F) (see figure 9 on page 19).

Figure 9. Headwall System Sections (Multiple Sections)



2. Remove and discard the two screws and the temporary wood end caps (AT) from the raceway (A) (see figure 10 on page 21).
3. Make sure the roll pins (AH) align correctly with the next raceway (A) (see figure 9 on page 19).
4. Find the two strings (AI) attached to the low-voltage assemblies on the transition end of the two raceways (A) and attach them (AI) together.
5. Refer to “Attach the Headwall System to the Wall” on page 17 to make sure the raceways (A) ends are lined up and are connected correctly.

6. Connect the wires between the raceways (A) in accordance with NFPA 70 requirements (CSA C22.1 and C22.2 for Canada) and as follows (see figure 9 on page 19):
 - a. Pull the loose ends of the wire loops out of the ends of each raceway (A).



WARNING:

Do not mix different services, such as standard power, critical branch, and communication, in the same raceway level of the back plate assembly. To do so could cause injury or equipment damage.

- b. Group the power and low-voltage wires for electrical power, critical branch, and communication into different levels of the applicable raceways (A).

NOTE:

For the correct wire connections, refer to the as-built drawings.

- c. Install the locknut (AJ) to attach the ground wires (AK) on the posts (AL).
 - d. Connect each wire connector (AM) to the correct wire connector in the nearby raceway (A).
7. Align the cover (AN) with the four grooves in the raceways (A).



WARNING:

Do not pinch wires between the raceway and the cover. To do so could cause injury and equipment damage.

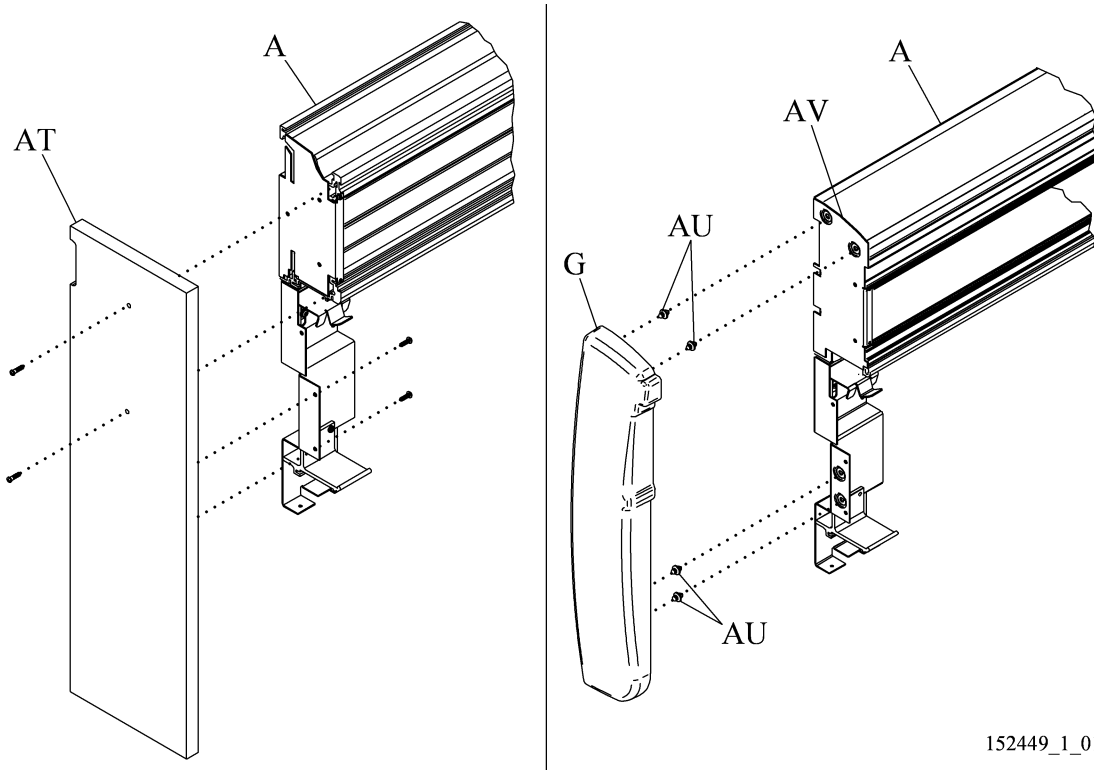
8. Install the four flat head screws (AO) to attach the cover (AN) to the raceway (A).
9. Put the cover trim (AP) on the fascia cover (AQ).
10. Slide the fascia cover (AQ) up into the base of the raceway (A) and down into the bottom of the raceway (A).
11. Install the lower splice cover (AR) and the top splice cover (AS) over the intersection where the two raceways (A) come together.

End Cap Installation

1. If necessary, remove and discard the two screws and the temporary wood end caps (AT) from the raceway (A) (see figure 10 on page 21).
2. Install the end caps (G). Push the ratchet fasteners (AU) through the dimpled holes in the end plate (AV) of the raceway (A).

3. Make sure unit installation and electrical connection of the unit to the facility services is in accordance with shop drawings, national, state or provincial, and local building codes, as well as NFPA 70 requirements (CSA Z318.0, CSA C22.1 and C22.2 for Canada).

Figure 10. End Cap Installation



152449_1_011

Installation of Optional Integrated Bed Locator



WARNING:

Install the headwall system and components in a manner that is applicable to the wall and construction type. Failure to do so could cause injury or damaged equipment.

1. Make sure unit installation and electrical connection of the unit to the facility services is in accordance with shop drawings, national, state or provincial, and local building codes, as well as NFPA 70 requirements (CSA Z318.0, CSA C22.1 and C22.2 for Canada).
2. Examine the type of wall and construction type (see “Wall and Construction Type” on page 6).



SHOCK HAZARD:

Disconnect the electrical power from the facility wires. Failure to do so could cause injury or damaged equipment.

3. Make sure the facility electrical power is disconnected from the local facility wire circuits.
4. Remove and keep the two #8-32 screws (AW) and locknuts (AX) that attach the spacer bar (AY) to the headwall system (see figure 11 on page 23).
5. Remove and discard the spacer bar (AY) from the headwall system.
6. Remove the screws (AZ) that attach the faceplates (BA) to the plastic cover (BB).
7. Remove the faceplates (BA).
8. Remove the four screws (BC) that attach the plastic cover (BB).
9. Remove the plastic cover (BB) from the frame assembly (BD).
10. Remove the four screws (BE) that attach the front panel (BF) to the frame assembly (BD).
11. Remove the front panel (BF).
12. Slide the frame assembly (BD) over the headwall tabs (BG). Make sure the mount holes in the frame assembly (BD) align with the holes in the headwall tabs (BG).
13. Attach the frame assembly (BD) to the headwall system with the two #8-32 screws (AW) and locknuts (AX).

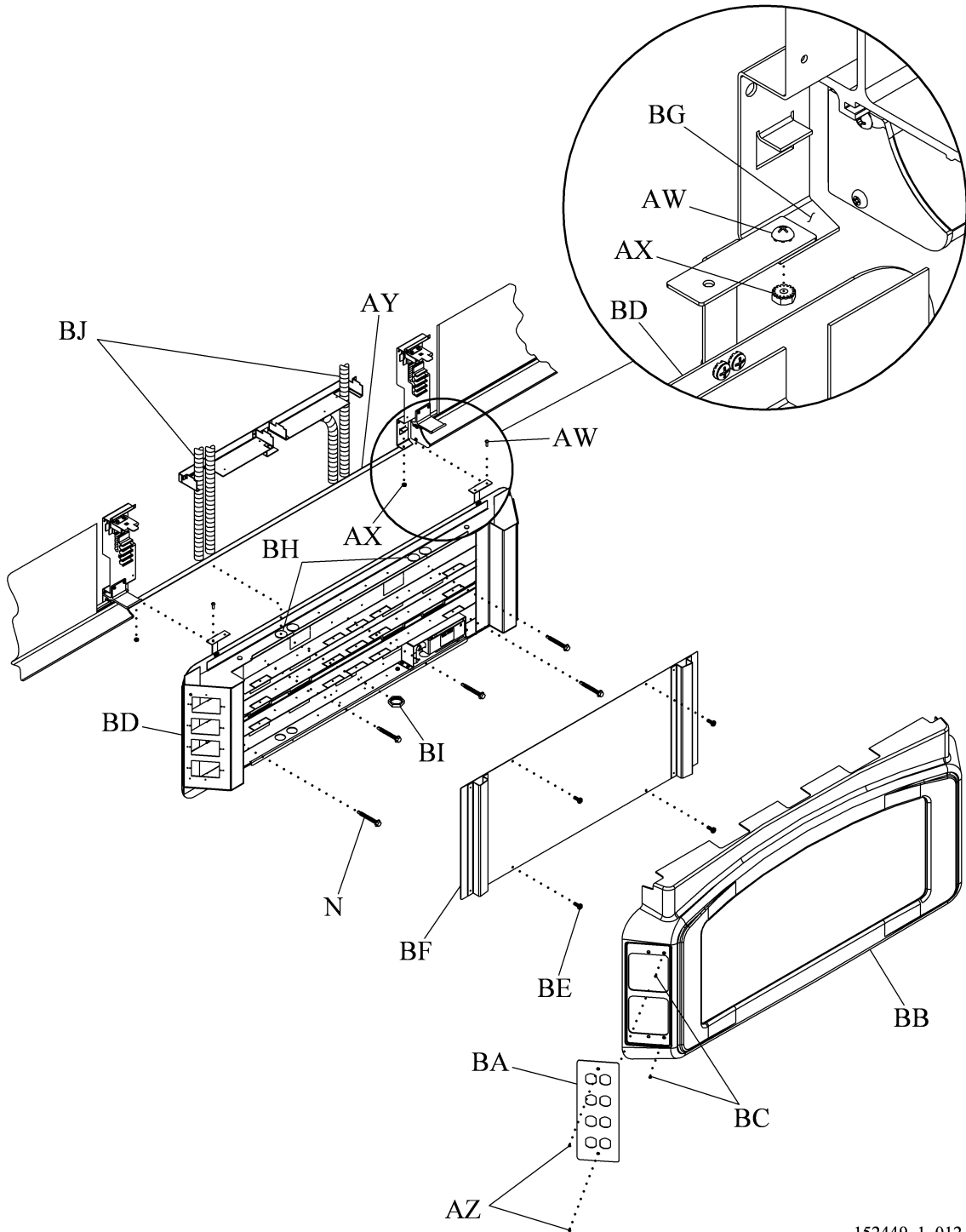


WARNING:

Wear eye protection. Failure to do so could cause eye injury.

14. Put on safety glasses.
15. To prepare to attach the **top** of the frame assembly (BD) to the wall, do these steps:
 - Wall Studs—If the wall has wall studs, use three knockouts or make three 0.25" (6.4 mm) diameter mount holes that align with the studs near the left hand edge, near the center, and the right edge in the top horizontal member of the frame assembly (BD). Find a location where no obstacle is in the way.
 - Metal back plate—If the wall has a metal back plate, use three knockouts or make three 0.25" (6.4 mm) diameter mount holes near the left hand edge, in the center, and near the right edge in the top horizontal member of the frame assembly (BD). Find a location where no obstacle is in the way.

Figure 11. Installation of Integrated Optional Bed Locator



152449_1_012



WARNING:

Make sure that the self-drilling screws go through the wall stud or back plate. Failure to do so could cause injury or damaged equipment.

16. Use three #12 self-drilling screws to attach the top of the frame assembly (BD) to the wall studs or back plate.
17. To prepare to attach the **bottom** of the frame assembly (BD) to the wall, do these steps:
 - Wall Studs—Find two wall studs that are furthest from the sides of the bed centerline still in the frame assembly (BD), then drill two 0.25" (6.4 mm) diameter holes in the bottom flange of the frame assembly (below the lowest raceway of the frame assembly). Find a location where no obstacle is in the way.
 - Metal back plate—Drill two 0.25" (6.4 mm) diameter holes near the left hand edge and right hand edge in the bottom flange of the frame assembly (BD) (below the lowest raceway of the frame assembly). Find a location where no obstacle is in the way.



WARNING:

Make sure the self-drilling screws go through the wall stud or back plate. Failure to do so could cause injury or damaged equipment.

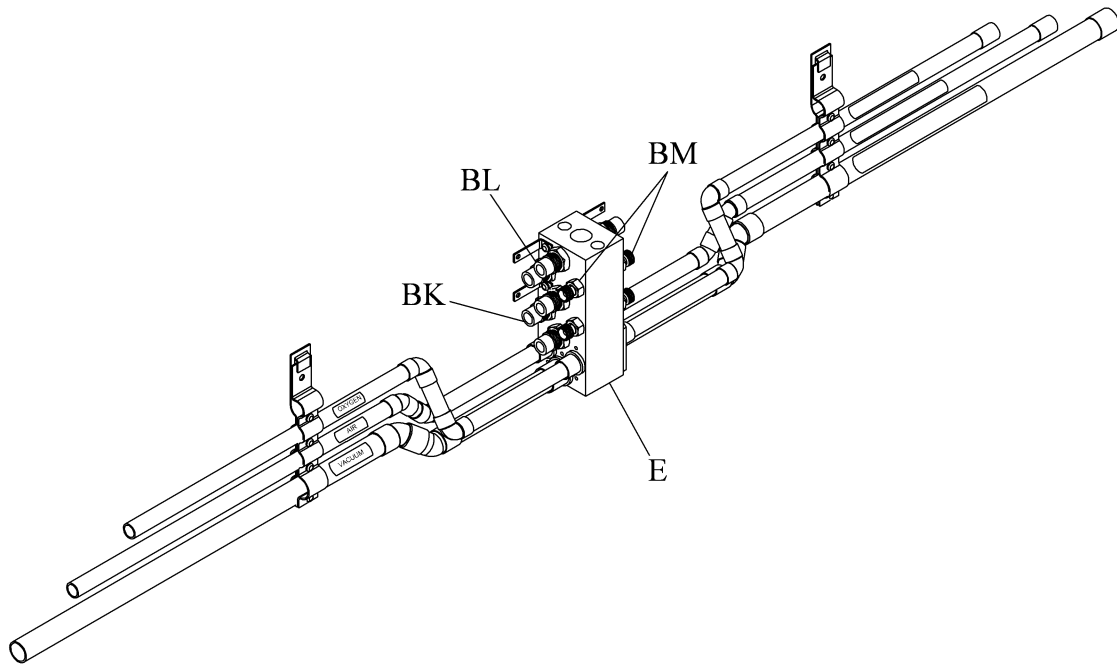
18. Install the two #12 self-drilling screws to attach the bottom of the frame assembly (BD) to the wall studs or back plate.
19. Remove the 4 circular knockouts (BH) in the top horizontal raceway of the frame assembly (BD).
20. Remove and keep the conduit connector nuts (BI) from the conduit connectors (BJ).
21. Put the wire and conduit connectors (BJ) through the applicable knockout (BH).
22. Install the conduit connector nuts (BI) and make the applicable wire connections.
23. Install the four screws (BE) to attach the front panel (BF) to the frame assembly (BD).
24. Install the four screws (BC) to attach the plastic cover (BB).
25. Install the four screws (AZ) to attach the faceplates (BA) to the plastic cover (BB).

Medical Gas Hose Connection

1. Open the hose compartment (see “Hose Compartment Access” on page 26).

2. Connect the lowest air hose on the hose clip to the lowest air DISS fitting (BK) on the manifold (E) (see figure 12 on page 25).

Figure 12. Medical Gas Hose Connection



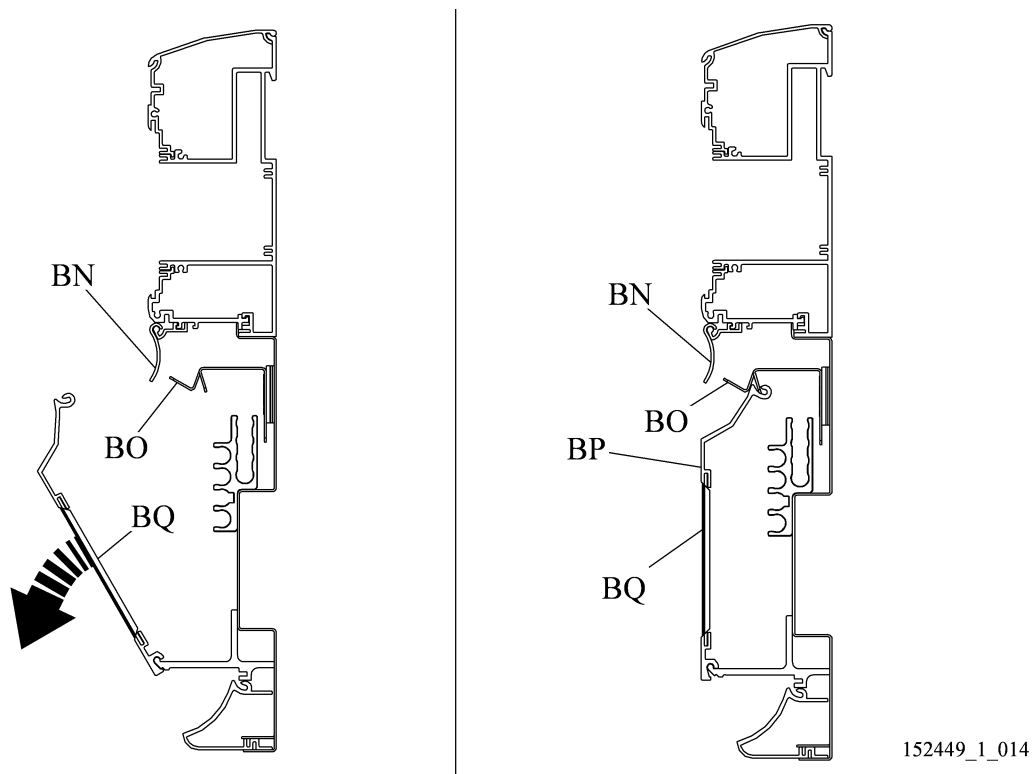
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3. Connect the lowest vacuum hose on the hose clip to the lowest vacuum DISS fitting (BL) on the manifold (E).
4. Connect the lowest oxygen hose on the hose clip to the lowest oxygen DISS fitting (BM) on the manifold (E).
5. Make sure the hoses are not crossed or kinked.
6. Finger-tighten all hoses at the DISS connections (BK), (BL), and (BM).
7. Make sure the medical gas installation is installed in accordance with NFPA 99 requirements (CSA Z7396, CSA Z318.0, and CAN/CSA-Z5359-04: *Low-Pressure Hose Assemblies for use with Medical Gases* for Canada).
8. Close the hose compartment (see “Hose Compartment Access” on page 26).
9. Make sure the gas connector outlets move smoothly along the gas rails.

Hose Compartment Access

1. To open the hose compartment, do these steps:
 - a. Lift the filler strip (BN) (see figure 13 on page 26).
 - b. Push up on all latches (BO) to disengage them from the gas rail (BP).
 - c. Pull the hose compartment cover (BQ) forward to open it.

Figure 13. Pipe Compartment Access



2. To close the hose compartment, do these steps:
 - a. Lift the filler strip (BN).
 - b. Close the hose compartment cover (BQ) and push the gas rail (BP) into location on the latches (BO).
 - c. Make sure the latches (BO) are engaged and the filler strip (BN) is down.