# Introduction

## Purpose

This manual provides instructions on installing the Lower Frame Repair Kit (M15838K001) on Encore® units manufactured in or after the year 2012, where an installing contractor has compromised the side center brace of the lower frame.

## Intended Users

This manual is intended for Gilbarco®-trained and certified Authorized Service Contractors (ASCs).

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## Required Tools

Following tools are required for installing the Lower Frame Repair Kit:

- Torque Wrench
- Socket Wrench
- Phillips® Screwdriver
- Wrench

## Parts List

Following table lists the parts included in the Lower Frame Repair Kit:

| Item # | Description | Part Number | Quantity |
|---|---|---|---|
| 1 | Lower Frame Support Bracket, Side A RHS | M15836B001 | 1 |
| 2 | Lower Frame Support Bracket, Side A LHS | M15679B001 | 1 |
| 3 | Lower Frame Support Bracket, Side B RHS | M15681B001 | 1 |
| 4 | Lower Frame Support Bracket, Side B LHS | M15837B001 | 1 |
| 5 | Screw, Metric M8 X 20, Serrated Flange Head | M00415B010 | 12 |
| 6 | Screw, Metric, Hex Cap, M8 X 60 | M00815B004 | 4 |
| 7 | Nut, Metric M8 Serrated, Flange | M00414B003 | 12 |

**Figure 1: Lower Frame Support Bracket Cutout Positions**

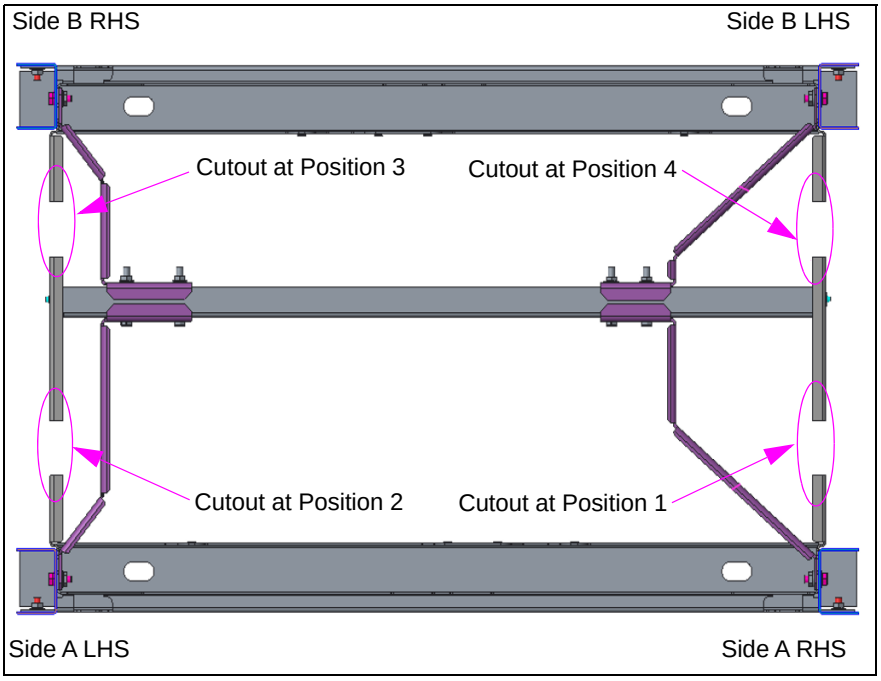



**Figure 2: Position 1 Bracket (M15836B001)**

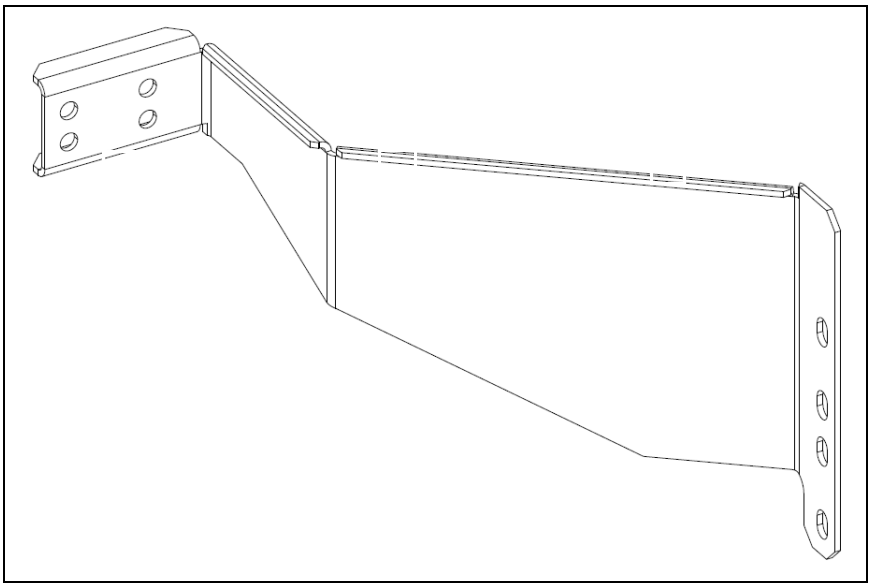


**Figure 3: Position 2 Bracket (M15679B001)**

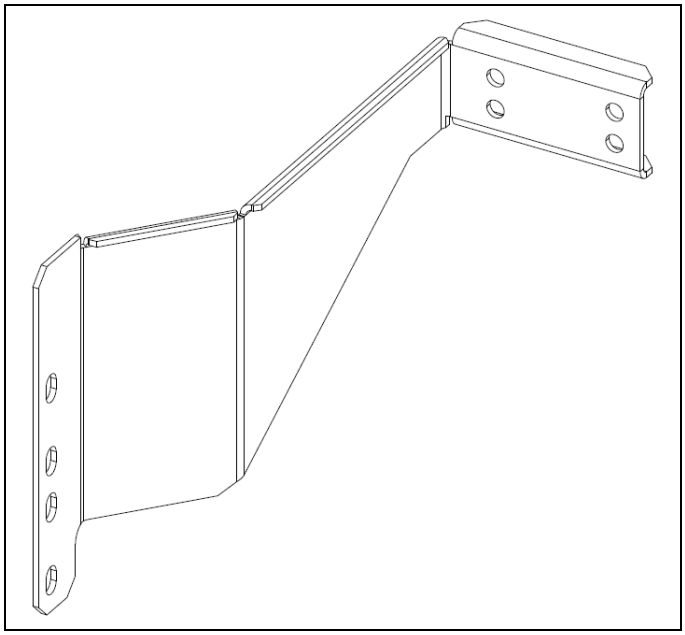


**Figure 4: Position 3 Bracket (M15681B001)**

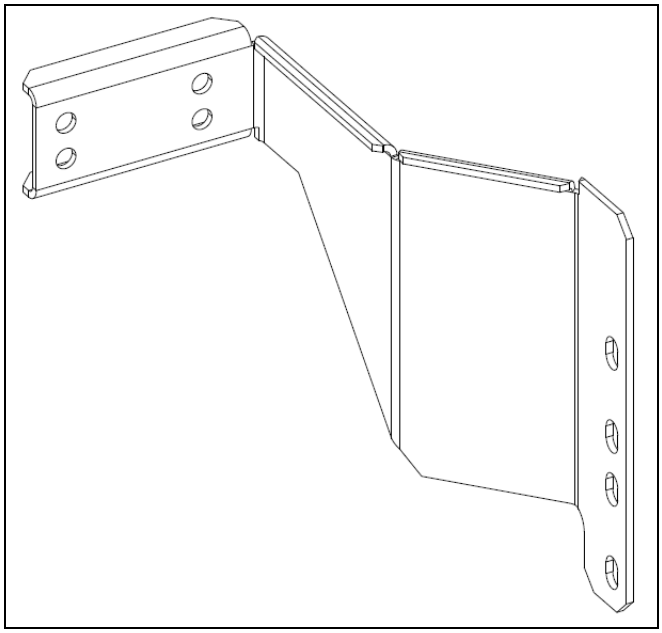
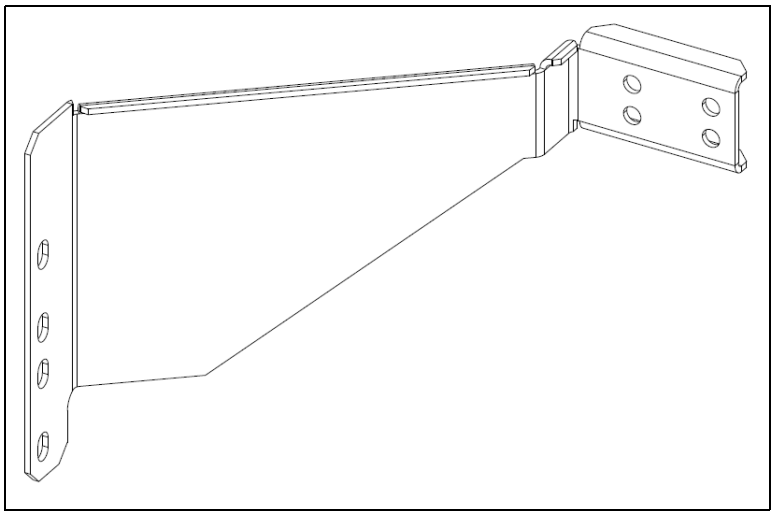


**Figure 5: Position 4 Bracket (M15837B001)**



## Related Documents

| Document Number | Title | GOLD℠ Library |
|---|---|---|
| MDE-3804 | Encore and Eclipse® Start-up/Service Manual | • Encore and Eclipse<br>• Service Manual |

## Abbreviations and Acronyms

| Term | Description |
|---|---|
| ASC | Authorized Service Contractor |
| ESD | Electrostatic Discharge |
| GOLD | Gilbarco Online Documentation |
| J-box | Junction Box |
| LHS | Left Hand Side |
| OSHA | Occupational Safety and Health Administration |
| RHS | Right Hand Side |

# Important Safety Information

***Notes: 1) Save this Important Safety Information section in a readily accessible location.***

***2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.***

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.

**Preliminary Precautions**
You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

**Emergency Total Electrical Shut-Off**
The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

**⚠ WARNING**

The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.

You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

**Total Electrical Shut-Off Before Access**
Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

**Evacuating, Barricading, and Shutting Off**
Any procedure that requires access to the pump/dispenser or STPs requires the following actions:

- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

**Read the Manual**
Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the Gilbarco Technical Assistance Center (TAC) at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

**Follow the Regulations**
Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

**Replacement Parts**
Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

## Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

**Alert Symbol**

This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

**Signal Words**
These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:

**DANGER**: Alerts you to a hazard or unsafe practice which will result in death or serious injury.

**WARNING**: Alerts you to a hazard or unsafe practice that could result in death or serious injury.

**CAUTION** with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

**CAUTION** without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

## Working With Fuels and Electrical Energy

**Prevent Explosions and Fires**
Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.
DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

**No Open Fire**

Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

**No Sparks - No Smoking**

Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

**Working Alone**

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

**Working With Electricity Safely**

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

**Hazardous Materials**

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

**⚠ WARNING**

The pump/dispenser contains a chemical known to the State of California to cause cancer.

**⚠ WARNING**

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

## In an Emergency

**Inform Emergency Personnel**

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

**⚠ WARNING**

Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

**⚠ WARNING**

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors.
If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

**⚠ WARNING**

Gasoline inhaled may cause unconsciousness and burns to lips, mouth, and lungs. Keep airway open. Seek medical advice immediately.

**⚠ WARNING**

Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

**⚠ WARNING**

Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

**⚠ WARNING**

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

**IMPORTANT**: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

**Lockout/Tagout**

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

# Before You Begin

**CAUTION**

A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

**⚠ WARNING**

Gilbarco recommends against any tampering that compromises the frame integrity during the installation process, and doing so may void the warranty.

To prepare the site and dispenser for the upgrade, proceed as follows:

1. Inform the manager.
2. Barricade the unit to be worked on.
3. Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.
4. Read all the safety information provided in *MDE-3804 Encore and Eclipse Start-up/Service Manual*.
5. Isolate two-wire cable to the unit.

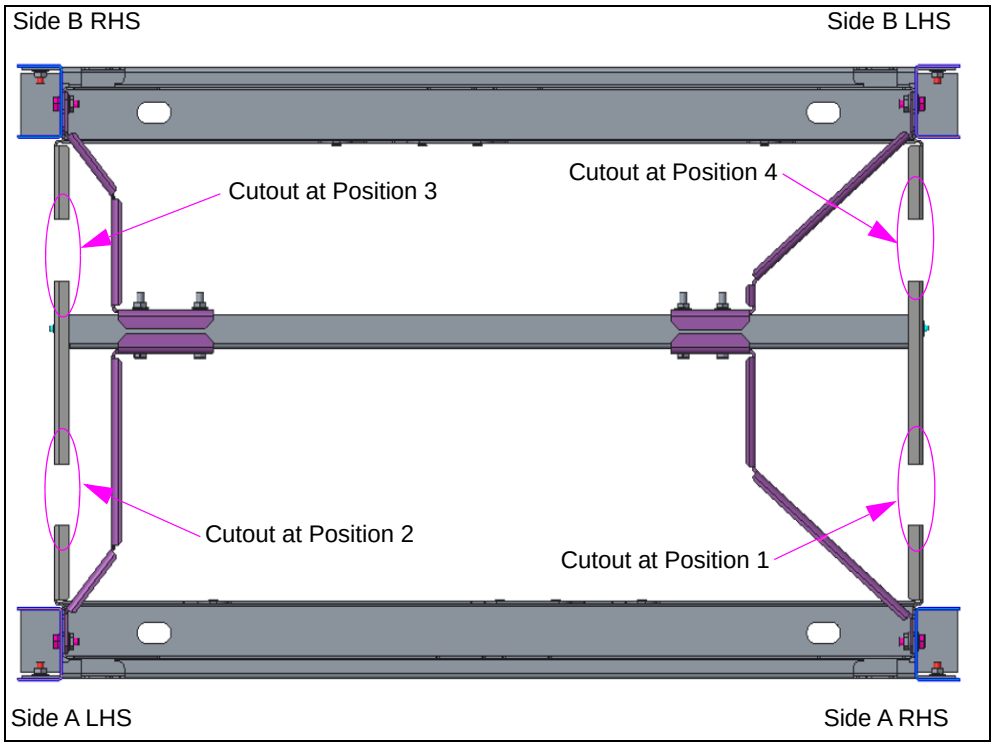
**⚠ WARNING**

Failure to turn off the unit during the installation of the kit may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door to the unit and during kit installation.

# Configuration Drawing

Figure 6 shows the configuration drawing for lower frame support.

**Figure 6: Configuration Drawing**




Following table provides information on the quantity of parts required for installing lower frame brackets at their respective positions:

| Position | M15836B001 | M15679B001 | M15681B001 | M15837B001 | M00415B010 | M00815B004 | M00414B003 |
|---|---|---|---|---|---|---|---|
| 1 | 1 | - | - | - | 8 | 4 | 12 |
| 2 | - | 1 | - | - | 8 | 4 | 12 |
| 3 | - | - | 1 | - | 8 | 4 | 12 |
| 4 | - | - | - | 1 | 8 | 4 | 12 |

# Repair Examples for Support Brackets Installed in Cut Frame

*Notes: 1) Support brackets installed in cut frame are Lower Frame Support Bracket Side A RHS (M15836B001), Lower Frame Support Bracket Side B LHS (M15837B001), Lower Frame Support Bracket Side A LHS (M15679B001), and Lower Frame Support Bracket Side B RHS (M15681B001).*

*2) M00815B004 Bolt and M00414B003 Nut are the fasteners used to mount bracket to IPS rail.*

**Figure 7: Installing Support Brackets at Position 1 and 4**

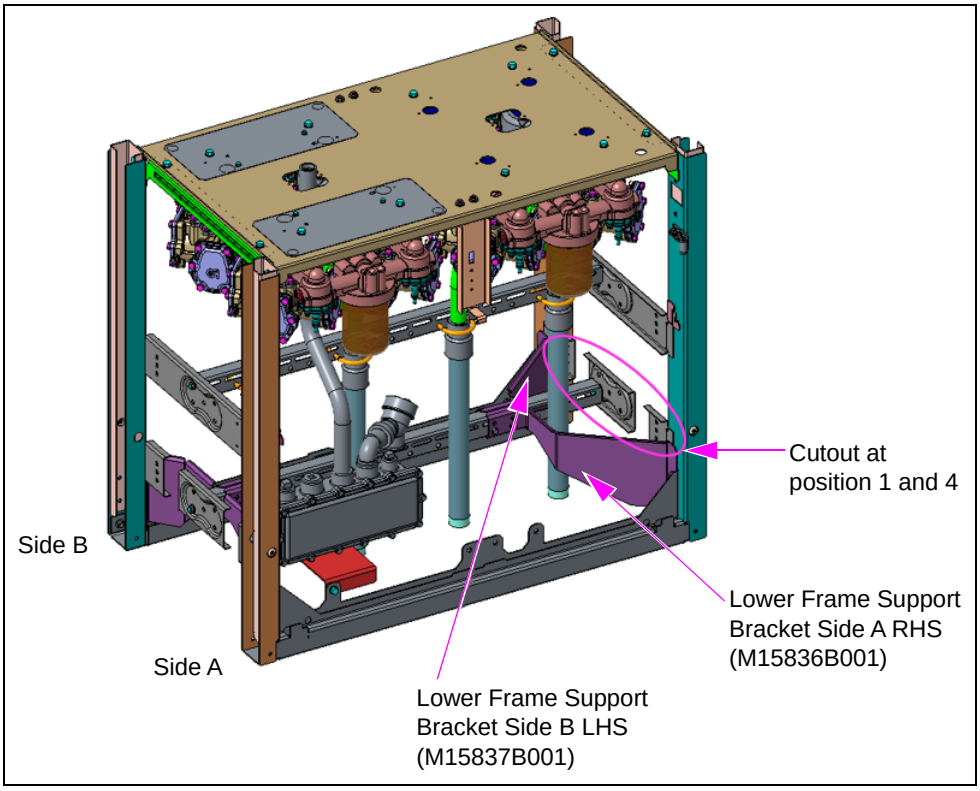


**Figure 8: Installing Support Brackets at Position 2 and 3**

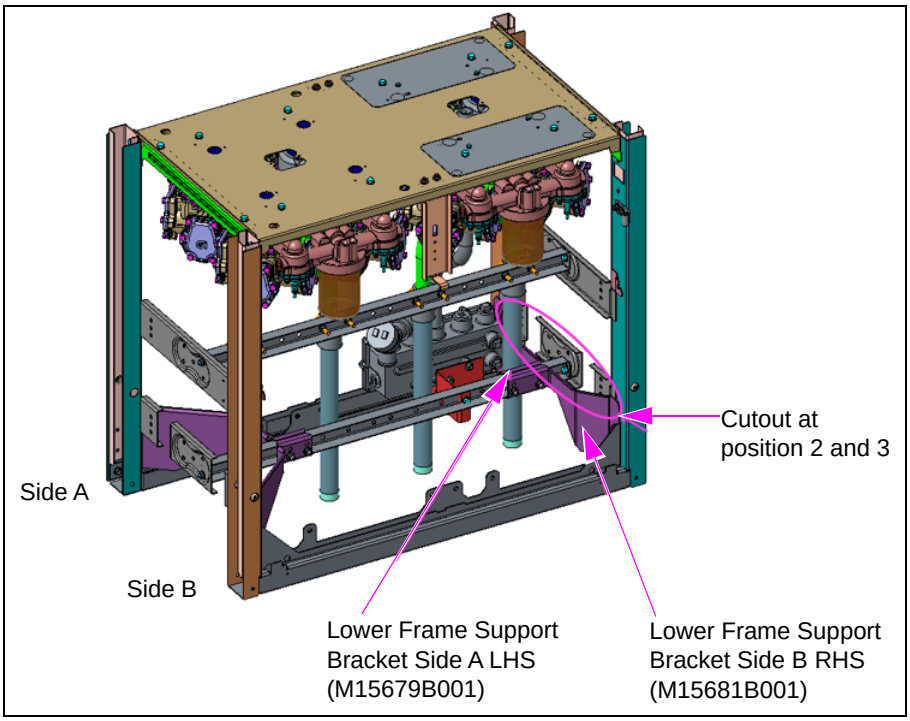
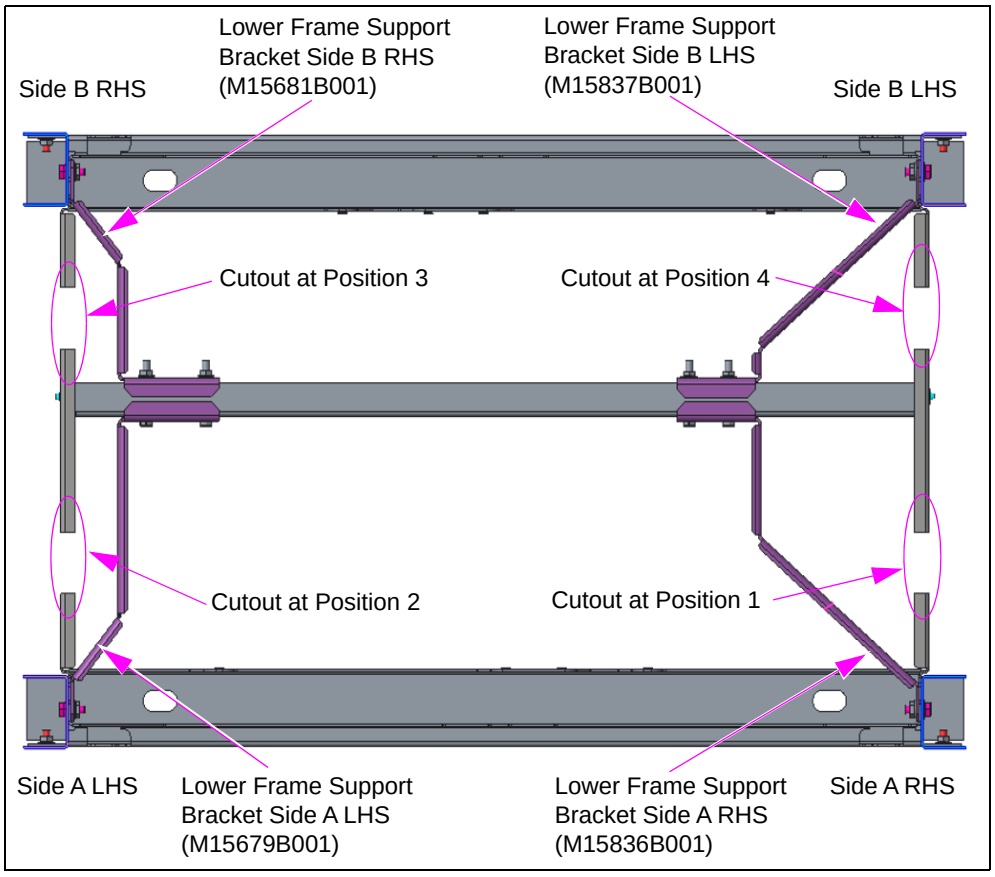



**Figure 9: Complete Configuration**

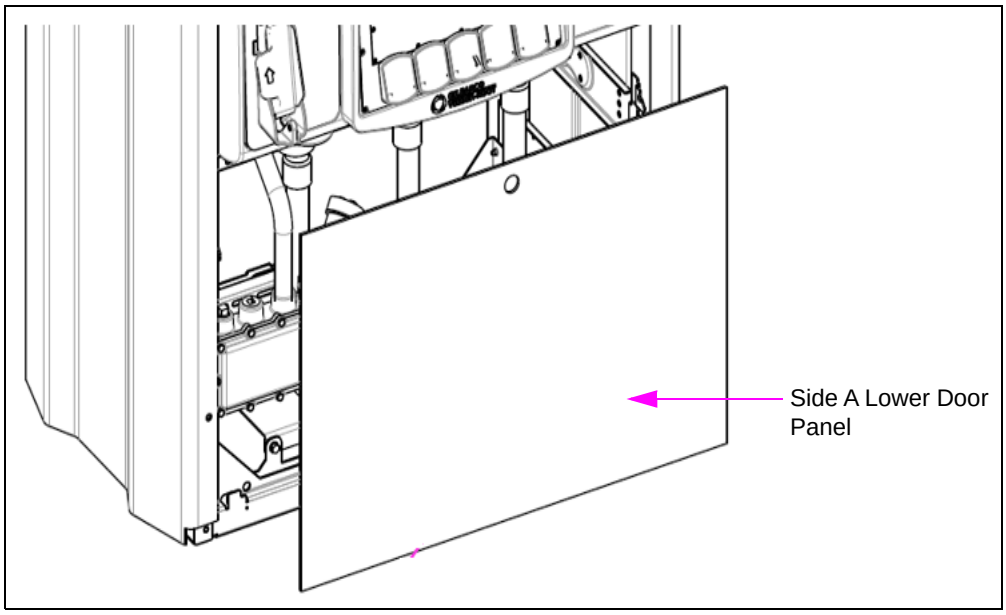


# Installing Lower Frame Support Brackets

To install the lower frame support brackets, proceed as follows:

1 Remove the side A lower door panel and check the center brace.

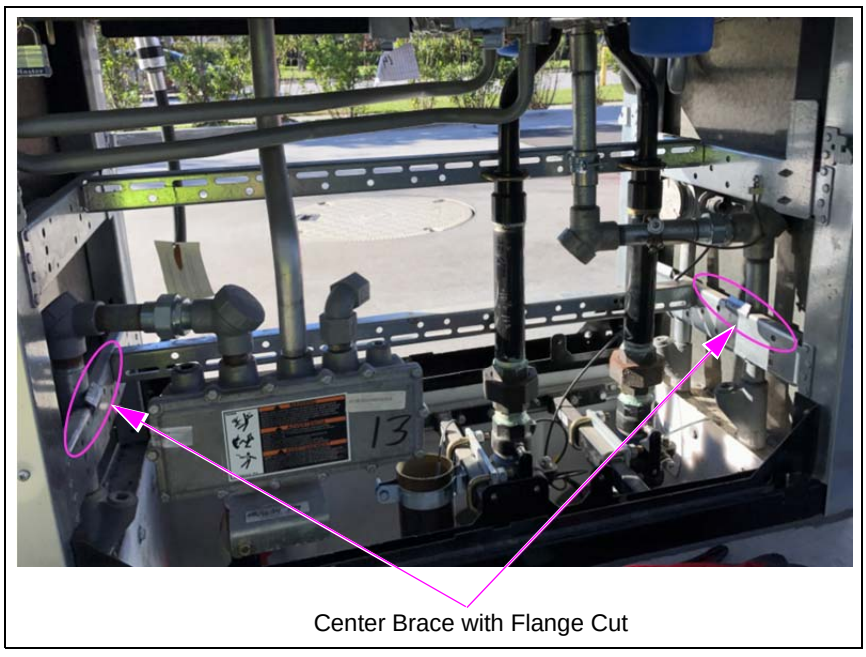
**Figure 10: Removing Lower Door Panel**




If the center brace includes a flange cut (see Figure 11), then this unit does not need a kit.

*Note: Discard all remaining parts/hardware.*

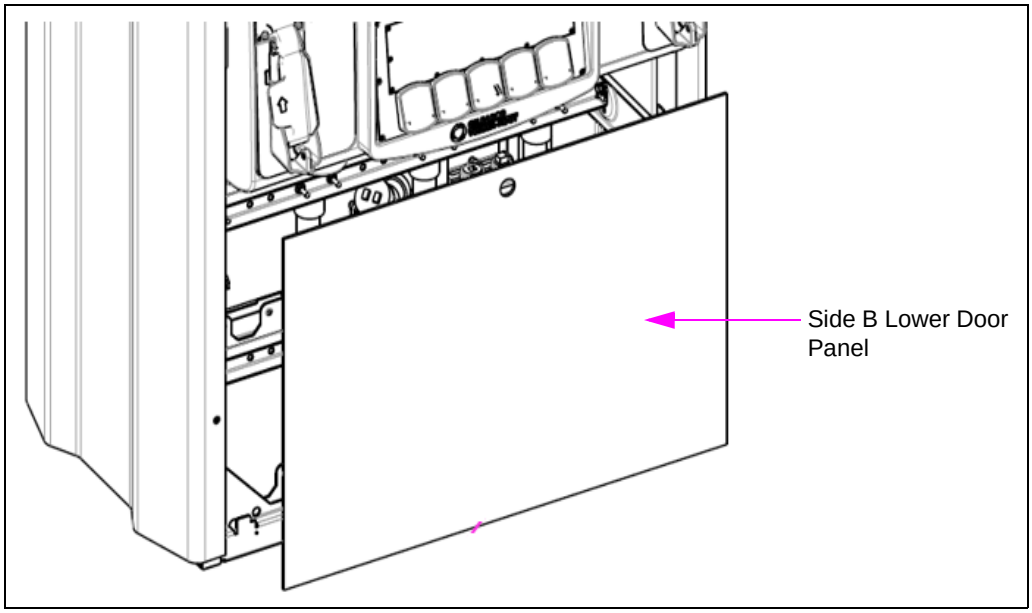
**Figure 11: Center Brace with Flange Cut**



If the center brace cross member includes a cut at any position, then all the four brackets must be installed.

2 Remove the side B lower door panel.

**Figure 12: Connecting Cables Inside the Unit**




3 Determine whether the IPS rail is in the home position (see Figure 13 and Figure 14 on page 13). If not, move it to home position. If the movement is not possible, make note for records.

**Figure 13: IPS Rail Home Position - 1**

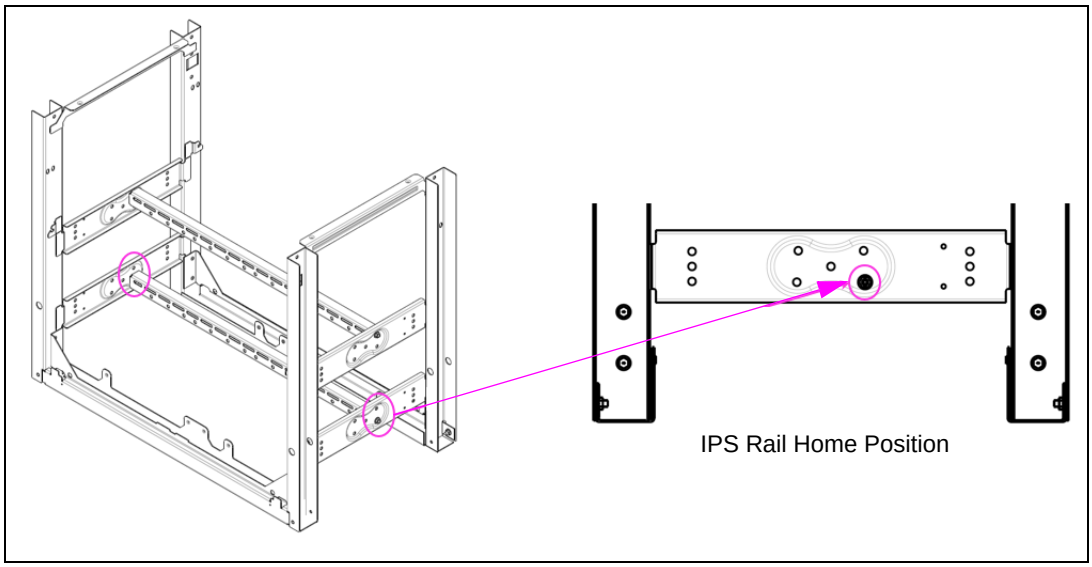
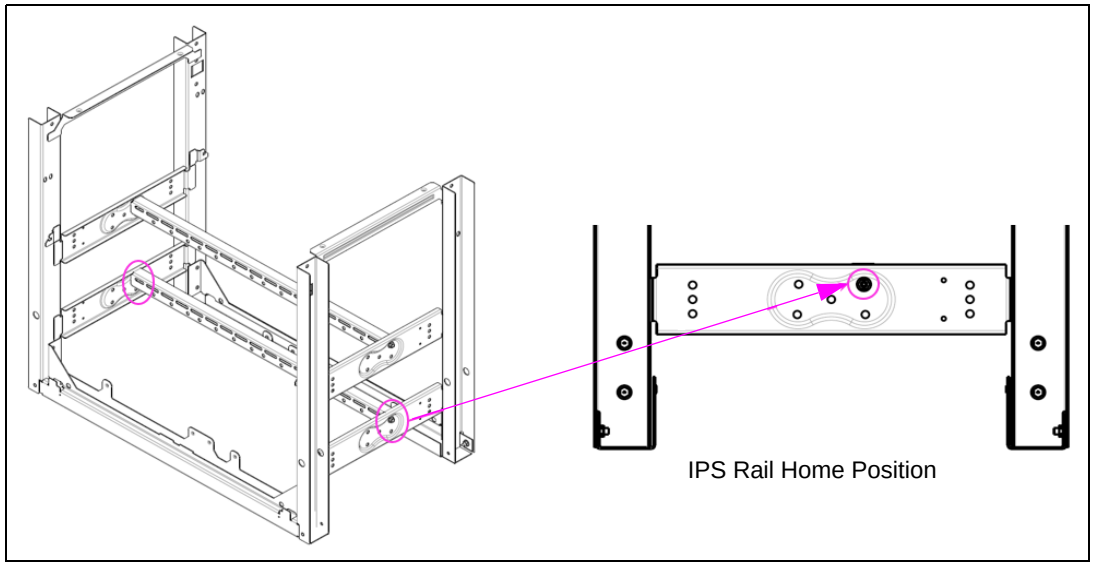


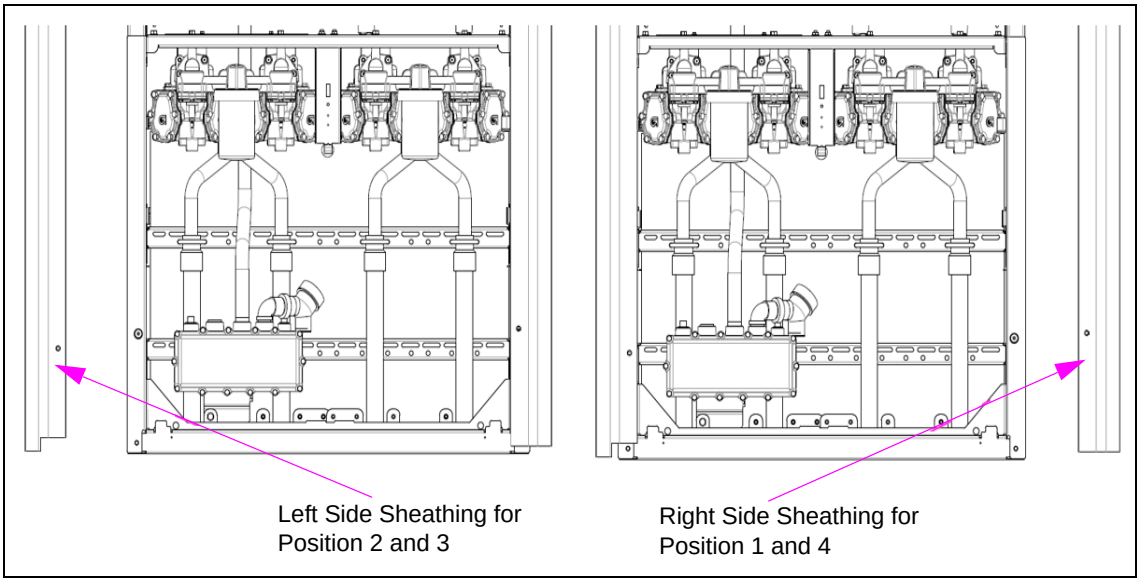
**Figure 14: IPS Rail Home Position - 2**




***Note: If there are any repair parts that are not factory installed and if they interfere the kit installation, remove those parts from the unit.***

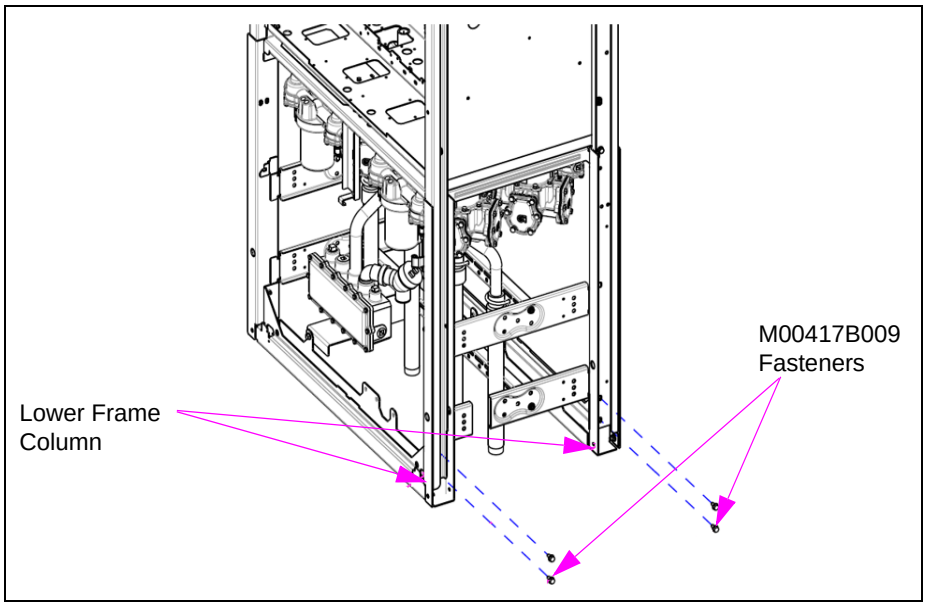
**4** Remove the sheathings to install the brackets.
*Note: Sheathing side is named assuming the operator is on side A.*

**Figure 15: Removing Sheathings**



**5** Remove the existing M00417B009 Fasteners from the columns at position 1 and position 4 and discard the fasteners.

**Figure 16: Removing Existing Fasteners**




**6** Align the bracket to the IPS rail.

*Note: Figure 17, Figure 18 on page 15, and Figure 19 on page 15 show the installation for position 1 bracket.*

**Figure 17: Aligning Bracket to IPS Rail - 1**

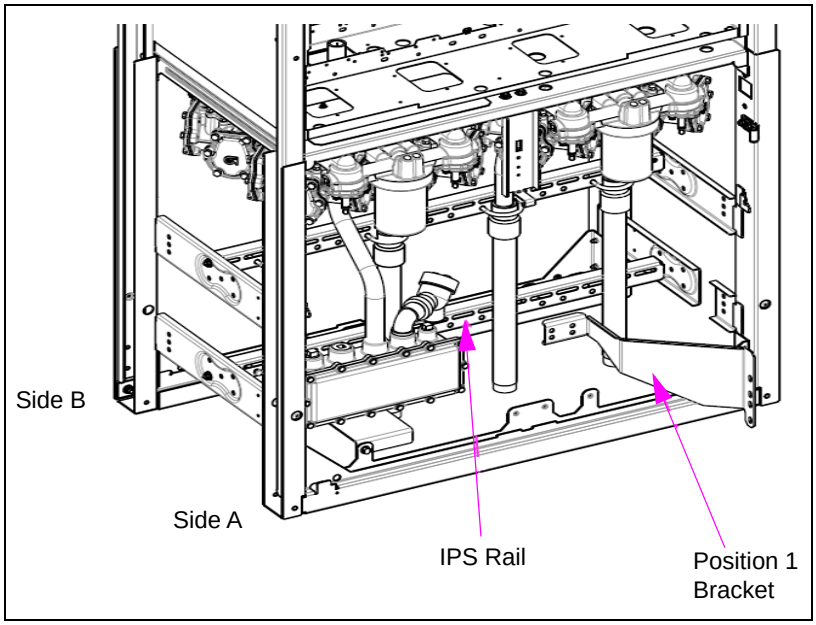


**Figure 18: Aligning Bracket to IPS Rail - 2**

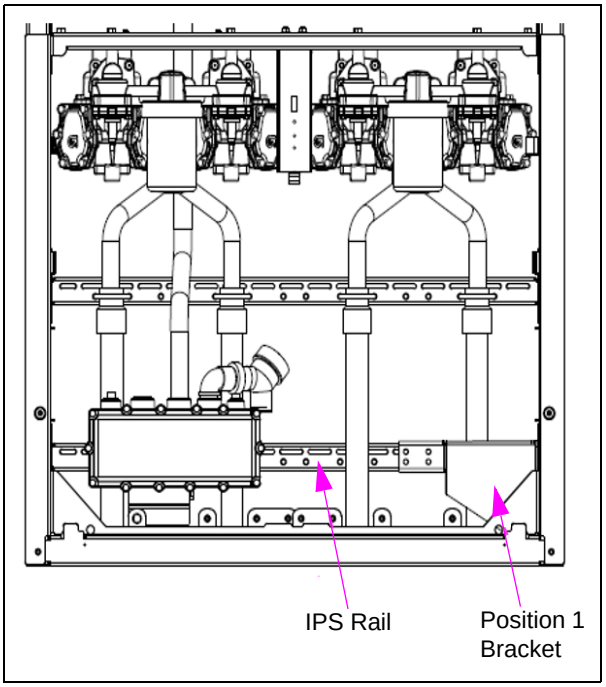
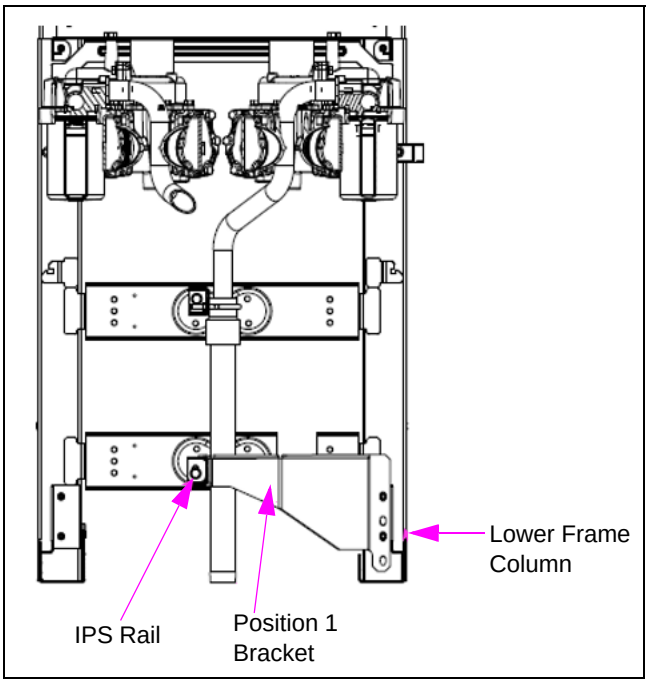



**Figure 19: Aligning Bracket to IPS Rail - 3**




After aligning the bracket to IPS rail:

- Holes of the bracket align to the holes of IPS rail.
- C flange of bracket rests on the flange of IPS rail.
- Side wall of bracket is in contact with side wall of base rail hydraulic frame.
- Slots of bracket align with holes of the lower frame column.

Figure 20 shows the locations for mounting IPS rail.

**Figure 20: Mounting Locations for IPS Rail**

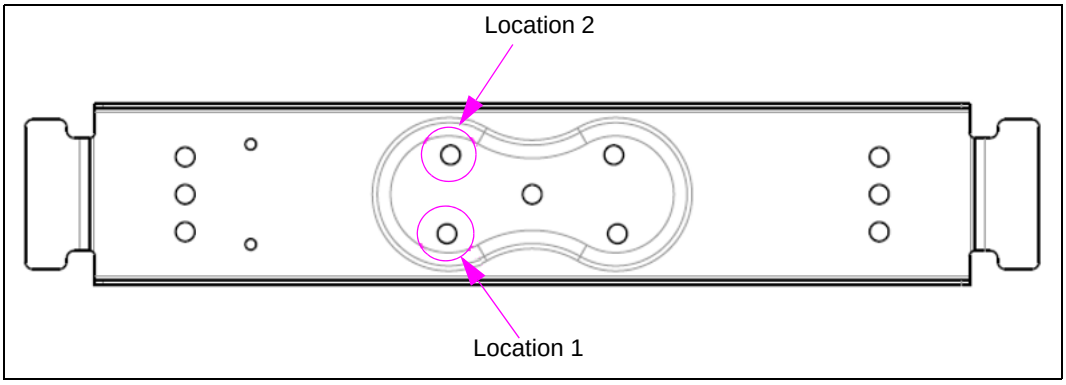



Figure 21 (i) shows IPS rail mounted at location 1 and Figure 21 (ii) shows the slots of bracket aligning to the holes of the column.

**Figure 21: Mounting IPS Rail at Location 1**

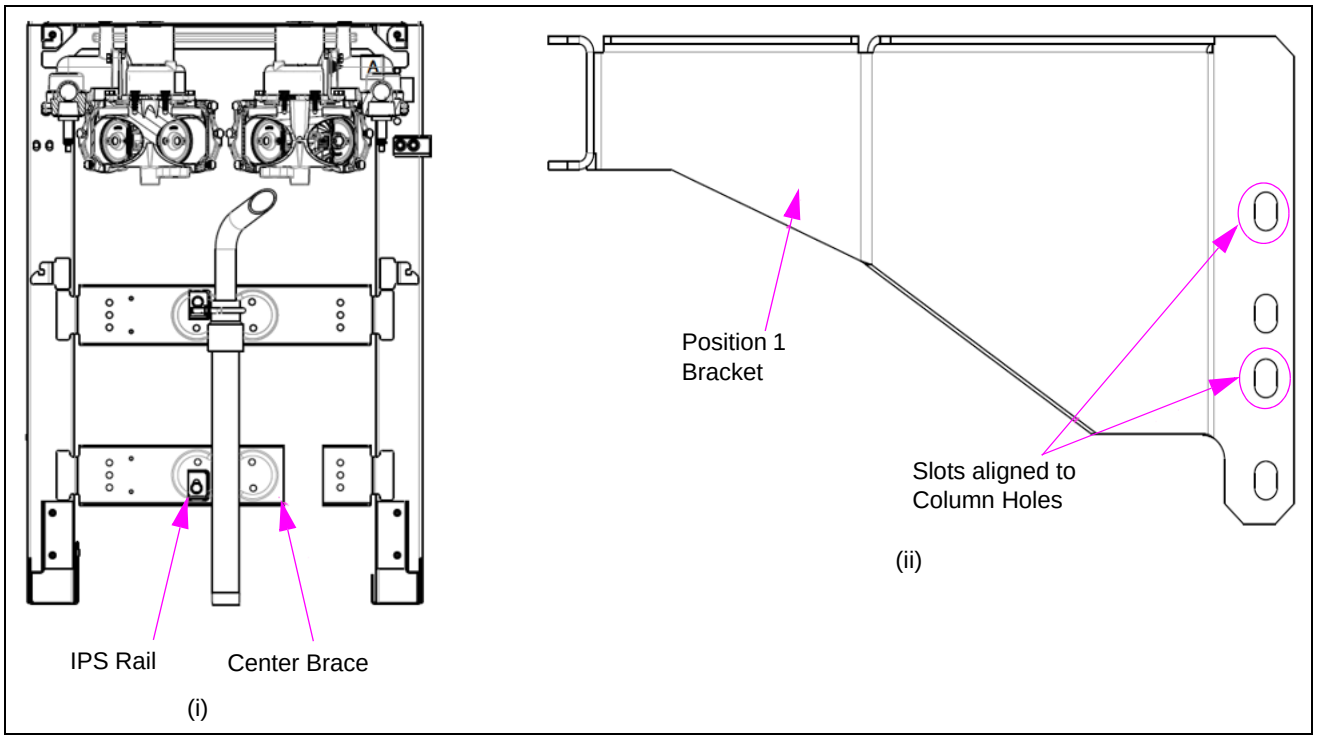


Figure 22 (i) shows IPS rail mounted at location 2 and Figure 22 (ii) shows the slots of bracket aligning to the holes of the column.

**Figure 22: Mounting IPS Rail at Location 2**

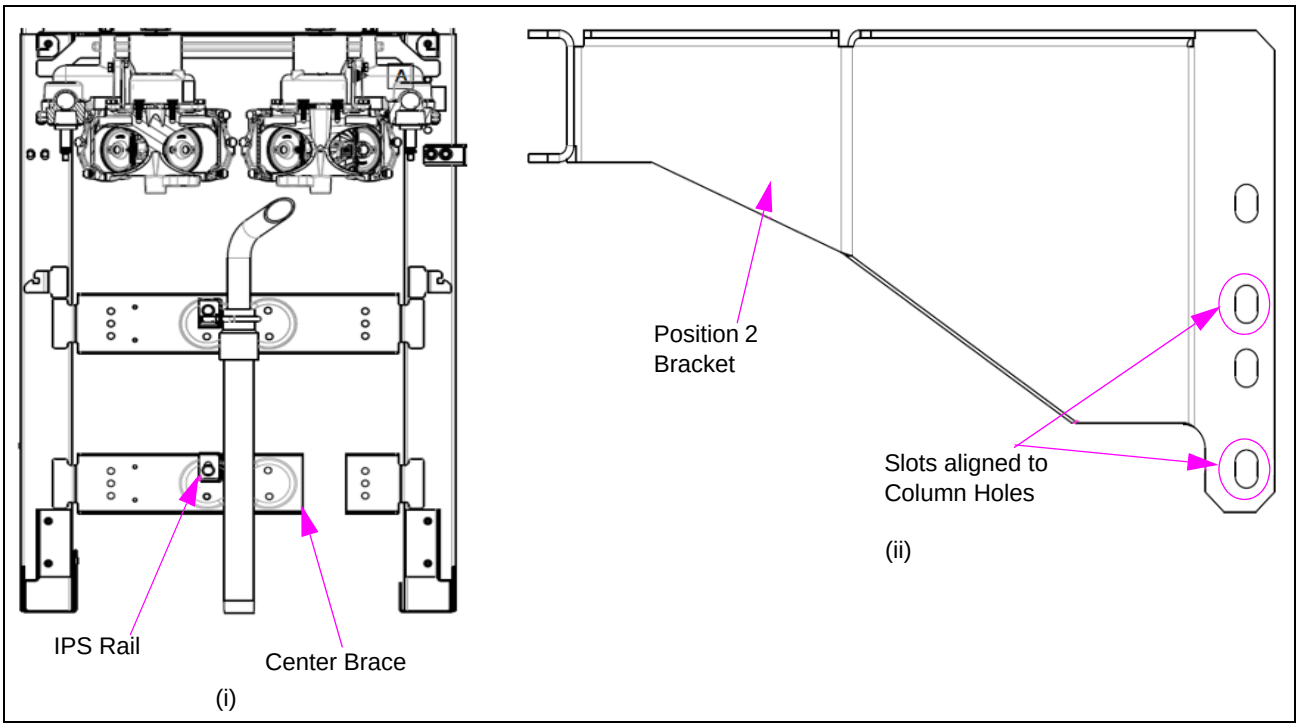
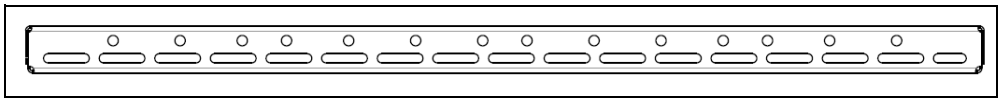


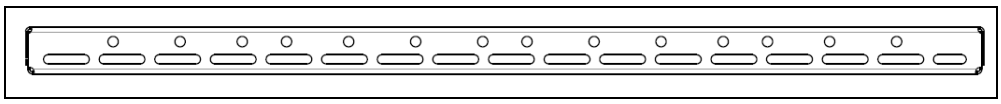

Figure 23 shows the actual orientation of the IPS rail.

**Figure 23: IPS Rail Actual Orientation**



If the IPS rail is mounted in upside down orientation (see Figure 24), orient it to actual orientation.

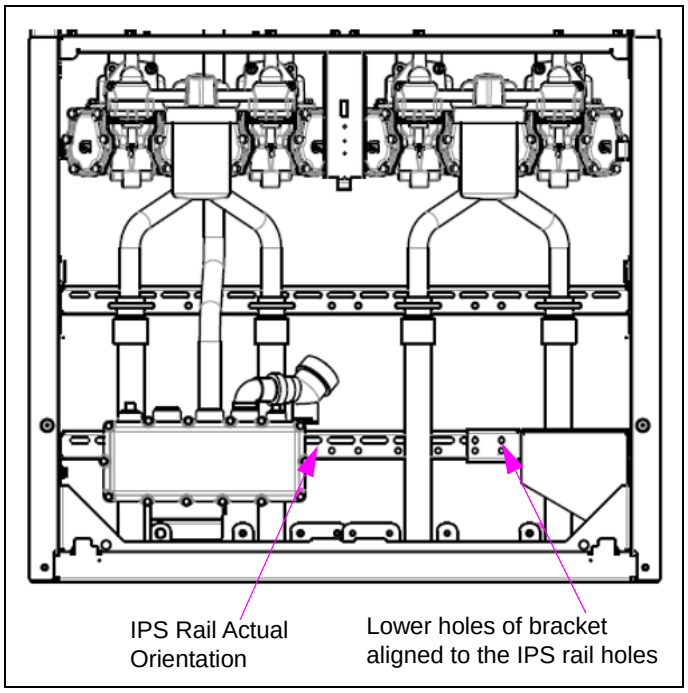
**Figure 24: IPS Rail Upside Down Orientation**



If it is not possible to move the rail to actual orientation, you can proceed with bracket installation as the rail has four holes allowing mounting either way.

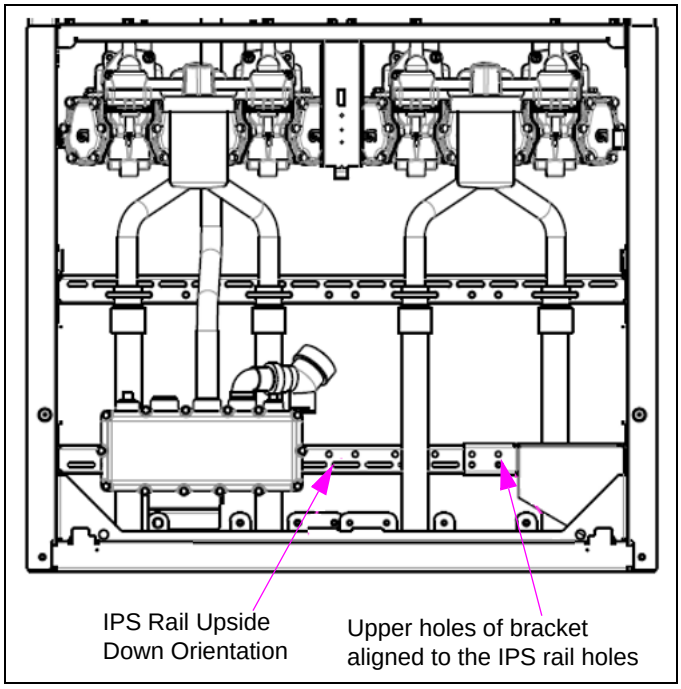
In the actual orientation, the lower holes of bracket will align to the holes of IPS rail (see Figure 25).

**Figure 25: IPS Rail Actual Orientation**



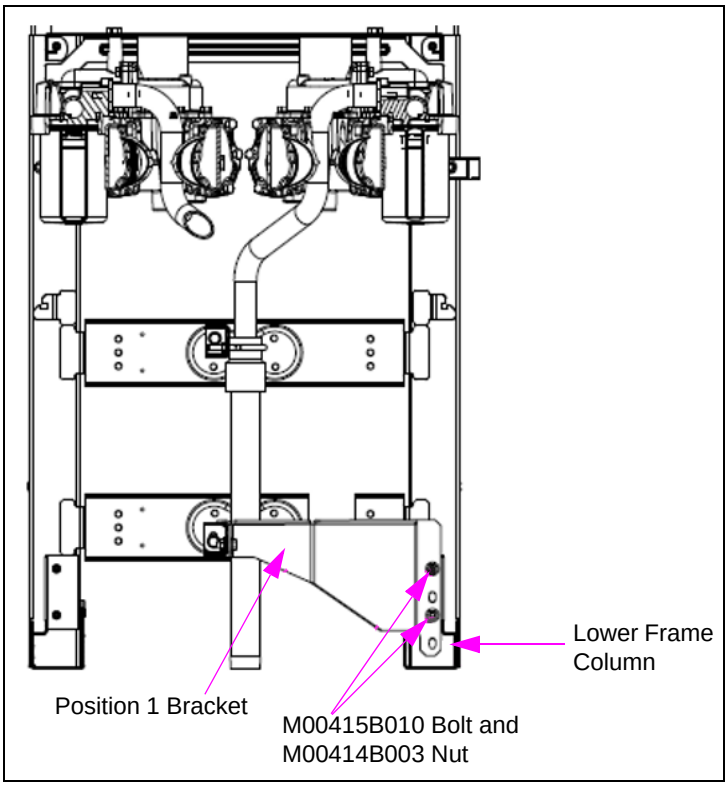

In the upside down orientation, the upper holes of bracket will align to the holes of IPS rail (see Figure 26).

**Figure 26: IPS Rail Upside Down Orientation**



**7** Mount the bracket to the lower frame column using M00415B010 Bolt and M00414B003 Nut and hand-tighten it.

**Figure 27: Mounting of Bracket**




**8** Repeat steps 6 on page 14 and 7 to install the Lower Frame Support Bracket Side B LHS (M15837B001) at position 4.

**9** Once the position 1 and 4 brackets are installed, mount them to the IPS rail using M00815B004 Bolt and M00414B003 Nut and hand-tighten them.
*Note: The bracket should be fastened to the holes of IPS rail.*

**Figure 28: Mounting Position 1 and 4 Bracket - 1**

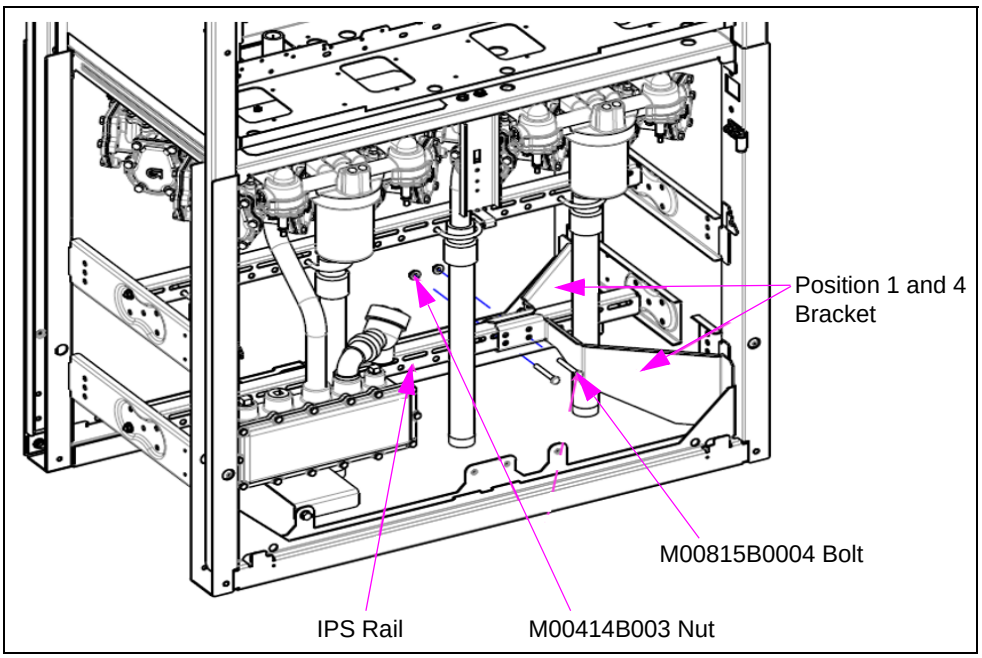
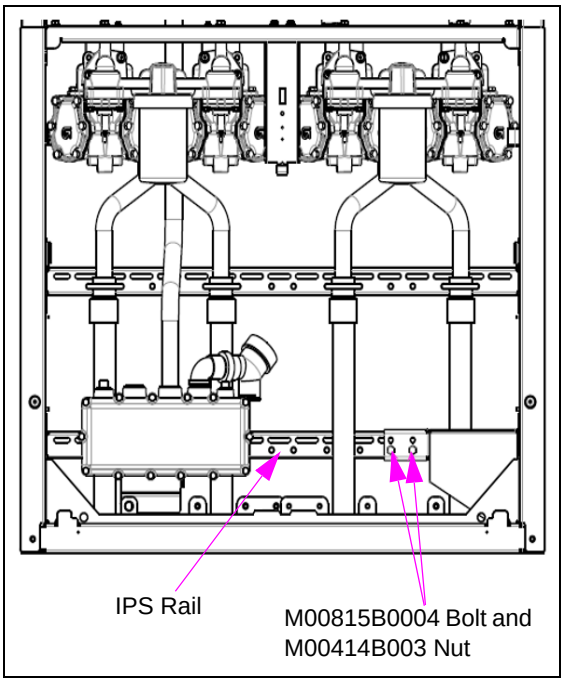



**Figure 29: Mounting Position 1 and 4 Bracket - 2**




**10** Tighten all the fasteners using wrench.

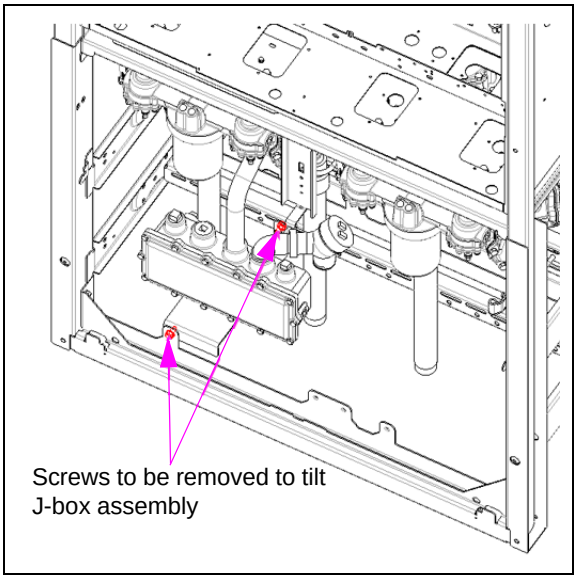
# Installing M15679B001 and M15681B001 Brackets

To install M15679B001 and M15681B001 Brackets, proceed as follows:

1 After installing brackets at position 1 and 4, remove the M00417B009 Fasteners from columns at position 2 and 3.

*Note: If Junction box (J-box) is present at position 2, before proceeding remove the screws and tilt the J-box assembly towards right (see Figure 30) to make way for position 2 bracket.*

**Figure 30: Tilting J-box Assembly**

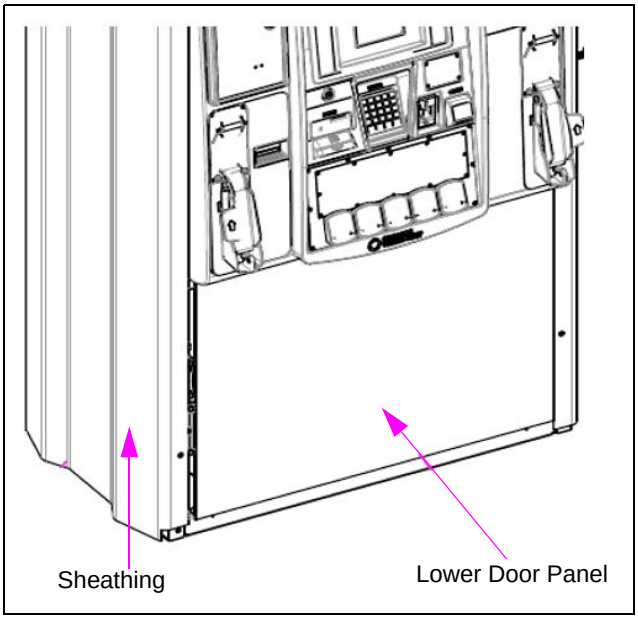



2 Repeat steps 6 on page 14 through 10 on page 20 to install the M15679B001 and M15681B001 brackets at position 2 and 3.

*Note: After mounting the position 2 bracket, remount the J-box assembly.*

**3** Remount the lower door panel and sheathing after mounting all the brackets (see Figure 31).

**Figure 31: Remounting Lower Door Panel**




*Note: Refer to "Configuration Drawing" on page 8 for brackets to be installed at different positions. Fasteners M00417B009 at position 2 and 3 should be removed from the column only after installing position 1 and 4 brackets.*

Installing the Lower Frame Repair Kit is now complete.



GILBARCO VEEDER-ROOT

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