

# **AC - 105**

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## **INSTALLATION GUIDE**

Please read this installation guide carefully to ensure correct installation of the **AC-105** Vertical Platform Lift.

### **AC-105 RESIDENTIAL & COMMERCIAL**

Rev. 12D142018

p/n: 999355-0084

# ATLAS AC-105 INCLINED PLATFORM LIFT

This guide describes how to install the Atlas **AC-105** Inclined Platform Lift.

The **Atlas AC-105** Model offers a smoother and more stable ride due to it's unique c-shaped rail system design. The platform fits most staircases and can be folded when not in use. Additionally, it doesn't require a mechanical room - everything fits into the sleek and slim upper landing column.

Refer to the Atlas **AC-105** Inclined Platform Lift Owner's Manual for details regarding operation and maintenance. The Owner's Manual can be found on our website: [www.atlasacces.com](http://www.atlasacces.com)

TECHNICAL SPECIFICATIONS	
Load Capacity	550 LBS (249 KG)
Rated Travel Speed	15 FPM (0.08 M/S)
Drive Type	SPROCKET & CHAIN
Motor	24 VDC
Maximum Travel	CUSTOM TRAVEL
Codes and Standards	CSA B613-00, B355-15, ASME 17.1 & ASME 18.1
Advantages	COMPACT AND QUIET

## DISCLAIMER

Les Escalateurs Atlas 1991, Inc. (Collectively, “Les Escalateurs Atlas”, “Atlas” and “Manufacturer”) shall not be held responsible or liable for any personal injury or property damage caused by or resulting from inappropriate operation of original product or of a product that has been modified or altered from the original **AC-105** design. No person or company is authorized to change the **AC-105** design without authorization and the express written consent of Les Escalateurs Atlas 1991, Inc.

## IMPORTANT

Do not throw away, destroy, or lose this installation guide. The instructions included in this guide must be followed to prevent product malfunction, property damage, injury, or death to the user or other people. Incorrect operation due to ignoring instructions found in this guide can cause harm, damage, injury or death. A summary of safety precautions is found below.

For more technical materials such as drawings and specification, end user support, and manuals, visit [www.atlasacces.com](http://www.atlasacces.com)

## WARNING

Read all instructions contained in this installation guide before installing the Atlas **AC-105** Inclined Platform Lift. It is highly recommended to observe and adhere to all governing codes and ordinances in the job site locale. This includes ensuring all work and materials comply and conform with all authorities having jurisdictions. Proper installation is the responsibility of the installer and failure to follow all instructions renders the Atlas Limited Warranty null and void.

## SAFETY PRECAUTIONS

Safety of personnel is the primary concern during all procedures. Before beginning installation, read and understand the installation guide and containing procedures carefully to ensure correct and safe installation. Use the appropriate tools, accessories and safety protection during the installation process. Plan your work and do not work alone, if possible. Know how to obtain emergency medical and fire fighting assistance.

Be sure to follow all the precautions below as they are important for ensuring safety. This installation guide classifies the safety precautions into DANGER, WARNING, CAUTION and NOTE.

<b>DANGER</b>	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
<b>WARNING</b>	Failure to follow any of WARNING is likely to result in such grave consequences as death or serious injury
<b>CAUTION</b>	Failure to follow any of CAUTION may in some cases result in grave consequences.
<b>NOTE</b>	Provides information such as reminders and guidelines and do not fit into the preceding text.

# INSTALLATION DISCLAIMER

The Atlas **AC-105** Inclined Platform Lift shall be installed and serviced only by an authorized Les Escalateurs Atlas, INC. dealer only. The authorized dealer should refer to this guide for installation and servicing. For Care & Troubleshooting, please refer to the **AC-105** Inclined Platform Lift Owner's Manual.

Please carefully read and follow the instructions found in this guide **BEFORE** installing and/or operating the Atlas **AC-105** Inclined Platform Lift. Improper installation, adjustment, service, use or maintenance can cause personal injury or property damage. If you have any problems or need assistance please contact your dealer immediately.

## INSTALLATION PRECAUTIONS

**WARNING** - To reduce the risk of fire, electric shock, personal injuries, and/or death, obey the following precautions:

- Never exceed the maximum rated lift capacity.
- Never use the Atlas **AC-105** Inclined Platform Lift to lift freight or other materials than intended by design.
- Read and understand the installation guide prior to installing the Atlas **AC-105** Inclined Platform Lift.
- Wear appropriate safety protection equipment for your head, eyes, hands and feet during all phases of the installation.
- Use extreme caution when lifting components into position to avoid personal injury and damage to the equipment.
- Keep panels and protective coverings in place to avoid potentially fatal injury.
- Disconnect power from the unit before performing any electrical or mechanical service operations.
- Never bypass sensor switches which prevent accidental start up when protective panels are removed.
- Be aware of the location of others in the work zone.
- Do not wear jewelry or loose clothing.
- Lock the wheels of any mobility device riding on the platform.
- Use only recommended anchor fasteners.
- Check and verify for applicable local codes and regulations.

### NOTE

Failure to comply the these Installation Safety Instructions could render the Atlas Limited Warranty null and void. If you have any question or concerns that are not covered in this installation guide, please contact your dealer immediately.

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# CODES AND REGULATIONS

The **AC-105** Inclined Platform Lift has been designed to meet **CSA B613-00 & B355-15** standards. Code requirements and standards for vertical platform lifts vary depending on location and region. It is the installer's responsibility to contact their local code enforcement office and determine all of the regulations they are subject to before installing the **AC-105** Inclined Platform Lift.

## SITE REQUIREMENTS

The **AC-105** must be installed on a Supporting Wall, Supporting Posts and Floor that is capable of supporting the minimum load and standards as laid out in the Technical Drawings. Please refer to and verify with the Technical Drawings before beginning the installation of the **AC-105**.

## ELECTRICAL REQUIREMENTS

The **AC-105** Inclined Platform Lift requires a 110VDC-15 AMP grounded electrical circuit and a GFCI protected circuit. Depending on local codes and regulations, this connection may need to be routed in electrical conduit and hard-wired.

### WARNING

DO NOT OPERATE OR RIDE ON THE **AC-105** UNTIL IT HAS BEEN ANCHORED TO AN APPROVED PAD OR FLOOR.

## BEFORE YOU GET STARTED CHECKLIST

1. Understand your client's intended use of the lift.
2. Determine the local code and regulations requirements.
3. Upon receipt of the **AC-105** Inclined Platform Lift, verify the lift for shipping damage immediately. Report any discrepancies or damage claims to your dealer.
4. Verify all the site parameters, technical drawings and all preparatory work prior to installation.
5. Plan and prepare for all electrical requirements.

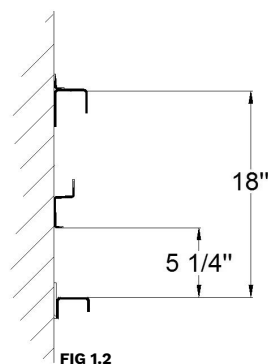
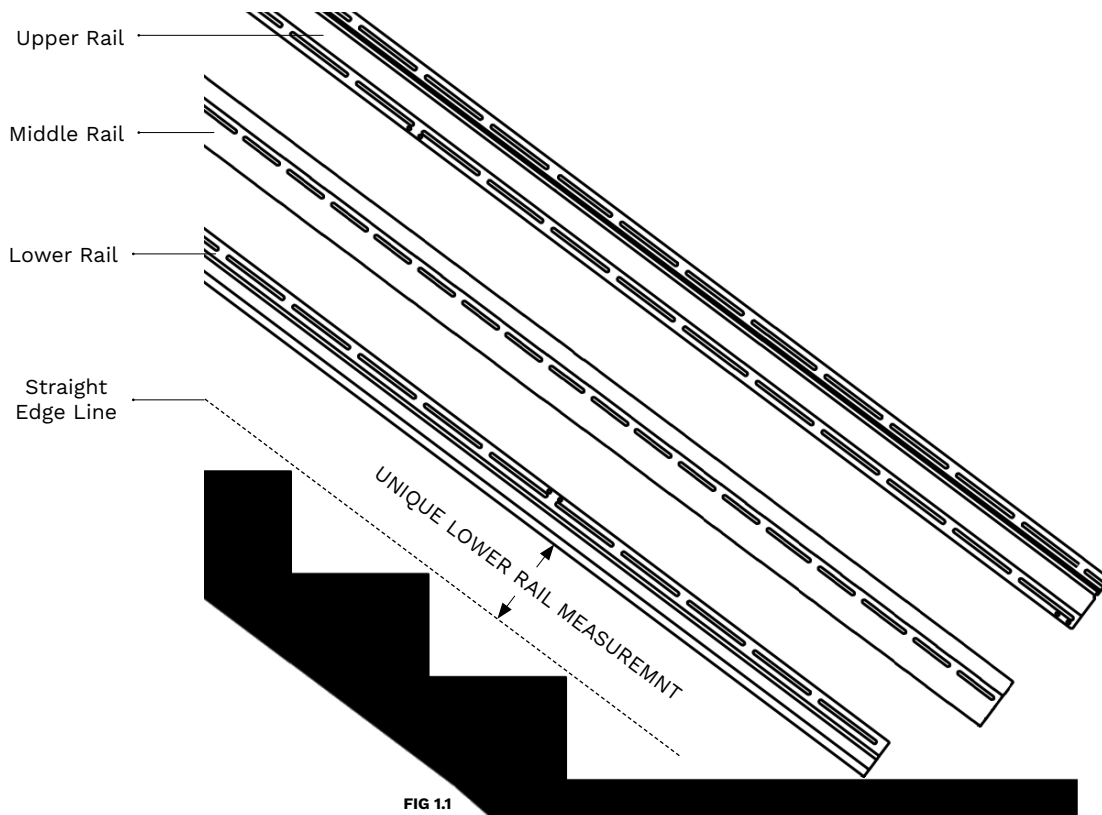
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# AC-105 INSTALLATION

## 1. RAIL INSTALLATION

### PROCEDURE

1. You will be provided a **Unique Lower Rail Measurement**, please refer to technical drawings.
2. Take a moment to review the diagram below to become familiar with the terminology of your rail system.



### POSTERIOR VIEW

The distance between the 3 rails are constant the length of the run. Take note of these measurements as they will be used in the next steps.



# AC-105 INSTALLATION

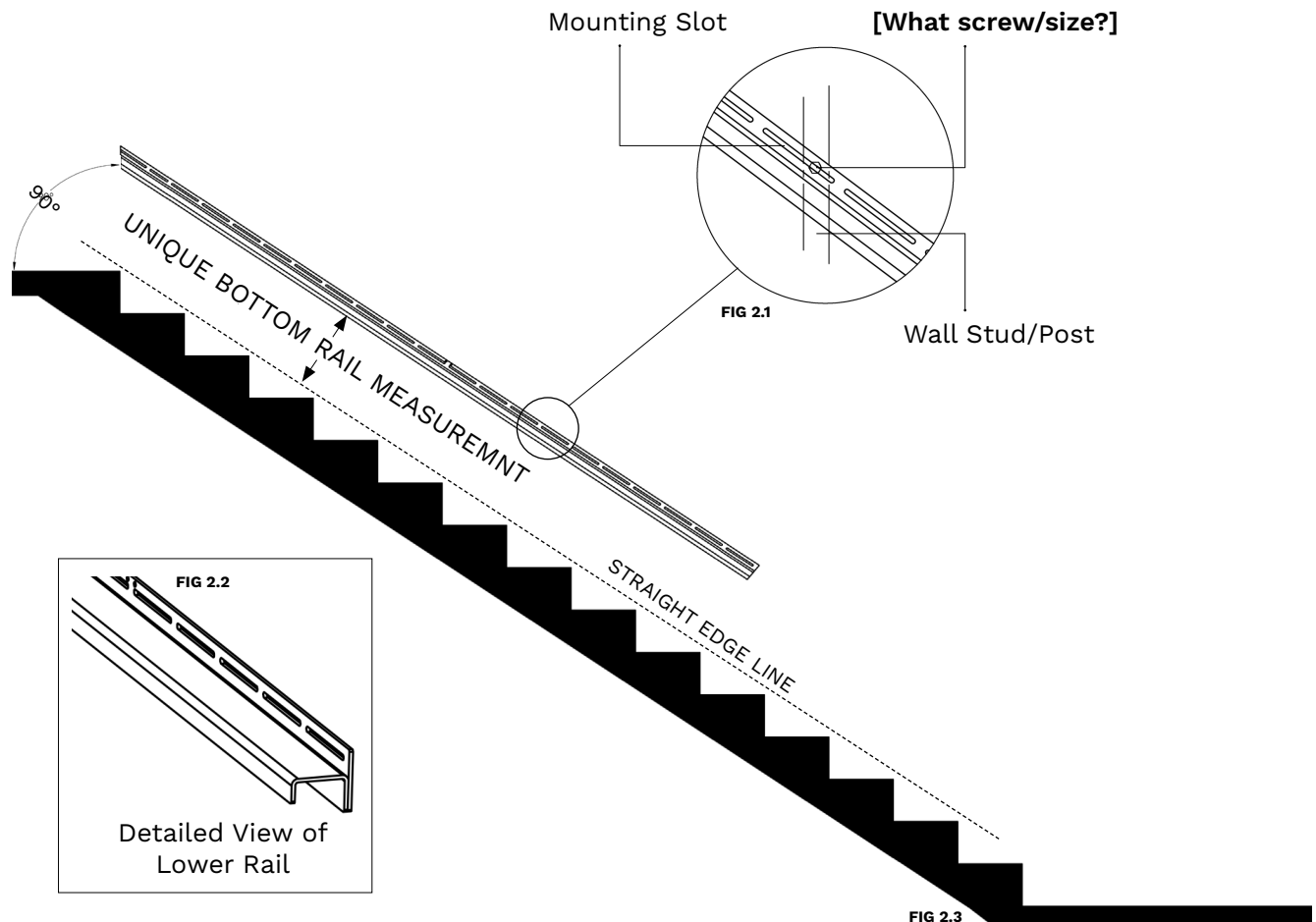
## 2. LOWER RAIL INSTALLATION

### PROCEDURE

Align and mount the Lower Rail to the wall studs or posts.

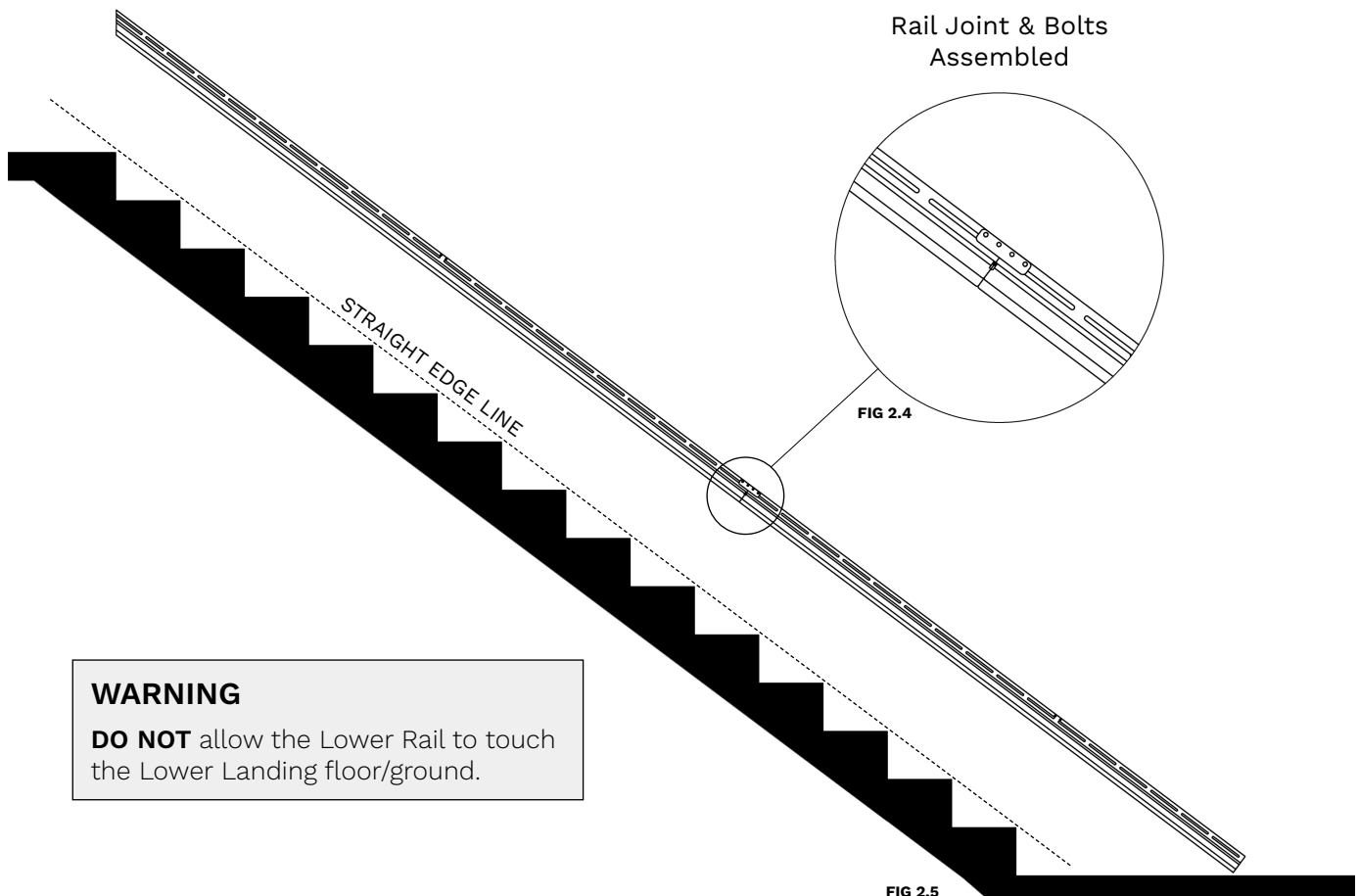
### INSTALL

1. Using your **Unique Bottom Rail Measurement**, measure from the Stair Edge Line to the bottom of the Lower Rail.
2. Align and mount the Lower Rail to the wall studs using Lag Screws through the Lower Rail's Mounting Slots. **ENSURE THE RAIL IS SQUARED 90° TO THE TOP LANDING FLOOR.**



## **(2. INSTALL THE LOWER RAIL CONT.)**

3. If required, join subsequent Lower Rails together using Rail Joints and Hex Bolts.  
**DO NOT** allow the Lower Rail to touch the Lower Landing floor/ground.



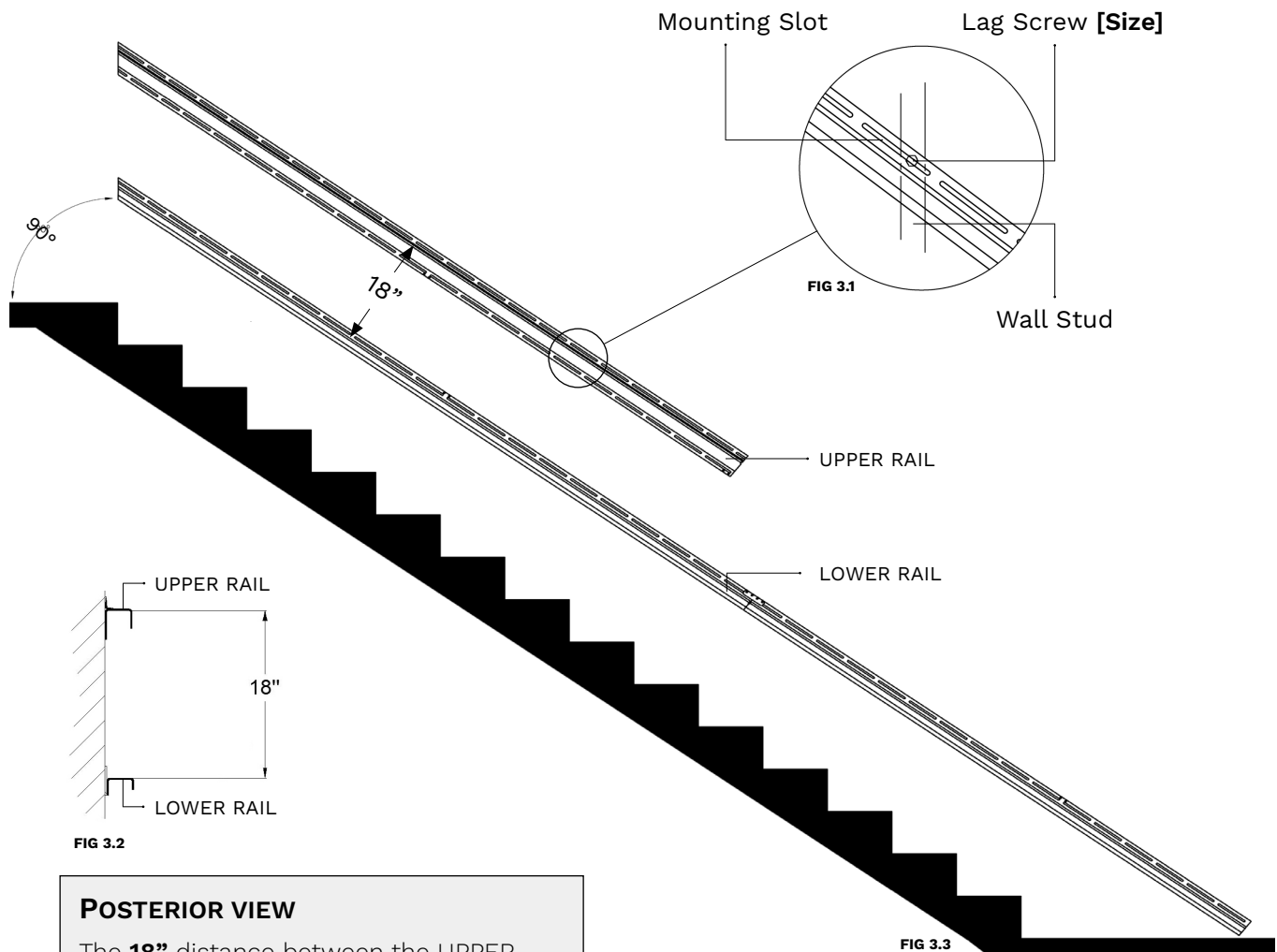
### 3. UPPER RAIL INSTALLATION

#### PROCEDURE

Align and mount Upper Rail to the wall studs/posts.

#### INSTALL

1. Measure **18"** from the Bottom Rail to the Upper Rail. Refer to **Fig 3.2** and **3.3**
2. Mount the Upper Rail to the wall studs/posts using Lag Screws through the Upper Rail's Mounting Slots. Refer to **Fig 3.1**

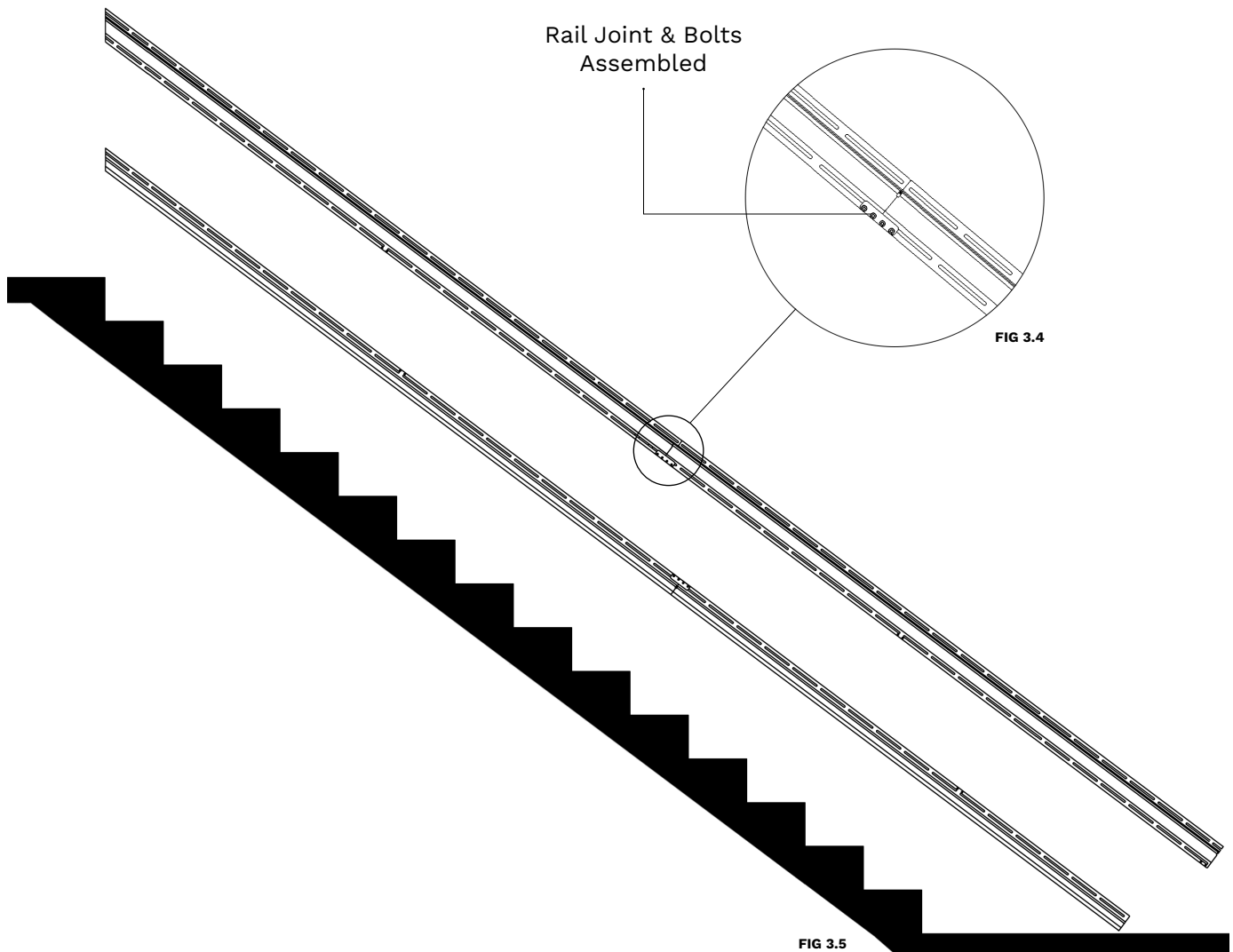


#### POSTERIOR VIEW

The **18"** distance between the UPPER AND LOWER RAIL must remain constant the length of the run.

### ***(3. UPPER RAIL INSTALL CONT.)***

3. If required, join subsequent Upper Rails together using provided Rail Joints and Hex Bolts.



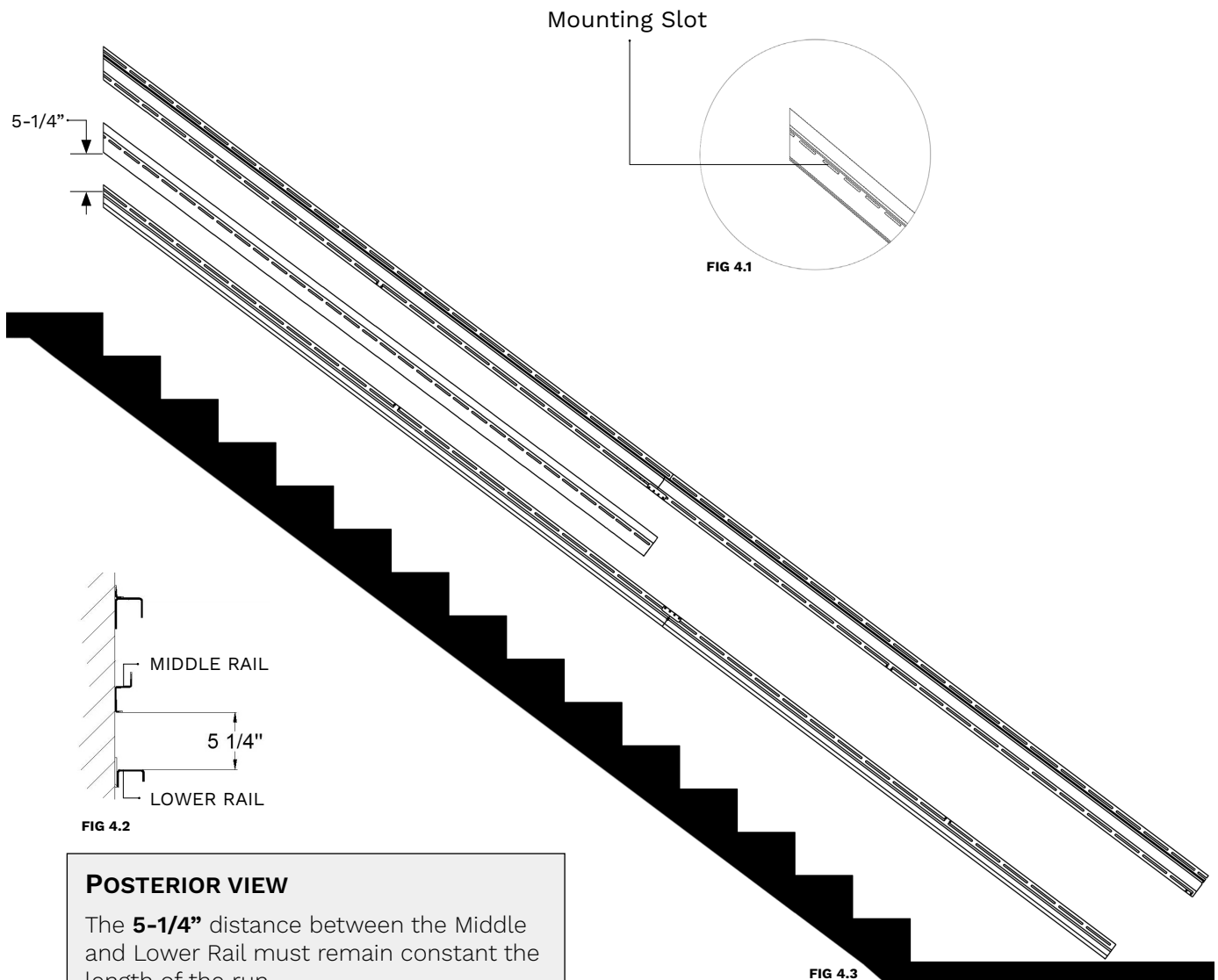
## 4. MIDDLE RAIL INSTALLATION

### PROCEDURE

Align and mount the Middle Rail to the wall studs.

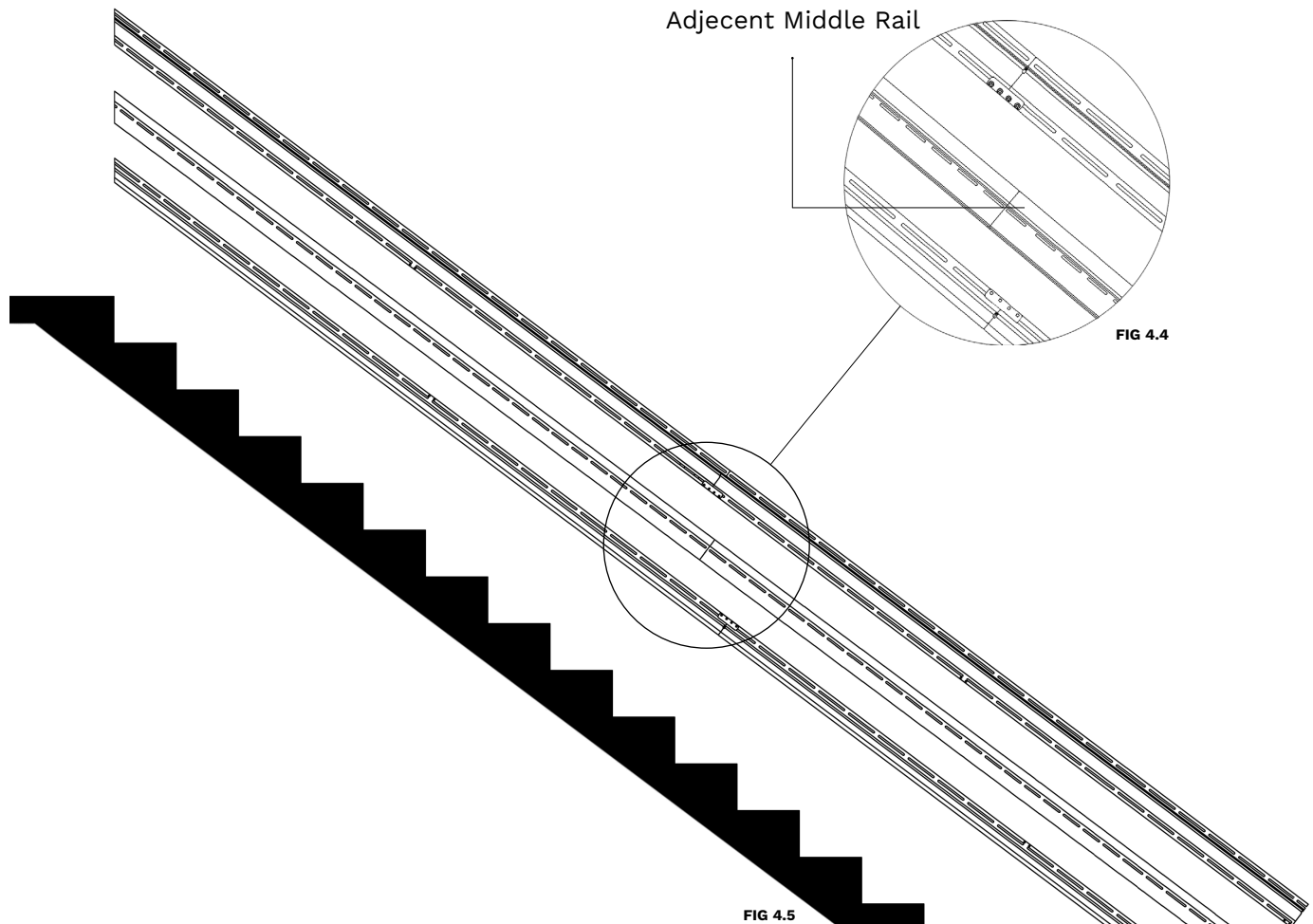
### INSTALL

1. Measure **5-1/4"** from the Bottom Rail to the Middle Rail. Refer to **Fig 4.2** and **4.3**
2. Mount the Middle Rail to the wall studs/posts using Lag Screws through the Middle Rail's Mounting Slots. Refer to **Fig 4.1**



## **(4. MIDDLE RAIL CONT.)**

3. Join subsequent Middle Rails adjacently and mount to wall studs, see **Fig 4.5**  
Middle Rails **DO NOT** require rail joints.



## 5. INSTALL THE UPPER TOWER COLUMN

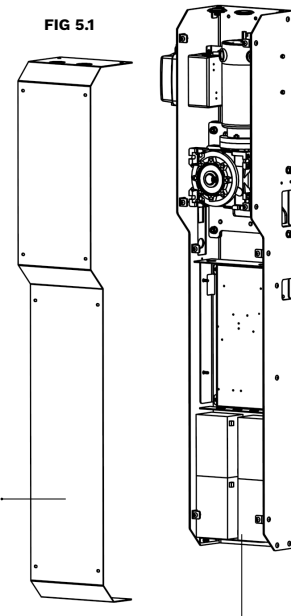
### PROCEDURE

Remove the Tower Cover and mount the Tower Column.

### INSTALL

1. Remove the Tower Column Cover by unscrewing the **#10-24** screws and put aside in a safe place. **Fig 5.1**
2. Mount the Tower Column to the Upper and Lower Rails using the provided brackets and hardware. **Fig 5.2**
3. Screw in the Tower to the wall/post at the Upper and Lower Screw Entry Points. **Fig 5.3**

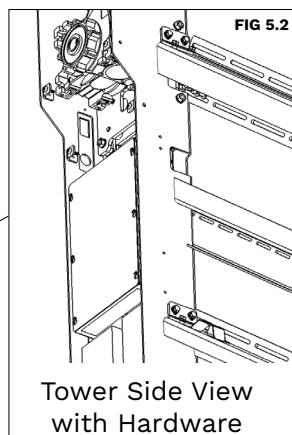
FIG 5.1



Tower Cover

Tower Column

FIG 5.2



Tower Side View  
with Hardware

Lower Screw Entry Points

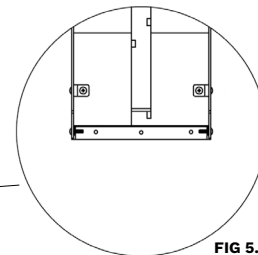
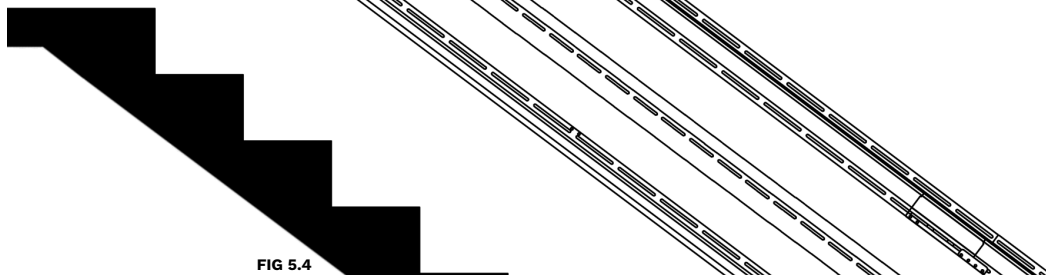


FIG 5.3

FIG 5.4

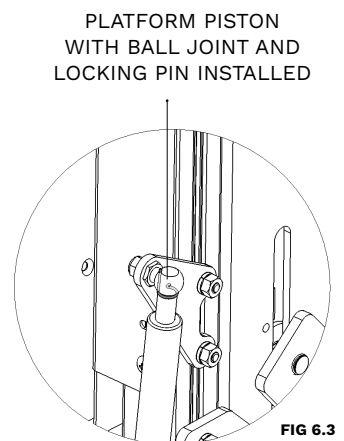
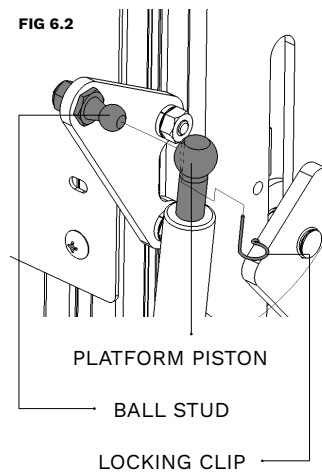
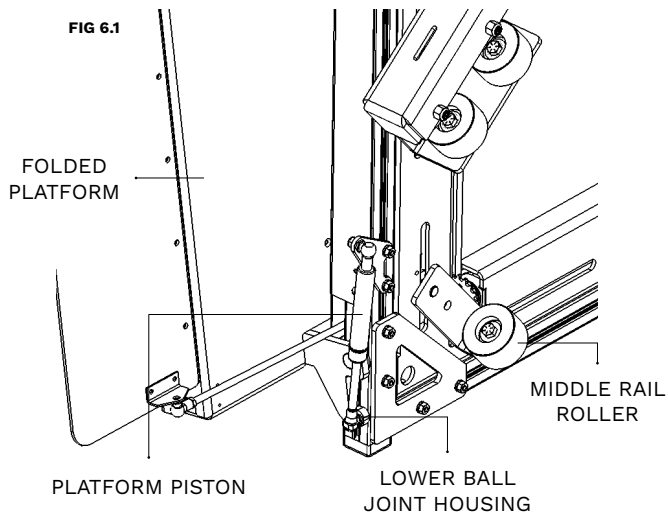


## 6. PREPARE THE PLATFORM

### PROCEDURE

Before unfolding the Platform **install the Platform Piston**.

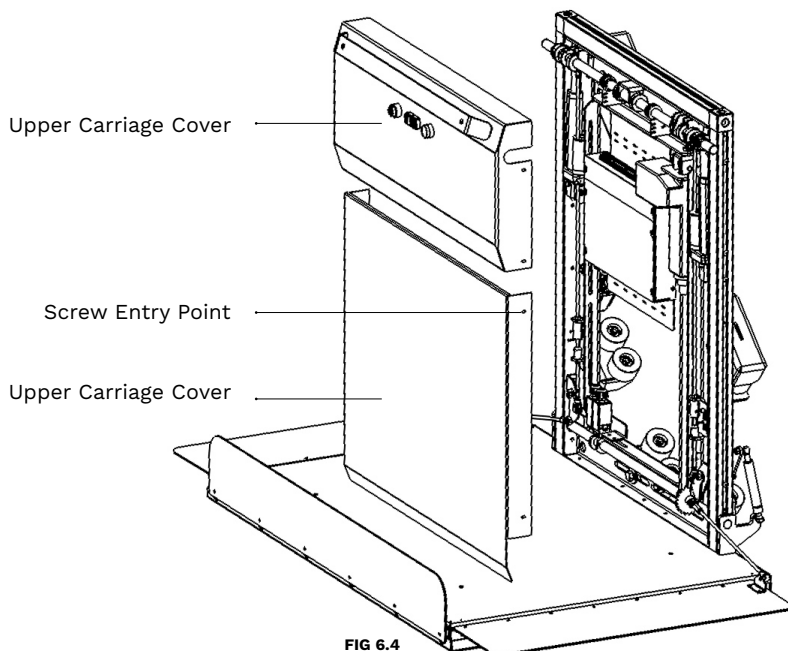
1. Snap in the Lower Ball Joint House Body to the Bottom Ball Stud.
2. Snap in the Upper Ball Joint Housing Body to the Ball Stud on the Platform.
3. Insert the Locking Clip into the Upper Ball Joint Housing Body.



3. Remove the Upper and Lower Carriage Covers by unscrewing the 4 (**#10-24**) Screws on each side of the Upper and Lower Covers.

### NOTE

Keep the cover hardware in a safe place.

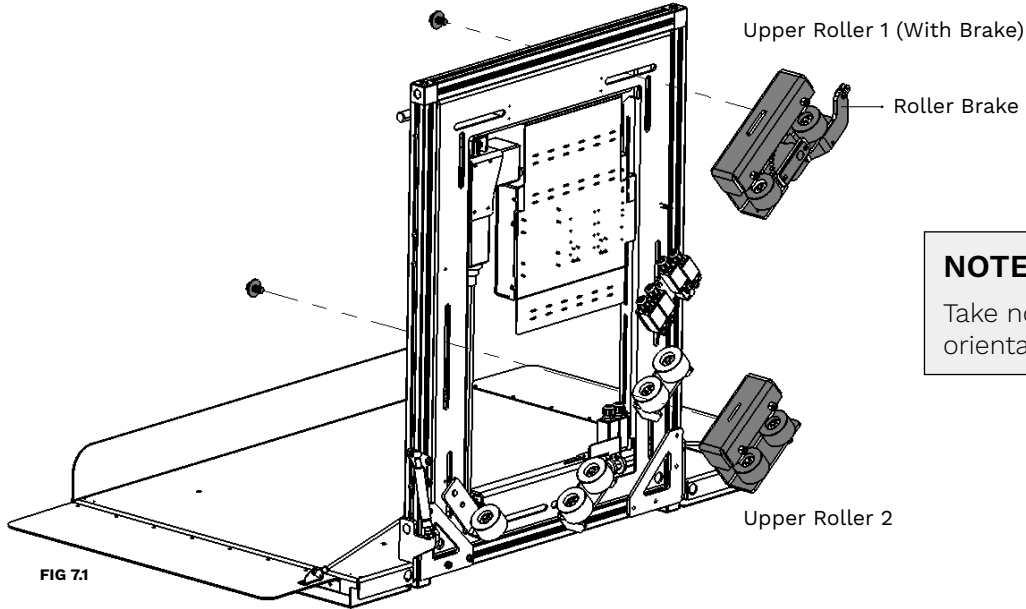




## 7. INSTALL UPPER ROLLERS TO UPPER RAIL

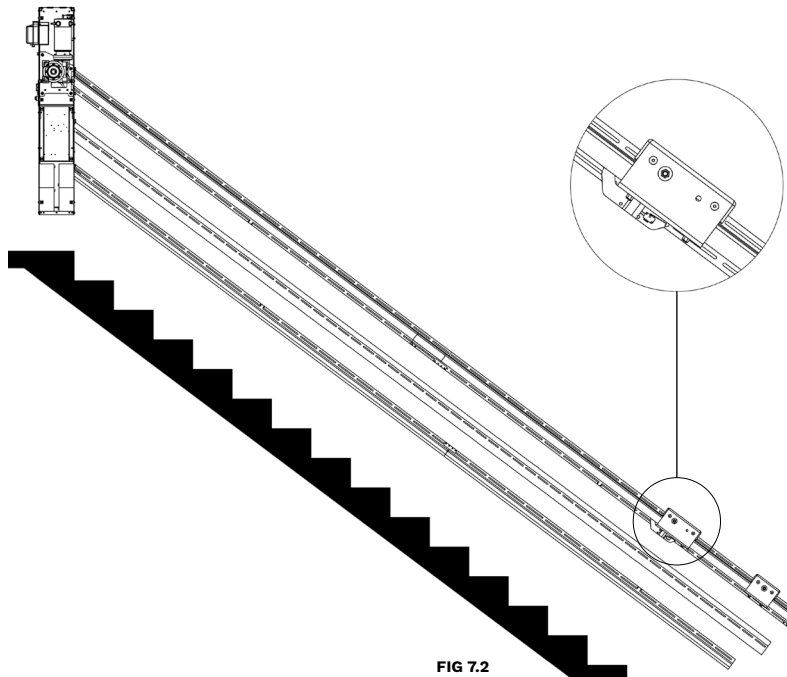
### PROCEDURE

Unmount both Upper Rollers from the Carriage by unfastening the **1/2" Hex Bolts**. **TAKE NOTE OF THE HARDWARE CONFIGURATION.** If not already installed, install the Middle Roller with the included spacer. See Page 16 Fig 6.1



### INSTALL

1. Using the same orientation and position in the previous step, slide the **Upper Roller 1** (with brake) onto the Upper Rail. **Fig 7.2**
2. Slide the **Upper Roller 2** (without the brake) onto the Upper Rail.



## 8. INSTALL THE CARRIAGE

### PROCEDURE

Mount and install the Carriage onto the Rail Assembly.

### INSTALL

1. Position the Carriage at the bottom landing and slide it towards the rails ensuring all rollers slide into position. **See Fig 8.1**
2. Ensure the Lower Rollers have a **1/4" gap** between the top of the roller and the underside of the Lower Rail. **See Fig 8.3**
3. Mount the Carriage to the Upper Rollers using the same bolt configuration from **Step 7. ENSURE ALL ROLLERS ARE IN POSITION BEFORE FASTENING THE UPPER ROLLERS REFER TO FIG 7.1**
4. Position the Carriage at the Lower Landing. v

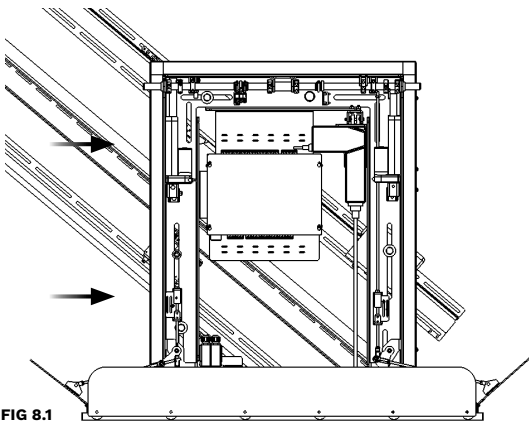


FIG 8.1

### WARNING

ENSURE ALL ROLLERS ARE IN POSITION BEFORE FASTENING THE UPPER ROLLERS.

### CAUTION

Ensure the Lower Rollers have a **1/4"** gap between the roller and the underside of the Lower Rail. **See Fig 8.2**

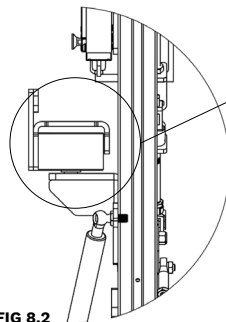


FIG 8.2

Lower Rail

Lower Roller

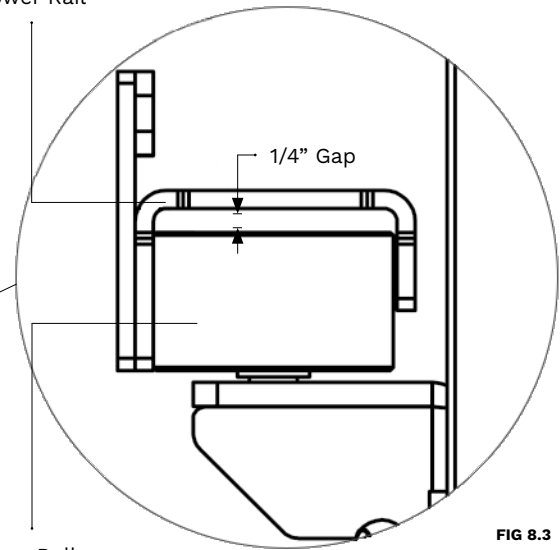


FIG 8.3

## 9. INSTALL THE RR .50 CHAIN

### PROCEDURE

Install the RR .50 Chain.

### INSTALL

1. Ensure the Carriage is at the Bottom Landing position.
1. With the Tower Cover already removed, use the Manual Lowering Device to descend the RR .50 Chain from the Tower
2. Run the RR .50 Chain the length of the Middle Rail runway and attach the Chain to the Upper Roller Brake using the RR .50 Connecting Link.
3. Tighten the RR .50 Chain to remove any slack.

FIG 9.1

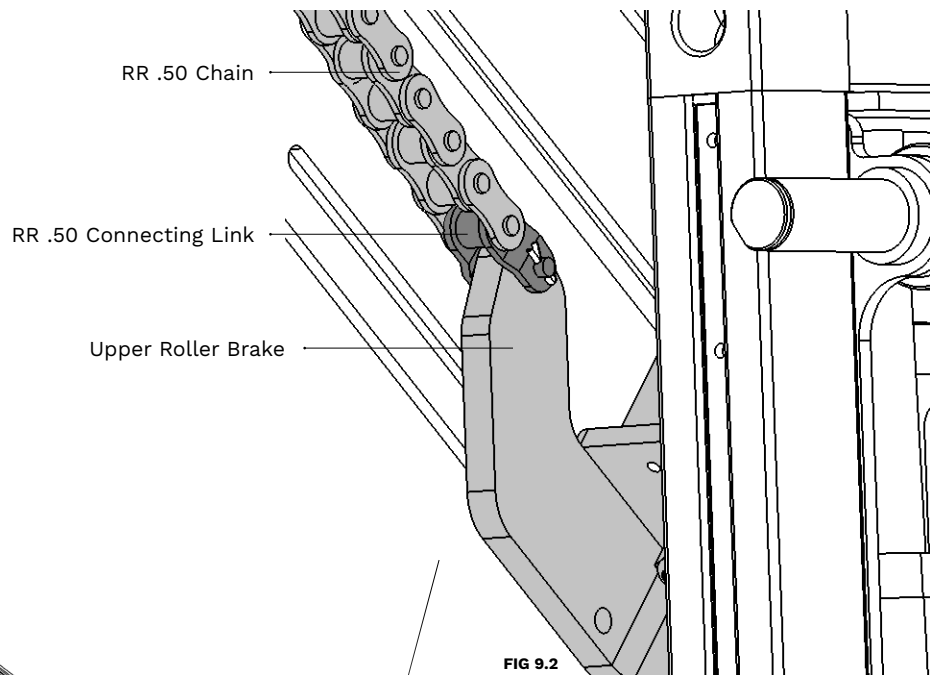
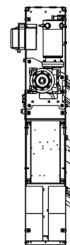
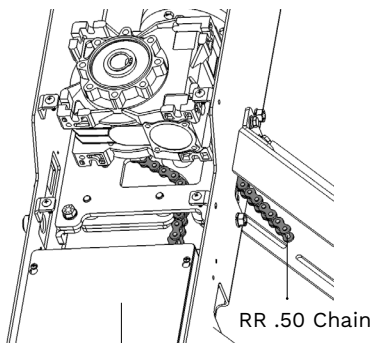


FIG 9.2

### WARNING

ENSURE .50 CHAIN PROPERLY  
EXITS FROM BEHIND THE PANEL  
AND TOWER COLUMN.

FIG 9.3

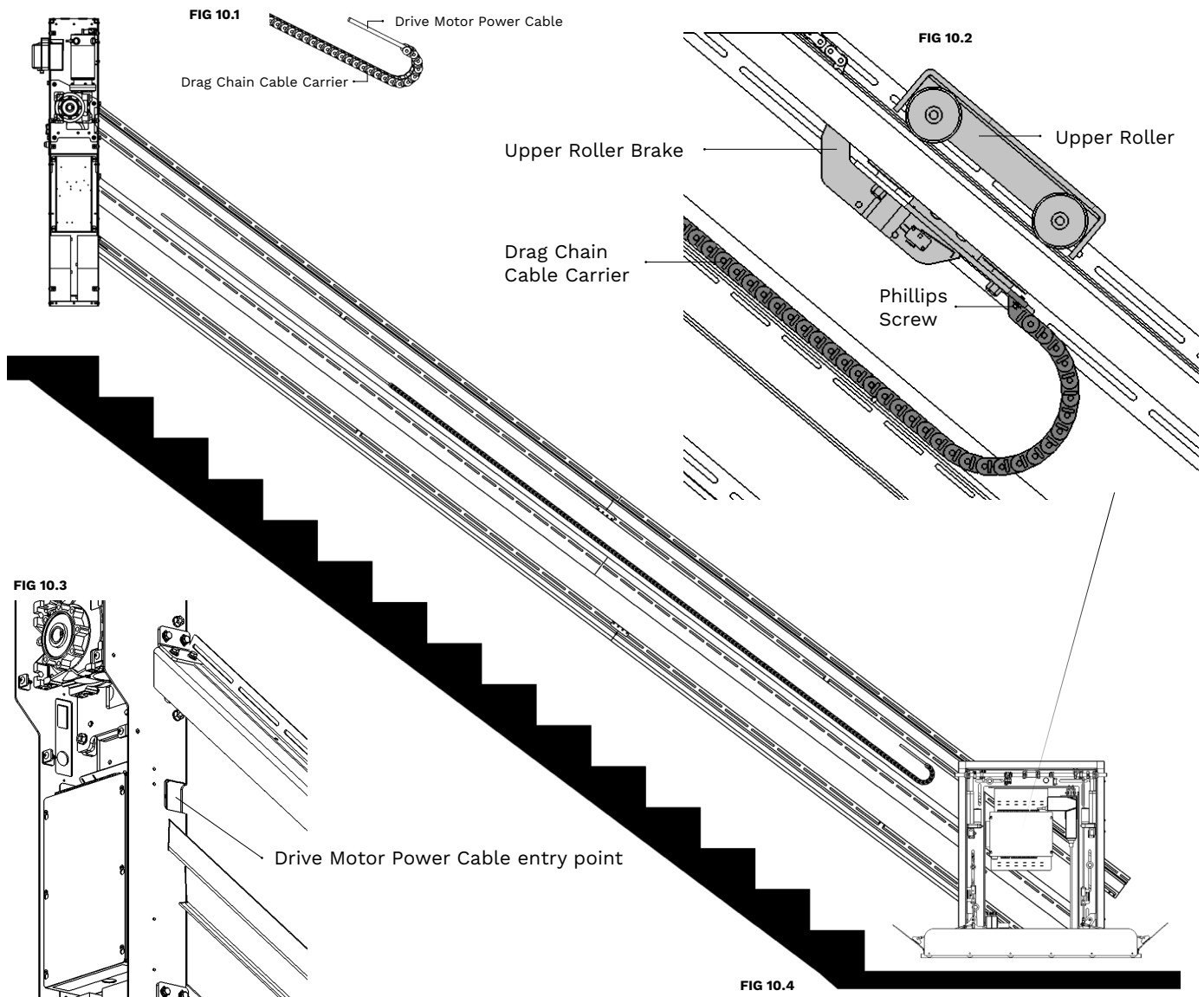
# 10. INSTALL DRAG CHAIN CABLE CARRIER

## PROCEDURE

Install the Drive Motor Cable and Drag Chain Cable Carrier

## INSTALL

1. Run the Drive Motor Power Cable through the Drag Chain Cable Carrier. **Fig 10.2**
2. Attach the Drag Chain Cable Carrier to the Upper Roller underside with the provided phillips screw. **See Fig 10.3**
3. Run the Cable Assembly the length of the Middle Rail and screw in the Drag Chain Cable Carrier to the Middle Rail at it's fully-extended length. **Fig 10.4** Wire and connect the Drive Motor Power Cable using the provided Electrical Diagram.
4. Run and wire the Drive Motor Power Cable into the Tower and wire using the provided electrical diagram.



# 11. WIRE MAIN POWER/DRIVE MOTOR/BATTERIES

## PROCEDURE

Install and wire the Main Power Supply, Drive Motor and 4 (12V7.5Ah) Batteries.

## INSTALL

1. Wire the Main Power Supply to the Electrical Disconnect **Fig 11.1**
2. Wire the Drive Motor from the Electrical Control Panel (ECP) **Fig 11.2**
3. Wire the 4 Batteries from the ECP as indicated on the provided electrical diagram. Once the batteries are wired, turn each battery inward so as the wiring is facing inward and the batteries are resting on thier side.

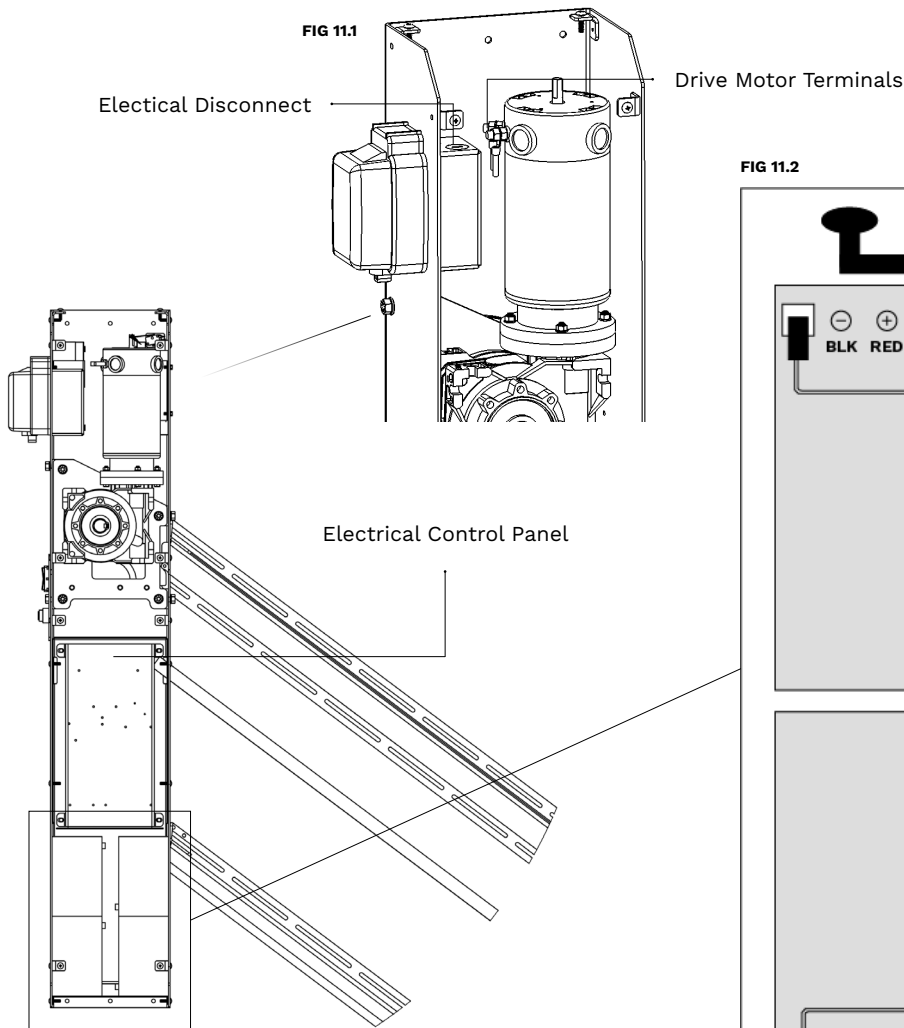
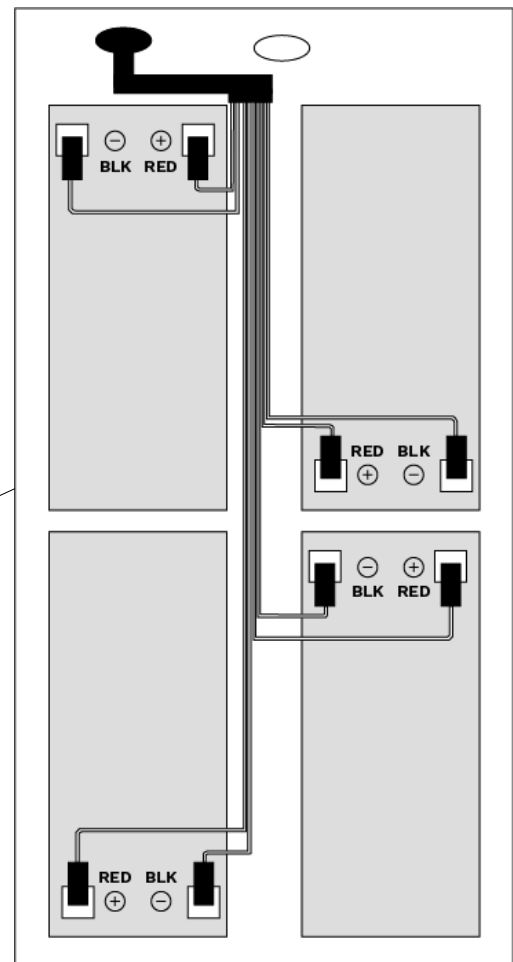


FIG 11.3

FIG 11.2



## WARNING

**FIG 11.2** is a reference image and **NOT** the electrical diagram. Please refer to the provided Electrical Diagram when wiring.

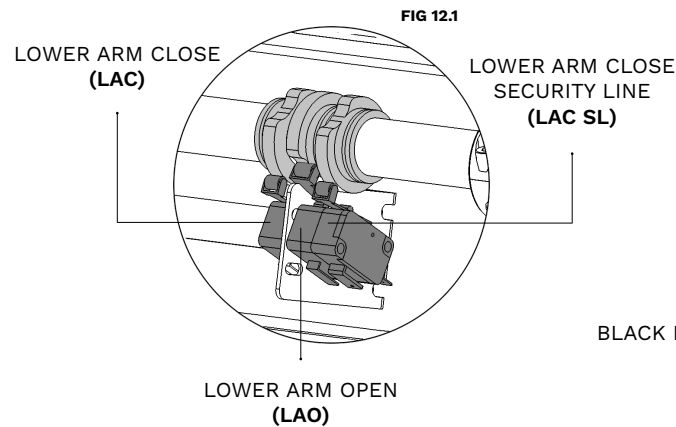
# 12. INSTALL SAFETY ARMS & CALIBRATE CAMS

## PROCEDURE

Install the Safety Arms and verify the cams are properly adjusted on each arm.

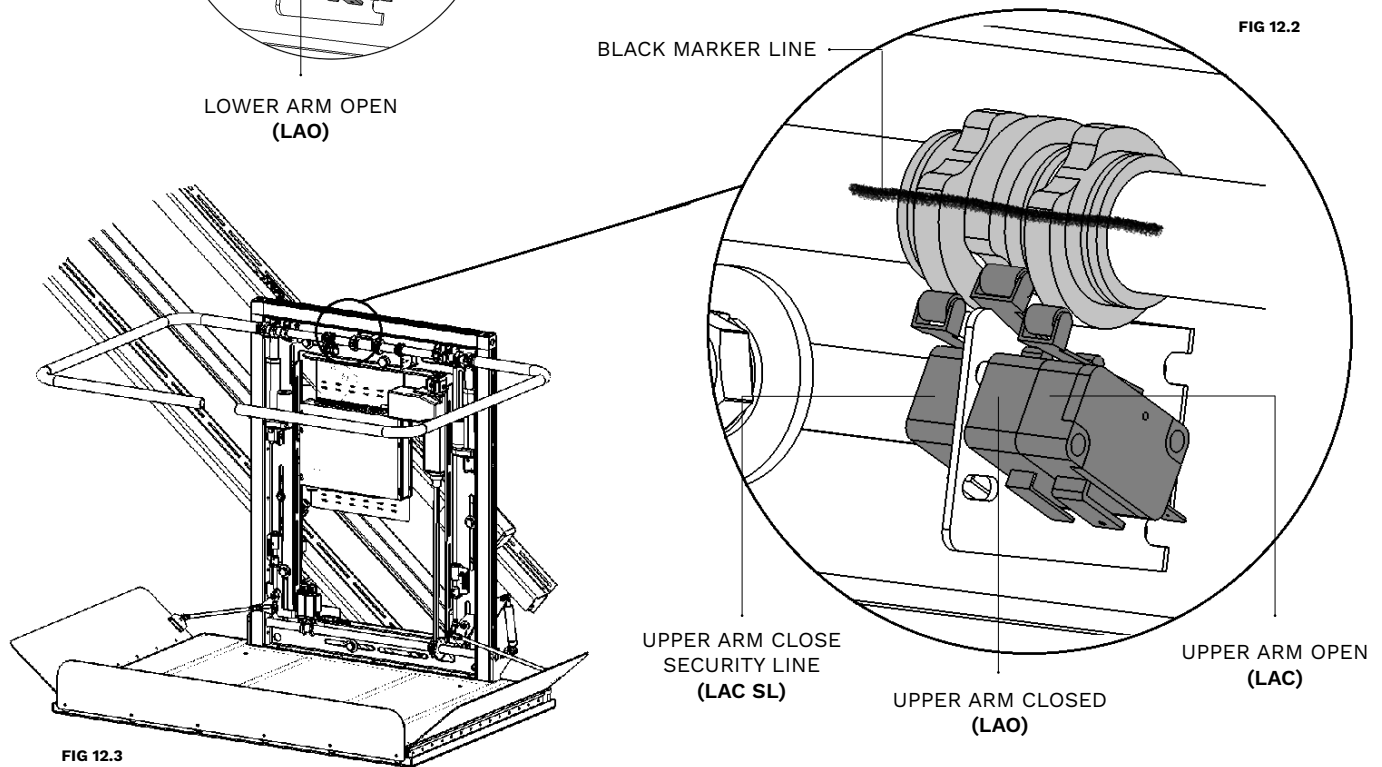
## INSTALL

1. Loosen the two set screws on each Security Arm.
2. Slide the Security Arms onto the D-Shafts and fasten all four Set Screws.
3. The cams are pre-adjusted in the factory but verify that they are still properly adjusted **Fig 12.1 & Fig 12.2**



### WARNING

ENSURE THE BLACK MARKER LINES ARE LINED UP.



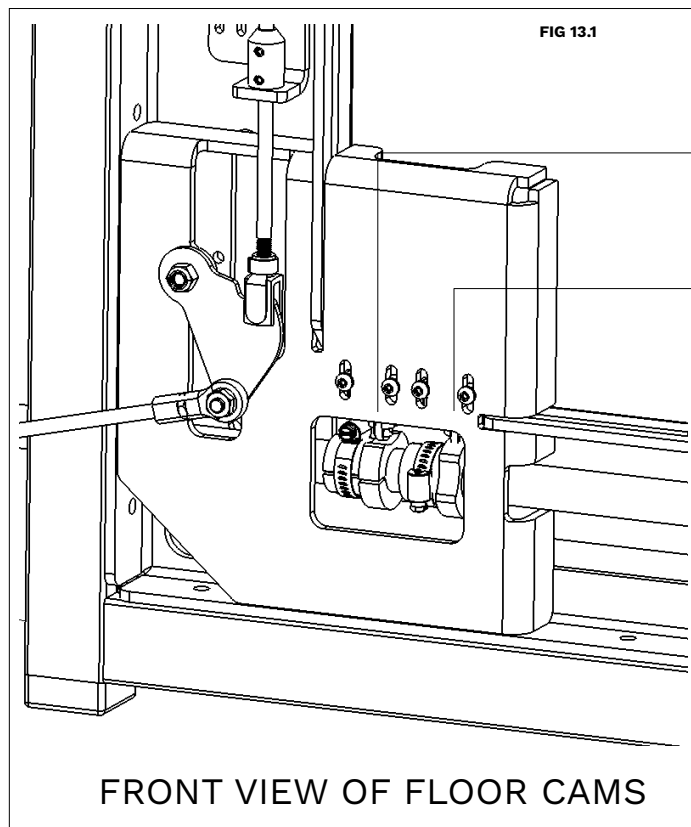
### NOTE

NOTE THE ARM CONFIGURATION SHOW IN **FIG 12.3** IS FOR ASME REGULATION

# 13. CALIBRATE FLOOR CAMS

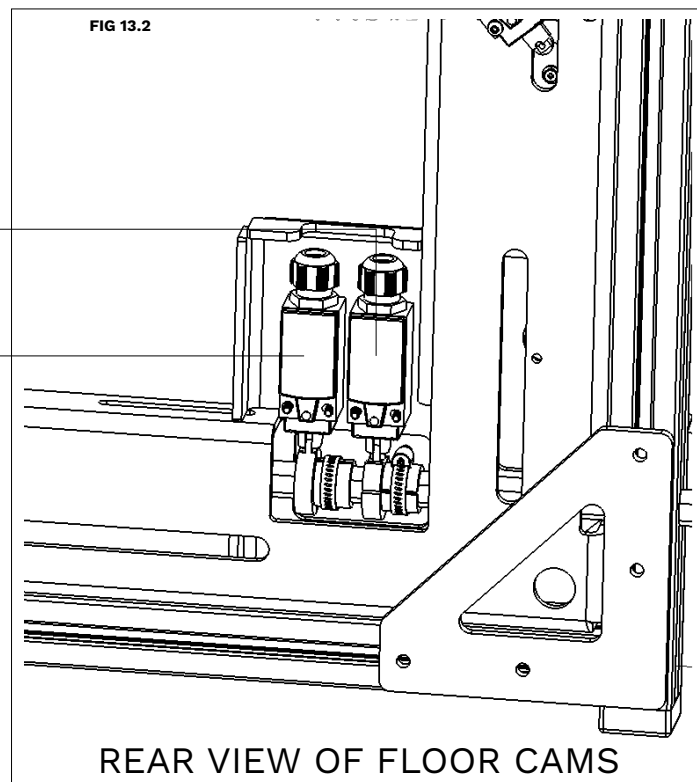
## PROCEDURE

Ensure that the Floor Cams have been properly adjusted.



FLOOR OPEN  
(FLO)

FLOOR CLOSE SECUTIRY  
LINE (FLC SL)



FLOOR OPEN  
(FLO)

FLOOR CLOSE SECUTIRY  
LINE (FLC SL)

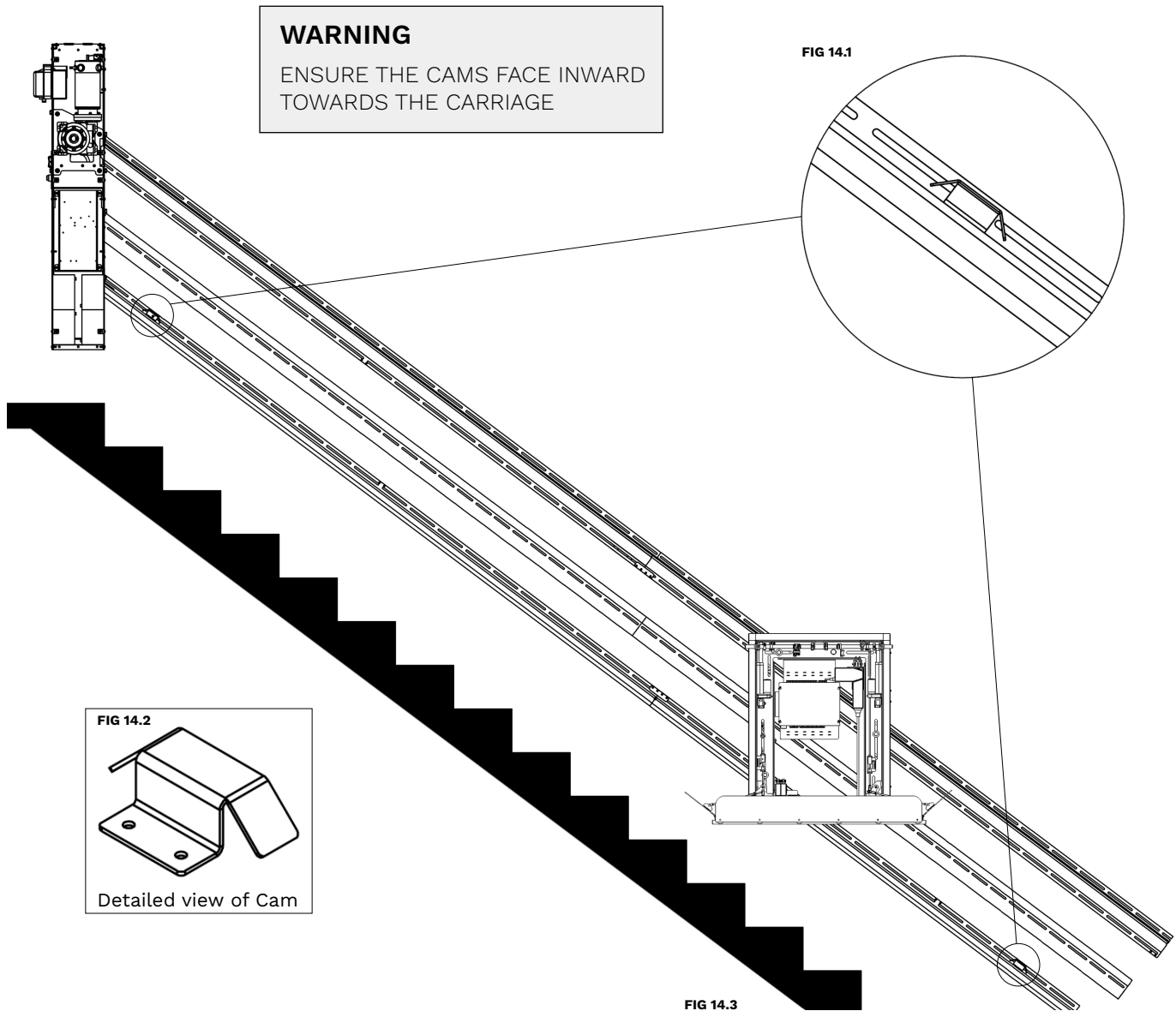
# 14. INSTALL CAMS AND ADJUST LIMIT SWITCHES

## PROCEDURE

Install the two Cams on the Lower Rail.

## INSTALL

1. Determine the position the Cams and ensure they properly function with the Limit Switches.
2. Once determined, install the two Cams on the Lower Rail using four **#10-24** screws and nuts. **ENSURE THE CAMS FACE INWARD.**





## 15. MOUNT UPPER TOWER AND CARRIAGE COVERS

### PROCEDURE

Mount the Upper Tower Cover and the two Carriage Covers the **#10-24** screws from the Steps 5 and 6 respectively.

FIG 15.1

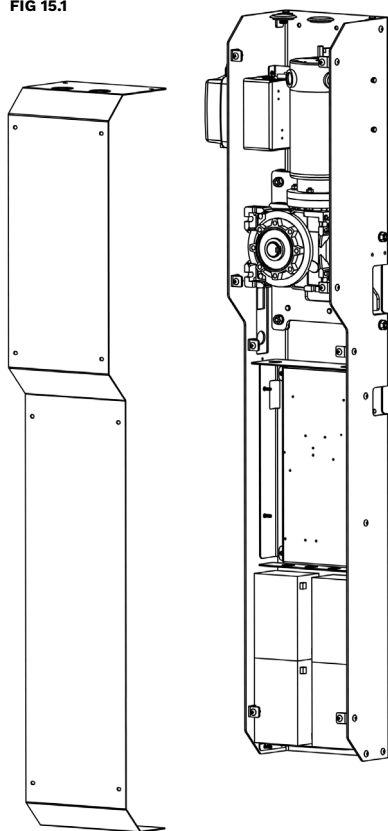
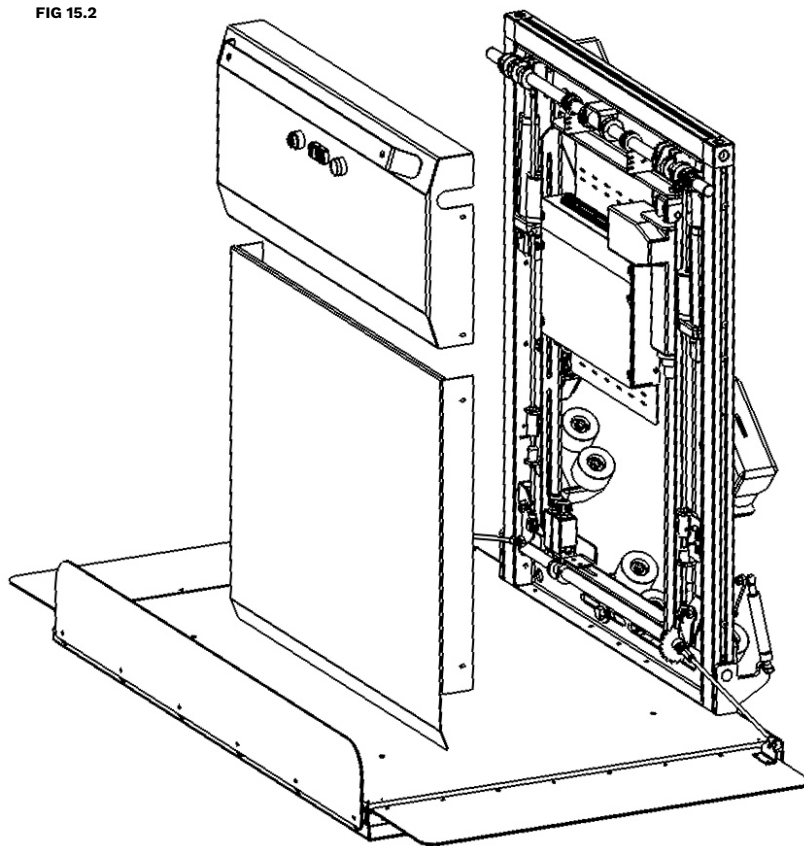


FIG 15.2



**AC-105 INSTALLATION COMPLETE.**