RYTEC

Service Bulletin 313

TurboSlide J-Rail Replacement

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Summary	This bulletin covers the replacement of the J-Rail on a TurboSlide door.			
Products Affected	TurboSlide (Single Panel or Bi-Part)			
Keywords	turboslide; damage; jrail; replacement			
Tools and Equipment Required	2 Technicians, Scissor lift, Drill with 1/2” bit, Standard toolkit with Imperial and Metric tools			
Parts and Materials Required	1220172-0 Replacement J-Rail Kit			
Related Media	N/A			
	Issue Date	July 2024	**Status**	Active

WARNING

Read and understand the entire service bulletin before proceeding.

When instructed to do so, follow lockout/tagout procedures before servicing the door.

Overview

This bulletin covers the replacement of a damaged J-Rail on a TurboSlide door.

SERVICE BULLETIN

Safety Information And the Meaning Of Signal Words

Technical content produced by Rytec includes safety information which must be read, understood, and followed to reduce the risk of death, personal injury, or equipment damage. This information is boxed to set it apart from other text. The boxed text identifies the nature of the hazard and appropriate steps to avoid it.

Each safety alert includes at least three components. The safety alert symbol may be general alert symbol or an alert symbol specific to the hazard. The safety signal word indicates the likelihood and potential severity of injury due to the hazard. The safety information contains information about the hazard and how to safely mitigate it.

The following severities may exist for working with this kit:

DANGER

Danger indicates a hazardous situation which, if not avoided, will cause death or serious injury.

WARNING

Warning indicates a hazardous situation which, if not avoided, can cause death or serious injury.

CAUTION

Caution indicates a hazardous situation which, if not avoided, can cause minor or moderate injury.

NOTICE

Notice is used to address practices not related to physical injury but which, if not followed, can result in damage to the door or other property.

Door and J-Rail Configuration

The TurboSlide door comes in multiple configurations: Single panel and bi-part (double panel), with the motor placed on the left or right of the door opening.

The quantity of J-Rails contained on the door varies based on door configuration and door opening width. There can be 2 J-Rails (1 piece front track, 1 piece rear track) or 4 J-Rails (2 piece front track, 2 piece rear track).

CAUTION

Do not replace a partial J-Rail. Replacing a partial J-Rail may lead to door trolley binding, resulting in excessive door wear and damage. Only replace the entire J-Rail section.

CAUTION

Do not replace multiple J-Rails simultaneously. If multiple J-Rails need to be replaced, repeat this procedure for each J-Rail. Removal of multiple J-Rails may cause damage to the door.

NOTICE

Undamaged J-Rails do not need to be replaced; they are compatible with the replacement rails provided as part of this procedure.

For example, on a door with a 2-piece front track where only one of the pieces is damaged, only the damaged piece needs to be replaced.

This procedure assumes a configuration of 2 J-Rails: A **front** track (farther from the wall) and a **rear** track (closer to the wall) as that requires the removal of any possible door components.

- Illustrations show removal of components from the front track; if the rear track is to be replaced instead, remove the fasteners from components connected to that track instead.
- If components are connected to an undamaged section of a 2 piece front or rear track, they may not need to be removed. If there is doubt about the need to remove a component, contact Rytec.

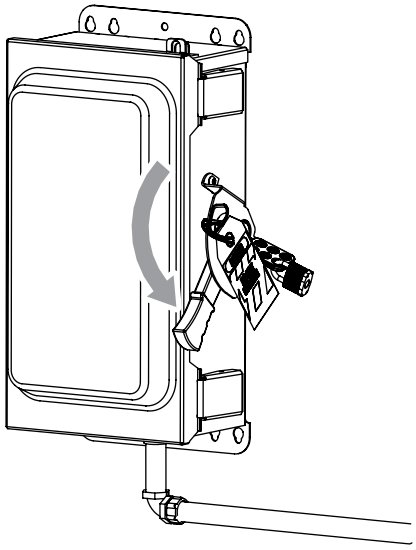
Throughout this procedure, retain all fasteners removed; they will be reused during the installation of the replacement J-Rail.

Disconnect Power and Perform Lockout/Tagout

To prevent unexpected movement and exposure to hazardous voltages, disconnect the door from power and perform a lockout/tagout when instructed.

1 **Locate** the disconnect switch. The disconnect switch may be a fused disconnect located near the System 4® controller or located on the controller itself.

2 **Set** the disconnect switch to the **OFF** position.



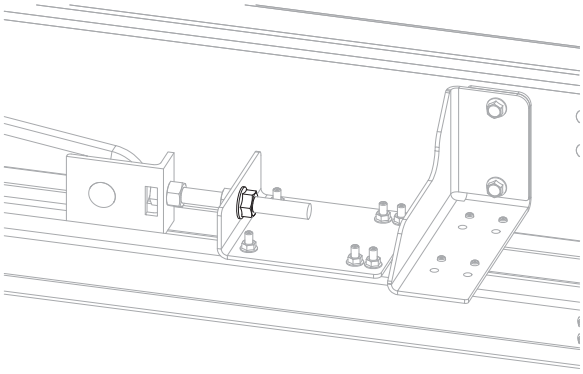
3 **Perform** a lockout/tagout on the disconnect switch.

Lockout
Tagout

	CAUTION
	Inform all users of the door when the door is out of service and when it is put back into service.

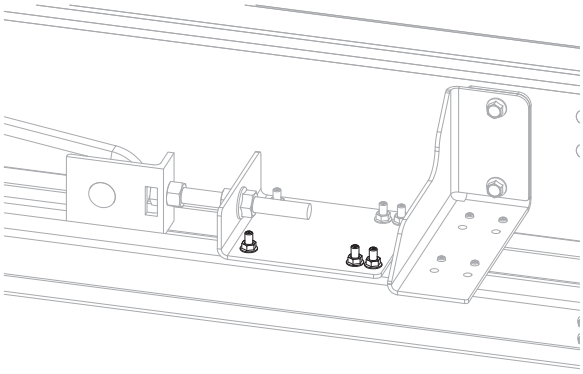
Remove Chain Tensioner and Motor

1 Loosen the drive chain by loosening the screw on the chain tensioner with a 15/16” wrench. Remove the drive chain from the chain tensioner sprocket.

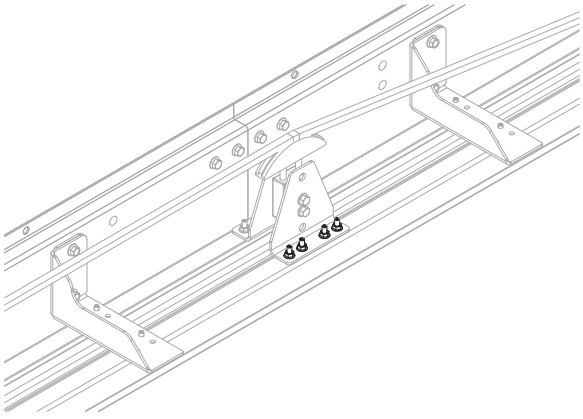


2 Locate the master link on the chain and open it to release the chain. Remove the chain from the chain tensioner, chain guide, idler sprocket, and motor.

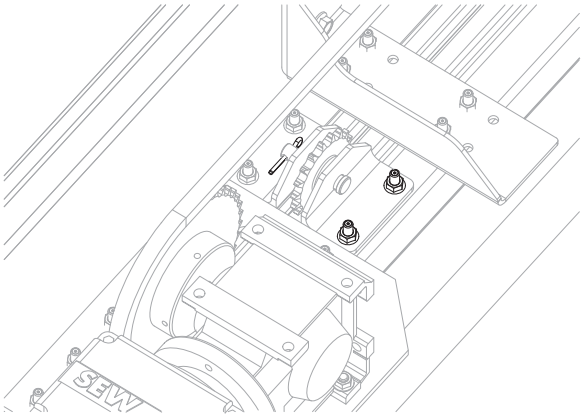
3 Remove the 3 fasteners connecting the chain tensioner to the track being replaced with a 1/2” wrench.



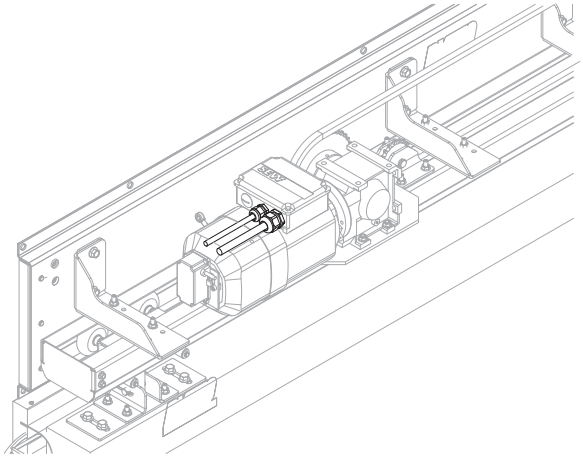
4 Remove the 4 fasteners connecting the chain guide to the track being replaced with a 1/2” wrench. The chain can be removed from the chain guide and draped down.



5 Remove the 2 fasteners connecting the idler sprocket to the track being replaced with a 1/2” wrench.



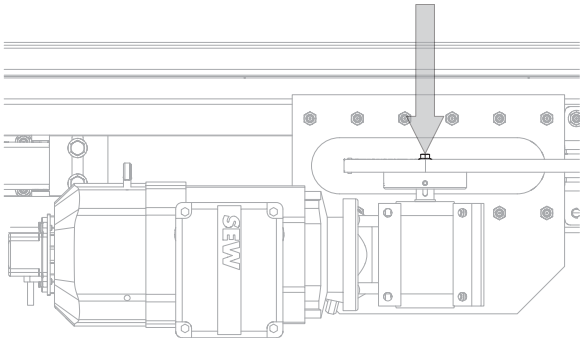
6 Remove the high voltage, low voltage, and encoder cables connected to the motor.



7 Remove the fastener connecting the motor sprocket from the motor with a 7/16” wrench.

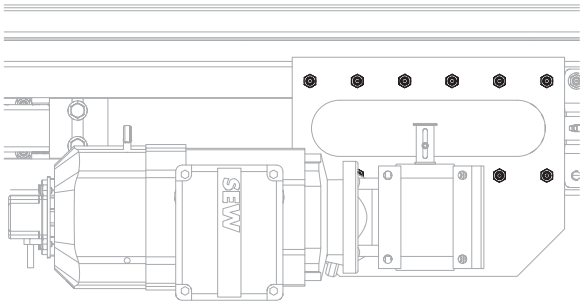
Loosen the set screw on the motor sprocket with a T6 Torx wrench.

Remove the motor sprocket from the motor.



8 Remove the 10 fasteners holding the motor mounting plate to **both** tracks with a 1/2” wrench. There are 6 fasteners attached to the rear track and 4 fasteners attached to the front track, 2 of which are located under the motor behind the removed motor sprocket.

Do not remove the fasteners connecting the motor to the motor mounting plate.



CAUTION

The motor must be removed from both tracks regardless if the front or rear track is being replaced. Failing to remove the motor from both tracks will cause deformation in the remaining track, leading to door binding and damage.

Remove the motor from the door; the chain will remain looped through the motor mounting plate.

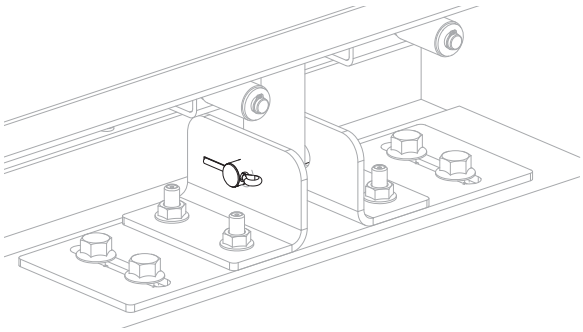
CAUTION

The motor is heavy. Use care when moving the motor.

Remove Door Panels and Door Hangers

1 For each door panel (1 for single panel doors, 2 for bi-part doors), shim the bottom of the door and support the panel.

2 Remove the door hanger cotter pin and remove the bolt holding the door panel to the door hanger. Each door panel has 2 door hangers.

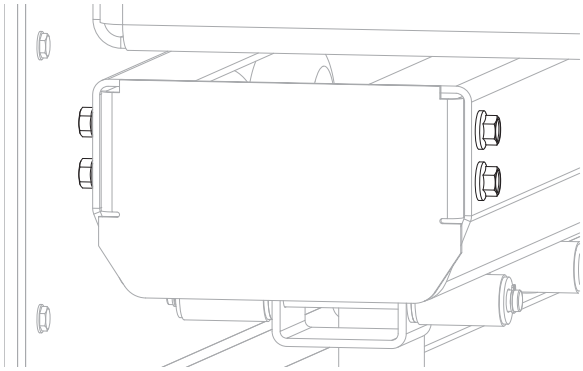


3 Move each door panel away from the work area.

CAUTION

The door panel is heavy and large. Two technicians are required to remove it after it is removed from the door hanger.

4 Remove the 4 fasteners holding the track end caps in place with a 3/8” wrench.

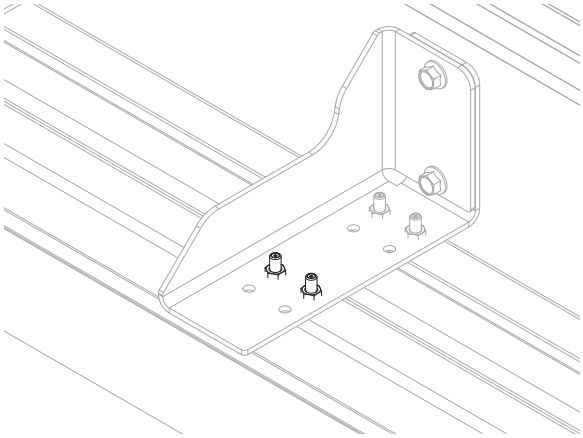


5 Roll the door hangers out of the track and move them away from the work area.

Remove J-Rail

1 For each support bracket, remove the 2 fasteners connecting the track being replaced to the support bracket with a 1/2” wrench.

Take note of which set of holes were used to mount the track; this can vary based on panel thickness and door configuration.



NOTICE

The number and spacing of support brackets is dependent on door configuration and door opening width. Each support bracket has two fasteners connecting it to the track.

2 Remove the J-Rail from the door assembly.

Install Replacement J-Rail

1 Using clamps, position the replacement J-Rail in position.

For tracks that consist of a single J-Rail, the replacement J-Rail should be roughly centered across the entire door. For tracks that consist of two J-Rails, the replacement J-Rail should be flush to the remaining J-Rail on the track.

2 Use a paint pen to mark the location of the support bracket holes on the replacement J-Rail. The proper set of holes was noted before; this can vary based on panel thickness and door configuration.

NOTICE

The number and spacing of support brackets is dependent on door configuration and door opening width. Each support bracket has two fasteners connecting it to the track.

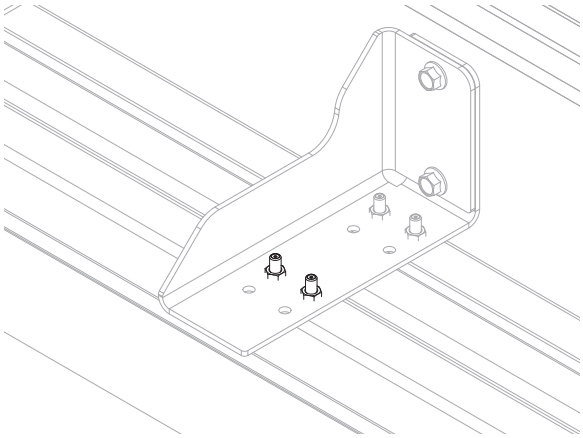
3 Remove the J-Rail and clamps.

Drill holes for the support bracket. It is recommended to drill a slightly wider (across the length of the J-Rail, not parallel to it) hole to allow slight alignment adjustments.

4 Install the replacement J-Rail to the support brackets.

The replacement J-Rail must be flush to the support brackets, flush with any other existing track, and parallel to the wall.

Tighten the support bracket fasteners.



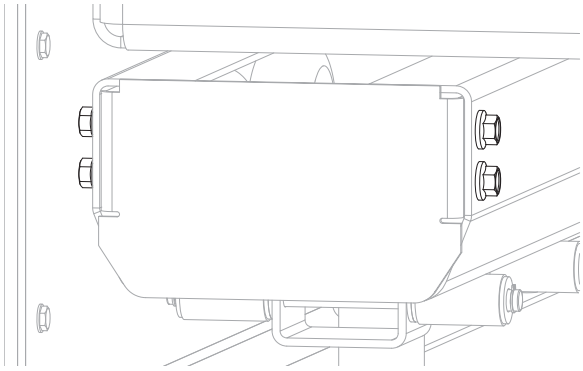
Reinstall Door Hangers and Door Panels

1 Roll the door hangers into the front and rear track.

Move the door hangers along the track, looking for binding or jamming. If binding or jamming occurs, the replacement track may not be properly installed; adjust the support bracket fasteners.

2 Install the track end caps. The track end caps should fit snugly at the end of the tracks formed by the J-Rails.

Tighten the track end cap fasteners.



3 Move each door panel into position. The manual chain release mechanism fits between the two tracks. Each door panel should have one of the door hangers on either side of the manual chain release.

CAUTION

The door panel is heavy and large. Two technicians are required to remove it after it is removed from the door hanger.

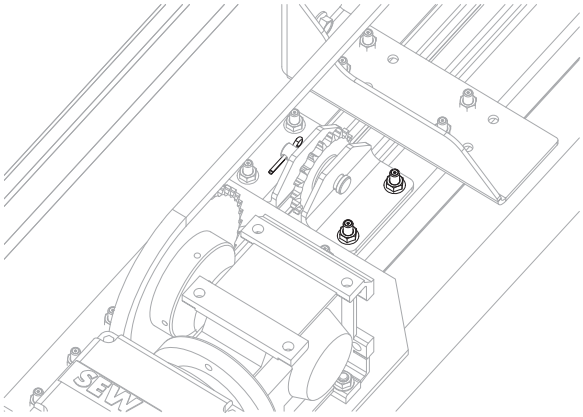
4 Shim each door panel to raise it so that the panel connection plates are level with the door hangers. Slide the bolt through the connection plate and the door hanger shaft and insert the cotter pin.

5 Remove the shims from each door panel.

Reinstall Motor

1 Drill two holes in the replacement J-Rail, using the two empty holes in the idler sprocket as guides.

2 Fasten the idler sprocket to the replacement J-Rail using the previously-removed hardware. Tighten the fasteners.



3 Position the motor and motor mounting plate on the tracks. The mounting plate should be flush with the idler sprocket, and the location of the motor sprocket should be in line with the idler sprocket. Use the existing mounting holes in the non-replaced J-Rail as a guide.

The motor sprocket is currently removed; temporarily reinstall it if you need to further confirm proper alignment.

	CAUTION
	The motor is heavy. Use care when moving the motor.

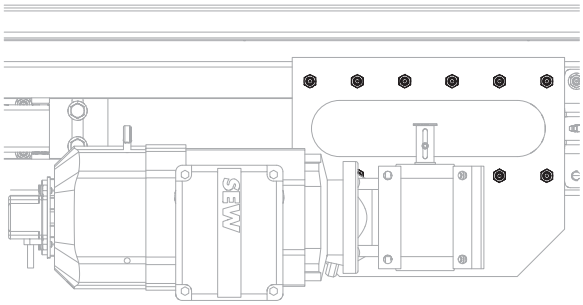
Use clamps to hold the motor in place.

	CAUTION
	Do not leave the motor unattended until it is secured. Failure to do so may result in injury or damage to the door should the motor fall.

4 Use a paint pen to mark the location of the needed mounting holes of the motor mounting plate on the replacement J-Rail.

5 Remove the motor from the rails. Drill the needed mounting holes.

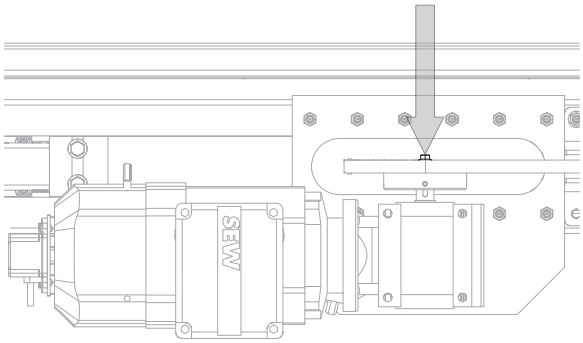
6 Position the motor on the tracks again, and fasten it to the tracks with the previously removed fasteners. Tighten the fasteners.



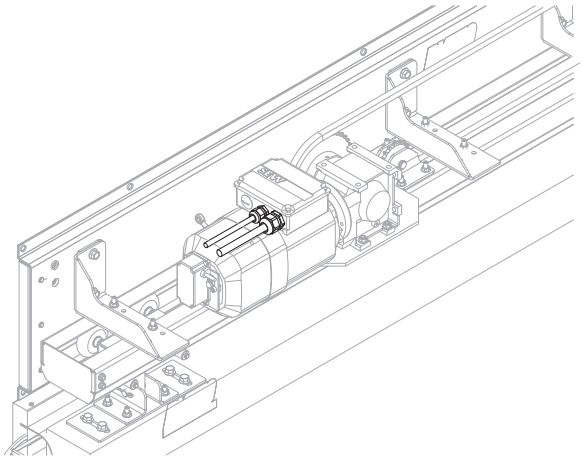
7 Attach the motor sprocket to the motor.

Tighten the set screw on the motor sprocket.

Replace the nut holding the motor sprocket in place.

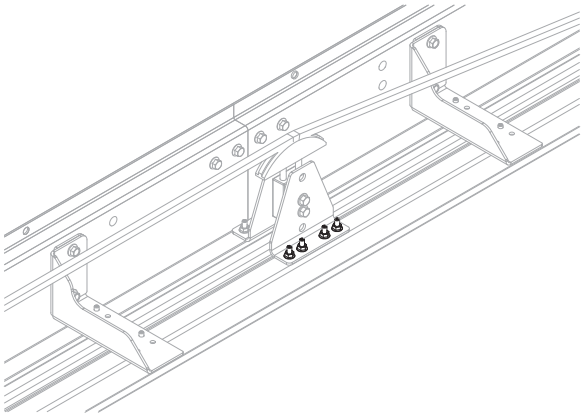


8 Connect the high voltage, low voltage, and encoder cables to the motor.



9 Drill 4 holes in the replacement J-Rail, using the four empty holes in the chain guide as guides.

10 Fasten the chain guide to the replacement J-Rail using the previously removed hardware. Tighten the fasteners.



11 Drill 2 holes in the replacement J-Rail, using the 2 empty holes in the chain tensioner and guides.

12 Fasten the chain tensioner to the replacement J-Rail using the previously removed fasteners. Tighten the fasteners.

13 Route the chain starting from the chain tensioner, over the chain guide, around the top of the motor sprocket, and then along the bottom of the idler sprocket before returning to the chain tensioner.

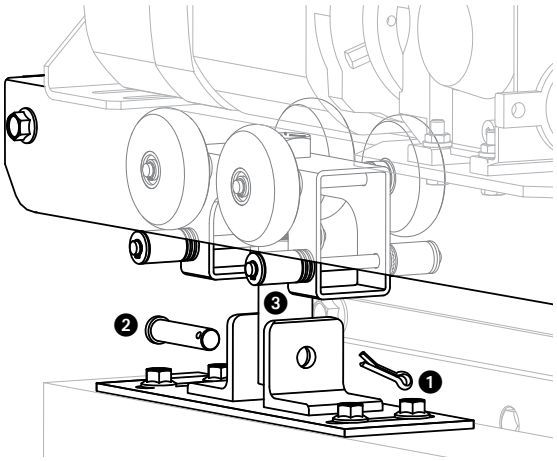
Connect the chain together using the master link.

Verify Door Panel Alignment

1 Use a laser level to determine if the door panels are level. They should be level at 3/4” above the floor, with the sweep seal dimpling by about 1/8”.

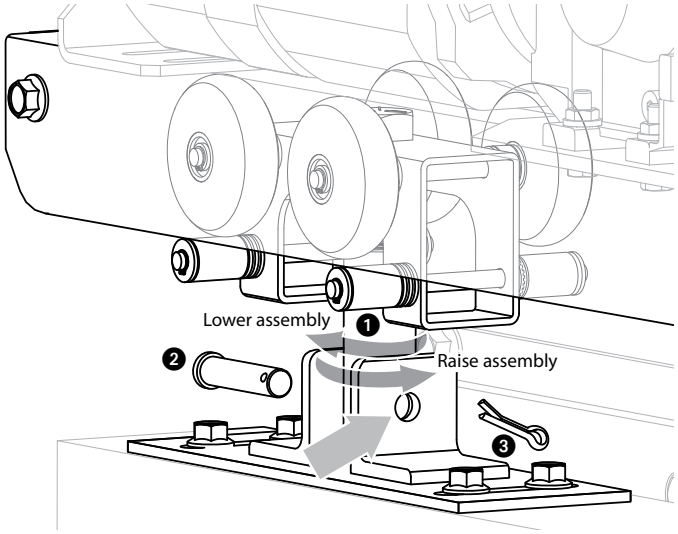
If the door panel is not level, shim and support the panel.

2 Remove the cotter pins and bolts connecting the door panel to both trolley hangers.



3 Adjust the shims until the door panel is level at 3/4” above the floor.

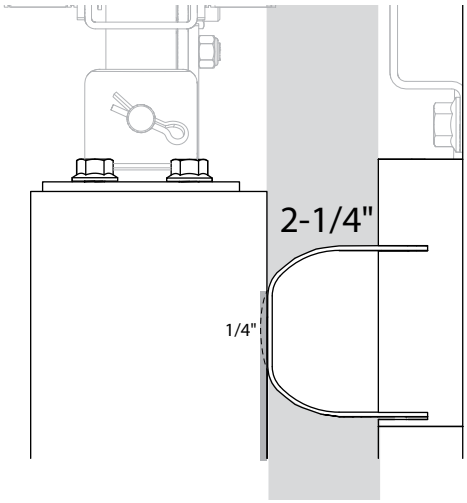
4 Rotate the trolley yoke on the trolley hangers to adjust its height relative to the door panel connection. The trolley hanger should align with the shimmed and level door panel connection.



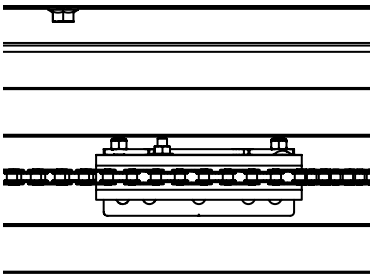
5 Reinstall the cotter pins and bolts connecting the door panel to both trolley hangers. Remove the shims and verify the door panel remains level.

6 Verify the door panels are compressing the bulb seals evenly. The panels should be plumb at 2-1/4” along the entire length of the backing board with 1/4” of compression of the bulb seal.

If the door panel is not plumb, it can be adjusted by loosening the four bolts on the top of the door panel. The door panel should be plumb at 2-1/4” along the entire length of the backing board with 1/4” of compression on the bulb seal.



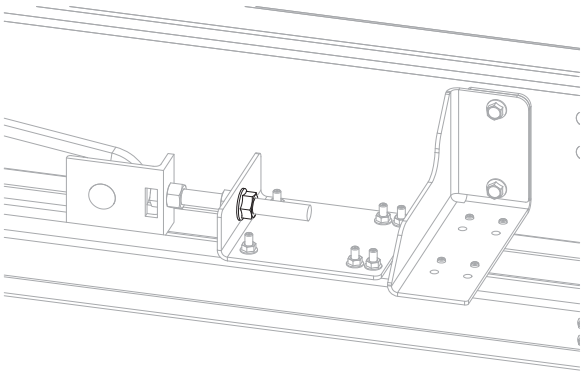
7 Verify the chain release mechanism is aligned. When viewed from above, the chain should pass straight through the mechanism.



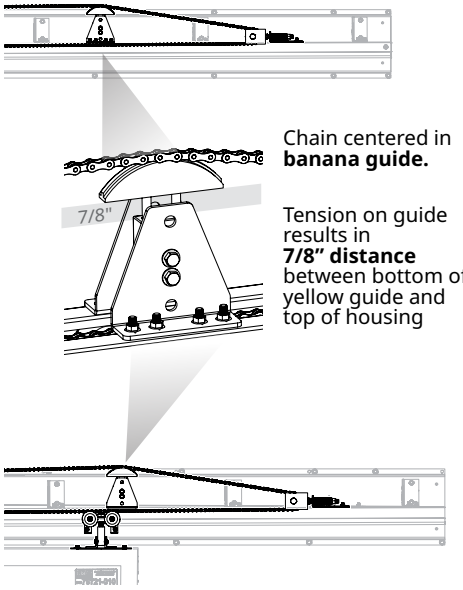
Top view looking down

Adjust Drive Chain Tension

1 Adjust the chain to proper tension by turning the adjustment screw on the chain tensioner.



2 The correct chain tension can be determined based on the chain (“banana”) guide. The chain tension is correct when the chain guide is deflected by 7/8”.



Chain centered in **banana guide.**

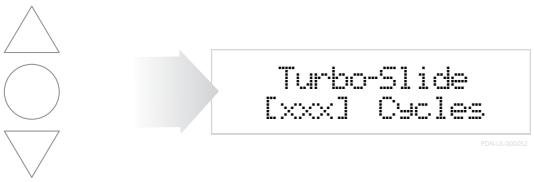
Tension on guide results in **7/8” distance** between bottom of yellow guide and top of housing

Set Limits

Set the Controller To Parameter Mode And Access Service Level Parameters

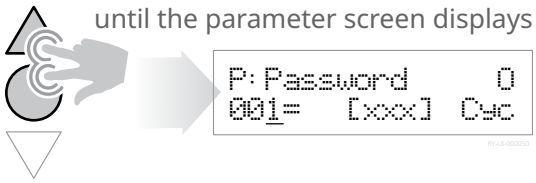
Do This *Result*

1



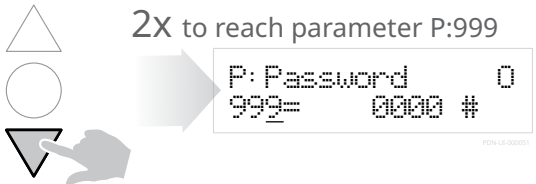
The door starts in run mode.

2



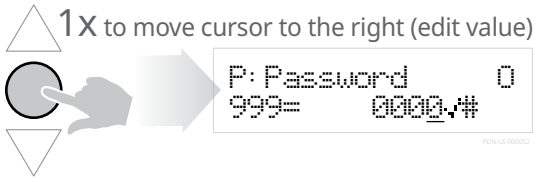
The System 4® Controller enters parameter mode.

3



Navigate to the Password Parameter (999).

4

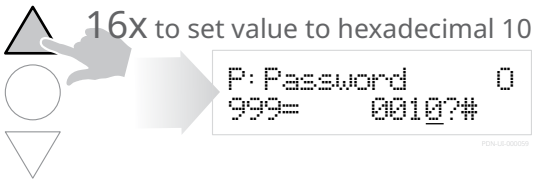


The cursor moves to the right side to edit the parameter value.

The checkmark indicates the displayed value is the current parameter value.

Do This *Result*

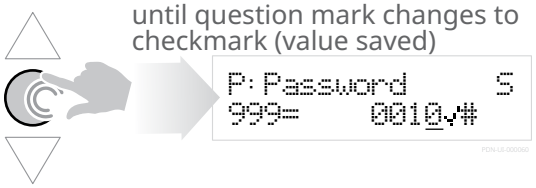
5



Set the value to 10 (service level password).

The question mark indicates the displayed value is changed but not yet saved.

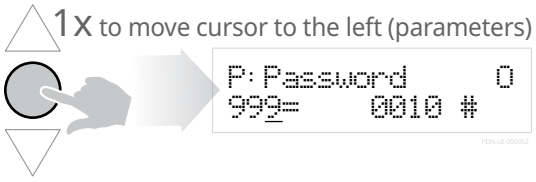
6



You must press and hold the Reset button for 5 seconds to save edits that you make to a parameter.

The checkmark indicates the displayed value is the current parameter value.

7



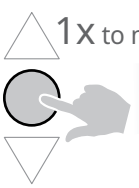
The cursor moves to the left side to select a new parameter.

Use Parameter P:210 To Set the Closed And Open Limits

Do This *Result*

8  until parameter 210 displays

Navigate to the New Limits Parameter (210).

9  1x to move cursor to the right (edit value)

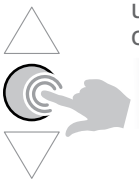
The cursor moves to the right side to edit the parameter value.

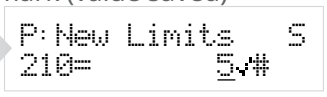
The checkmark indicates the displayed value is the current parameter value.

10  5x to set value to 5

Set the value to 5 (reset all limits). This setting allows you to edit both the closed position limit and the open position limit.

The question mark indicates the displayed value is changed but not yet saved.

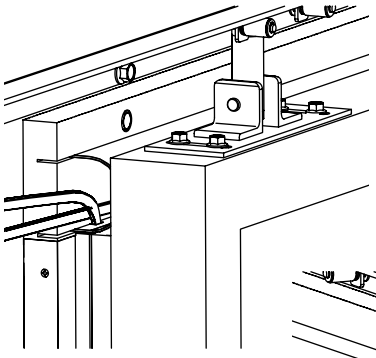
11  until question mark changes to checkmark (value saved)



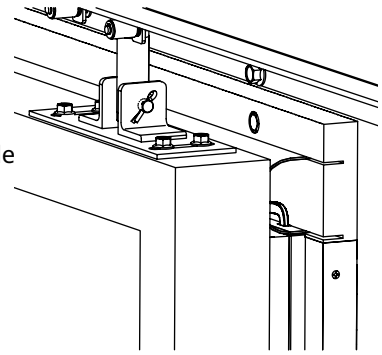
You must press and hold the Reset button for 5 seconds to save edits that you make to a parameter.

The checkmark indicates the displayed value is the current parameter value.

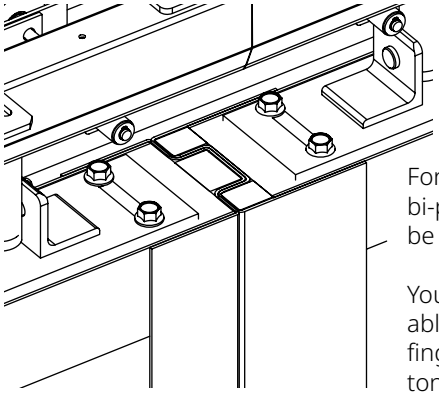
Close limit
Door panel should be evenly aligned with bulb seal assemblies on left and right and fully compress both seals.



Left side



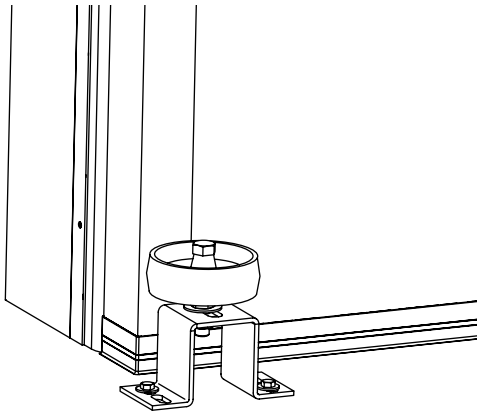
Right side



For bi-part doors, bi-part seal should be fully engaged.

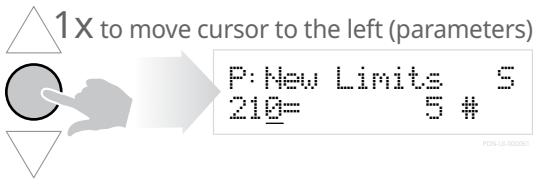
You should not be able to press a finger between tongue and groove without effort.

Open limit
Trailing side of door should align with edge of door opening.



Do This *Result*

12



The cursor moves to the left side to select a new parameter.

13

The sequence to set the closed and open position limits begins.

14

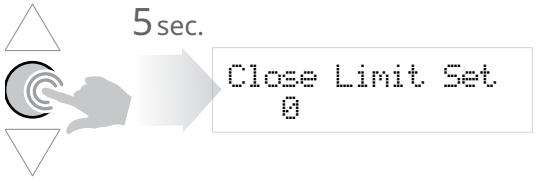
You can now set the value for the closed position limit.

15

Set the closed position limit value:

- Press the UP arrow or the DOWN arrow to move the door to the correct position.
- Each press moves the door by a small increment. Press and hold to move the door more quickly.

16



Press and hold the Reset button for 5 seconds to save the close limit.

Do This *Result*

17

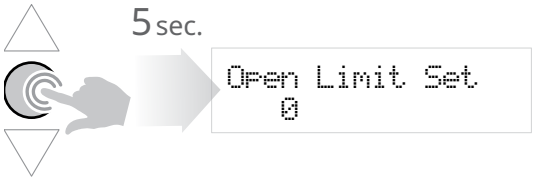
You can now set the value for the open position limit.

18

Set the open position limit value:

- Press the UP arrow or the DOWN arrow to move the door to the correct position.
- Each press moves the door by a small increment. Press and hold to move the door more quickly.

19



Press and hold the Reset button for 5 seconds to save the open limit.

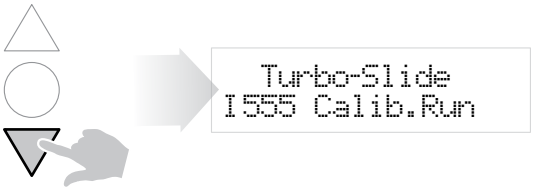
CAUTION

Keep the area around the door clear of obstructions and do not allow people or vehicles to pass through the door until the automatic calibration is complete.

The door can open or close unexpectedly, resulting in injury.

Do This *Result*

20



The automatic calibration sequences starts:

- The door runs through several cycles of opening and closing.
- Initial cycles may not match the limits that were set. The final cycle should match the saved values for the closed and open position limits.
- The controller returns to Run mode when calibration is complete.

Do This *Result*

21 Test for these conditions while the door opens and closes:

- Door panel moves smoothly
- Door is not unusually noisy
- Bracket stays tight to motor and head assembly
- Door limits are correct
- Safety systems work correctly

Manually Adjust the Open or Closed Limit (Optional)

NOTICE

This procedure is for making small adjustments (up to 1 inch) to the open or close limits. Reset limits using parameter P:210 for larger adjustments.

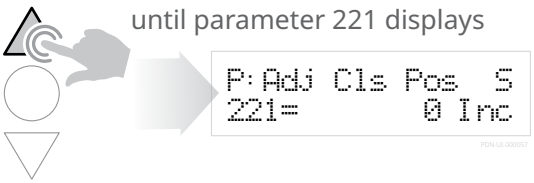
Navigate to Parameter P:221 (Adjust Close Position) or P:231 (Adjust Open Position) and Change the Value

Parameter P:221 is used in this example; Parameter P:231 follows the same procedure.

Do This *Result*

1 If necessary, enter parameters mode and enter the service level password. See steps 1 through 7 on page 18.

2 until parameter 221 displays



Navigate to the Adjust Close Position Parameter (2221).

Do This *Result*

3 1x to move cursor to the right (edit value)

The cursor moves to the right side to edit the parameter value.

The checkmark indicates the displayed value is the current parameter value.

NOTICE

1 Inc (increment) is roughly 1⁄10 inch.

Do This *Result*

4 to change parameter value

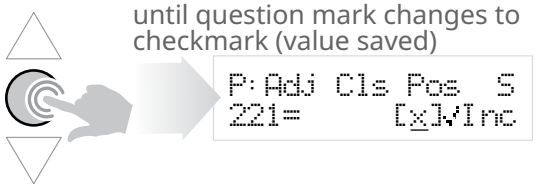
- Press the UP arrow to increase Inc.
- Press the DOWN arrow to decrease Inc.

The question mark indicates the displayed value is changed but not yet saved.

NOTICE

Do not change the value by more than 5 Inc before testing the door. Overcorrection of the limit may damage the door.

5 until question mark changes to checkmark (value saved)



You must press and hold the Reset button for 5 seconds to save edits that you make to a parameter.

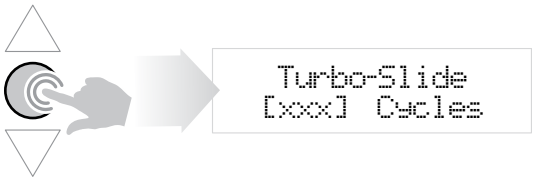
The checkmark indicates the displayed value is the current parameter value.

Do This *Result*

6 1x to move cursor to the left (parameters)

The cursor moves to the left side to select a new parameter.

7



The door returns to run mode.

8 Run the door through 5 full open/close cycles. Verify the manually adjusted limits are correct, the door panel moves smoothly, the door is not unusually noise, and there is no binding during operation.

- Door panel moves smoothly
- Door is not unusually noisy
- Bracket stays tight to motor and head assembly
- Door limits are correct
- Safety systems work correctly