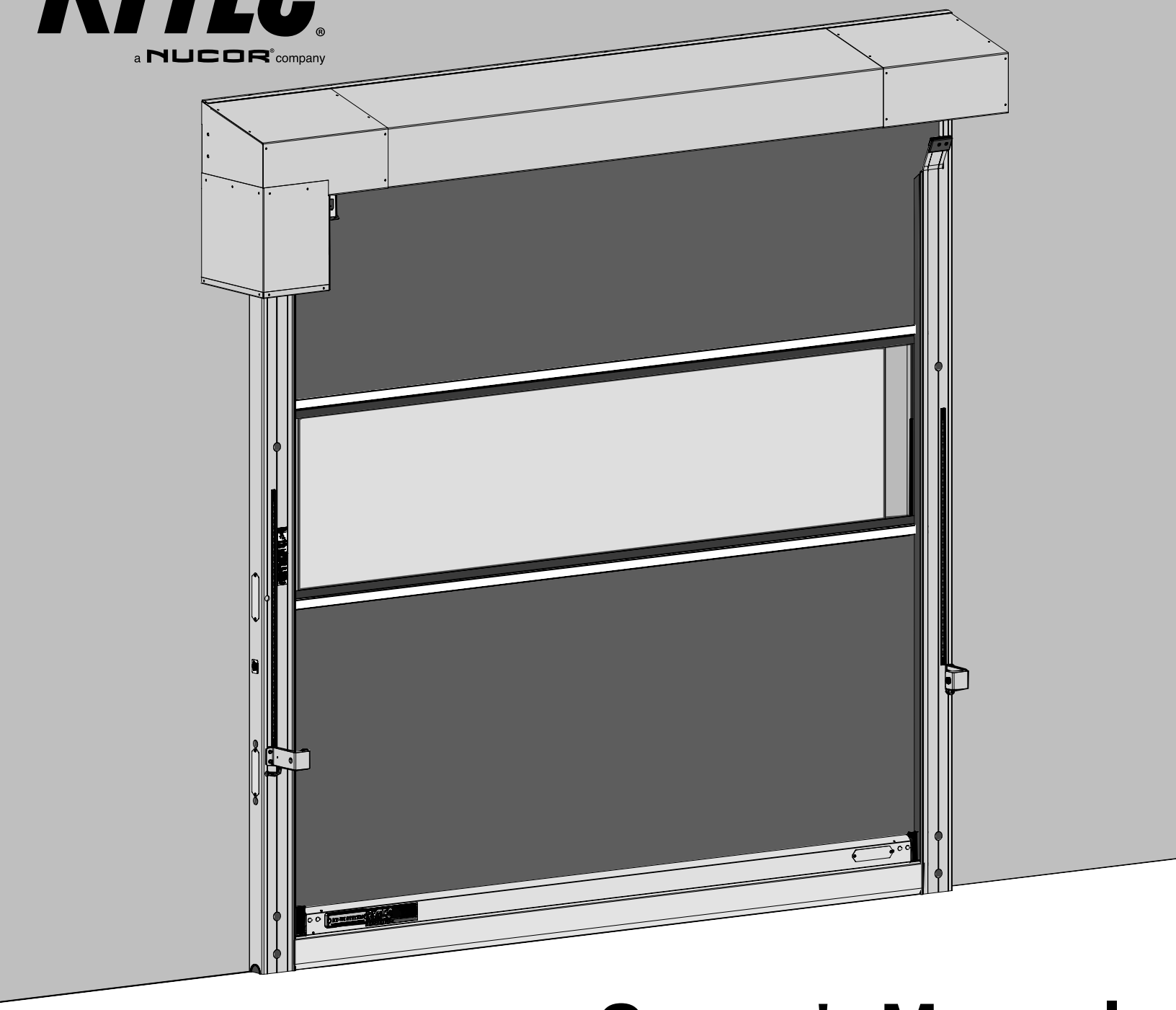
RYTEC®
a NUCOR® company



Owner's Manual

PredaDoor® NXT® and PredaCool™ Doors

	⚠ WARNING
	**Read and understand** all operation, warning and safety instructions in this manual before operating or servicing the door. When instructed to do so, follow lockout/tagout procedure before servicing the door.

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Rev 1 07/25

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The information contained in this manual will allow you to operate and maintain your Rytec PredaDoor® or PredaCool™ door in a manner which will ensure maximum life and trouble-free operation.

Any unauthorized changes to these procedures, or failure to follow the steps as outlined, will automatically void the warranty. Any changes to the working parts, assemblies, or specifications as written, which are not authorized by Rytec Corporation, will also cancel the warranty. The responsibility for the successful operation and performance of this door lies with the owner.

DO NOT OPERATE OR PERFORM MAINTENANCE ON THIS DOOR UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS CONTAINED IN THIS MANUAL.

If you have any questions contact your Rytec representative or **call the Rytec Technical Support Department at 800-628-1909**. Always refer to the serial number of the door when calling the representative or Technical Support.

A set of wiring schematics is provided with each individual door specifically covering the control panel and electrical components of that door. The schematics for a door are shipped inside the box that holds the System 4® controller.

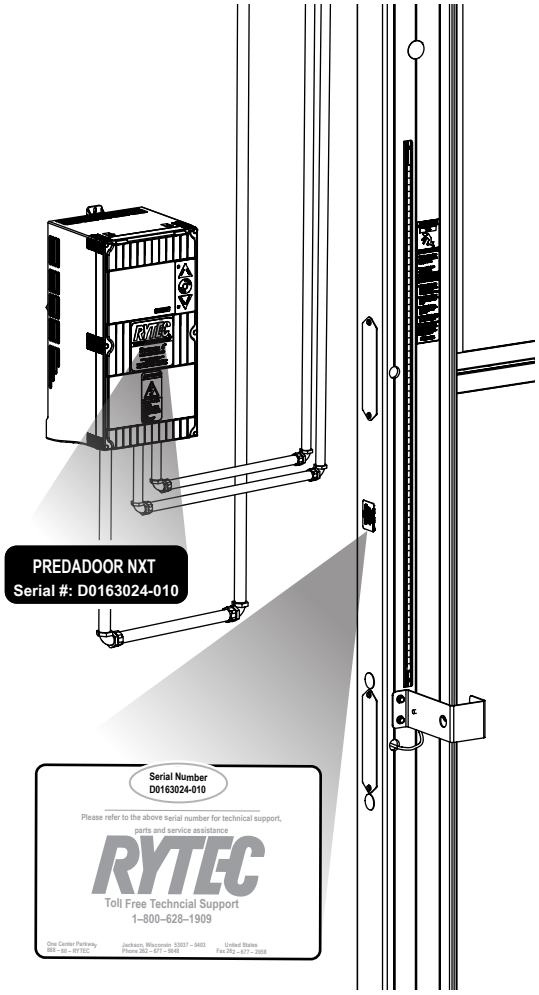
How to find the serial number

IMPORTANT

You will need to know the serial number of your door any time you call Rytec Technical Support.

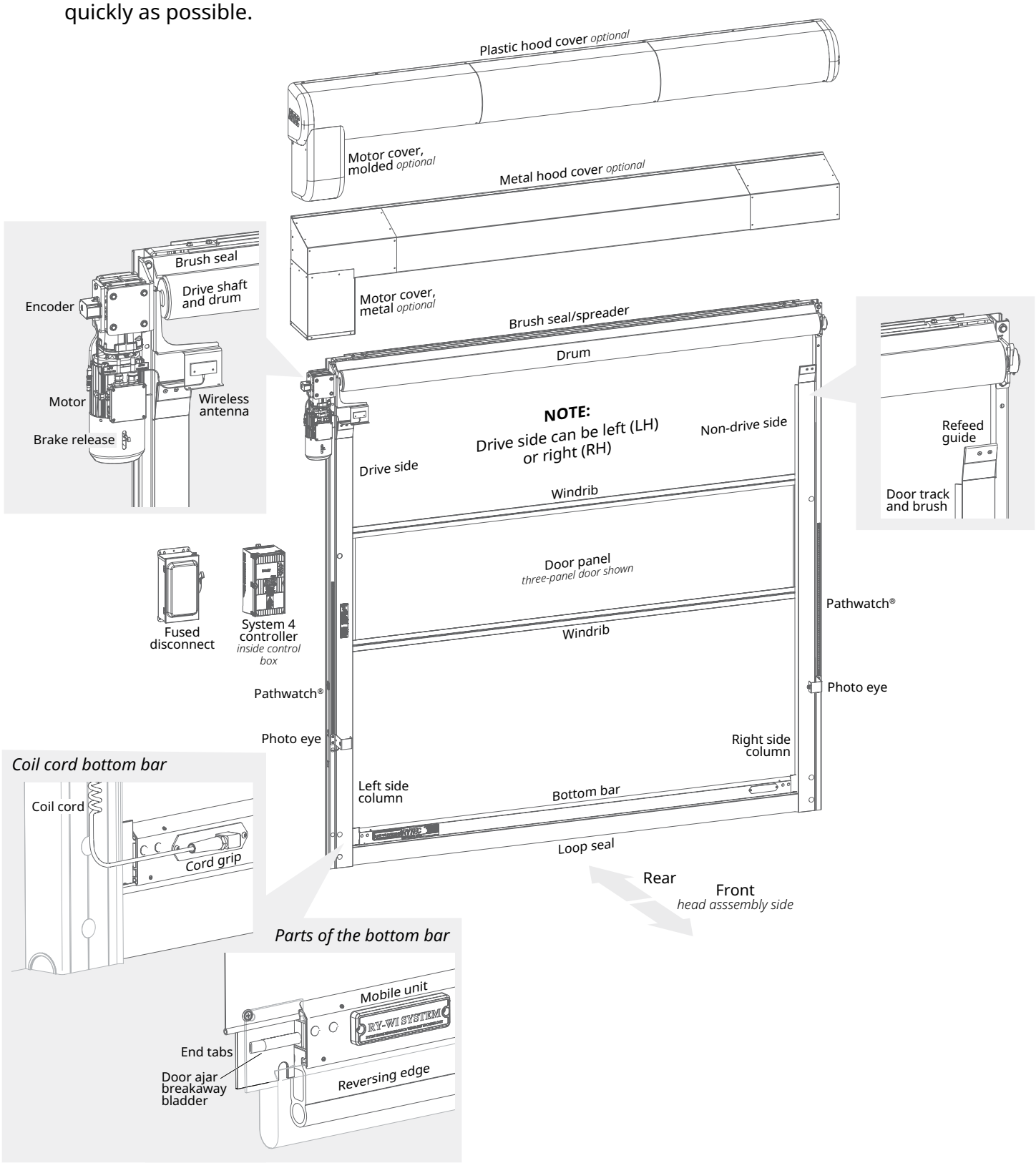
There are labels displaying the serial number in several locations on the door.

The easiest labels to locate are at roughly eye level on the drive side side column of the door and at the bottom of the display on the controller.



Rytec naming conventions

The illustration below shows the terms used by Rytec technical support to refer to the major components of your door. Using these terms helps technical support to provide assistance as quickly as possible.

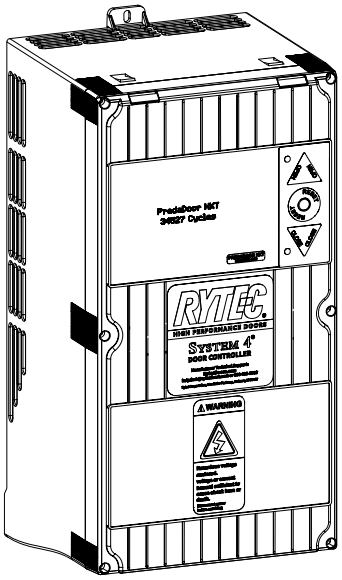


The System 4® controller

The PredaDoor is controlled by a solid-state, microprocessor-based control system designed exclusively to operate Rytec doors.

This is a robust and highly customizable system that allows for both precise control of all door functions and coordinated control of multiple optional accessories such as activators, detection systems, and alert systems.

Door performance can be customized to meet the needs of any installation.



The open and close limits

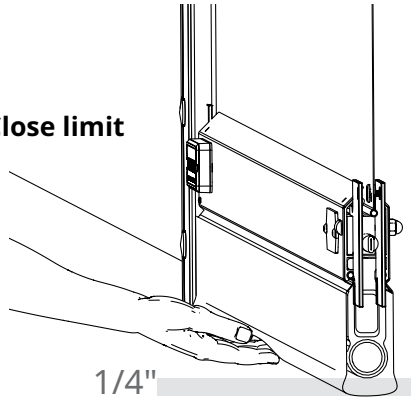
The heights where the door stops while opening and closing, called the **open and close limits** of the door, are set through a programming sequence at the controller.

The limits should be checked periodically and adjusted if necessary.

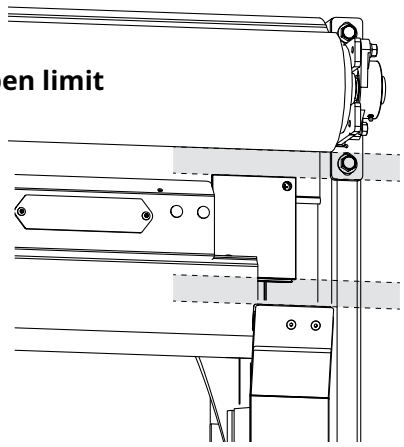
The **close limit** should be set so that the loop seal dimples slightly against the floor when the door is at the fully closed position.

The **open limit** should be set as show here. This position if required for the door ajar breakaway system to operate correctly.

Close limit



Open limit



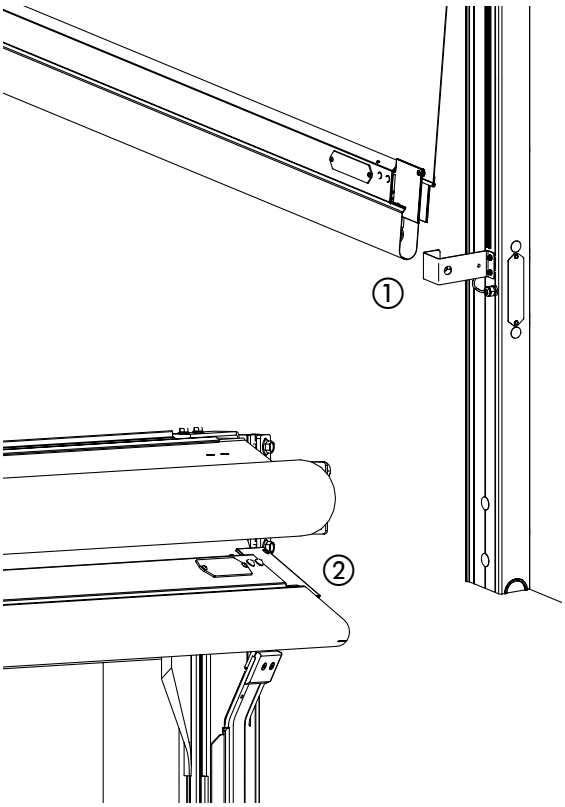
The door ajar breakaway system

The PredaDoor door panel is designed to be easily refed if it is accidentally knocked out of the drive track.

If the door panel is struck hard enough to knock it out of the track ①, the door stops.

All that is required to put the door back into operation is to make sure both end tabs have been removed from their tracks, position the door panel against the front of the side columns, and jog the door to the fully open position.

The bottom bar passes over the refeed guide ②, drops back into the door track, and the door automatically returns to service.



The obstruction detection systems

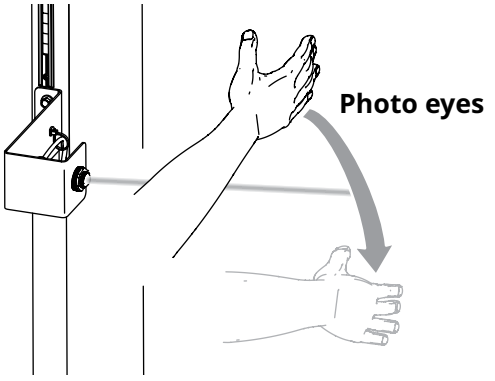
The standard PredaDoor installation includes two obstruction detection systems which stop, then reverse the door if they are activated.

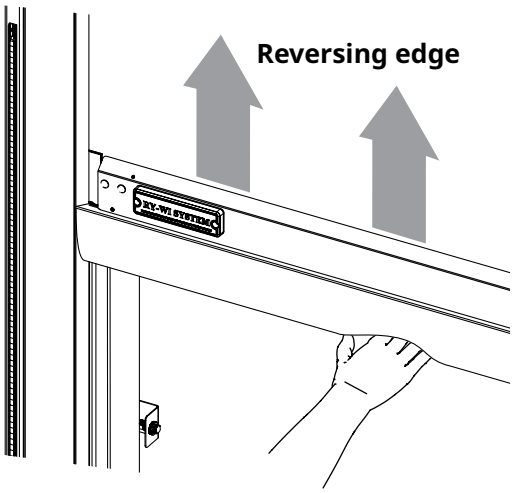
The **photo eyes** ① stop, then reverse the door when a potential obstruction crosses the beam in front of, or to the rear of, the door opening. They then hold the door open until the obstruction is removed.

The front photo eyes are field installed into the side columns at a height of three feet. The rear photo eyes are field installed into the rear wall around the door opening at a similar height.

The **reversing edge** is attached to the bottom bar under the loop seal. It runs the length of the bottom bar.

If the edge hits an obstruction, it actives a pneumatic switch in the bottom bar to stop, then reverse the door. The door then cycles normally and closes.





SAFETY

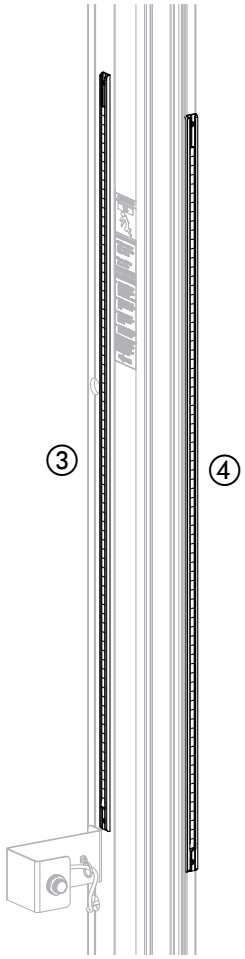
The alert system

The **Pathwatch LED strips**, mounted on both side columns, alert users when the door is active. The strips flash in the following ways:

- **While the door opens or closes:** continuous red
- **Before the door closes:** blinking yellow for three-seconds

One set of Pathwatch strips are mounted on the front of the side columns ③, and the other is mounted on the side of the columns ④, behind the door panel.

Your installation may also include other optional detection or alert devices.



Safety information and the meaning of signal words

Summary

Technical content produced by Rytec includes safety information which must be read, understood and obeyed 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.

The safety alert symbol identifies a situation that can result in personal injury. The accompanying signal word indicates the likelihood and potential severity of the injury. The meaning of the signal words are as follows:

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Caution indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Safety icons used in this manual

The safety icons used throughout this manual indicate the hazards listed in the boxed text shown here.

⚠ WARNING

CRUSH AND BODY CRUSH HAZARD

BEFORE WORKING ON THE DOOR:

- **Make sure the high voltage fused disconnect** has been set it to the OFF position and a lockout/tagout has been performed.

WHEN WORKING ON THE DOOR:

- **Make sure** the door panel is secured at all times, proper procedures and safety measures are followed, and tools meet recommended specs.

FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY

⚠ WARNING

FALLING HAZARD

- **Make sure ladders and scissor lifts** have the correct load rating and are of sufficient height to safely access the door head assembly.
- **Follow all** safety instructions.

FAILURE TO COMPLY COULD RESULT IN DEATH OR SERIOUS INJURY

⚠ CAUTION

CRUSH HAZARD

KEEP HANDS CLEAR OF PINCH POINTS

- **Be aware** of potential hazards if you place your hands in places where you cannot see them.
- **Make sure** all proper procedures and safety instructions are followed.

FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY

⚠ WARNING

CUT AND BLADE HAZARD

KEEP HANDS CLEAR OF ALL BLADES AND SHARP EDGES

- **Be aware** of potential hazards if you place your hands in places where you cannot see them.
- **Make sure** all proper procedures and safety instructions are followed when operating power tools.

FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY

⚠ WARNING

FORK LIFT

- **Make sure** fork lift operators are certified for the lift in use, that the forklift is rated for at least the Rytec® standard of 4,000 pounds, and that non-service personnel are clear of the work area.
- **Follow** all proper procedures and safety instructions.

FAILURE TO COMPLY COULD RESULT IN DEATH OR SERIOUS INJURY

Additional safety icons used in this manual

General hazard

Shock hazard

Perform lockout/tagout

Operational and maintenance safety

Operational precautions

Observe these precautions while using the door.

- Make sure that all individuals who use the door have been informed about the correct use of the door and all activating devices, and that they understand all safety devices for the door.
- Make sure that only individuals who are trained, qualified and authorized can access the control system, system software and control parameters.
- Do not run through the door opening or attempt to cross the threshold before you are able to do so while walking fully upright.
- Do not drive a vehicle through the door until the door is completely open and has stopped moving.
- Do not climb on or hang on the door.
- Do not touch any part of the door or door frame while the door is opening or closing.
- Only operate the door at the approved supply voltage.
- If the door is to be kept open for a sustained period of time, use the control system to put the door in jog mode, and jog to the desired height. For servicing, set the door to the open position, then set the power disconnect to the OFF position and perform a lockout/tagout. Make sure all personnel are informed that the door is not operational during this time.
- Safety devices must not be modified or put out of services. Do not use the door if there is any indication that a safety device is not operating correctly.

Maintenance precautions

Observe these precautions while performing maintenance on the door.

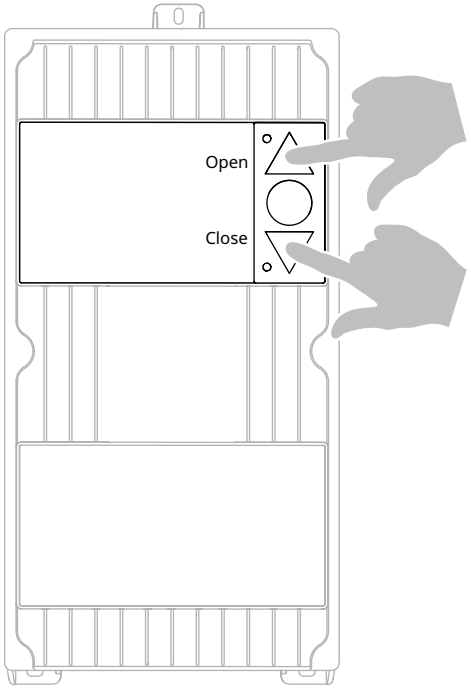
- Maintenance of the door and the control system is to be done by trained, qualified and authorized individuals only.
- Make sure all routine maintenance is performed as scheduled in the instructions for the door.
- Make sure the power disconnect is set to the OFF position and a correct lockout/tagout procedure has been performed before servicing any component of the door that is powered by the control system.
- The control system includes components that remain charged after the power has been disconnected. Do not open the control box until at least 5 (five) minutes have elapsed after power is disconnected.
- Do not pass through or stand in the door panel pathway while the door is being serviced.
- Make sure you have and use all required Personal Protective Equipment.
- Make sure that you are aware of the location of all power lines, piping and HVAC systems within the work site.
- Make sure all components and hardware used to service the door are approved by the manufacturer.

Other icons used in this manual

IMPORTANT	Indicates instructions which, if not followed, could result in **damage to the door** or **voiding of the warranty.**
INSIDER'S TIP	Indicates **best practice.** This is how Rytec Technical Support does the job.

How to open and close the door using the System 4 controller

The System 4 controller should be installed within sight of the PredaDoor door.

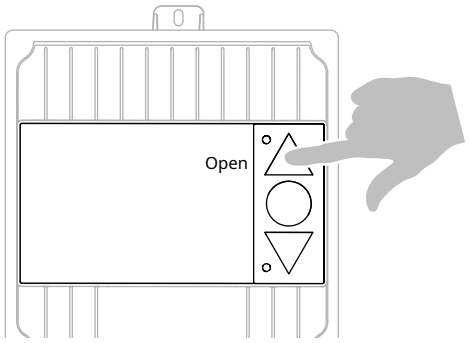


- **Press the UP arrow** to manually open the door.
- **Press the DOWN arrow** to manually close the door.
  Under normal operating conditions, the door should always close automatically.

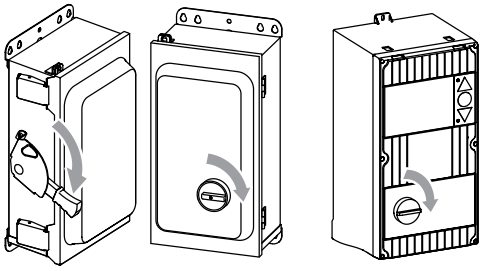
Under normal operating conditions, it should not be necessary to use the System 4 controller. Rytec offers a wide range of automatic and manual activators designed to fit the specific requirements of the installation. Call Rytec Technical support at **800-628-1909** if you have questions about the activators for your door.

How to hold the door open

1 **Press the UP arrow** to open the door.



2 **Turn the disconnect switch** to the OFF position. The switch may be located on the System 4 controller or on an external disconnect.



Fused disconnect

System 4 controller

3 **Perform a lockout/tagout.**

⚠ CAUTION

Make sure all users of the door are informed when the door is out of service, and when it is put back into service.

OPERATION

How to open and close the door manually

1

NOTE: *if motor is covered, use a 7/16" socket or #1 Phillips head screwdriver to remove the motor cover.*

Remove the cover plug at the bottom of the motor ①.

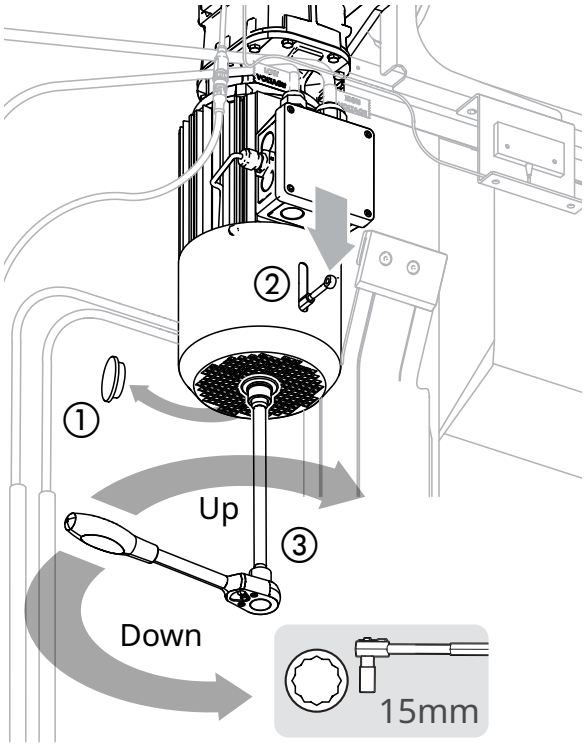
Press down on the brake release lever ② to release the brake.

Insert a 12-point 15mm socket into the bottom of the motor ③ and engage the manual axle.

Turn the wrench to move the door panel:

- **Clockwise** to raise the door panel
- **Counterclockwise** to lower the door panel

Release the brake release lever when the door panel is at the desired height. Remove the socket and **replace** the plug.

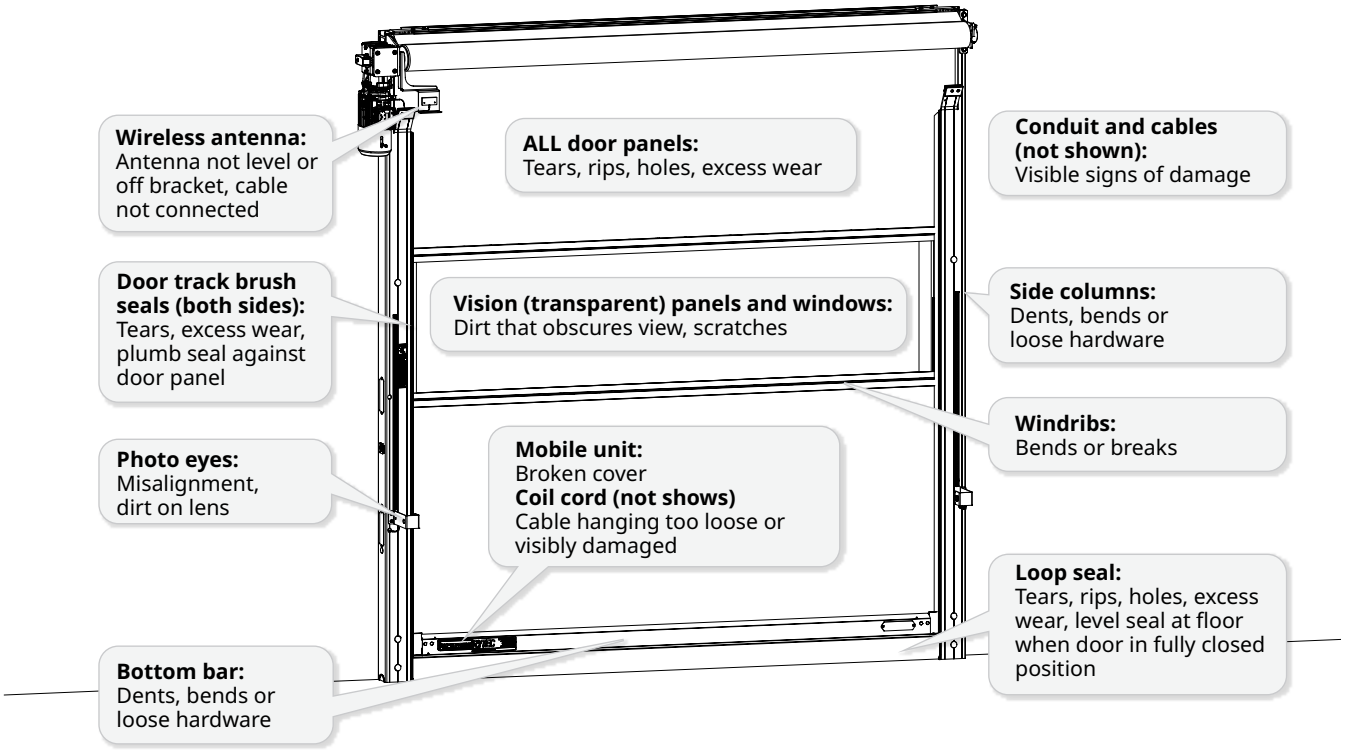


Recommended inspection and maintenance schedule

Action	Daily	Quarterly
Inspect visually for damage: door panel, side columns, bottom bar, loop seal, wireless antenna/coil cord, cables and conduit	■	
Test door operation	■	
Test reversing edge	■	
Test photo eyes; clean if necessary	■	
Inspect and clean transparent panels	■	
Check condition of safety labels		■
Visually inspect controller, cabling and conduit		■
Inspect hardware; tighten where necessary		■
Visually inspect the reversing edge and door ajar breakaway pneumatic switches and bottom bar wiring		■
Visually inspect the brush seal in head assembly		■
Lubricate bearing		■
Inspect anchoring; tighten where necessary		■
Check open and close limit; adjust if necessary		■
Test photo eyes; clean or realign if necessary		■
Test reversing edge and door ajar breakaway systems; adjust if necessary		■
Test brake and brake release; adjust brake if necessary		■
Perform or schedule routine or required maintenance		■

Daily maintenance - perform daily

Daily visual inspection: where to look and what to look for



⚠ CAUTION

Immediately take the door out of service and perform a lockout/tagout if any of the door systems are not working properly.

1. **Inspect** the side columns and head assembly for signs of damage or signs of excessive wear.

2. **Inspect** the door panels, bottom bar, loop seal and reversing edge for damage or signs of excessive wear.

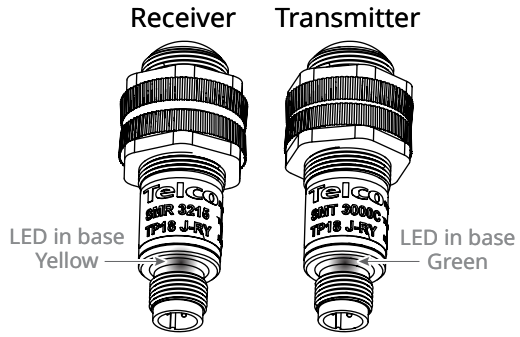
3. **Activate** the door using each activating system. **Run** the door through at least three cycles for each system.
   - **Make sure** the door panel rises to the fully open position, remains in place for the standard time, and then closes to the fully closed position.
   - **Make sure** the reversing edge is level when the door is fully closed.
   - **Repeat** for each activating device.

4. While the door cycles, **look and listen** for:
   - **Unusual noises** such as grinding, whining or excessive motor noise
   - **Changes in door speed** from one cycle to the next. **NOTE:** The door motion should accelerate, then decelerate, during a normal run up or down.
   - **Excess movement** by the motor, drive or door panels.
   - **Unexpected delay** in activation or unusually long time period before automatically closing.

5. On non-wireless doors, **inspect** the coil cord for signs of damage or excess stretching.

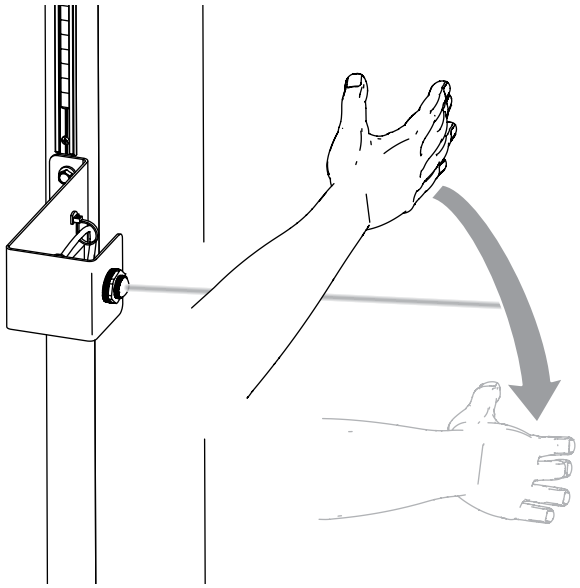
6 **Check** the LED lights in the front and rear transmitters and receivers.

- **Transmitter:** green light indicates it is operational.
- **Receiver:** yellow light indicates it is correctly aligned with the transmitter.



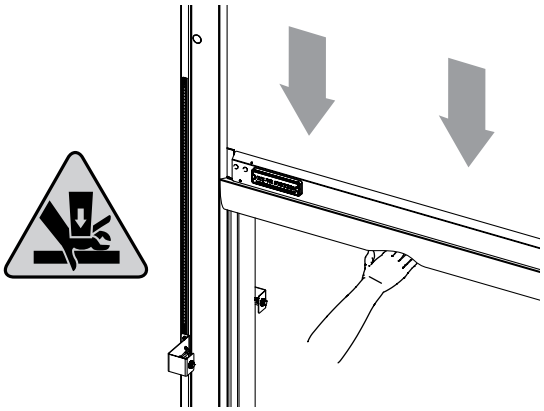
7 While the door is closing, **break the beam** on each set of photo eyes.

- **Door should stop, reverse,** and stay open as long as the obstruction remains in place.
- **Door should only close** when the obstruction is removed.



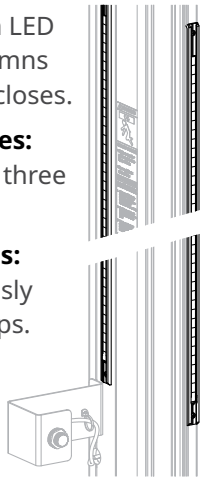
8 **Place your hand** in the path of the closing door panel, above the photo eye beams, and allow the reversing edge to hit it.

- The door panel should stop, reverse, then run through the delay timers and close normally.



9 **Observe** the Pathwatch LED strips on both side columns as the door opens and closes.

- **Before the door closes:** strips flash yellow for three seconds.
- **While the door closes:** strips glow continuously red until the door stops.



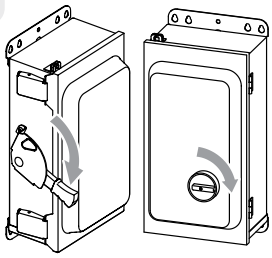
Daily cleaning - if required

1 **If a photo eye is dirty,** Use a clean, soft cloth and household window cleaner to clean the lens.

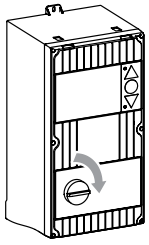
2 If the door has a **clear panel or clear windows,** check that you can see clearly through them and the view is not obstructed of distorted by dirt or grease. **Clean if necessary.**

3 If a panel or window requires cleaning:

1: Turn off power to the door until the cleaning is complete by setting the disconnect to the OFF position and performing a lockout/tagout.



Fused disconnect



System 4 controller

2: Use a mild non-abrasive solution of soap and warm water.

3: Grease or oil-based buildup may require using a commercial grade cleaner/degreaser.

4: Apply the cleaning solution to the dirty area by spraying, or with a damp microfiber cloth.

5: Reapply until the dirt is removed or the grease breaks up.

6: Rinse lightly with a water spray, then **wipe down** with a clean, damp microfiber or lint-free cloth.

7: Use a clean and dry microfiber or lint-free cloth to dry the cleaned area.

8: When the area is dry, **restore** power to the door.

4 This cleaning procedure should also be followed if a **solid panel** on the door requires cleaning.

Quarterly maintenance

Contact Rytec Technical Support at **800-628-1909** or e-mail **rytec.helpdesk@nucor.com**

IMPORTANT if you have any questions at any time during service of the door. **See page 6** for a list of Rytec terms.

If you find, during inspection and testing, **that parts need to be replaced,** you will find instructions for the most common maintenance procedures later in this manual.

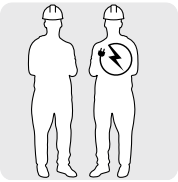
Safety

Read the Safety section beginning on page 8 before performing any service on the door.

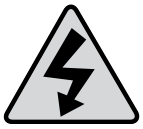
Requirements – Site Conditions

- Service techs must have unrestricted access to the door opening at all times during the service.
- Make sure there is no pedestrian or vehicular traffic within the service area for the duration of the service.

Requirements – Staffing



- A licensed electrician is recommended for making any changes to the electrical connections for the door.
- Refer to the *Rytec System 4® Drive & Control Installation & Owner's Manual* for a complete list of the electrician's responsibilities.



⚠ WARNING

Electrical work must meet all applicable local, state and national codes.

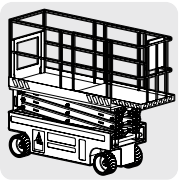
Failure to wire the door correctly can cause shock, burns or death to the people who install, use or service the door.

Failure to comply also voids the warranty for the door.

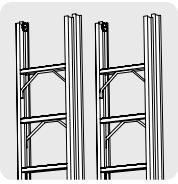
Requirements – Lifts

⚠ WARNING

Follow all safety instructions on all lifts and ladders used for this installation.



- **Scissor lift** that meets the following specifications:
  - Can hold all service techs
  - Minimum height ability: door height

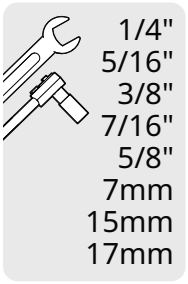


- **Alternatively, ladder(s)** of sufficient height to safely access the door head assembly

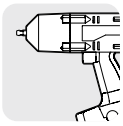
Required tools and supplies

Additional tools may be required to perform maintenance after inspections and tests have been done. They will be called out as they are needed.

Phillips screwdriver



Socket or open wrench

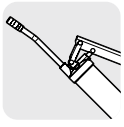

Impact wrench or power drill


Carpenter's level

Hex wrench

(2) Sockets or wrenches needed


Multimeter


Grease gun

Quarterly maintenance - visual inspections and tightening hardware

Before you start: rules of thumb for tightening hardware on Rytec doors

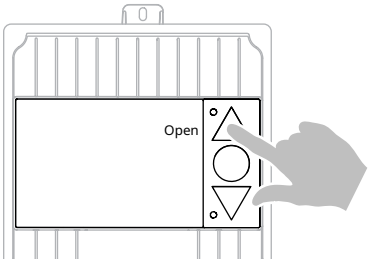
- Do not tighten hardware **unless you can feel that it is loose**, and you can rotate it by hand.
- **Do not overtighten:** tighten only until hardware cannot be rotated with your fingers.
- **Power tools** can be used to loosen hardware, such as the tek screws in the metal hood cover, but **should not be used to tighten.**
  - Some bolts connect to riveted nuts, which can be pulled loose by power tools.


NO POWER TOOLS
Rivnuts in use

1 **Perform** all steps of the daily inspection.

Perform any required cleaning.

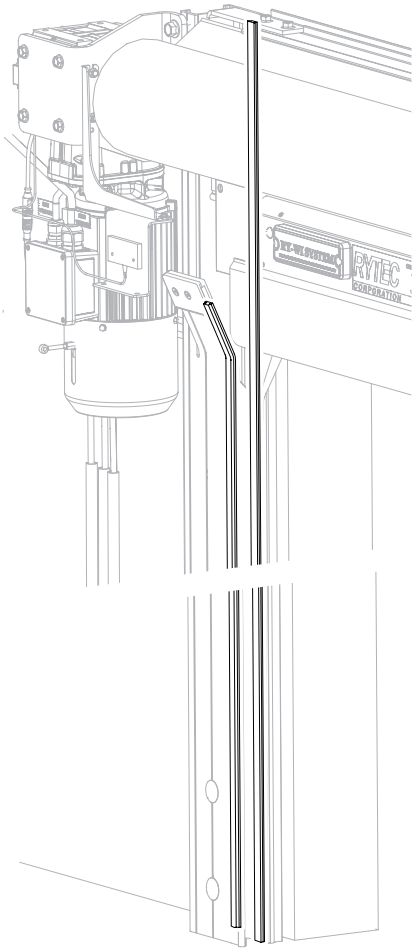
2 **Press** the OPEN button to move the door to the fully open position.



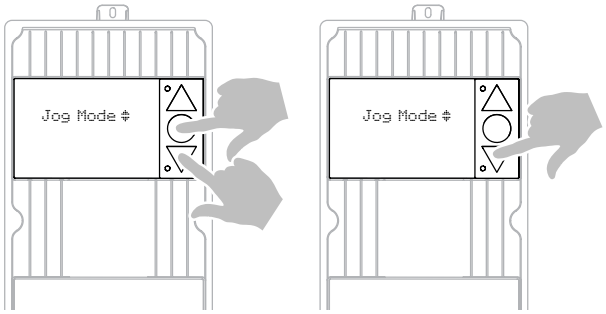
3 **Inspect** the rubber wear strips on either side of the door track.

Complete this inspection later, when you are inspecting components in the head assembly.

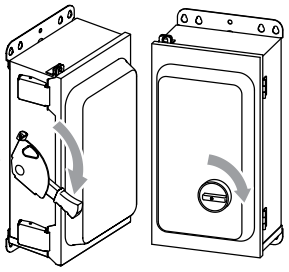
Check for cracks, tears, and signs of excess wear. **Replace** if necessary.

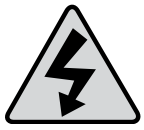


4 **Jog** the door down to a comfortable working height, then **shut off power to the door** and perform a lockout/tagout until all inspections are complete.



Fused disconnect





⚠ WARNING

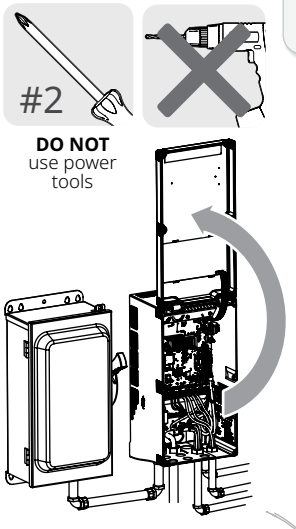
Set the disconnect switch to the OFF position and perform a lockout/tagout of the high-voltage disconnect before opening the controller. **This MUST be done at the fused disconnect, even if there is a disconnect switch on the controller.**

Then wait 5 minutes after performing the lockout/tagout before opening the controller.

Do not set the disconnect switch to the ON position until the controller has been closed and the cover secured.

Failure to comply could result in shock, burns or death.

5 **Loosen** the six capture screws, **open** the front cover and **inspect** the inside of the controller.

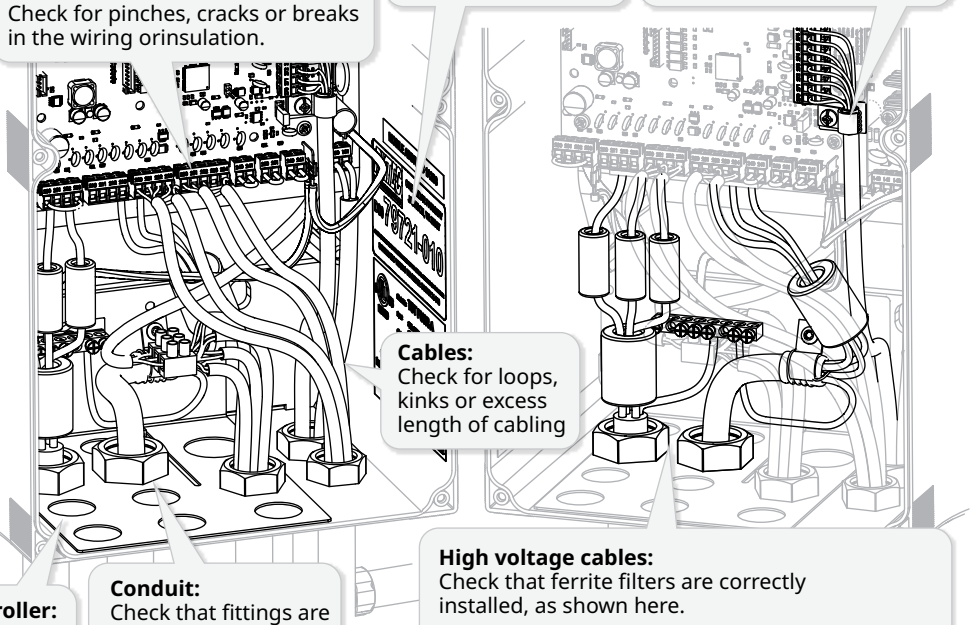


Wires:
Tug lightly at terminal connections to make sure they are securely set.

Check for pinches, cracks or breaks in the wiring orinsulation.

Labels:
Check that door serial number matches number on door

Encoder cable:
Check that the P-clip makes a secure connection to cable and drain wire.



Cables:
Check for loops, kinks or excess length of cabling

Floor of controller:
Make sure it is free of rust, corrosion or water

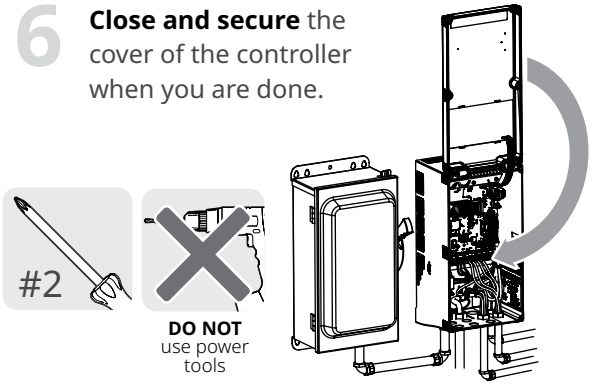
Conduit:
Check that fittings are tight and conduit is secure against wall

High voltage cables:
Check that ferrite filters are correctly installed, as shown here.

Check that wires are securely set in terminals and grounding bar.

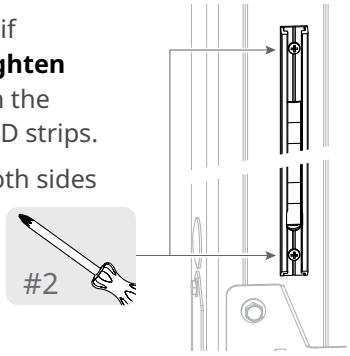
Check that the P-clip makes a secure connection to the motor cable, copper sheath and drain wire.

6 **Close and secure** the cover of the controller when you are done.



7 **Inspect** and, if necessary, **tighten** the screws on the Pathwatch LED strips.

Do this on both sides of the door.

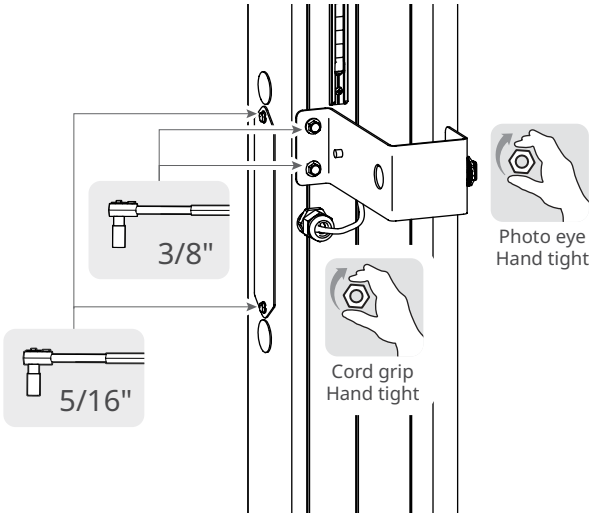


8 **Check** the hardware on the photo eyes and side ports on both side columns.

Also **check** that the photo eyes are tight in their brackets.

Check that the cord grip is tight. .

Rear photo eye anchoring hardware will vary by installation.



INSIDER'S TIP

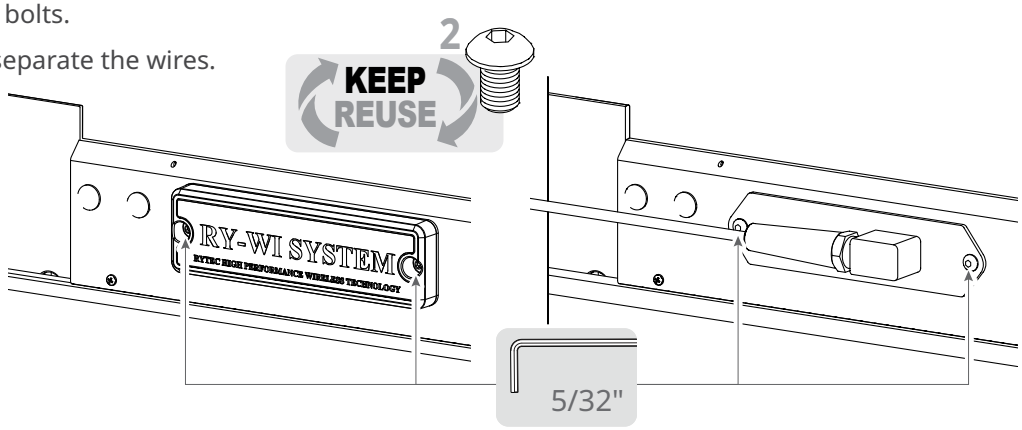
It is easier to work on the bottom bar and the wires inside if you have a work surface at working height to place the covers on when you remove them.

9

Remove the cover from the drive side of the bottom bar to reveal the pneumatic switch for the door ajar breakaway system, as well as the wires and hoses inside the bottom bar.

Retain the bolts.

Carefully separate the wires.



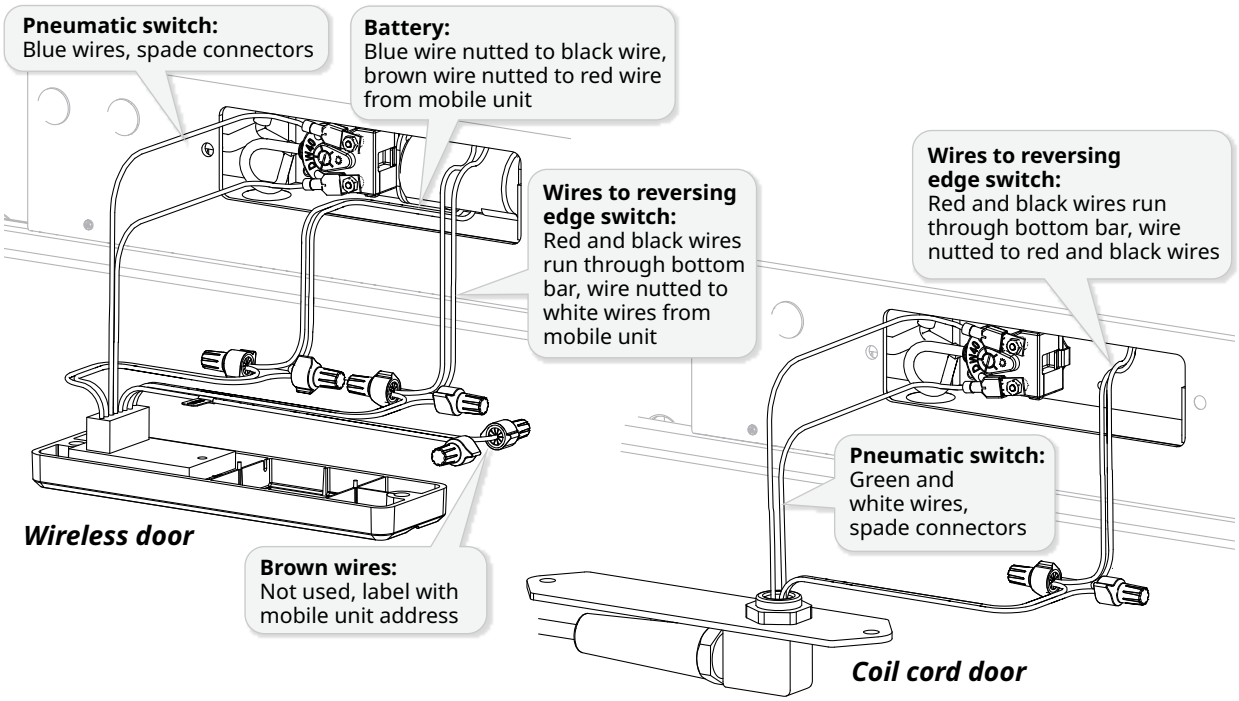
10

Inspect the inside of the bottom bar for water, excess dirt or corrosion.

Check that all wire connections between the mobile unit or coil cord are correct and all wires are securely wire nutted, all wire connections are clean and wires are free from damage.

- **Strip** wires and **reinstall** into wire nuts if required.

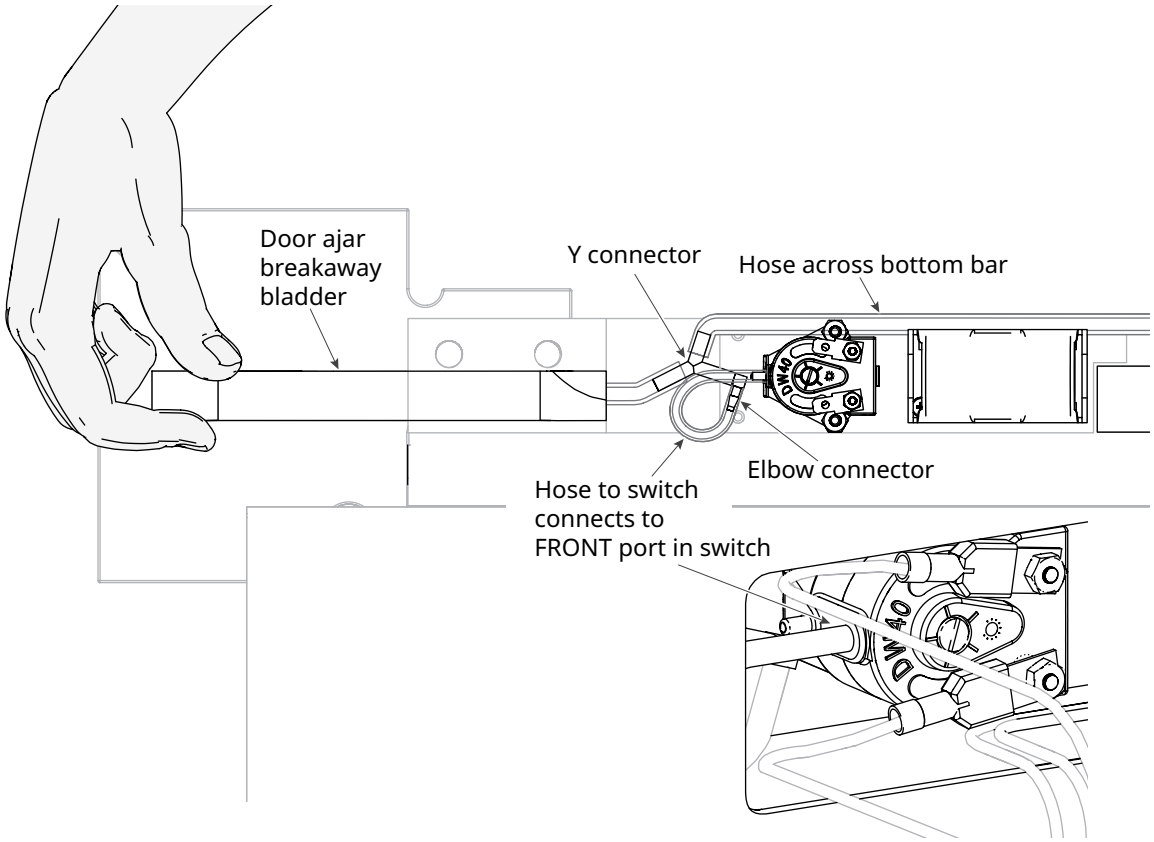
NOTE: wires in actual door will be considerably thinner than shown here.



11 **Check** all hose connections to make sure they are correctly configured and tight.

Reach into the side column, between the end tabs, and squeeze the door ajar breakaway bladder. You should feel resistance, indicating the bladder is intact.

Make sure the hose connection to the pneumatic switch is to the FRONT of the two ports at the back of the switch.

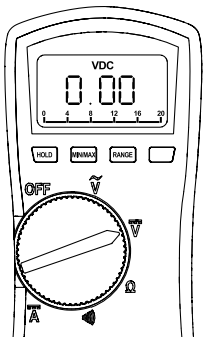


IMPORTANT

Checking the voltage on the wireless battery should be a standard part of any service call for a wireless door.

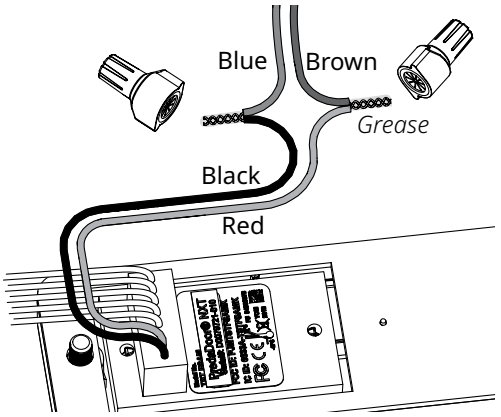
The multimeter used to check the voltage on the wireless battery must have a display that shows at least two decimal places.

Multimeters that **show just one decimal place** may round up and give an incorrect reading.



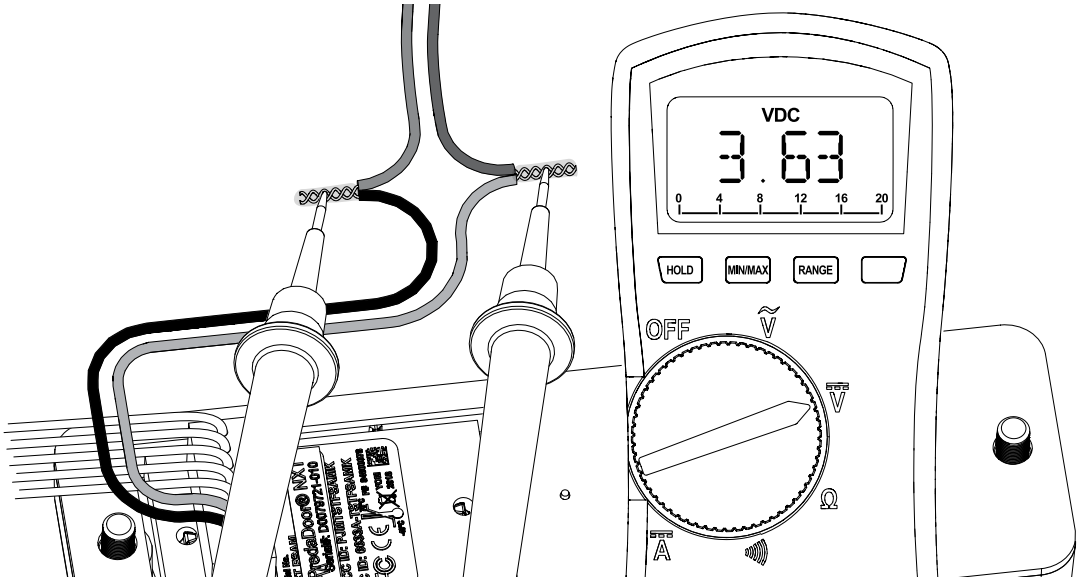
12 **To check** the voltage on the battery (wireless doors only), remove the wire nuts connecting the blue/black and brown/red wires.

- **Make sure** the wires are securely twisted.
- The wires should be coated in a **dielectric grease** that facilitates current flow. **DO NOT wipe the grease off.**



13 **Set the multimeter** to DC voltage, **make sure** the user interface is set to display at least two decimal places, and **touch the probes** to the exposed wires.

- **3.61 volts is the minimum** acceptable reading.
  - If you get a reading of 3.61 volts or higher, simply **retighten** the wire nuts.
- **3.60 volts or lower** means the battery should be replaced. This is the case, even though the battery is listed as a 3.60 volt battery.
  - **Battery is held in the bracket** by friction and can be popped out and replaced. **Trim** new wires and **twist** securely to the wires in bottom bar, blue to black and brown to red. **Retain** as much dielectric grease as possible. **Reinstall** the wire nuts.



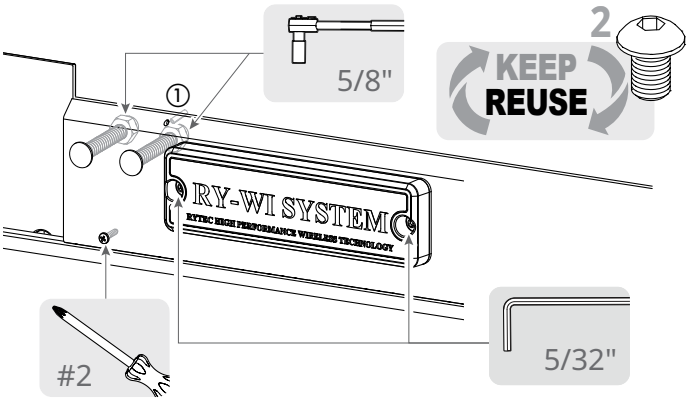
14

Carefully wrap the wires so they will not be pinched or crimped when the Ry-Wi or coil cord cover is replaced.

Then **replace and secure** the cover.

Tighten the other hardware on the drive side of the bottom bar, if required.

Make sure the roll pin ① securing the door panel to the bottom bar is tightly in place.

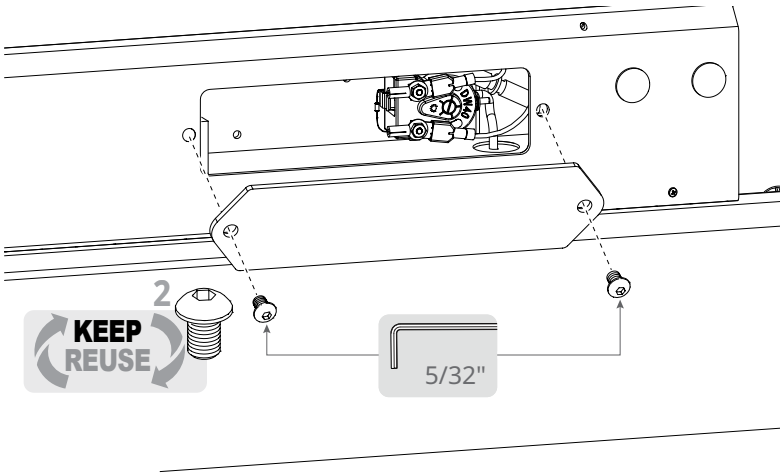


15

Remove the cover from the non-drive side of the bottom bar to reveal the pneumatic switch for the reversing edge, as well as the wires and hoses inside the bottom bar.

Retain the bolts.

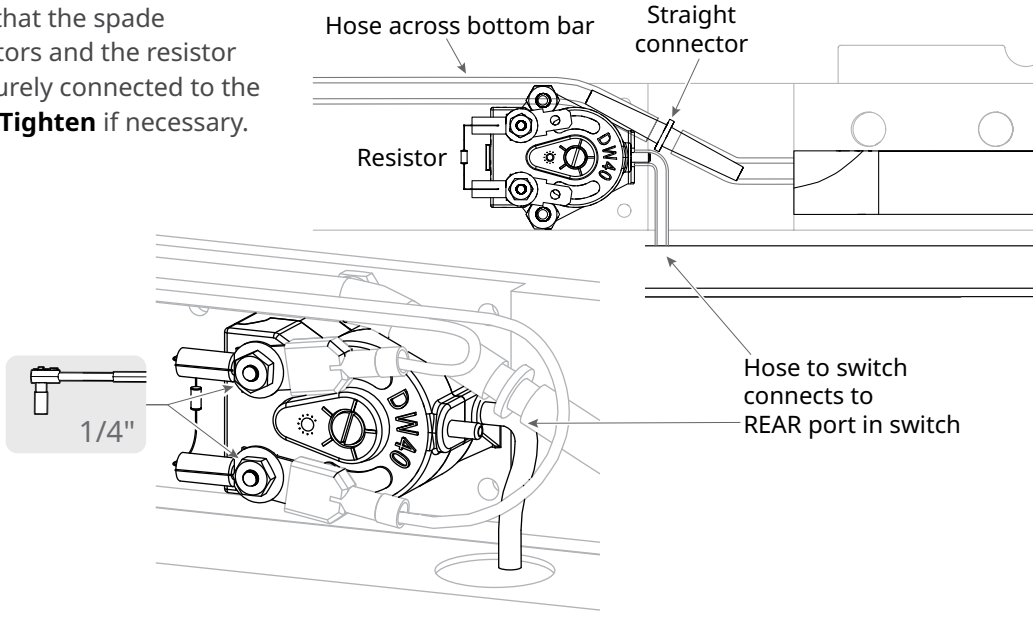
Inspect the inside of the bottom bar from the non-drive side for water, excess dirt or corrosion.



16

Check that all hose connections are correctly configured and tight. **Make sure** the hose connection to the pneumatic switch is to the REAR of the two ports at the back of the switch.

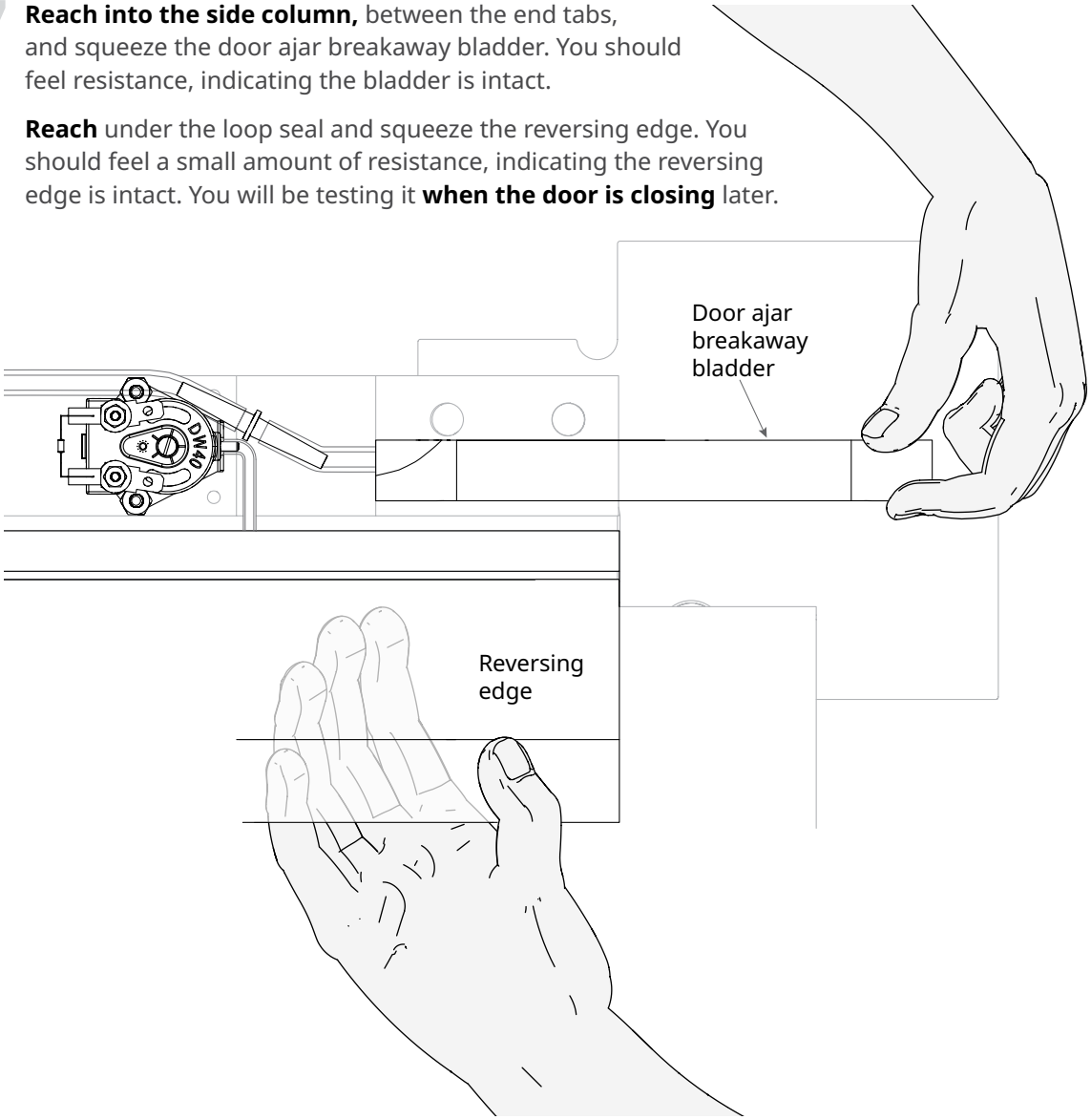
Check that the spade connectors and the resistor are securely connected to the switch. **Tighten** if necessary.



17

Reach into the side column, between the end tabs, and squeeze the door ajar breakaway bladder. You should feel resistance, indicating the bladder is intact.

Reach under the loop seal and squeeze the reversing edge. You should feel a small amount of resistance, indicating the reversing edge is intact. You will be testing it **when the door is closing** later.

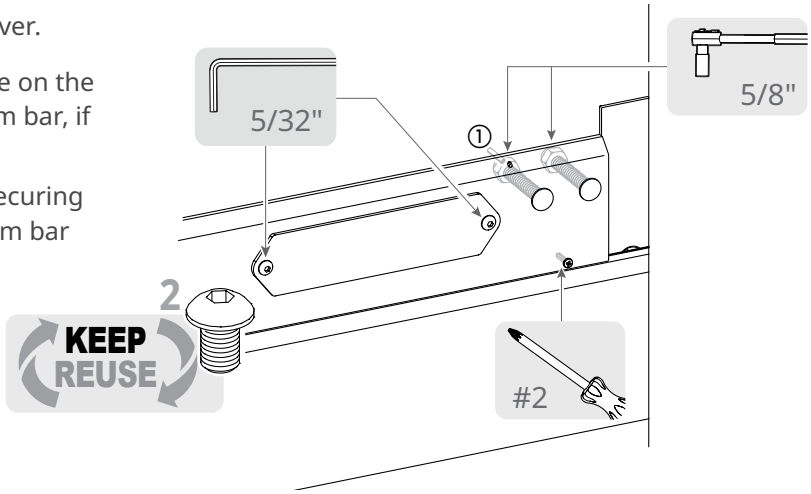


18

Replace and secure the cover.

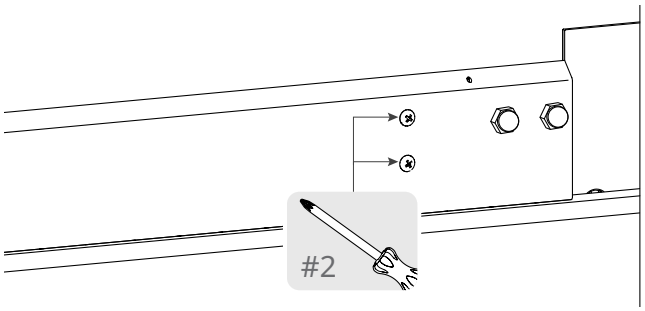
Tighten the other hardware on the non-drive side of the bottom bar, if required.

Make sure the roll pin ① securing the door panel to the bottom bar is tightly in place.



19 **Check,** and if necessary **tighten,** the two screws on the rear of the bottom bar that secure the end tab assemblies.

Do this on both sides of the bottom bar.



IMPORTANT

On doors with hood covers and motor covers, it will be necessary to remove the motor cover and side panels of the hood cover to access, inspect and adjust the head assembly components.

Metal hood covers

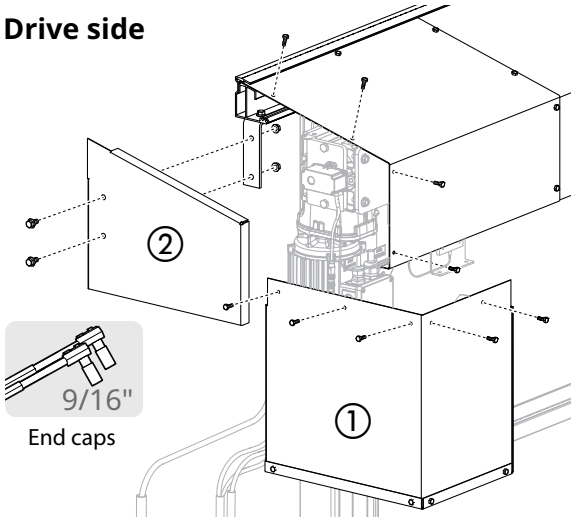
① If there is a motor cover, **remove** the five 7/16" self-tapping screws. Then the cover can be **removed intact.**

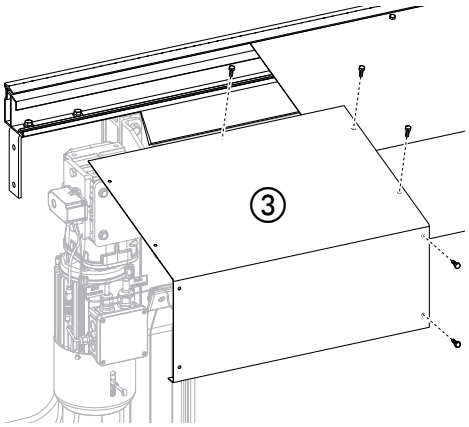
② **Remove** the two bolts and three self-tapping screws, then **remove** the drive side end cap from its mounting bracket.

③ **Remove** the five self-tapping screws, then **remove** the first top panel.

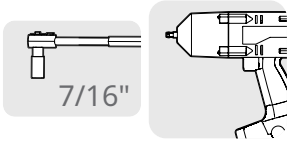
④ On the non-drive side, **remove** the end cap and first top panel.

Drive side

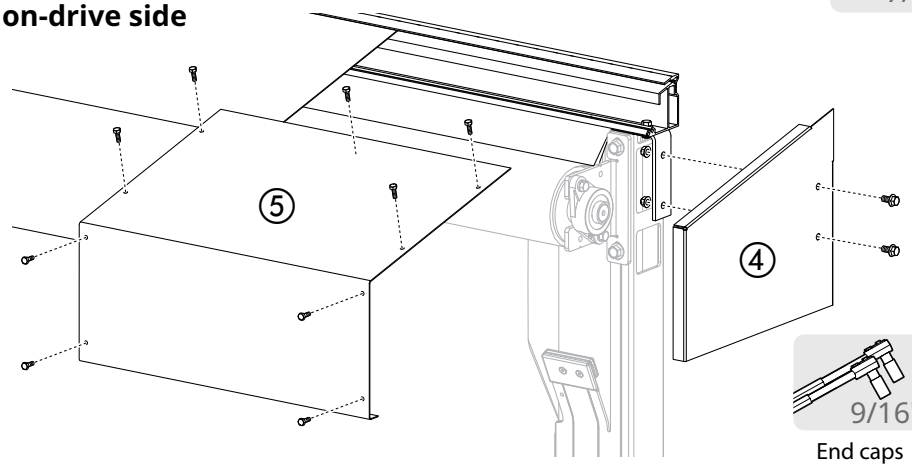




All other panels



Non-drive side



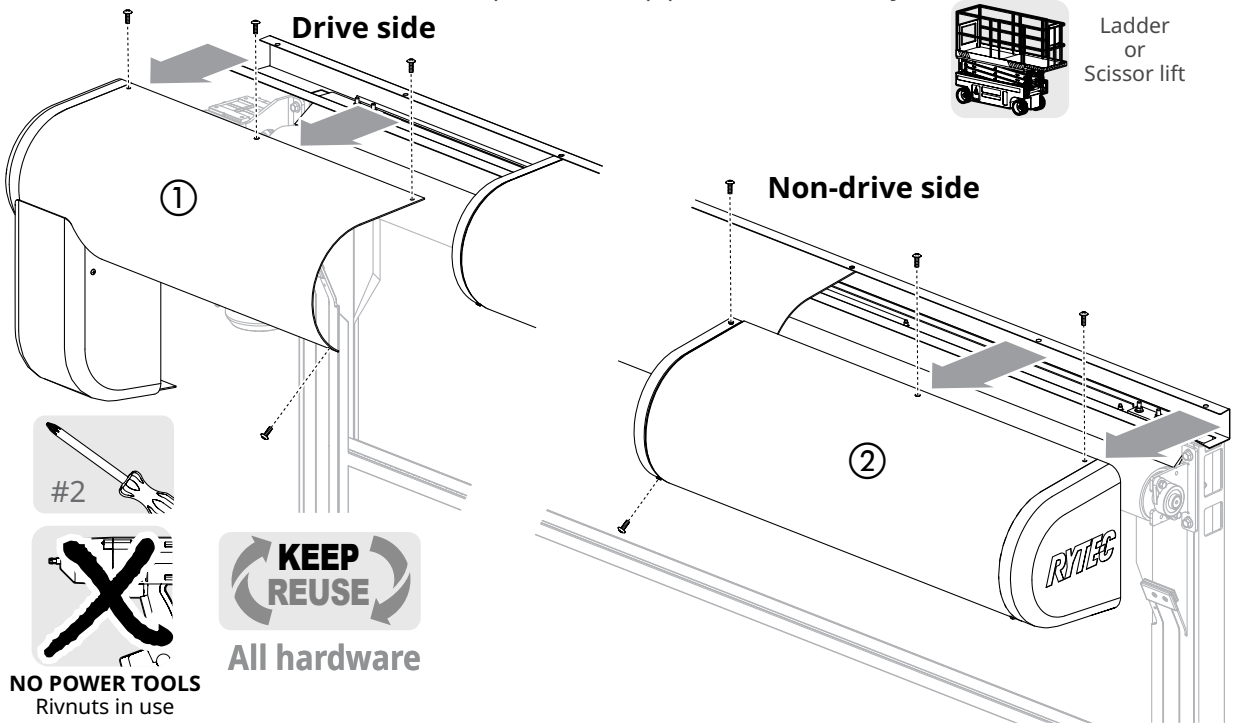
KEEP REUSE

All hardware

Plastic hood covers

① **Remove** the four screws that hold the first panel on the drive side in place. Then the panel, end cap and motor cover (if present) can be **removed intact.**

② On the non-drive side, **remove** the end cap and first top panel the same way.

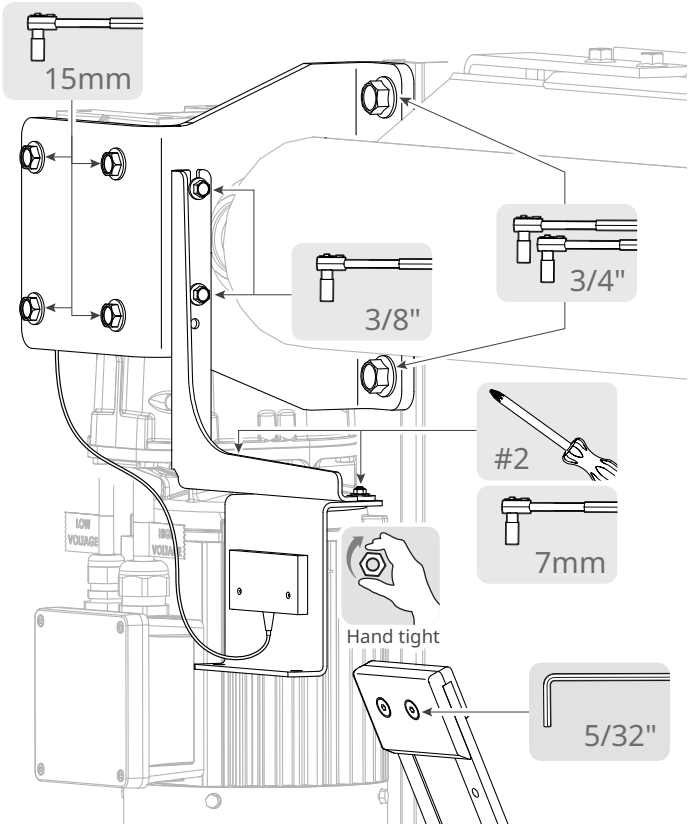


20

Go up to the head assembly.

On the drive side, **inspect**, and if necessary **tighten**, the hardware around the motor:

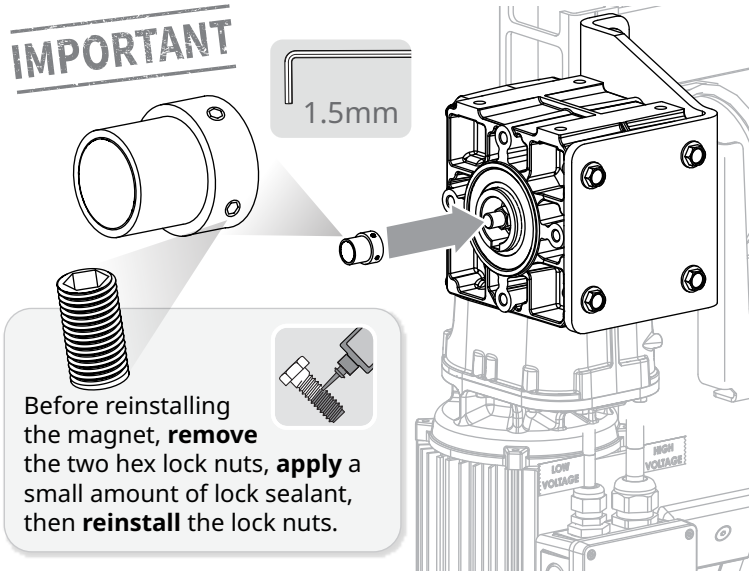
- The four bolts securing the motor to its bracket.
- The two bolt/nut combinations securing the motor bracket to the side column.
- The two bolts securing the wireless antenna bracket to the motor bracket.
- The two bolt/nut combinations that secure the wireless antenna holder to the bracket.
- The two plugs that secure the wireless antenna.
- Also check the two bolts that secure the covers to the refeed guide.
- Finally, finish your inspection of the wear strips.



21 **The ABM motor** currently used on PredaDoors does not require lubricating.

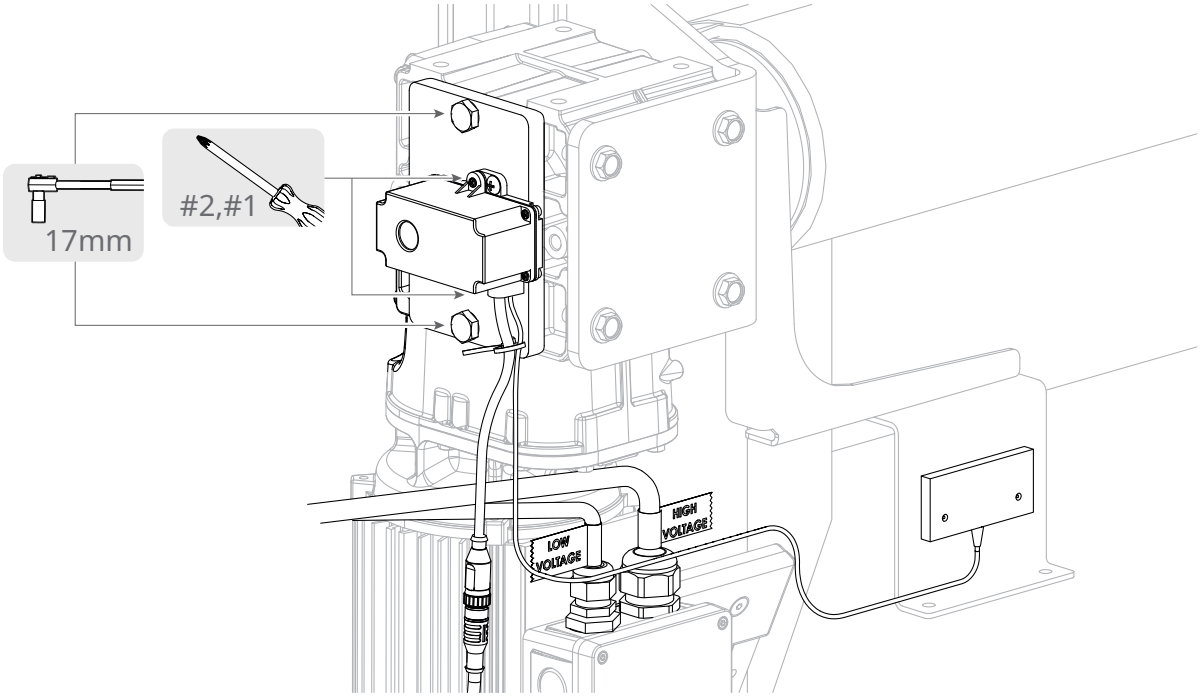
22 **ONLY** do this if the door owner has reported a problem with the door which suggests an encoder issue.

Remove the encoder mounting plate to expose the encoder magnet, then **follow these steps** to tighten the magnet.



23 I**nspect** the hardware and wiring around the encoder, and if necessary **tighten** the hardware:

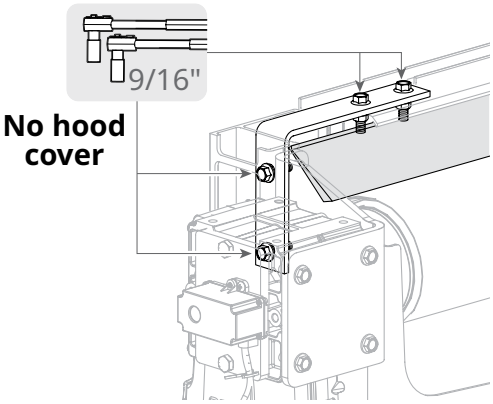
- The two bolts securing the encoder mounting plate.
- The two screws that secure the encoder to the plate, and the six screws that secure the top of the encoder.
- The cable to the wireless antenna, if there is one.
- The cables from the encoder, electromagnetic brake, and motor.

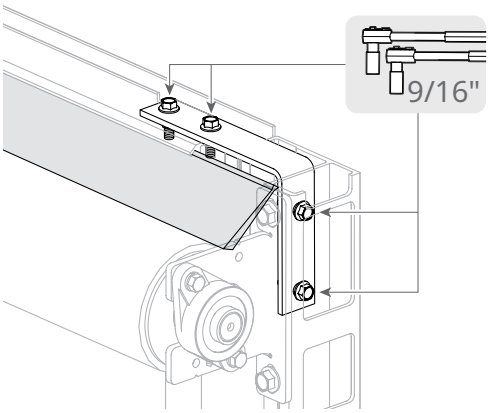


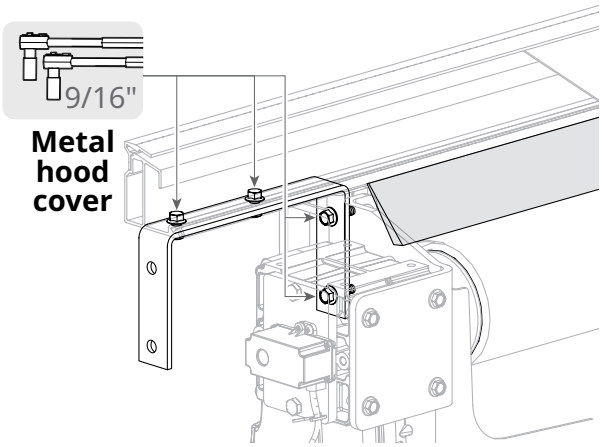
24 I**nspect** and, if necessary **tighten,** the hardware on the brackets for the brush seal:

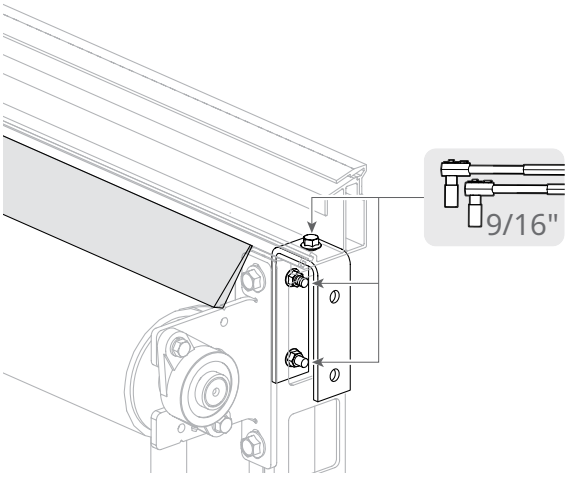
- Reach through the brush seal to access hidden bolts and nuts.
- Also inspect the brush seals. Look for excess wear and damage.

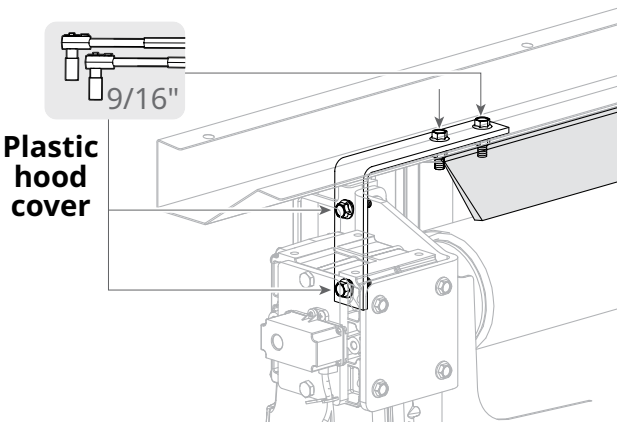
When you've completed the inspection on the drive side, **repeat on the non-drive side.**

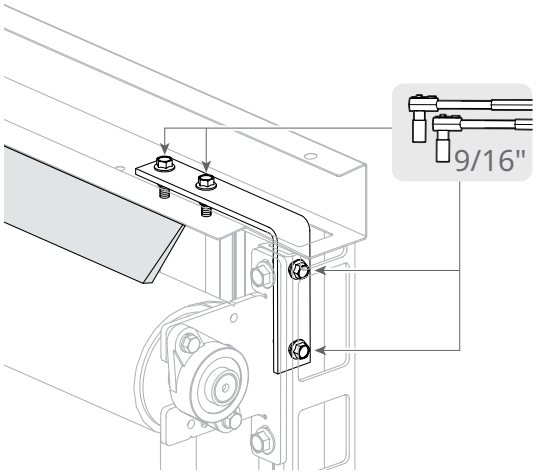










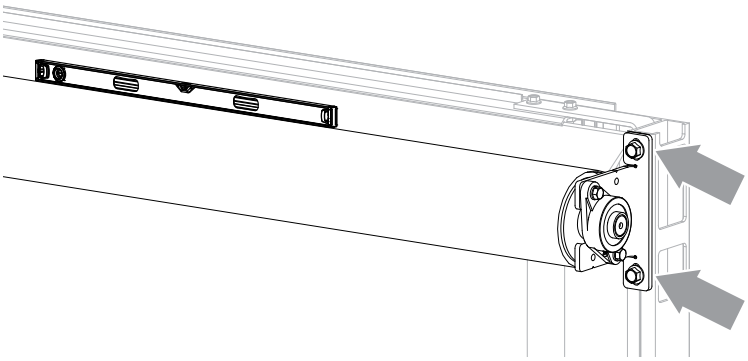


25

Check that the door panel is level where it rolls around the drum.


Carpenter's level

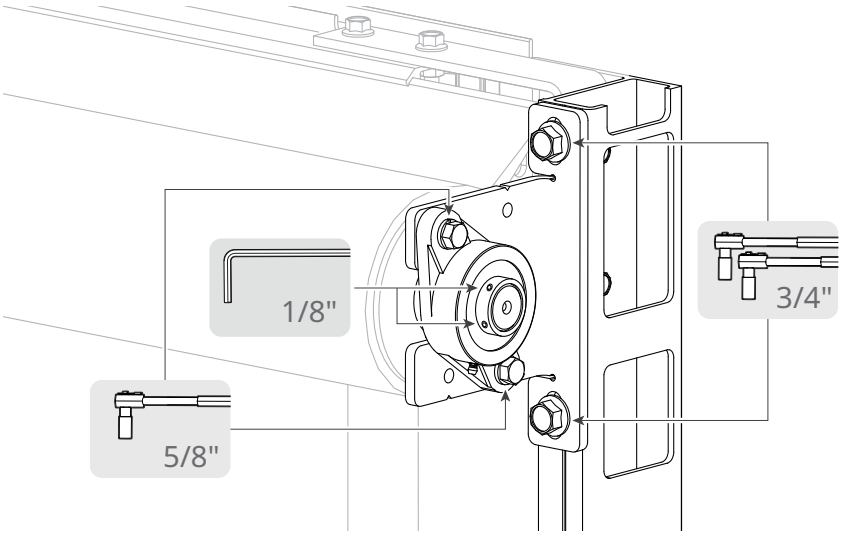
- If necessary, **loosen** the bolts on the bearing bracket (gray arrows) and **adjust** the height of the bearing before tightening them in the next step.



26

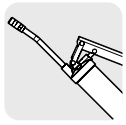
I**nspect** the bearing hardware on the non-drive side, and if necessary, **tighten** the hardware:

- The two hex screws that secure the drum to the bearing.
- The two bolts that secure the bearing to the bracket.
- The two bolt/nut combinations that secure the bracket to the side column.

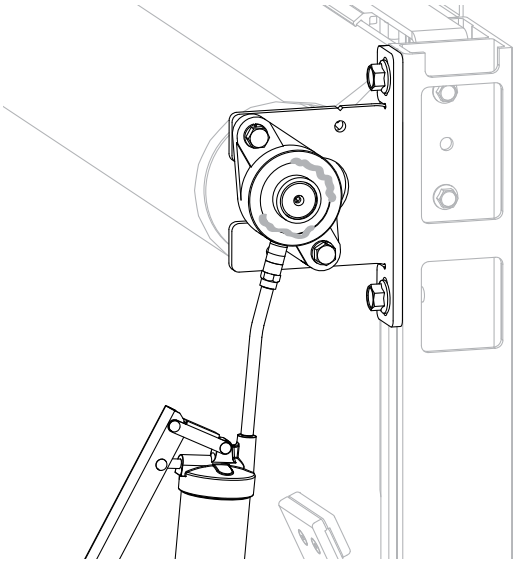


27

Lubricate the bearing at the zerk fitting.


Grease gun

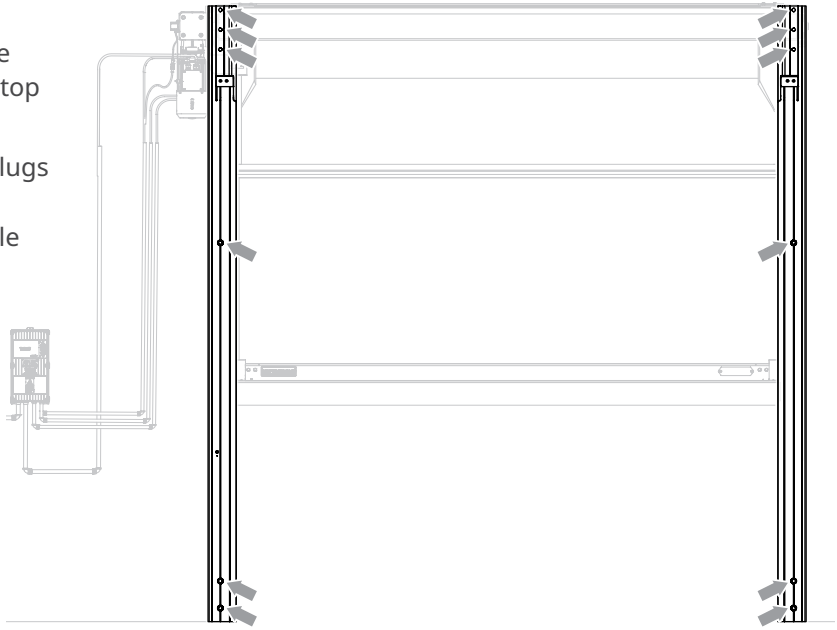
- Recommended lubrication is a lithium-based grease conforming to NLGI Grade 2 standards. It should be medium viscosity, low torque, with an operating temperature range of –30°F to +200°F.
- **Wipe off the old grease** as it is pushed out by the grease from the grease gun.



28

Inspect, and if necessary, **tighten** the anchors in the three anchor holes at the top of both side columns.

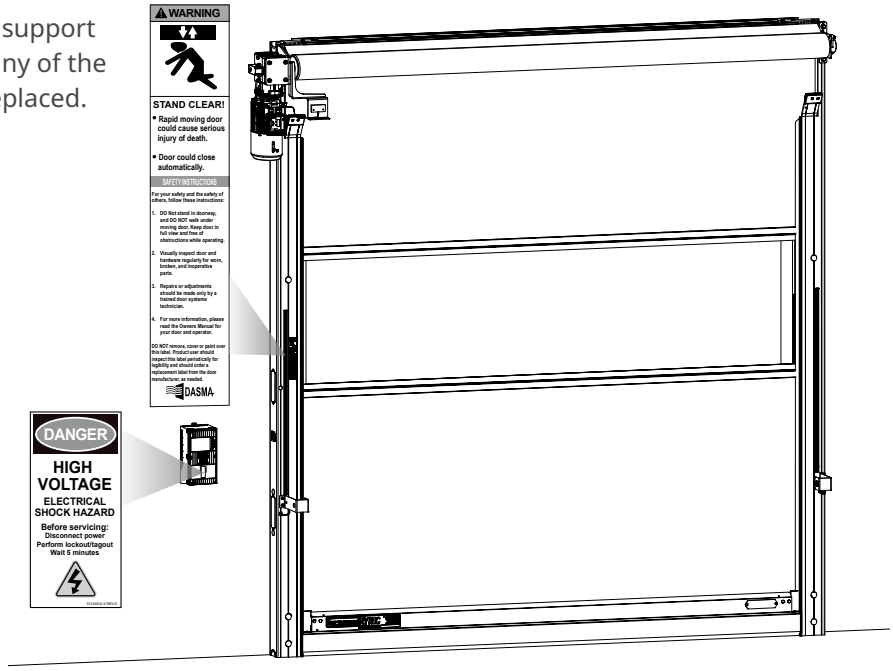
Then **remove** the dome plugs covering the bottom two holes (as well as the middle plug on taller doors), and **inspect/tighten** those anchors.



29

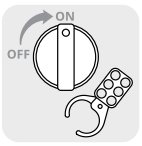
Check the condition of the two safety labels: the DASMA label on the drive side column, and the shock warning on the front of the System 4 control box. **Make sure** both labels have no rips or tears, that they can be clearly seen, and that all text is readable.

Call Rytec technical support at **800-628-1909** if any of the labels need to be replaced.

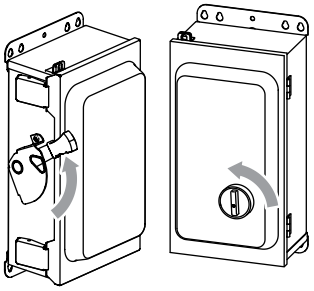


30

Remove the lockout/tagout and **restore** power to the door.



Fused disconnect



Quarterly maintenance - testing the components

Set the controller to Parameter mode and access Service level parameters

Do This *Result*

1

PredaDoor NXT
[xxx] Cycles

The door starts in run mode.

2 until the parameter screen displays

P:Password 0
001= [xxx] Cyc

You are in Parameter mode. Go to parameter 999.

3 2x to reach parameter P:999

P:Password 0
999= 0000 #

The Password parameter P:999 screen displays.

4 1x to move cursor to the right (edit value)

P:Password 0
999= 0000✓#

You can change the value of parameter P:999.

5 16x to set value to hexadecimal 10

P:Password 0
999= 0010?#

Set the value to 10 (Service level password).

6 until question mark changes to checkmark (value saved)

P:Password S
999= 0010✓#

The Service level password is saved.

7 1x to return to parameter side

P:Password S
999= 0010✓#

Navigate to parameter P:920 and check the error history of the door

This parameter stores the last eight error codes generated by the controller, as well as date and time. **This can alert you to issues** the door owner may not have told you about.

Do This *Result*

1 until parameter displays

P:Err History S
920#Err1=F060 6:

2 1x to move cursor to the right (value side)

P:Err History S
920#Err1=F060 6:

3 Let the value scroll to see date and time

P:Err History S
920#26:00 PM 10/1

Make a note of the information.

4 Press UP or DOWN ARROW to scroll through errors

P:Err History S
920#Err2=F060 5:

Note if any errors are recent and should be taken into account when testing components.

5 1x to return to parameter side

P:Err History S
920#Err2=F060 5:

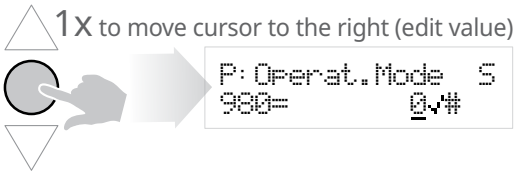
Navigate to parameter P:980 and set the value to 4 so the door will cycle continuously

Do This *Result*

1 until parameter displays

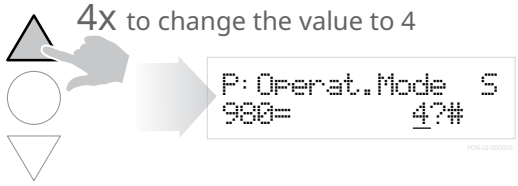
The default value is 0.

2 1x to move cursor to the right (edit value)

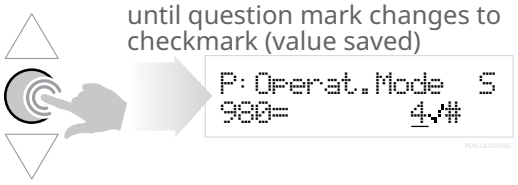


You can now change the value.

3 4x to change the value to 4

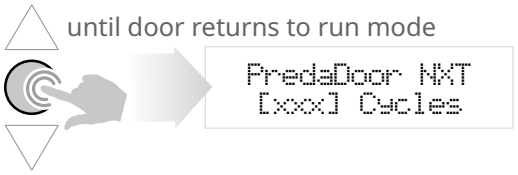


4 until question mark changes to checkmark (value saved)

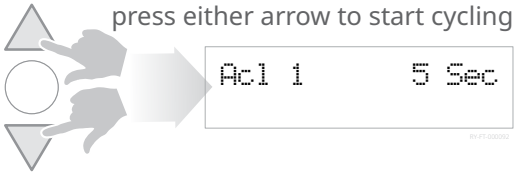


The new value is saved.

5 until door returns to run mode



6 press either arrow to start cycling

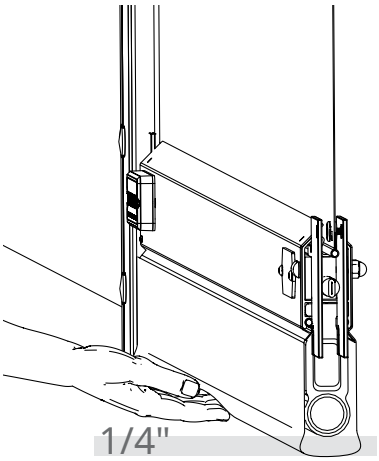


Check that the door stops at the correct open and close limits

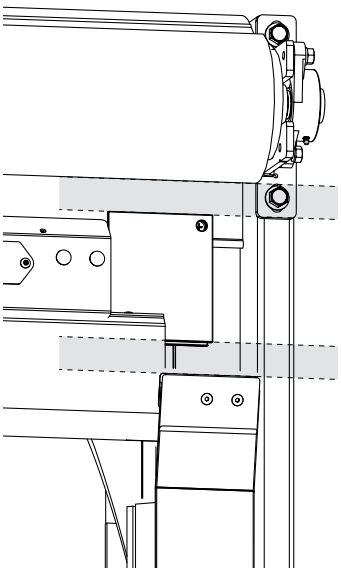
1 **Watch** the door as it cycles. **Stop** it at the fully open and fully closed position.

If the open or close limits are not correct, **follow** the instructions to set limits.

- For PredaDoor, the door is at the correct close limit when the **loop seal dimples,** sealing the panel at the floor, and the **reversing edge is 1/4",** or roughly the width of your fingers when slid under the door panel, above the floor.



- For PredaDoor, the door is at the correct open limit when the end tabs are in the **middle of the space** between the rolled-up door panel and the refeed guide.
- **Move at least ten feet** from the door to check the height.

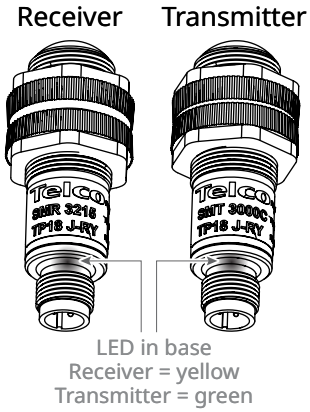


Test the photo eyes

1 **Check** the LED lights in the front and rear transmitters and receivers.

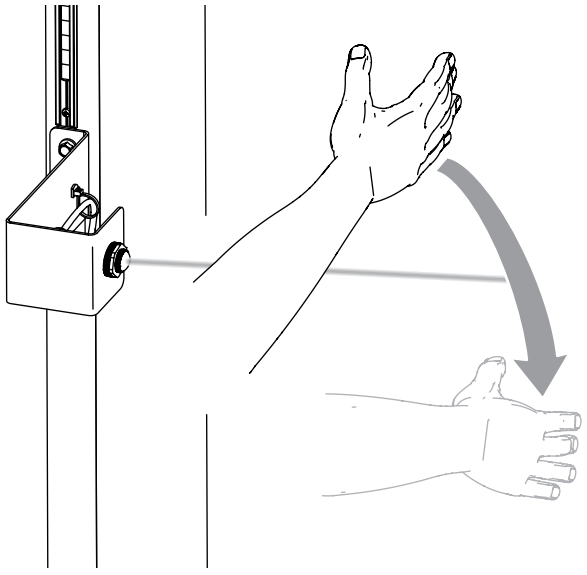
- **Transmitter:** green light indicates it is operational.
- **Receiver:** yellow light indicates it is correctly aligned with the transmitter.

If you see a green light, but not a yellow one, **check that the brackets are level and are perpendicular** to the side columns.



2 While the door is closing, **break the beam** on each set of photo eyes.

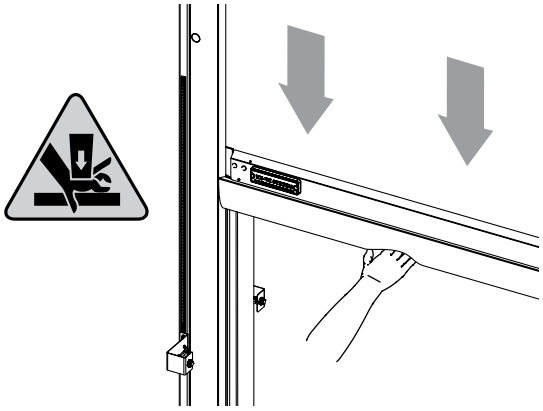
- **Door should stop, reverse,** and stay open as long as the obstruction remains in place.
- **Door should only close** when the obstruction is removed.



Test the reversing edge

1 **Place your hand** in the path of the closing door panel, above the photo eye beams, and allow the reversing edge to hit it.

- The door panel should stop, reverse, then run through the delay timers and close normally.



2 **If necessary,** test the pneumatic switch and adjust the sensitivity. See *How to reset the sensitivity of the reversing edge pneumatic switch* on page 70.

3 IMPORTANT

Set the controller to parameter mode.

Set Parameter 980 back to 0 to take the door out of continuous cycle.

Return to run mode.

Test the door ajar breakaway system

⚠ WARNING

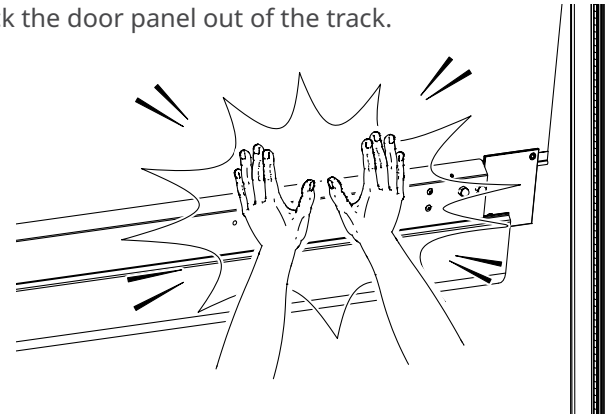
Activating the door ajar breakaway system requires you to strike the metal bottom bar hard enough to push the door panel out of the door track.

Do not attempt this procedure if you have a previous injury which might be aggravated by the force of the contact.

1 **Strike the bottom bar** hard enough to knock the door panel out of the track.

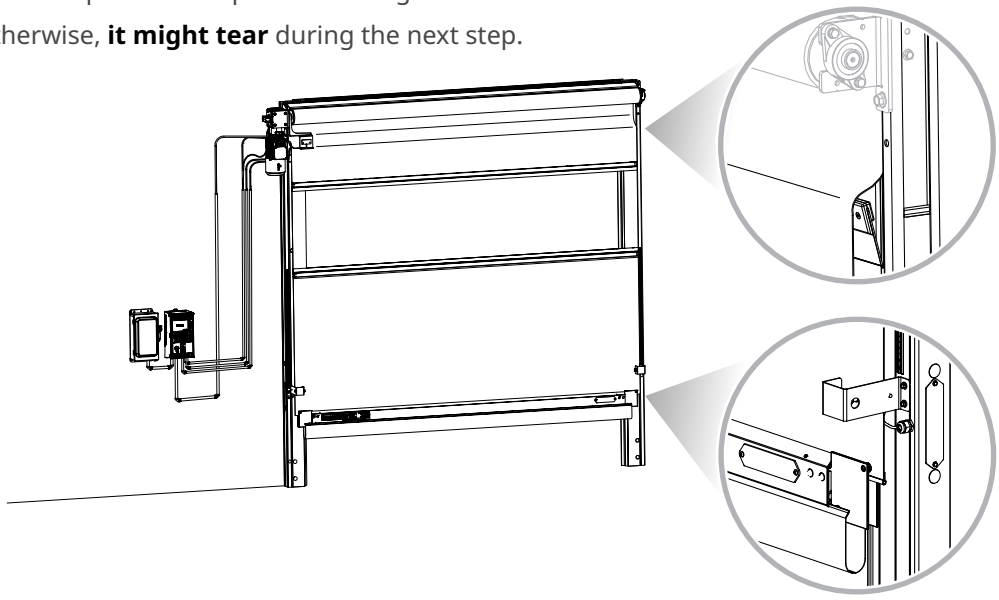
IMPORTANT

- **You can do this** while the door is closing or after jogging it to a working height.
- **This is most easily done** near a side column, rather than in the center of the door, and from the rear of the door rather than from the front.
- **Door should stop immediately.**
- **The controller** generates an F:060 error.



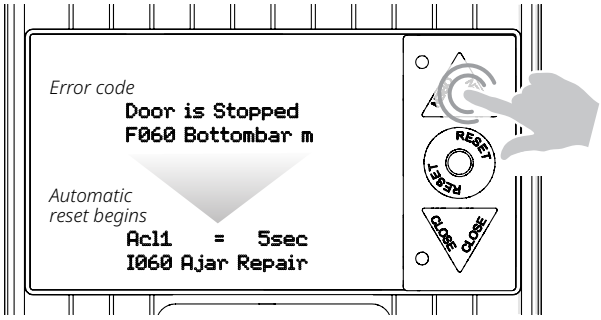
2 To set the door up to automatically refeed, **place the door panel so that:**

- The end tabs on both sides are resting against the front of the side columns
- The door panel is inside the brackets for the photo eyes
- The door panel overlaps the refeed guide on both sides of the door.
- Otherwise, **it might tear** during the next step.



3 **Press and hold the UP arrow** until the door reaches the open limit.

- The bottom bar should drop into the door track after it passes over the refeed guide.
- The controller should take command of the door, **stop it** at the open limit, change the F:060 error code to an I:060 information code, and **close** the door, with the door panel now inside the door track.
- **Watch** the controller display to see the error message change then the door closes.



- It may be necessary to **reset the open limit** for the refeed to work correctly. See *How to set limits* starting on page 38.

4 **If necessary,** test the pneumatic switch and adjust the sensitivity. See *How to reset the sensitivity of the door ajar breakaway pneumatic switch* on page 64.

This can also be done if the door owner wants the sensitivity adjusted so that a strike that doesn't knock the door panel out of the track stops the door, to minimize wear and tear.

Increasing the sensitivity of the switch CAN increase F:060 errors and down time for the door.

Standard repairs and replacements

This section shows the procedures to perform standard repairs and replacements that may be required to fix issues found during daily or quarterly maintenance inspections.

Requirements

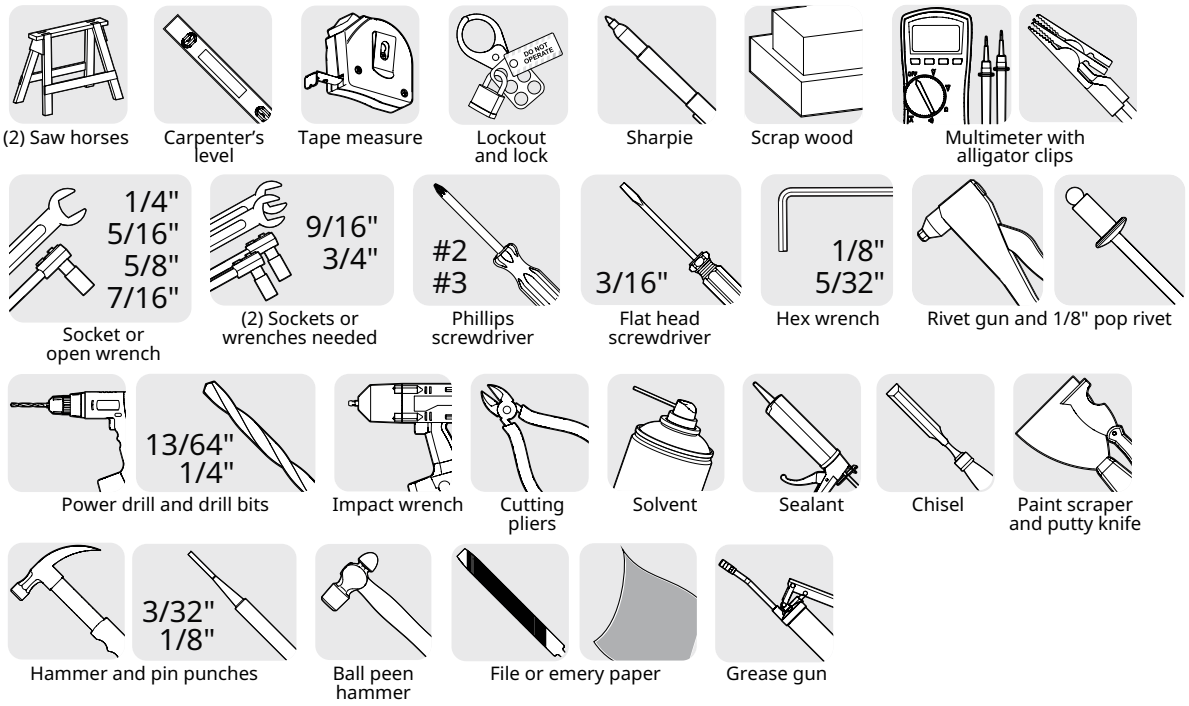
See the **Requirements** section of the Quarterly Inspection beginning on page 17 section of the Quarterly Inspection for a complete list of requirements, including site conditions and staffing.

Safety

Read the Safety section beginning on page 8 before performing any service on the door.

Tools

This is a complete list of the tools used in all procedures. Tools will be called out in each procedure as they are needed.

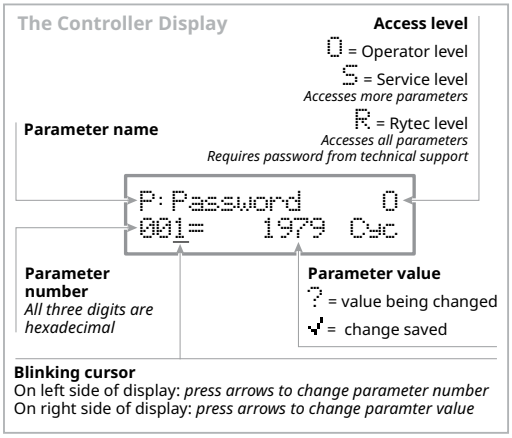


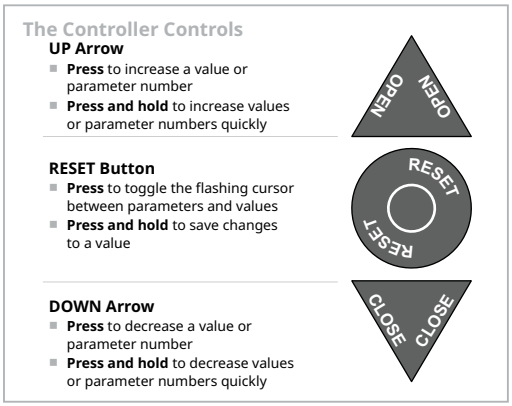
How to set limits

⚠ CAUTION

Make sure that people and vehicles do not pass through the open doorway until the automatic calibration is complete.

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





NOTE: The System 4 display uses hexadecimal numbers to number parameters and for some values.

The display uses the ten numeric characters (0-9), plus six letters (A-F), which represent the values from 11 through 16.

In some cases it will be necessary to press the UP arrow sixteen times to change a value from 0000 to 0010.

Icon key

Press | Press and hold | Press UP or DOWN arrow, as needed

First: set the controller to Parameter mode and access Service level parameters

Do This *Result*

1 PredaDoor NXT [xxx] Cycles

The door starts in run mode.

2 until the parameter screen displays

P: Password 0
001= [xxx] Cyc

You are in Parameter mode. Go to parameter 999.

3 2x to reach parameter P:999

P: Password 0
999= 0000 #

The Password parameter P:999 screen displays.

4 1x to move cursor to the right (edit value)

P: Password 0
999= 0000✓#

You can now change the value of parameter P:999.

5 16x to set value to hexadecimal 10

P: Password 0
999= 0010?#

Set the value to 10 (Service level password).

6 until question mark changes to checkmark (value saved)

P: Password S
999= 0010✓#

The Service level password is saved.

Next: navigate to parameter P:210 and set the closed and open position values

Do This *Result*

1 until 210 displays

The Limits parameter (210) screen displays

2

The cursor moves to the right side.

3 5x

Set the New Limits value to 5.

- This setting allows you to edit both the closed position limit and the open position limit.

4 5 sec.

The New Limits value is saved

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

5

The cursor moves to the left side.

Do This *Result*

6 5 sec.

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

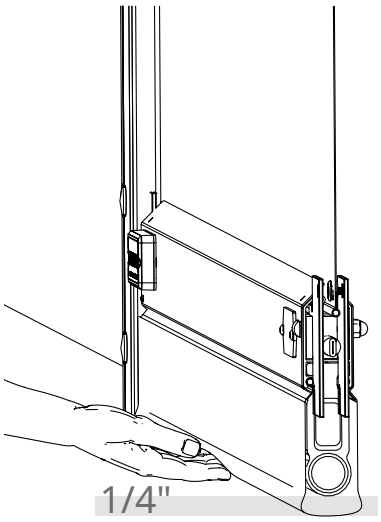
7

You can now set the value for the closed position limit

8 until closed height is correct

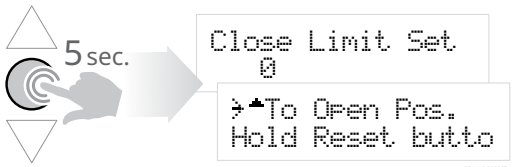
Set the closed position limit value

- Press the UP arrow or 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.
- For PredaDoor, the door is at the correct close limit when the **loop seal dimples,** sealing the panel at the floor, and the **reversing edge is 1/4",** or roughly the width of your fingers when slid under the door panel, above the floor.



Do This *Result*

9



The closed position limit is saved

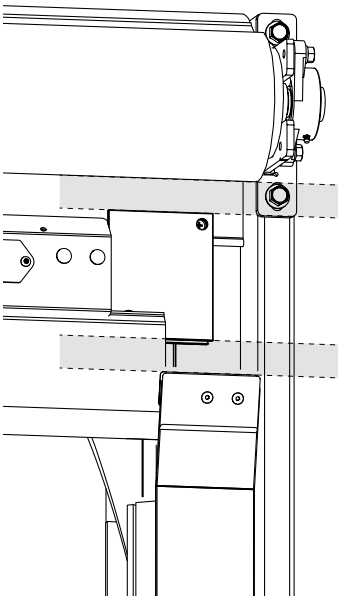
- **You must press and hold** the Reset button for five (5) seconds to save edits that you make to a parameter.

You can now set the value for the open position limit

10 until open height is correct

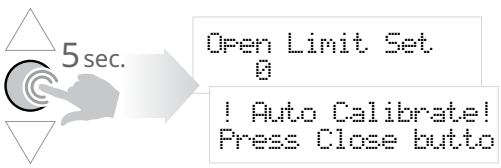
Set the open position limit value

- Press and hold the UP 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.
- For PredaDoor, the end tabs should be in the **middle of the space** between the rolled-up door panel and the refeed guide.
- **Move at least ten feet** from the door to check the height.



Do This *Result*

11



The open position limit is saved

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

12

The automatic calibration sequence starts

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

13

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
- Drive shaft does not shake
- Door limits are correct

How to manually adjust the open or close limit (optional)

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

Go to parameter P:221 (Close Position) or P:231 (Open Position) and change the value *(P:221 shown here)*

Do This *Result*

1  until parameter displays

```
P:Adj Cls Pos  S
221=        0 Inc
```

Default value is 0 Inc

IMPORTANT Inc (increment) is roughly 1/10 inch.

2  1X to move cursor to the right (edit value

```
P:Adj Cls Pos  S
221         0✓Inc
```

Checkmark indicates current value

3  until new value displays

```
P:Adj Cls Pos  S
221=      [x]?Inc
```

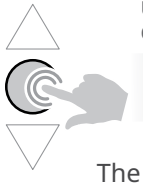
Press **UP ARROW** to increase Inc.

Press **DOWN ARROW** to decrease Inc.

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

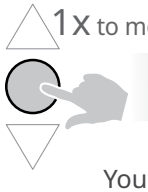
Do This *Result*

4 IMPORTANT Do not change the value by more than 5 Inc before testing the door.

5  until question mark changes to checkmark (value saved)

```
P:Adj Cls Pos  S
221=      [x]✓Inc
```

The new value is saved

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

```
P:Adj Cls Pos  S
221=      [x] Inc
```

You can now exit parameters

7  until door returns to run mode

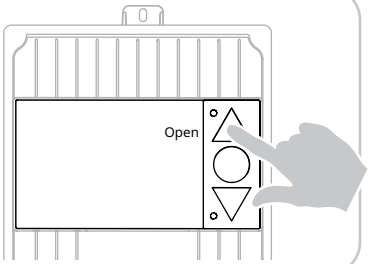
```
PredaDoor NXT
[xxx] Cycles
```

The bottom bar components: repairs and replacements

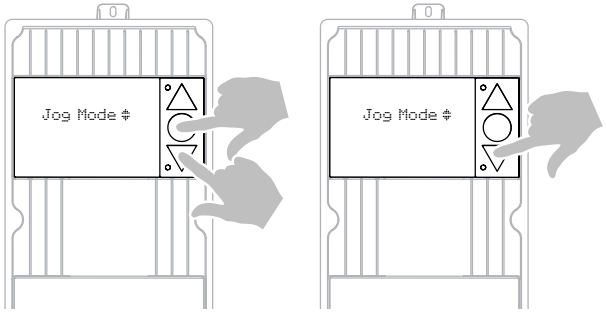
First, take the door panel out of the door track and lower it until the bottom bar rests horizontally on two saw horses

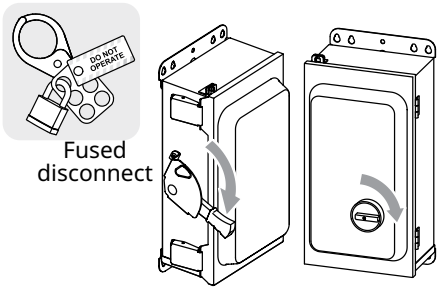
This is required to give you unrestricted access to all parts of the bottom bar.

1 **Press** the OPEN button to move the door to the fully open position.



2 **Switch** the door to jog mode and **jog** the door about a foot, then **shut off power to the door** and perform a lockout/tagout.

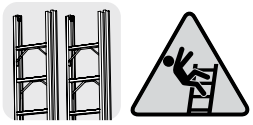




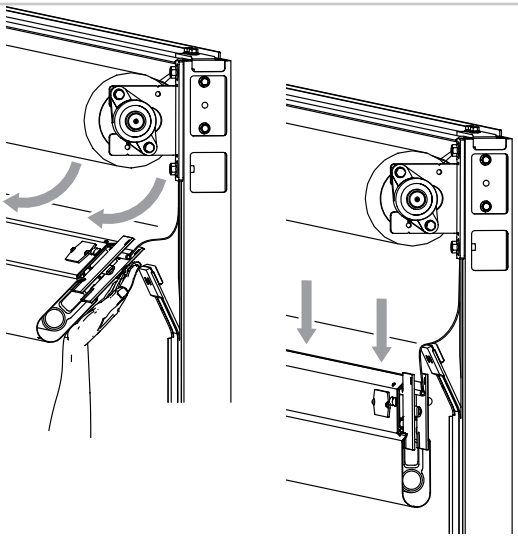
Fused disconnect

3 **Use** a scissor lift or ladders to go up to the head assembly, then use the slack in the door panel to lift the bottom bar over the refeed guide on both sides of the door.

Release the bottom bar so it hangs free in front of the guide.



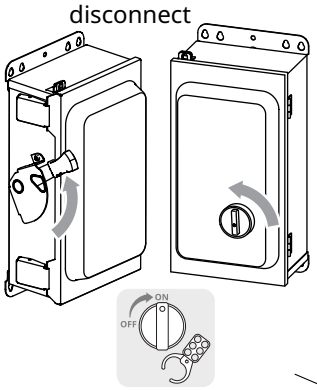
Ladder or Scissor lift

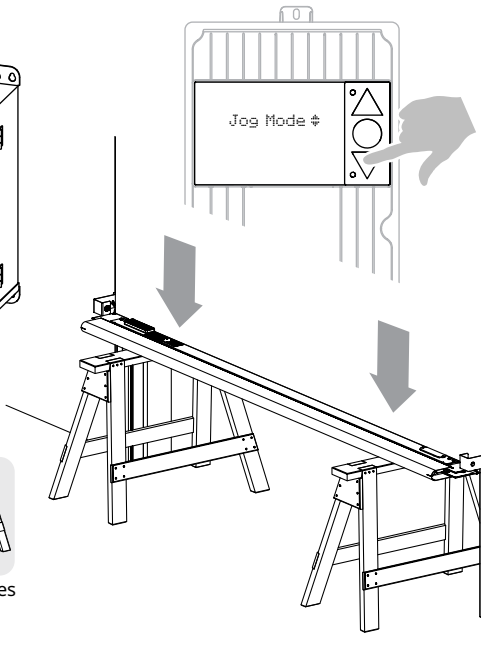


4 **Place** two saw horses across the door opening.

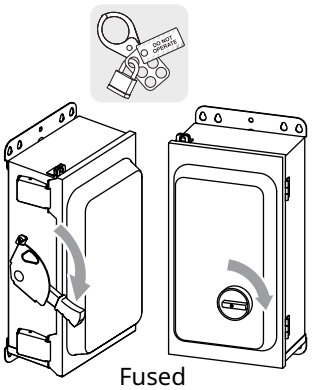
Restore power to the door, **jog** the door panel down until the bottom bar rests on its side on the saw horses, then **do a shutoff/lockout/tagout** until the service is complete.

Fused disconnect





(2) Saw horses



Fused disconnect

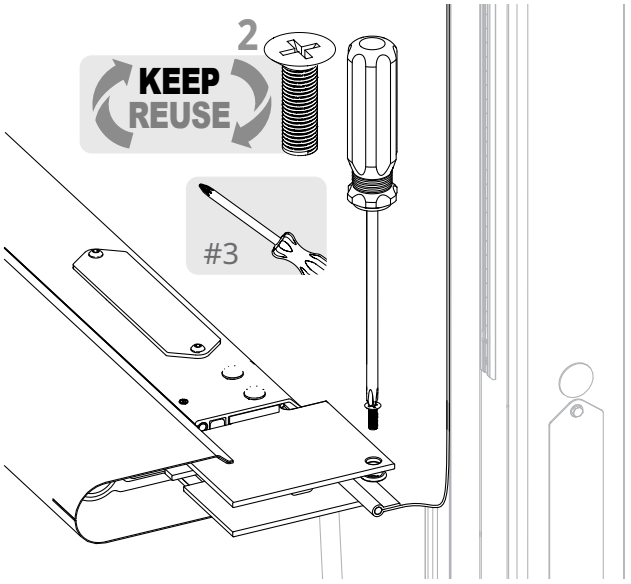
How to remove and replace the bottom bar

IMPORTANT You can replace components inside the bottom bar while leaving the bar attached to the door panel. This procedure is only for situations where the entire bar, or the body of the bar (extrusion), must be replaced.

1 On doors with vinyl panels, **locate and remove** the bolt that secures the door panel to the end tab.

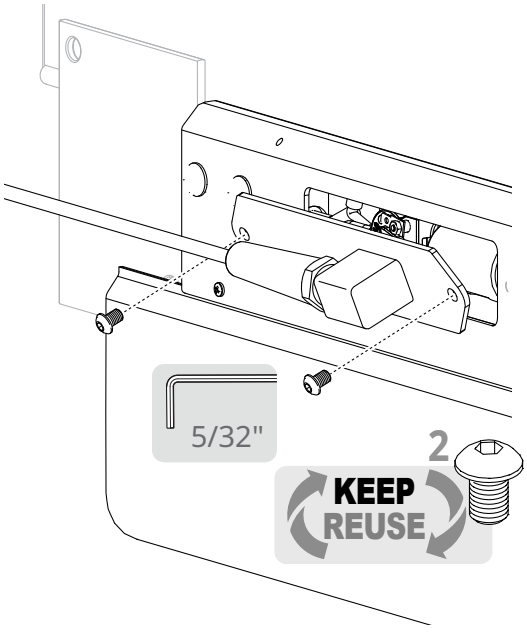
Do this on both sides of the bottom bar.

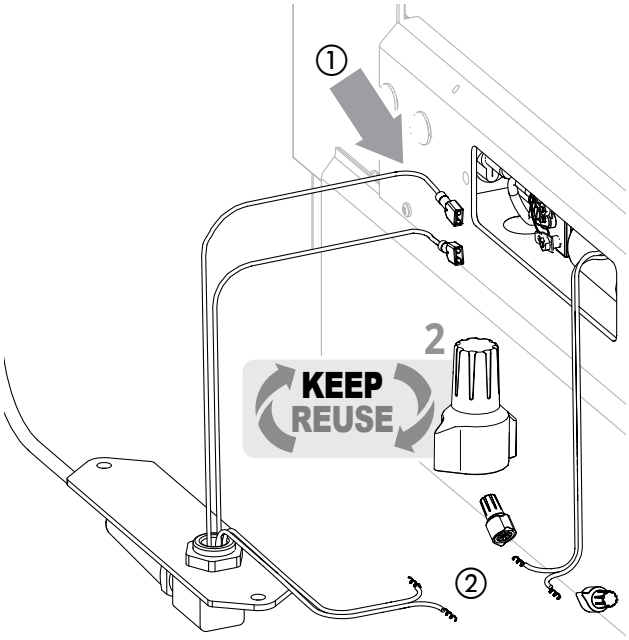
You will **reinstall** both bolts after you replace the bottom bar, so **retain** the bolts.



2 On doors with a coil cord, **remove** the cover plate, then **disconnect** the two spade connectors ① from the pneumatic switch and **separate** the battery wires ②. **Retain** the wire nuts.

Let the coil cord **hang free** of the bottom bar.

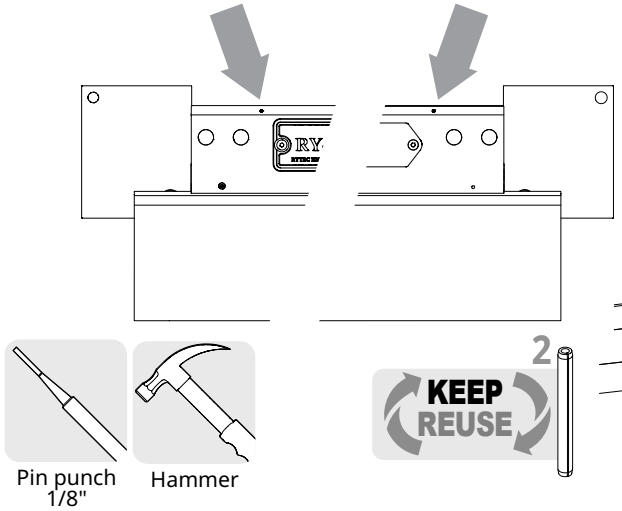


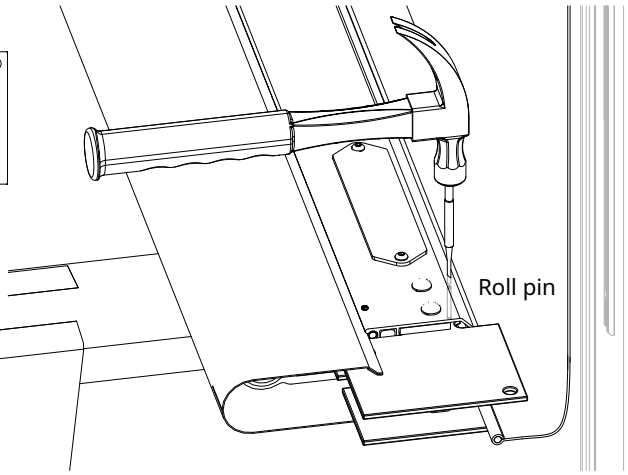


3 **Locate** the holes on the drive and non-drive side of the bottom bar (gray arrows) for the roll pins (also called spring pins) that secure the bar to the door panel.

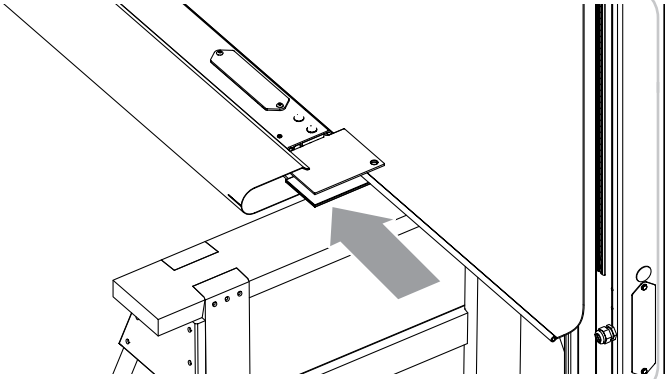
Position the saw horses next to these holes.

Use a hammer and 1/8" pin punch to **tap out** the roll pins. **Retain** the pins.





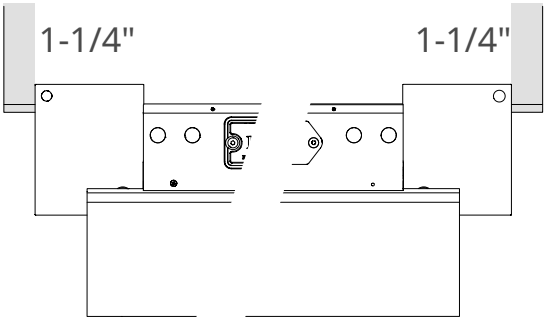
4 You can now **slide** the bottom bar off the door panel in either direction.

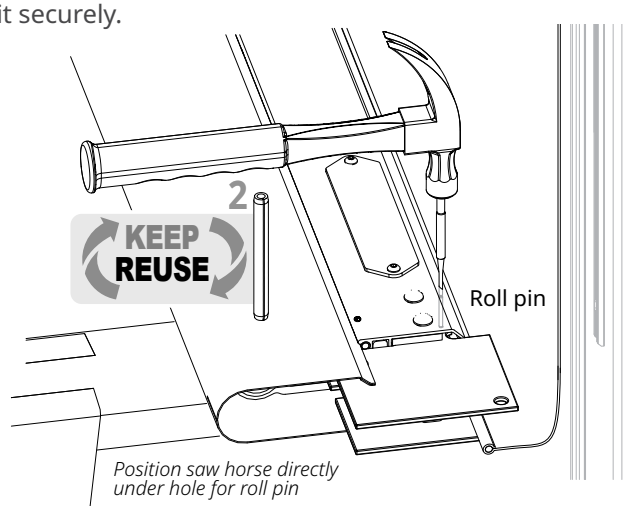


5 **Reverse** these steps to install a new bottom bar.

Center the new bottom bar so there is 1-1/4" of door panel on both sides, **position** the saw horses directly beneath the holes for the roll pins, and **tap in** the pins. **Make sure** the roll pins are centered inside the bottom bar and hold it securely.

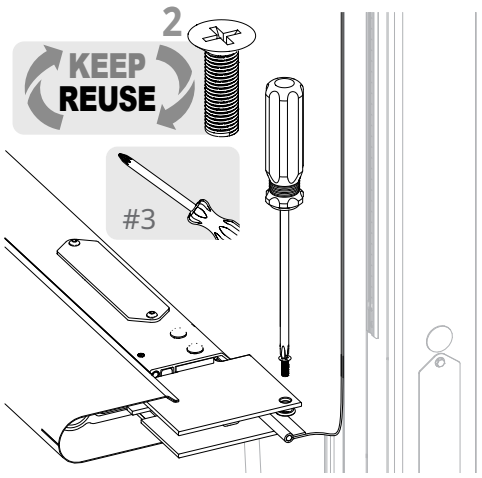
Use new 1/8" roll pins if the old pins do not set securely.





6 On doors with vinyl or screen panels, **reinstall** the bolt that secures the door panel to the end tab.

Do this on both sides of the panel.



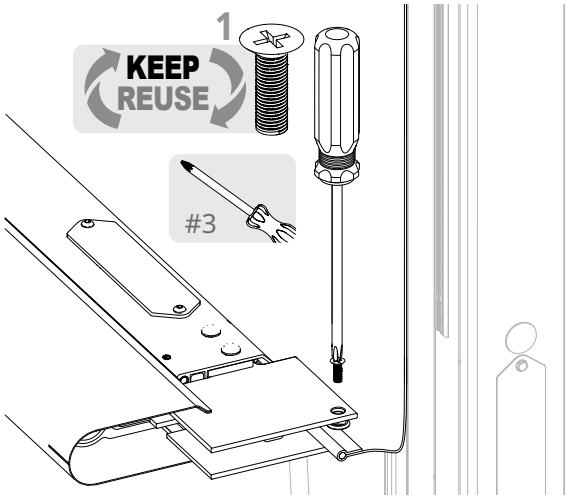
7 For wireless doors, see *How to remove and replace the mobile unit* starting on page 54 for the steps to locate the wireless address of the new mobile unit and sync it with the controller.

How to remove and replace the end tabs

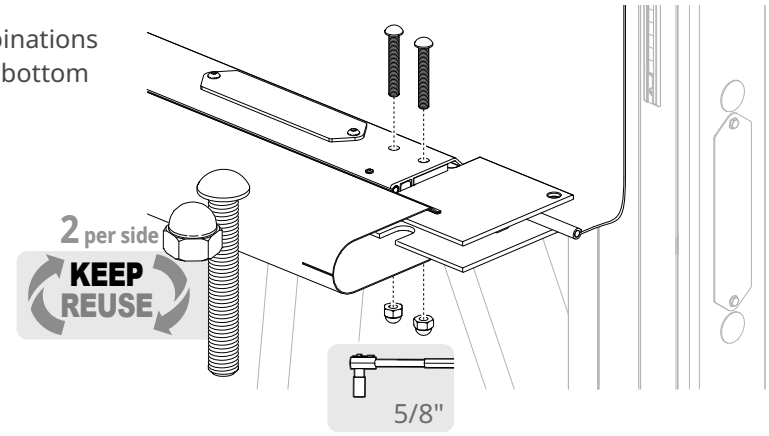
The end tabs must be removed from one side of the door before you can replace the reversing edge or reversing edge assembly.

1 On doors with vinyl panels, **locate and remove** the bolt that secures the door panel to the end tab.

Retain the bolt.

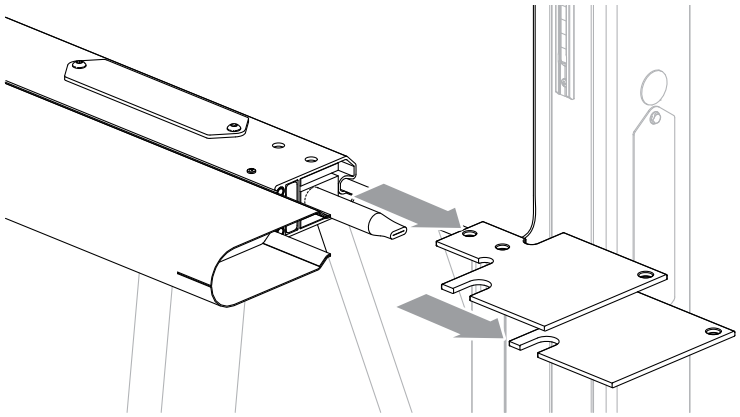


2 **Remove** the two bolt/nut combinations that secure the end tabs to the bottom bar. **Retain** all hardware.



3 **Slide out** the end tabs.

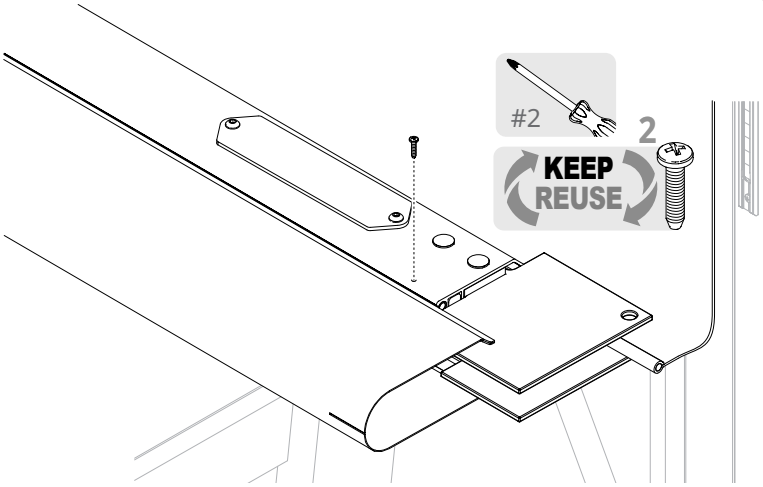
Reverse these steps to install the new end tabs.



How to remove and replace the loop seal

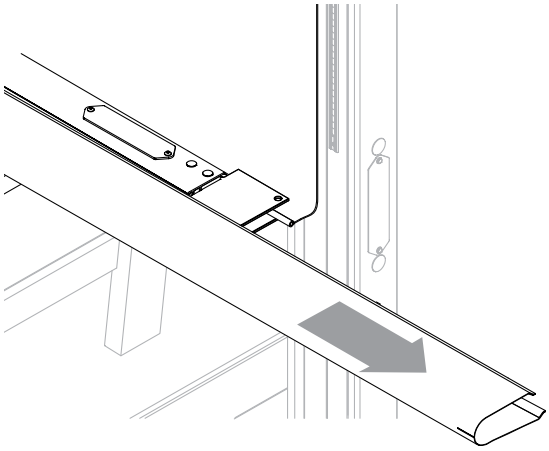
1 **Locate and remove** the two small screws on the front of the bottom bar, just above the loop seal and near the end of each side of the bar.

Retain the screws.



2 You can now **slide** the loop seal off the bottom bar in either direction.

Reverse these steps to install the new loop seal.



How to remove and replace the reversing edge

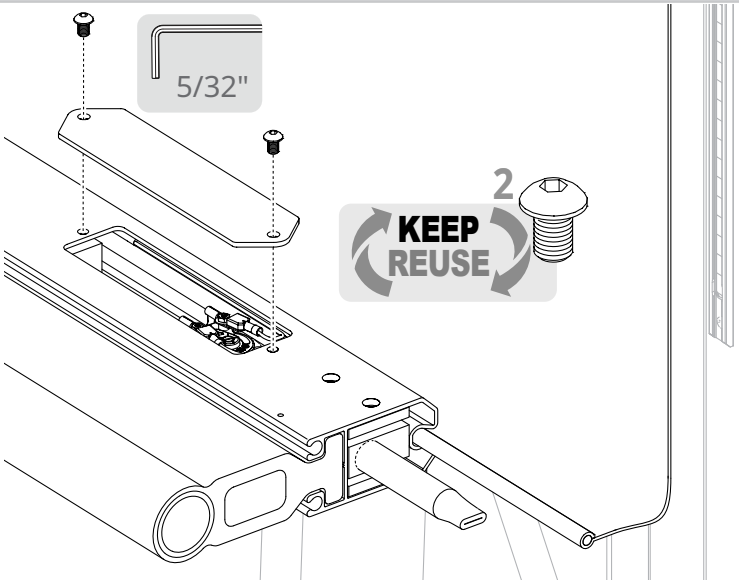
1 **Remove** the end tabs on the side of the door where you will slide off the reversing edge.

Remove the loop seal.

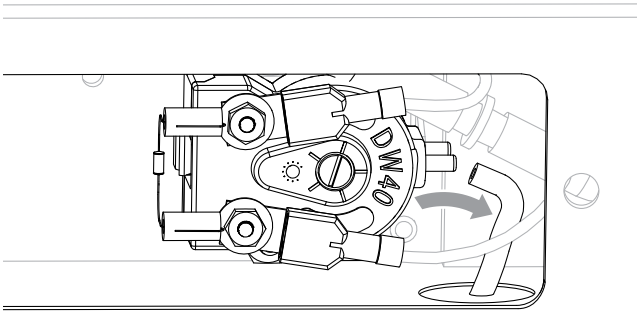
Retain all hardware.

2 **Remove** the cover on the non-drive side of the bottom bar. The pneumatic switch for the reversing edge is inside.

Retain the screws.



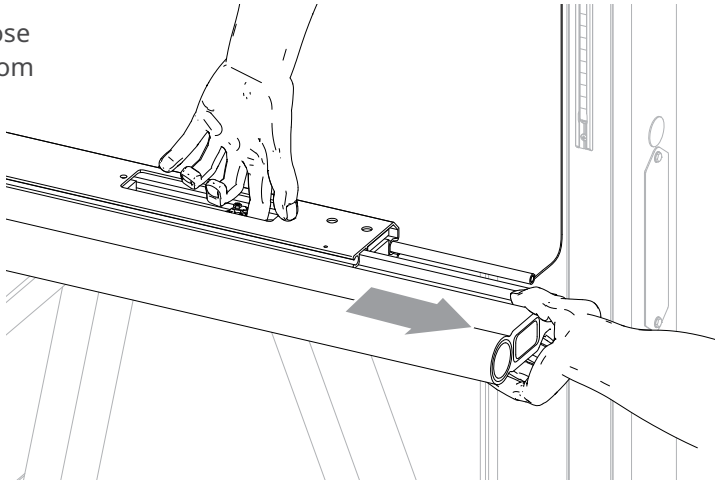
3 **Disconnect** the hose that connects the reversing edge pneumatic switch to the reversing edge.



4 **Reach** in and **push** the connecting hose down and out of the body of the bottom bar.

Pull the reversing edge out and to the side.

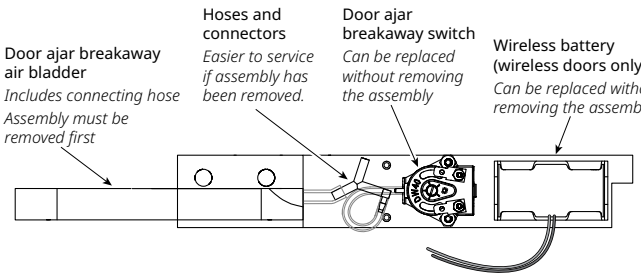
Reverse these steps to install the new reversing edge.



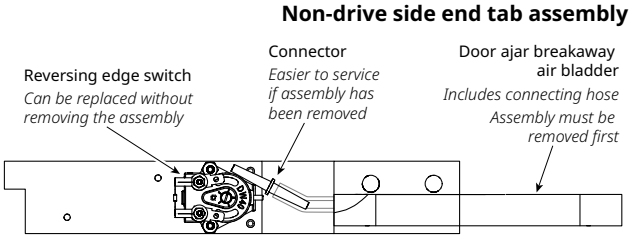
How to remove and replace the end tab assembly

The end tab assembly can be replaced as a unit, or the individual parts can be replaced separately. Some require the assembly to be removed to allow access, others can be replaced without removing the assembly from the bottom bar.

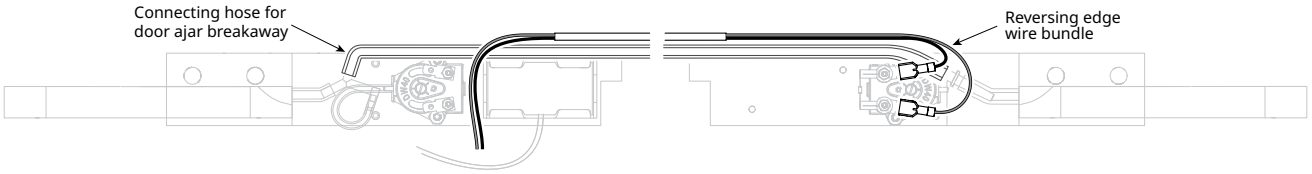
Drive side end tab assembly



Non-drive side end tab assembly



These other parts that run the length of the bottom bar are more easily replaced if an end tab assembly has been removed



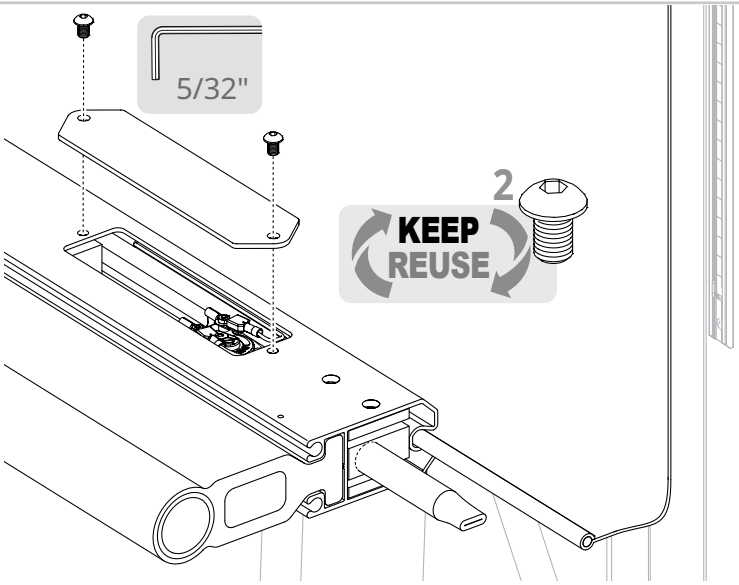
End tab assembly – non-drive side

1 **Remove** the end tabs.

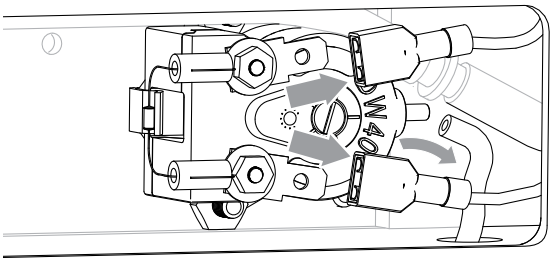
Retain all hardware.

2 **Remove** the reversing edge pneumatic switch cover.

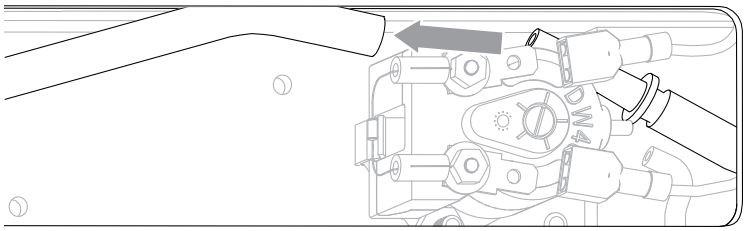
Retain the screws.



3 **Disconnect** the two spade connectors on the reversing edge pneumatic switch and the hose that connects it to the reversing edge.

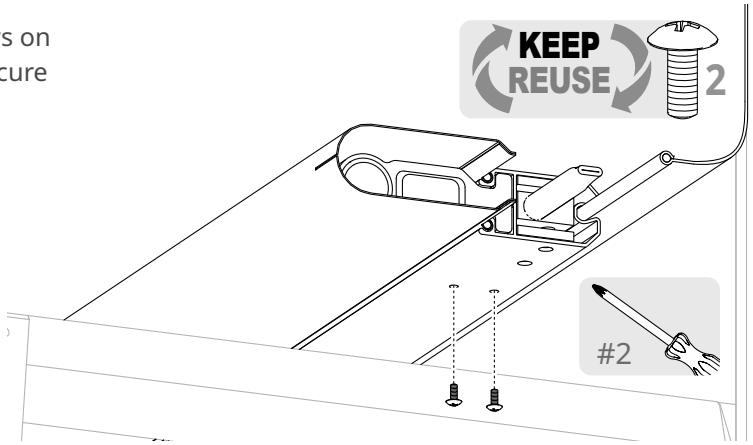


4 **Disconnect** the hose that runs across the bottom bar, behind the switch.



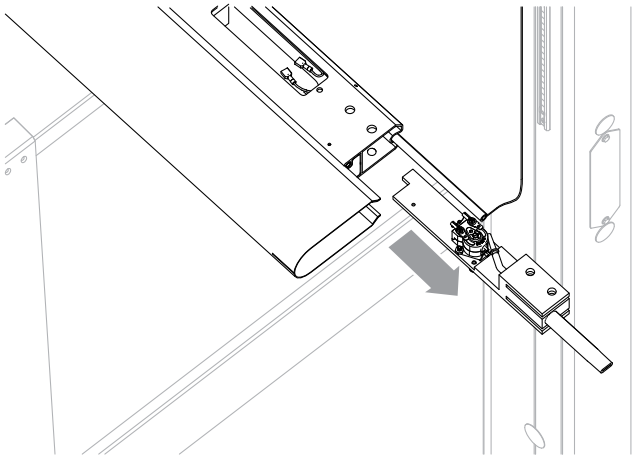
5 **Locate and remove** the two screws on the back of the bottom bar that secure the end tab assembly.

Retain the screws.



6 **Slide out** the assembly.

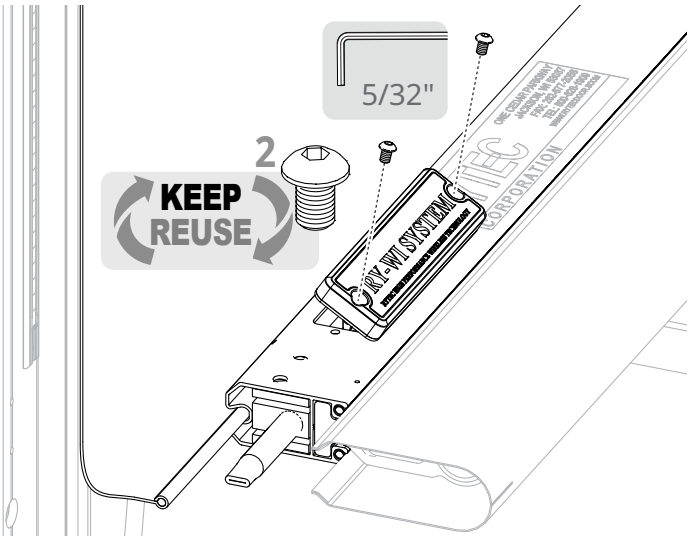
Reverse these steps to install the new edge assembly.



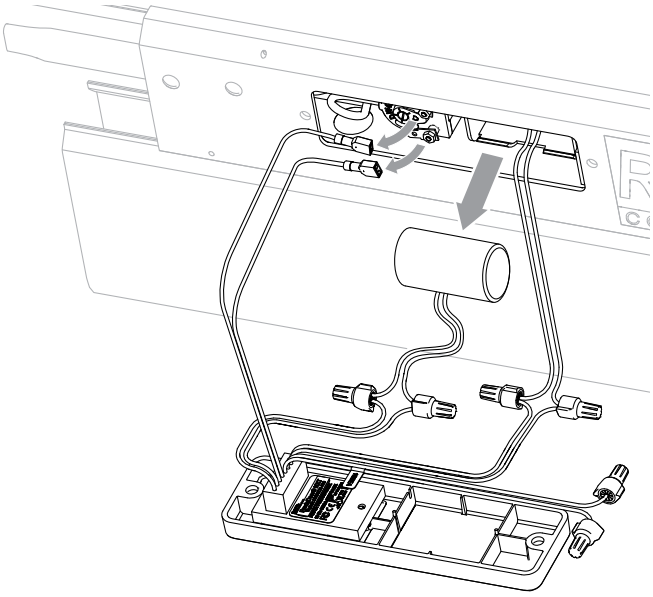
End tab assembly – drive side, wireless doors

1 **Remove** the end tabs.
Retain all hardware.

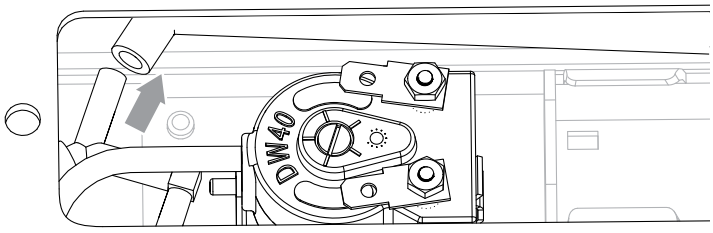
2 **Remove** the mobile unit cover.
Retain the screws.



3 **Disconnect** the two spade connectors on the door ajar breakaway pneumatic switch and **remove** the battery from its holder.

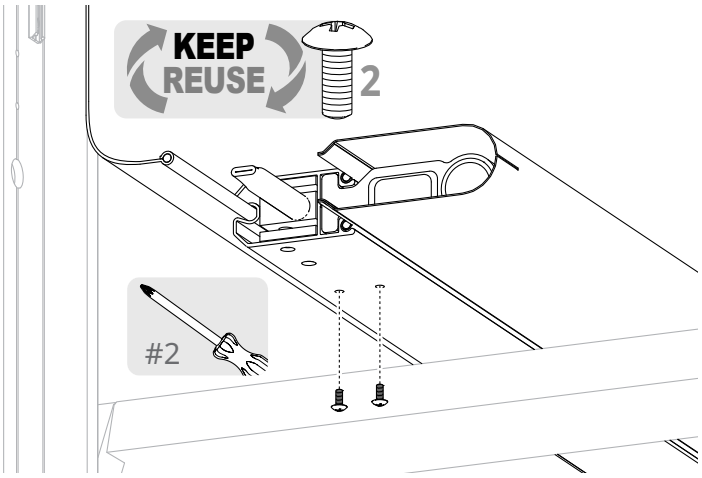


4 **Disconnect** the hose that runs across the bottom bar, behind the switch, from the Y connector.



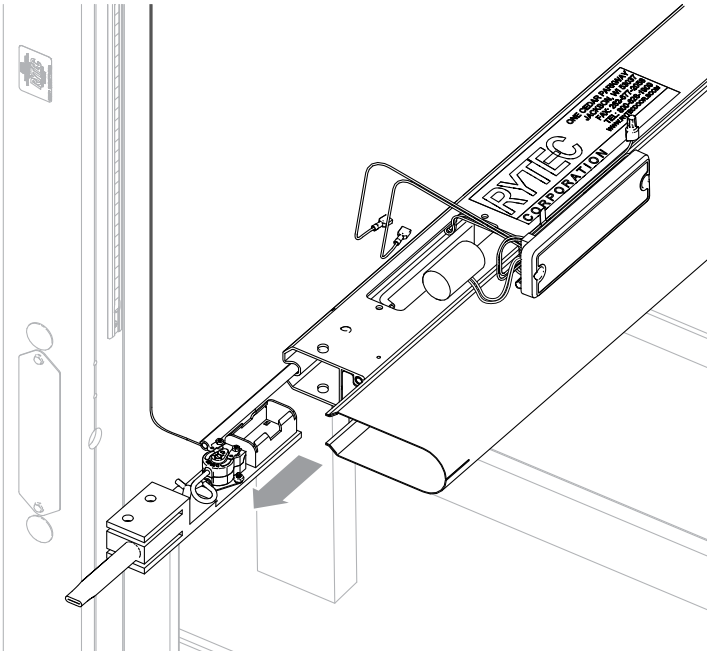
5 **Locate and remove** the two screws on the back of the bottom bar that secure the end tab assembly.

Retain the screws.



6 **Slide out** the assembly.

Reverse these steps to install the new edge assembly.



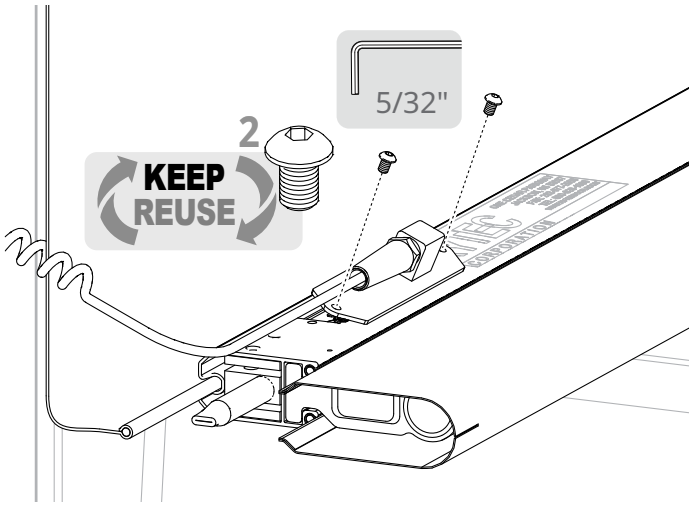
End tab assembly – drive side, coil cord doors

1 **Remove** the end tabs.

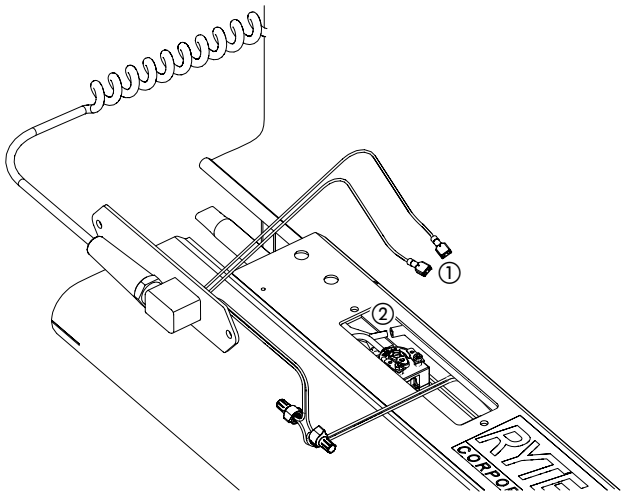
Retain all hardware.

2 **Remove** the cover that connects the coil cord to the bottom bar.

Retain the screws.

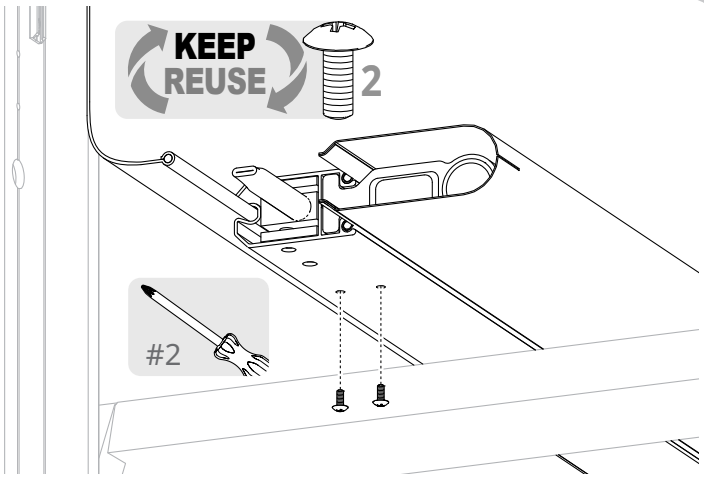


3 **Disconnect** the two spade connectors on the door ajar breakaway pneumatic switch ①, then **disconnect** the hose that runs across the bottom bar, behind the switch, from the Y connector ②.



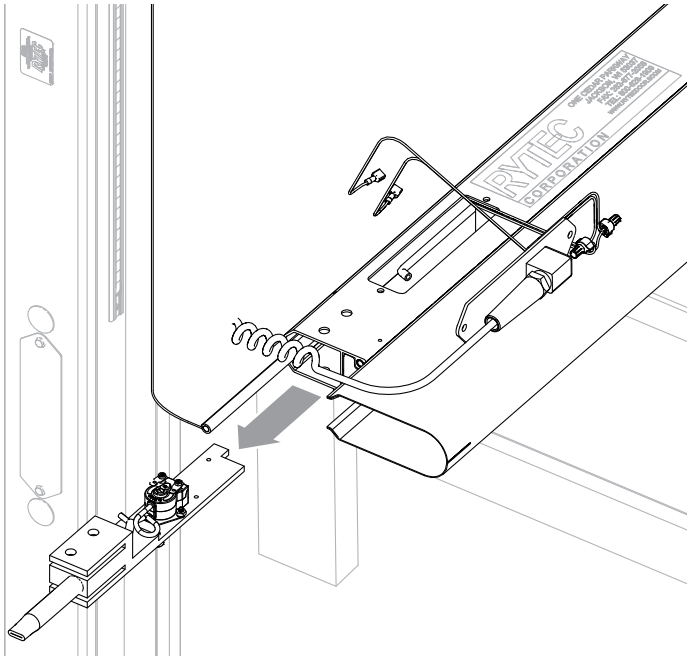
4 **Locate and remove** the two screws on the back of the bottom bar that secure the end tab assembly.

Retain the screws.



5 **Slide out** the assembly.

Reverse these steps to install the new edge assembly.



How to remove and replace the door ajar breakaway air bladder

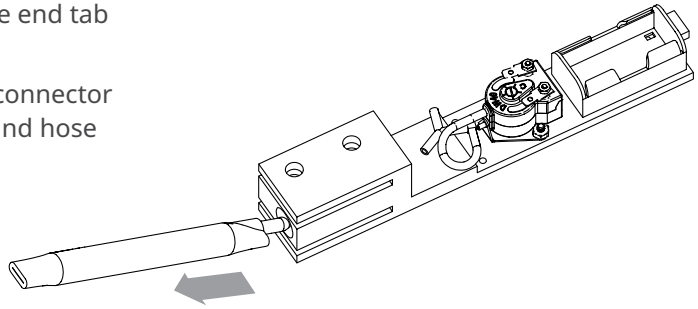
1 **Remove** the end tabs and end tab assembly.

Retain all hardware.

2 The air bladders are held in place in the end tab assemblies by friction

Disconnect the feeder hose from the connector in the assembly, and pull the bladder and hose out through the end of the assembly.

Reverse these steps to install the new bladder.



How to remove and replace the mobile unit battery

1 **Refer to page 23** in *Quarterly maintenance - visual inspections and tightening hardware* for the steps to follow.

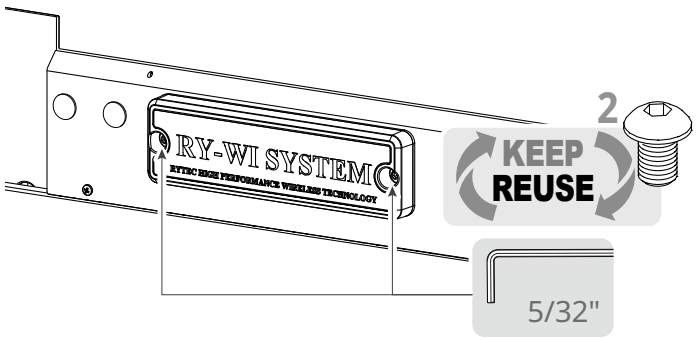
How to remove and replace the mobile unit

IMPORTANT

You must update the mobile unit address at parameter P:F07 to allow the controller to locate and communicate with the new mobile unit. The address is **a hexadecimal number (includes numbers and letters)** listed on a label attached to the brown wire at terminal 3 on the new mobile unit.

1 **Remove** the mobile unit cover.

Retain the screws.

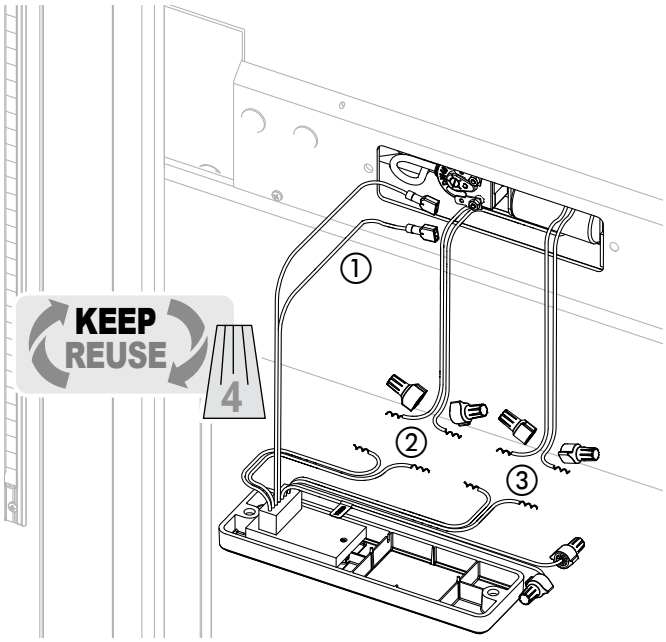


2 **Disconnect** the two spade connectors on the door ajar breakaway pneumatic switch ①.

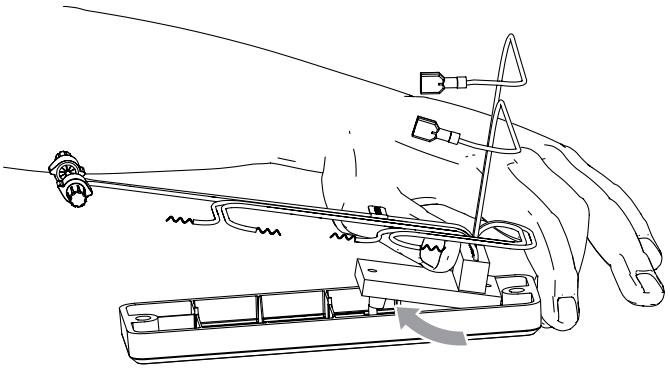
Disconnect the red and black wires from the wire nut that connects them to the black and blue battery wires ②.

Disconnect the two white wires from the wire nut that connects them to the black and white wires that run across the bottom bar to the reversing edge pneumatic switch ③.

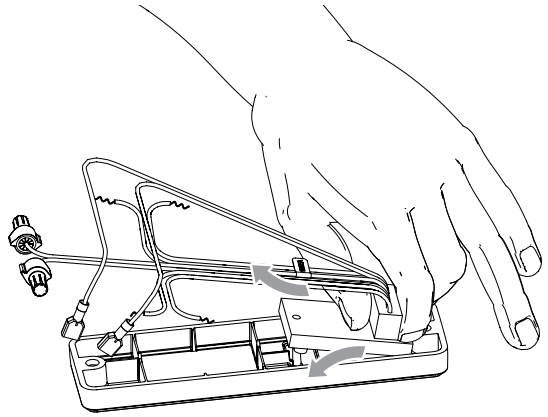
Retain the wire nuts.



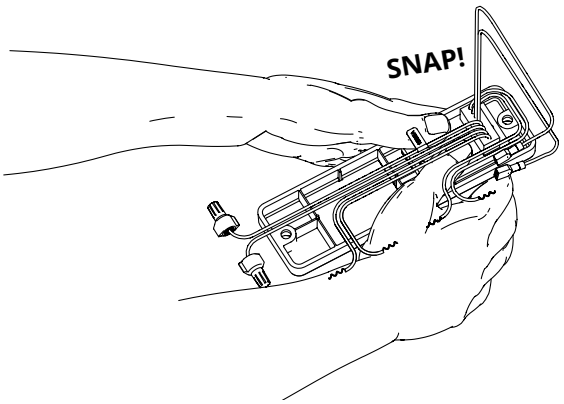
3 To remove the mobile unit without snapping the plastic clips that hold it in place, first **push with your thumb** against the terminal block, then **swing** the mobile unit up and off the bottom clip.



4 Then gently **twist the mobile unit** side to side until it slides off the top clip to remove it.



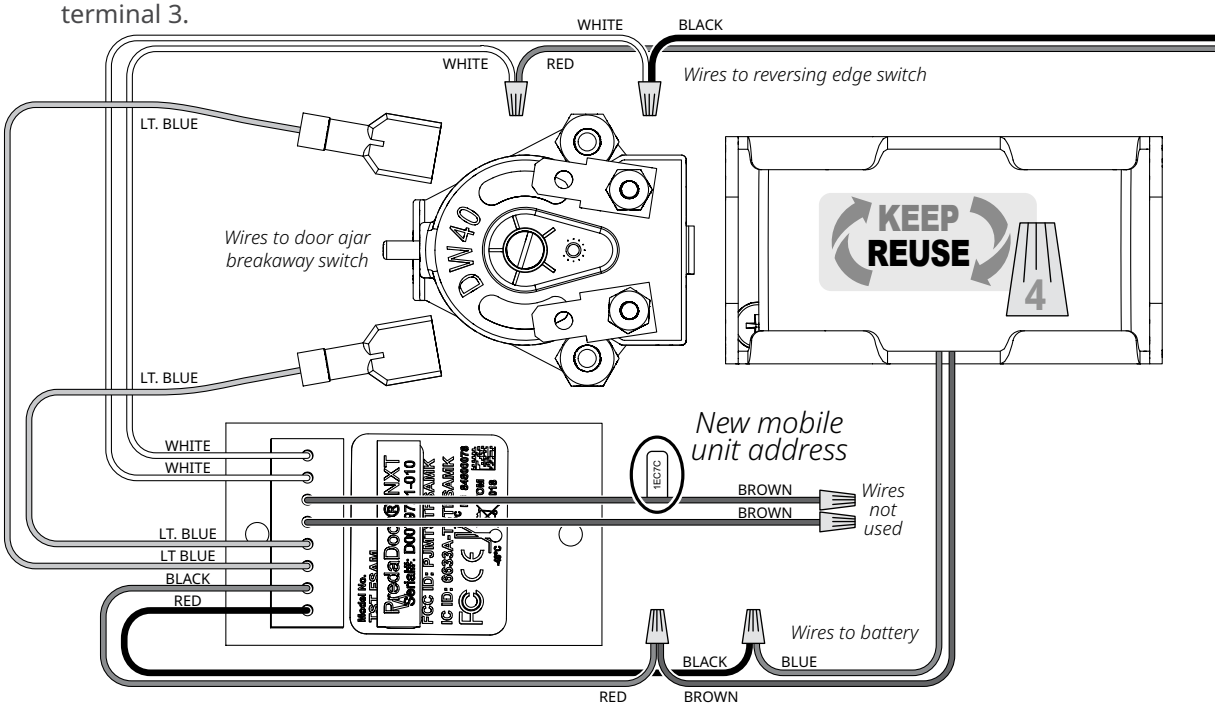
5 **Snap** the new mobile unit into place.



6 **Trim** the wires on the new mobile unit so you have **1/4" of clean copper.**

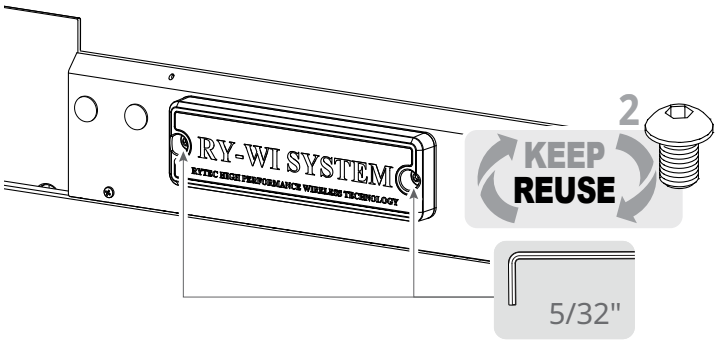
Connect or **plug in** the wires as shown here. **Make sure** wires are securely twisted together before using wire nuts.

Make sure to write down the new mobile address, on the label attached to the brown wire at terminal 3.



7 **Carefully wrap** the wires so they will not be pinched or crimped when the Ry-Wi cover is replaced.

Then **replace and secure** the cover.



8 To enter the new mobile unit address into the controller, **set the controller** into parameter mode and **enter the password** for Service level access.

If you don't know how to do this, **review** *Set the controller to Parameter mode and access Service level parameters on page* 32.

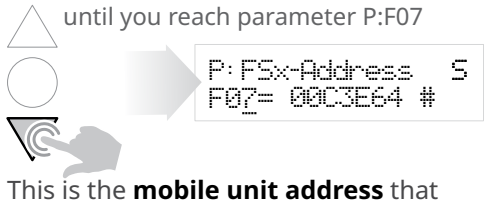
NOTE: The System 4 display uses hexadecimal numbers for some values, including the mobile unit address.

The display uses the ten numeric characters, from 0 through 9, plus six letters (A-F), which represent the values from 10 through 16.

The mobile unit address, which is a five-digit hexadecimal number, **is very large,** and you will have to hold down the UP ARROW for a substantial amount of time to update the value at parameter P:F07.

Do This *Result*

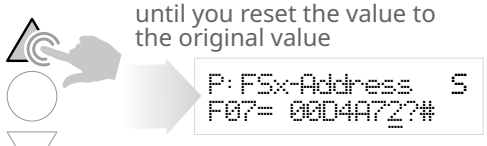
9 until you reach parameter P:F07



- This is the **mobile unit address** that you recorded earlier.

10 1X to move cursor to the right (edit value)

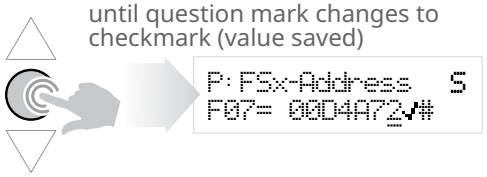
11 until you reset the value to the original value



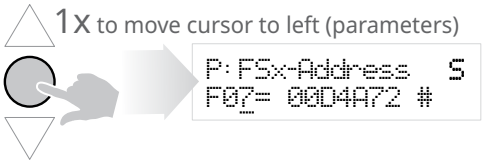
- *The mobile address is a large number; for example, this value is 87,1026. So it will take a while to reach it.*
- *The speed of the change increases the longer you hold down the UP arrow.*

Do This *Result*

12 until question mark changes to checkmark (value saved)



13 1X to move cursor to left (parameters)



14 IMPORTANT If the mobile unit address is entered incorrectly, the controller will generate an F:856 error.

How to remove and replace the coil cord

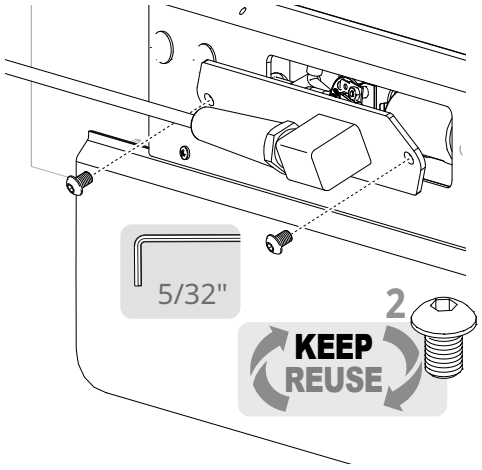
IMPORTANT

Wire colors in the cable that links the coil cord to the controller, and that connects to the coil cord inside the drive side side column, vary by installation, and will probably **NOT** match the wire they connect to in the coil cord.

Make sure to write down the wire-to-wire connections when you remove the old coil cord, and **replicate** these connections with the new coil cord.

1 **Remove** the cover that connects the coil cord to the bottom bar.

Retain the screws.

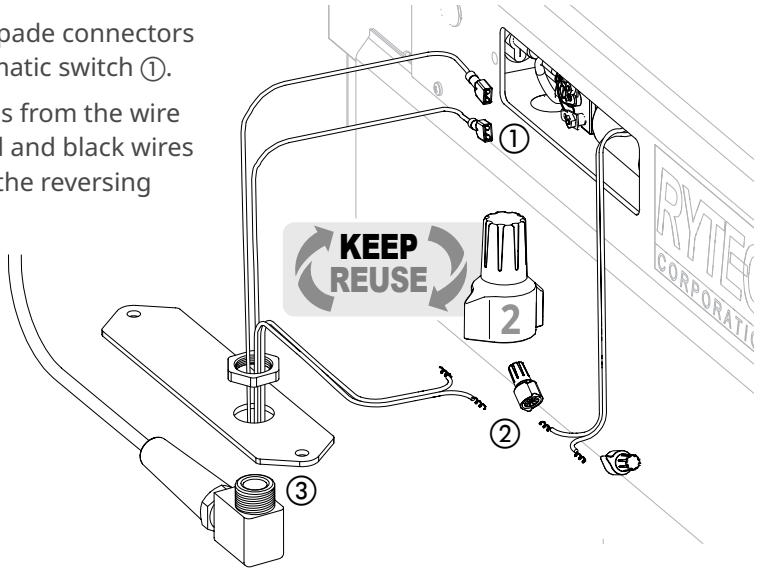


2 **Disconnect** the white and green spade connectors on the door ajar breakaway pneumatic switch ①.

Disconnect the red and black wires from the wire nuts that connects them to the red and black wires that run across the bottom bar to the reversing edge pneumatic switch ②.

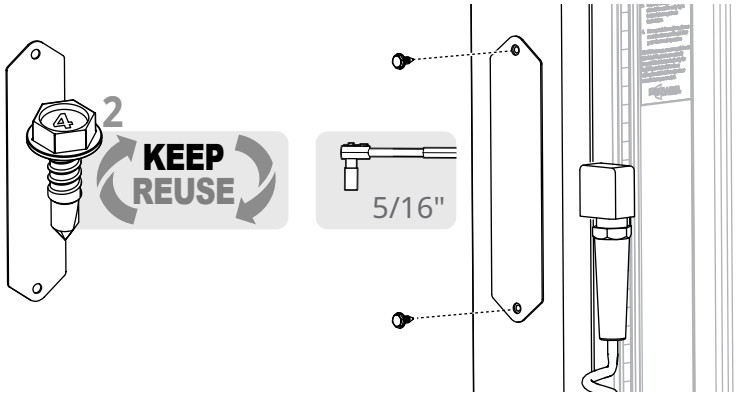
Then **remove** the coil cord grip from the cover ③.

Retain the wire nuts.



3 **Locate** and **remove** the cover plate on the side of the drive side side column, next to the coil cord grip.

Retain the screws.



4

Check the wires in the cable to the controller.

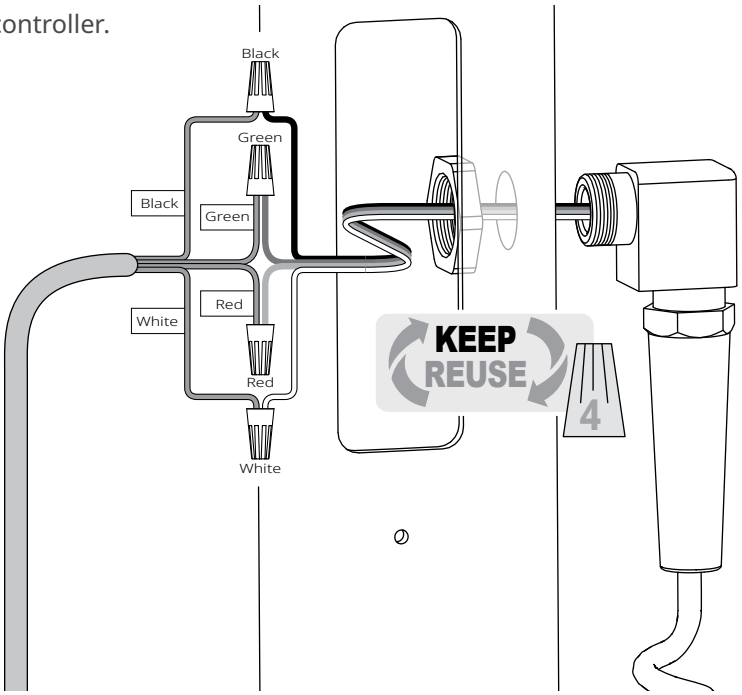
IMPORTANT

The four wires in the cable **should be marked** to indicate the color of the coil cord wire they connect to.

If they are not marked, **use tape to mark them**.

Then **disconnect** the wires and **remove** the coil cord.

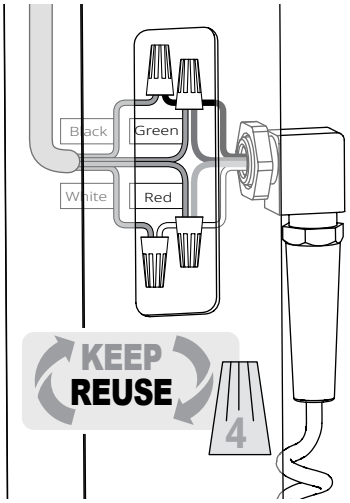
Retain the wire nuts.



5

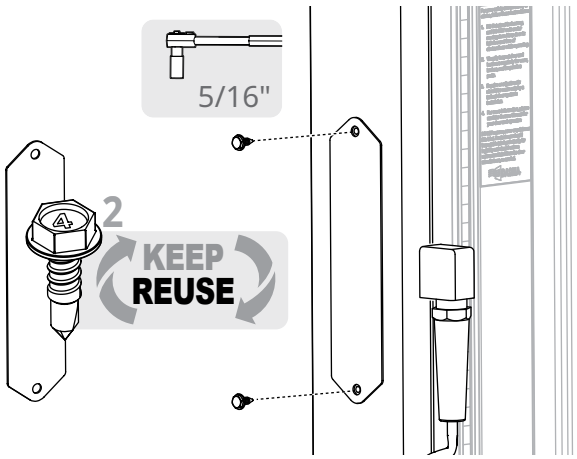
Install the new coil cord grip, **tighten** the retaining nut inside the column, then **trim** the coil cord wires so there is 1/4" of clean copper and **connect** the wires as labeled.

Make sure all wires are securely twisted before using the wire nuts.

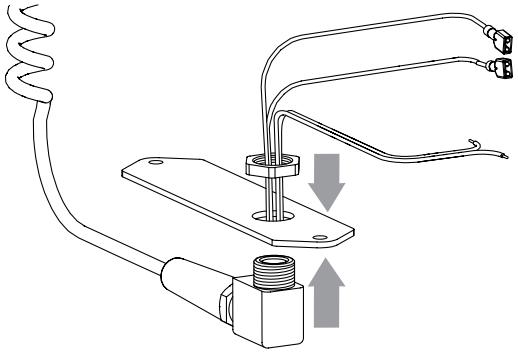


6

Reinstall the cover plate.

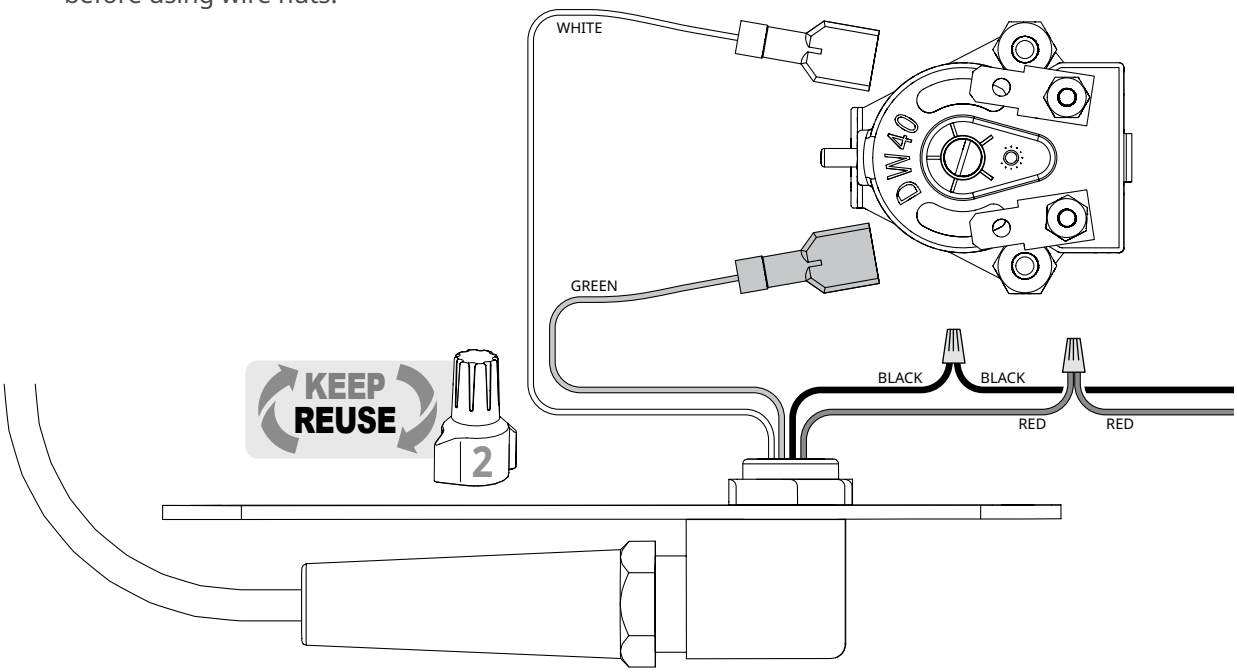


7 **Install** the other coil cord grip into the cover plate and **tighten** the retaining nut.

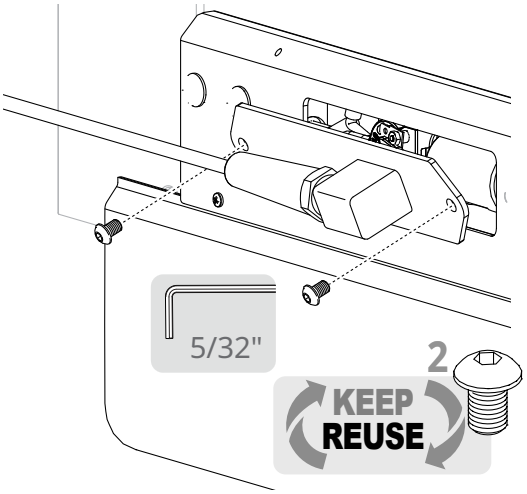


8 At the bottom bar, **trim** the wires that connect to the wires to the reversing edge switch so you have **1/4" of clean copper.**

Connect and **plug in** the wires as shown here. **Make sure** wires are securely twisted together before using wire nuts.



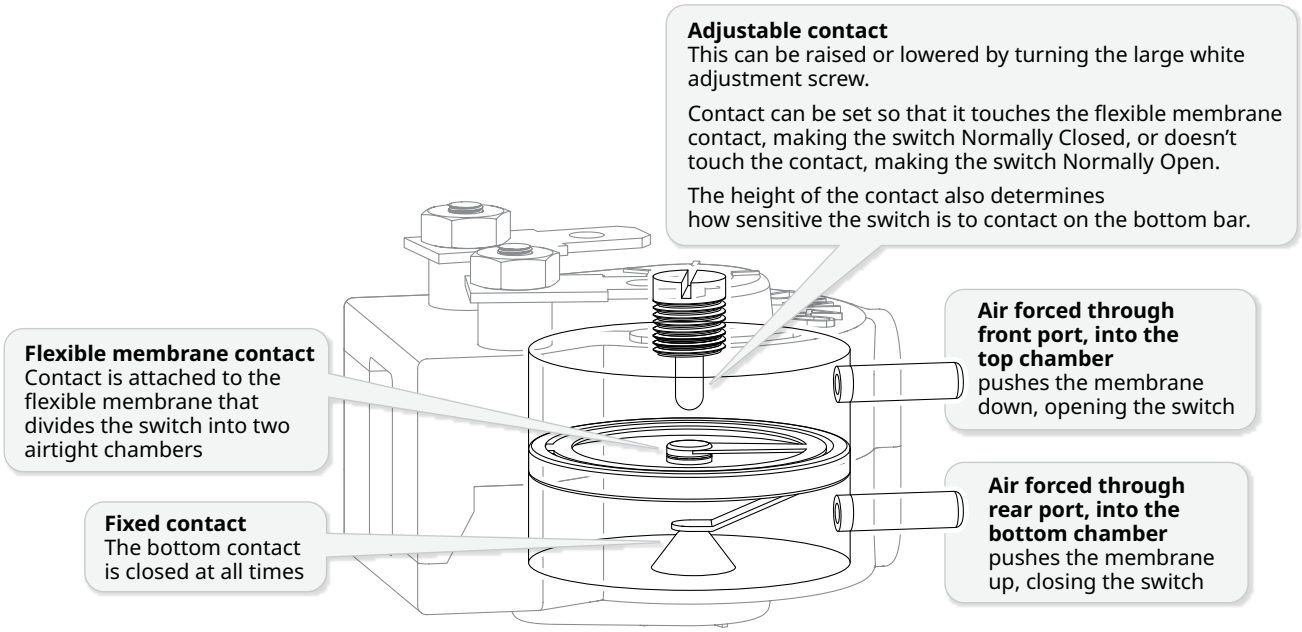
9 **Install** the cover onto the bottom bar.



How to test, reset, and replace the door ajar breakaway pneumatic switch

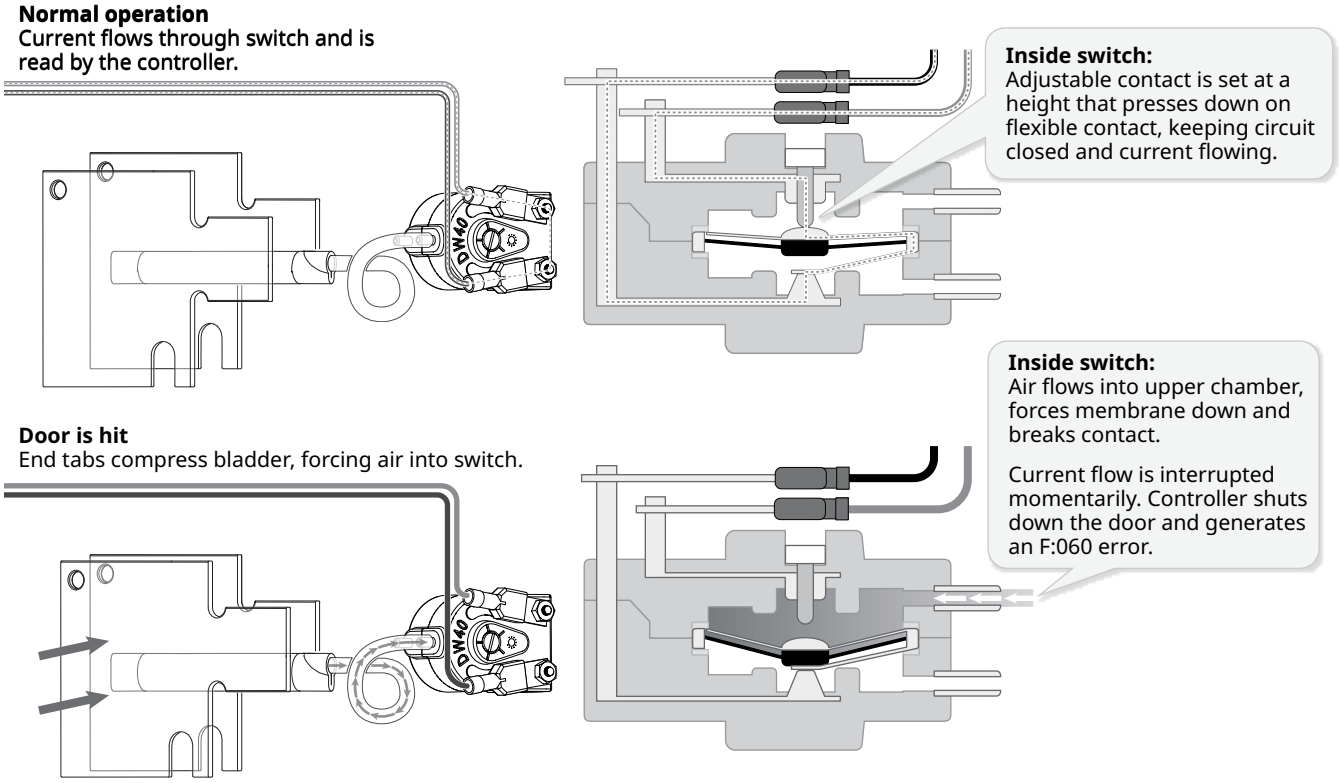
How the Bircher DW40 pneumatic switch works

The Bircher pneumatic switch used in Rytec doors is flexible enough that it is used, in the PredaDoor, as both a Normally Closed (NC) switch in the door ajar breakaway system and a Normally Open (NO) switch in the reversing edge system.



How the switch works in the door ajar breakaway system

The controller monitors the NC switch for current, reacts with an F:060 error and a shutdown of the door if the switch opens and breaks the circuit.



Before following these steps, it is assumed that you have done the following:

IMPORTANT

1. **Visually inspected** the switch, the bottom bar, the hoses and bladders, and the wiring, as described in *Quarterly maintenance - visual inspections and tightening hardware,* and found no visible problems with parts other than the switch.
2. **Physically tested** the door ajar breakaway system as described in *Test the door ajar breakaway system* on page 35 and found a problem in the door's response to contact.
3. **Checked** the error history or the door as described on page 32.

Steps to follow if the controller is generating F:060 errors when the door is still in its track

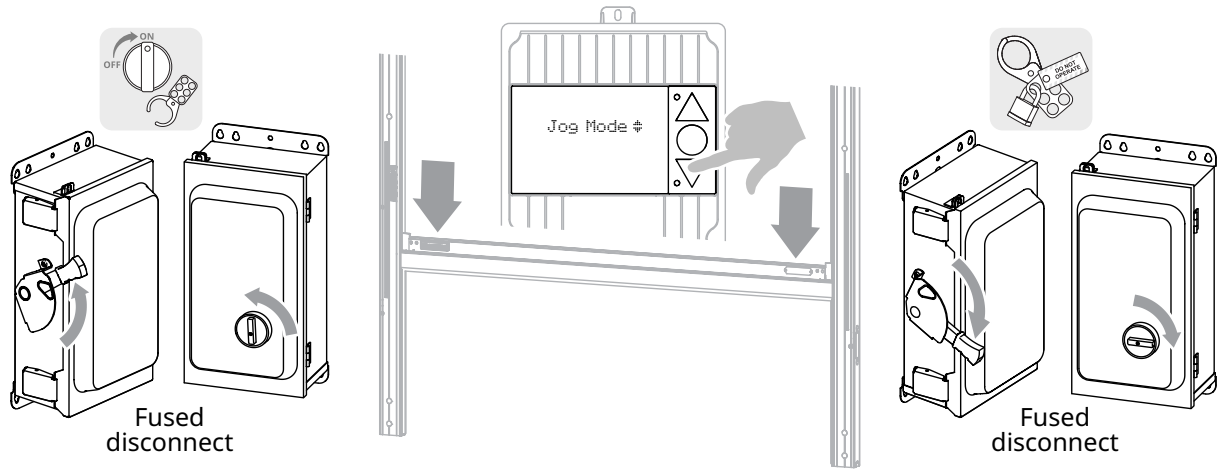
1 Before testing or adjusting the switch, **physically inspect** the door track inside both side columns while the door panel is outside of the track and the track is clear.

Feel for obstructions or irregularities.

If any are found, **contact** Rytec Technical Support for next steps.

2 **Restore** power to the door, refeed the door panel into the track, and **jog** the door panel down to a comfortable working height.

Then **do a shutoff/lockout/tagout**.



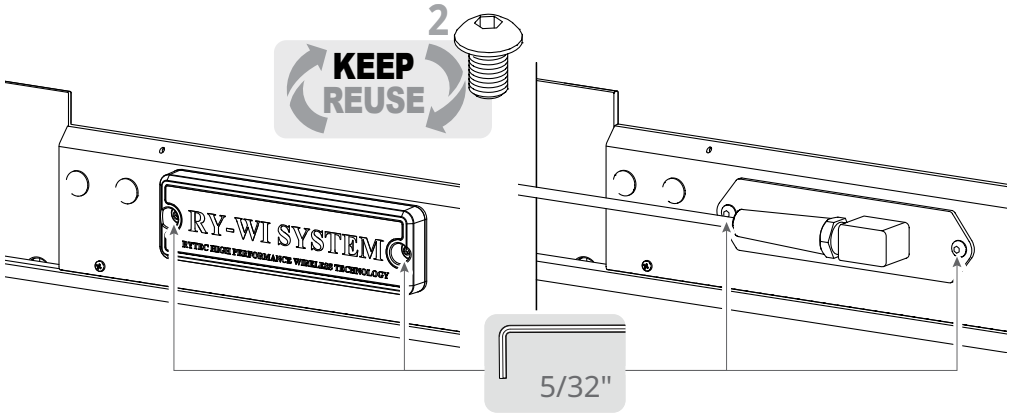
INSIDER'S TIP

It is easier to work on the bottom bar and the wires inside if you have a work surface at working height to place the covers on when you remove them.

3

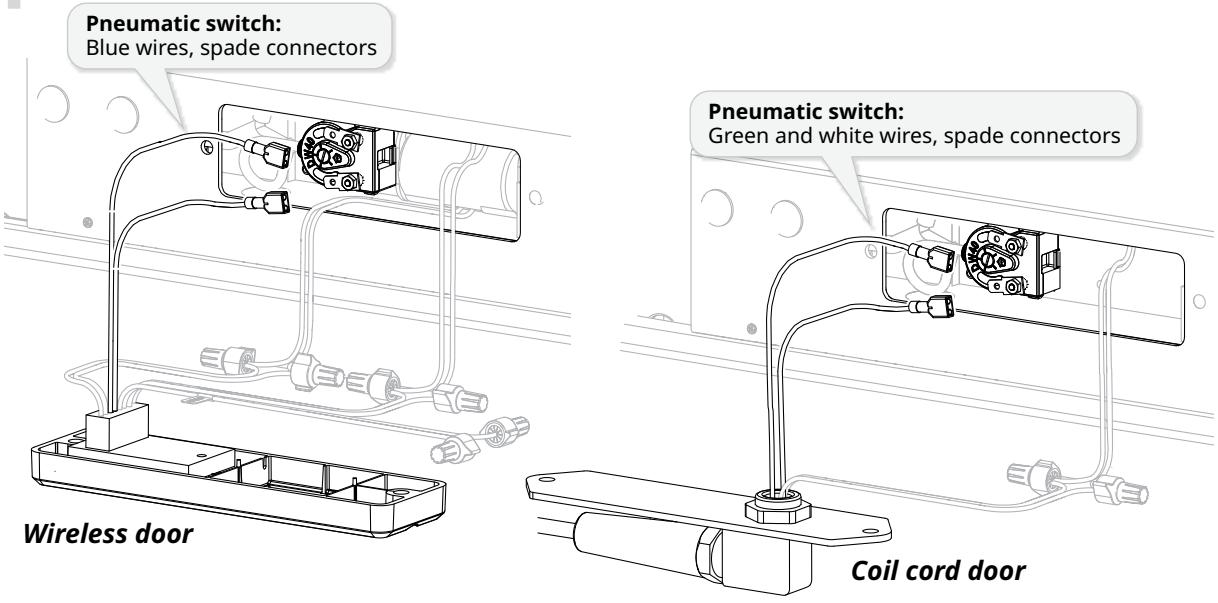
Remove the cover from the drive side of the bottom bar to reveal the pneumatic switch for the door ajar breakaway system, as well as the wires and hoses inside the bottom bar.

Carefully separate the wires.



4

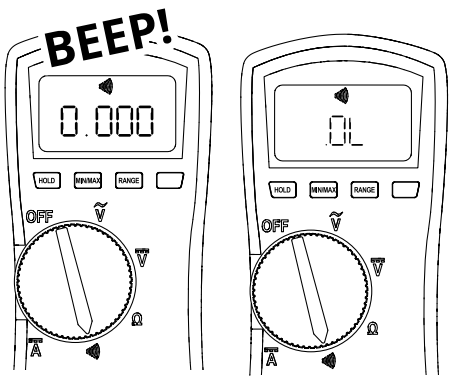
Remove the spade connectors from the door ajar breakaway switch to isolate the switch.



How to test the switch for continuity

If the switch has continuity, this means **current is flowing** through the switch.

The switch should **show a reading of "0" (audible beep)**, or near zero, until you hit the bottom bar hard enough to activate the switch, at which point is should **drop momentarily to ".OL"** (Open Loop or open circuit).

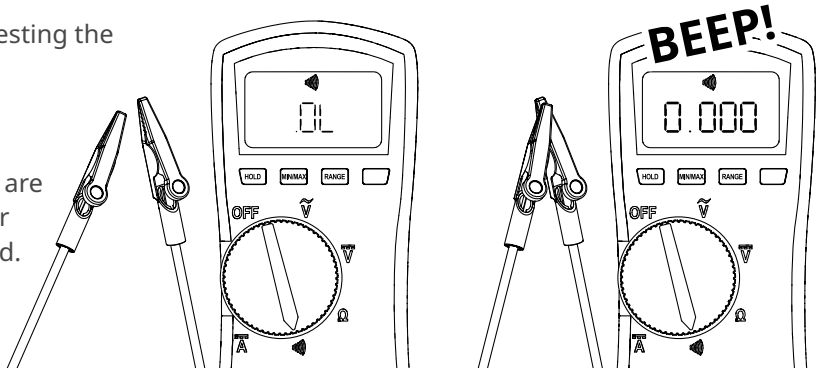


Continuity **No continuity**

INSIDER'S TIP **Using alligator clips,** instead of probes, frees your hands to strike the door while monitoring the reaction of the multimeter.

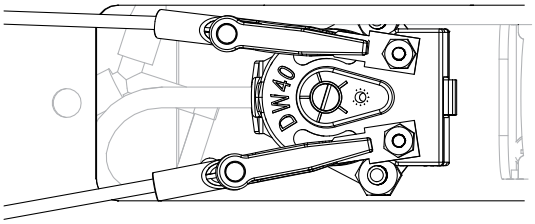
5 **Test** the multimeter before testing the switch.

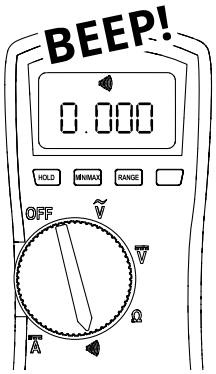
Connect, then disconnect the clips, and make sure the reading is at ".OL" when they are disconnected, and "0" or near zero when they are connected.



6 **Connect** the alligator clips to the terminals on the switch.

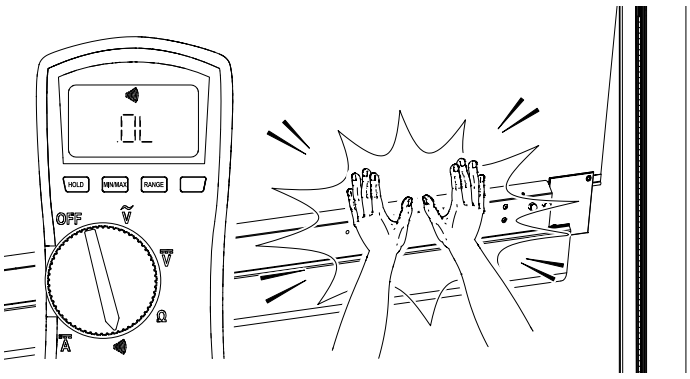
You should see a reading of continuity.





7 **Strike** the bottom bar of the door, softly at first, then gradually harder, until the multimeter responds to the strike and momentarily indicates no continuity.

- **If the sensitivity of the switch is correct,** take no further action.
- **If the sensitivity of the switch is too high,** this is most likely the cause of the F:060 errors when the door is still in its track. **Reset** the sensitivity of the switch to the Rytec default.



Steps to follow if the controller is NOT generating F:060 errors, even when the door is knocked out of its track

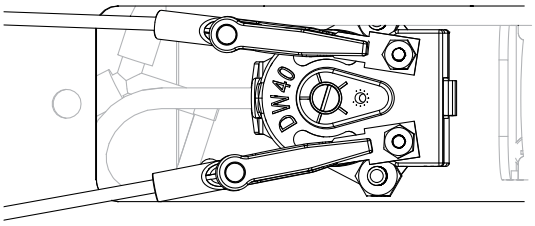
1 Follow the steps from the previous section, with these changes:

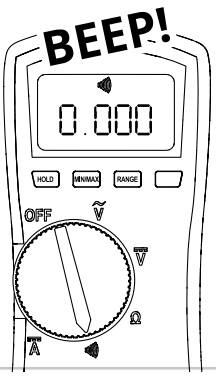
- **It is not necessary** to check the door tracks for obstructions.
- When turning the adjustment screw to find the base continuity point, you may not reach a point where there is no continuity. **If the multimeter still shows continuity** after six full turns counterclockwise, **the switch is broken** and needs to be replaced

How to reset the sensitivity of the door ajar breakaway pneumatic switch

1 If the switch is not still connected to the alligator clips, **connect** the clips to the terminals and **set** the multimeter to continuity.

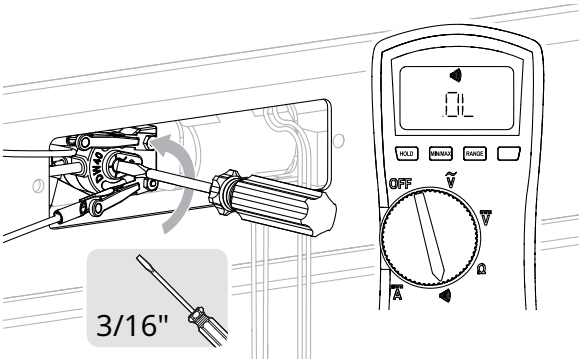
The multimeter should read "0" or near zero, and there should be an audible beep.





2 **Use** a 3/16" flathead screwdriver to gradually turn the white adjustment screw on the switch **COUNTERCLOCKWISE**.

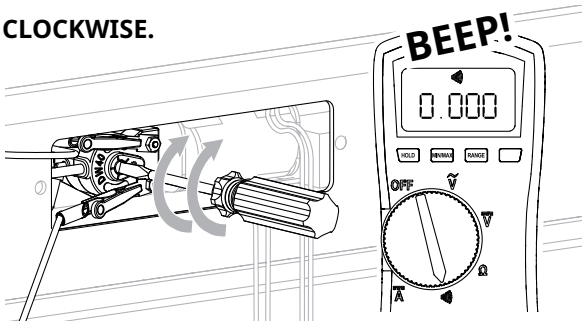
- **Stop** when the multimeter indicates no continuity.
- **Turn** the screwdriver **back and forth** by incremental amounts to verify that you have reached the point where a small adjustment changes the switch from continuity to no continuity.



You have set the switch to the **base continuity point**. This is the point where the adjustable contact and the contact on the flexible membrane are just touching.

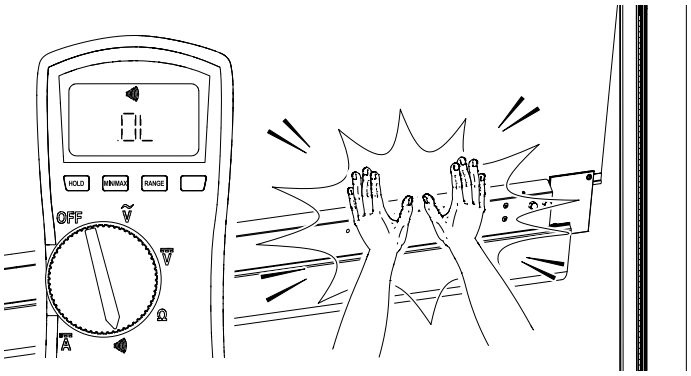
3 **Turn** the adjustment screw **two full turns (720°) CLOCKWISE.**

This is the **default Rytec setting** for the switch.



4 Test the sensitivity of the switch by **striking** the bottom bar of the door, softly at first, then gradually harder, until the multimeter responds to the strike and momentarily indicates no continuity.

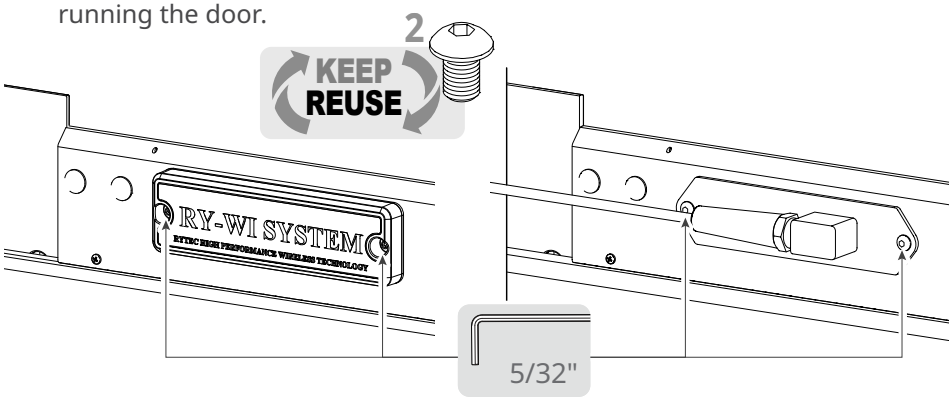
- **It should be necessary to knock the door out of the track** to make this happen.

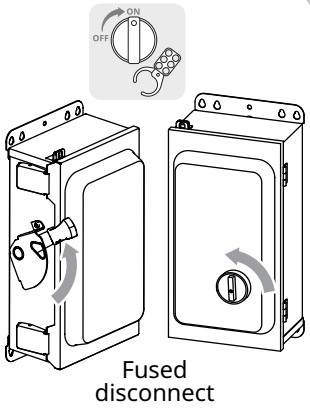


5 If you want to adjust the sensitivity from the Rytec standard, you will need to **restore power** and **refeed** the door panel into the door track.

You can **continue to test and adjust** with the door in Run mode, striking the door while it closes.

Make sure the cover for the switch has been reinstalled when running the door.





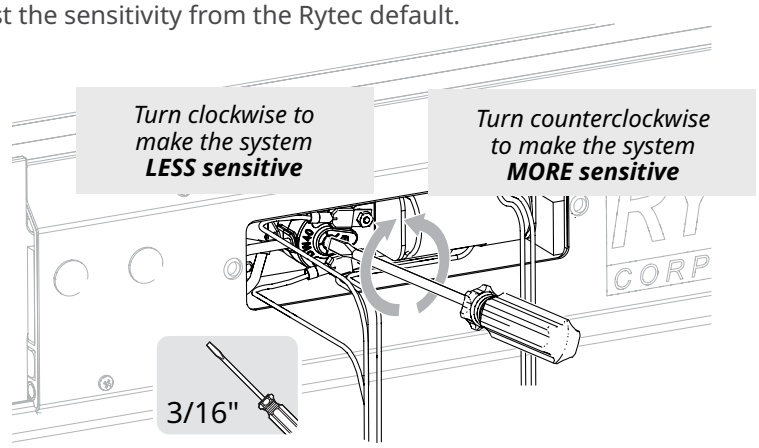
6 **Use** the flathead screwdriver to adjust the sensitivity from the Rytec default.

- **Clockwise** to make the system **LESS sensitive**, so harder contact is required to stop the door.
- **Counterclockwise** to make the system **MORE sensitive**, so less contact is required to stop the door.

IMPORTANT

Turn a half turn, then retest the door. **DO NOT** turn farther than half a turn before retesting.

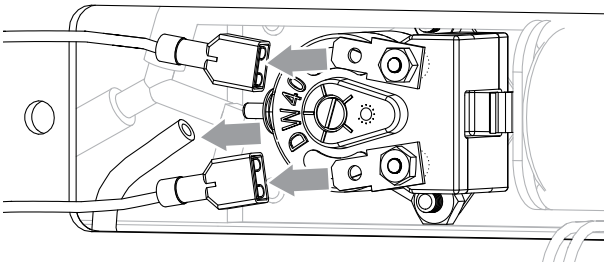
Make sure to close up the bottom bar when the sensitivity is correct.



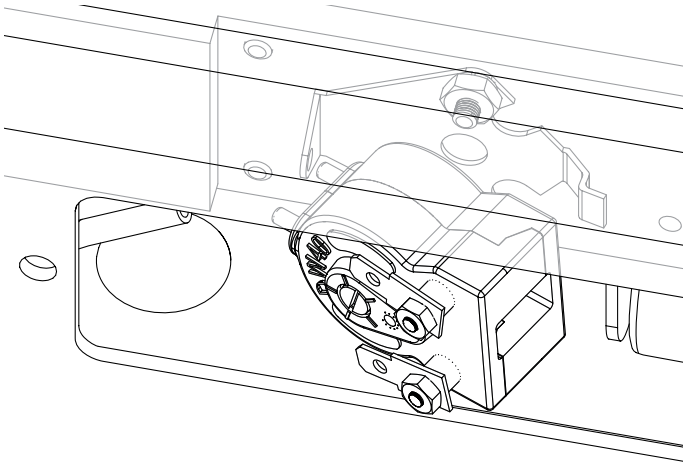
7 **Put** the door into test mode and allow it to run through multiple cycles to make sure the controller is no longer generating unwanted F:060 errors.

How to replace the door ajar breakaway pneumatic switch

1 **Remove** both spade connectors from the terminals, as well as the hose from the Y connector connected to the front port.



2 **Pull back** the tab on the mounting bracket and **slide out** the switch.



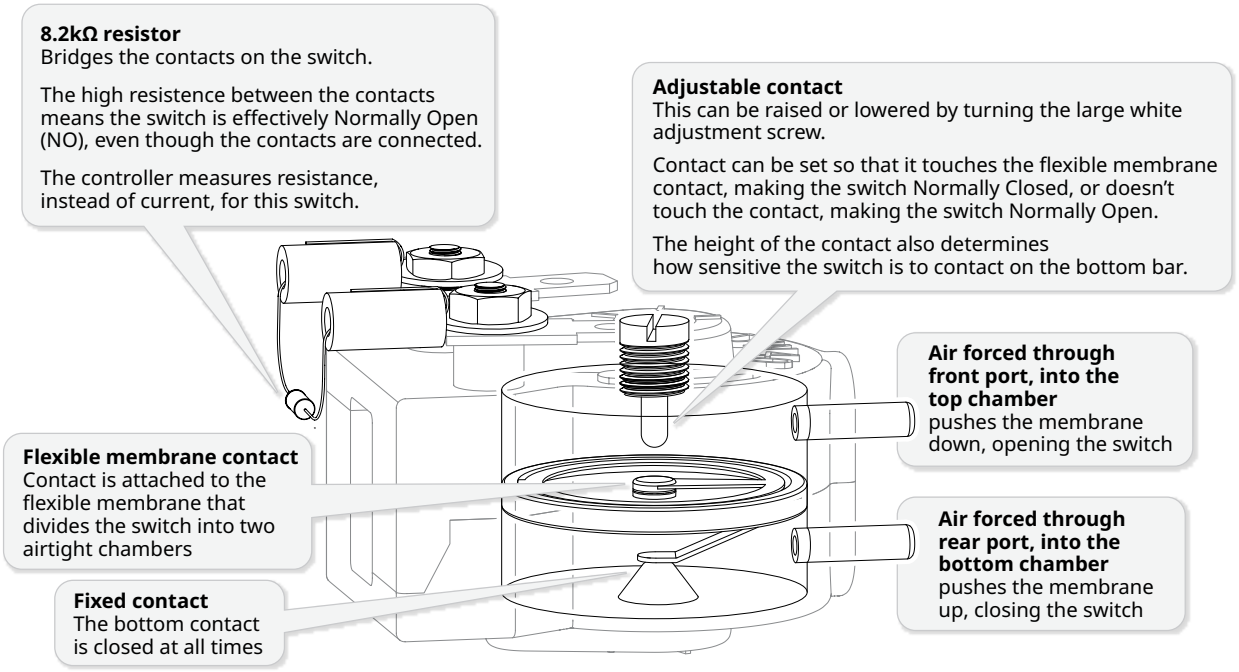
3 **Reverse** these steps to install the new switch.

Make sure to follow the steps in *How to reset the sensitivity of the door ajar breakaway pneumatic switch* on page 64 once the new switch has been installed and connected.

How to test, reset, and replace the reversing edge pneumatic switch

How the Bircher pneumatic switch works

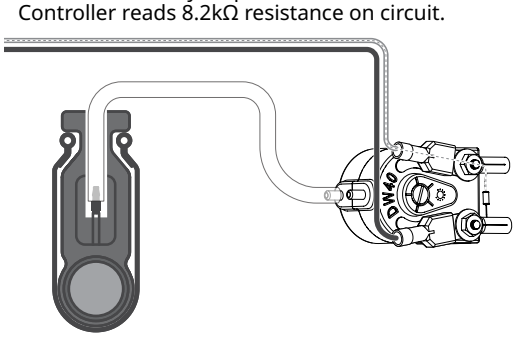
The Bircher pneumatic switch used in Rytec doors is flexible enough that it is used, in the PredaDoor, as both a Normally Closed (NC) switch in the door ajar breakaway system and a Normally Open (NO) switch in the reversing edge system.

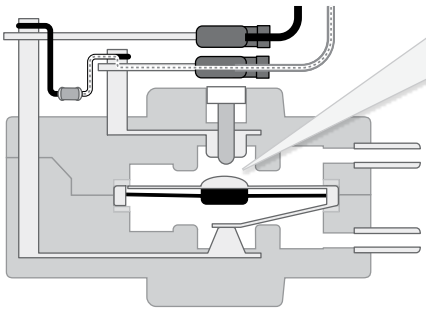


How the switch works in the reversing edge system

The controller monitors the NO switch for resistance, and reacts by stopping, then reversing the door if the switch closes and resistance drops to zero.

Normal operation
Current effectively stops at resistor.
Controller reads 8.2kΩ resistance on circuit.

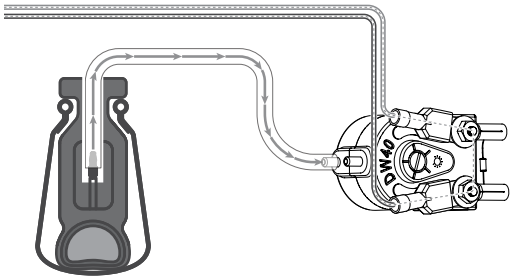


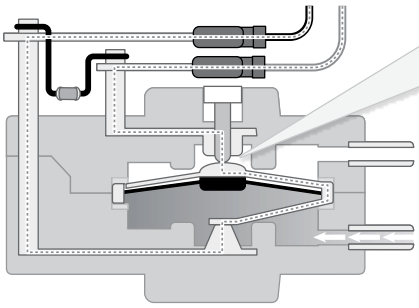


Inside switch:
Adjustable contact is set at a height that does not touch the flexible contact.

Current routes through the resistor, where it is effectively stopped, making the circuit effectively open.

Door is hit
Reversing edge compresses, forcing air into switch.





Inside switch:
Air flows into lower chamber, forces membrane up and creates contact.

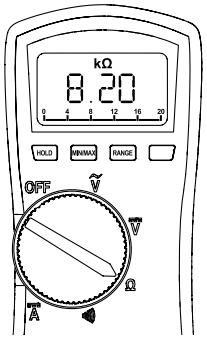
Current flow passes momentarily through switch. Controller reads 0 resistance and stops, then reverses, door.

Before following these steps, it is assumed that you have done the following:

IMPORTANT

1. **Visually inspected** the switch, the bottom bar, the hose and reversing edge, and the wiring, as described in *Quarterly maintenance - visual inspections and tightening hardware,* and found no visible problems with parts other than the switch.
2. **Physically tested** the reversing edge as described in *Test the reversing edge* on page 34 and found a problem in the door's response to contact.
3. **Checked** the error history of the door as described on page 32, in particular looking for error codes F:361, F:363, F:831 and F:f01 in the recent history of the door.

How to test the resistor, switch and wiring for resistance.



- **The multimeter** used must have a display that shows at least two decimal places, and has a range of at least 10kΩ (20kΩ is preferable)
- Multimeters that **show just one decimal place** may round up and give an incorrect reading.

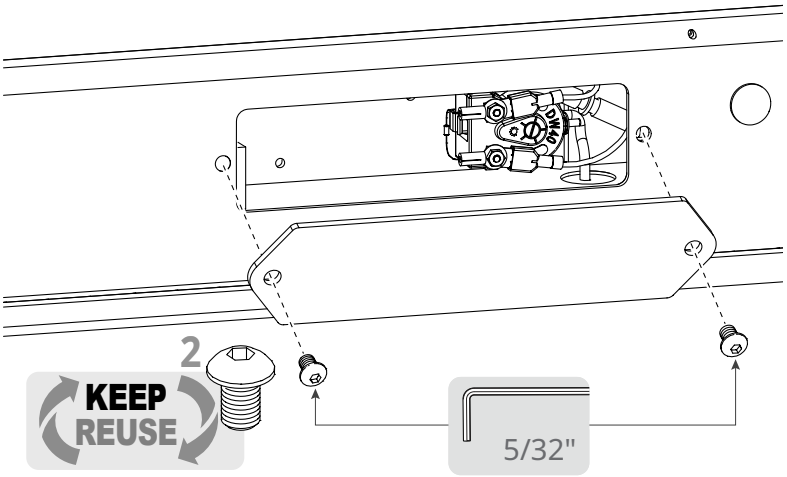
INSIDER'S TIP **Using alligator clips,** instead of probes, frees your hands to strike the reversing edge while monitoring the reaction of the multimeter.

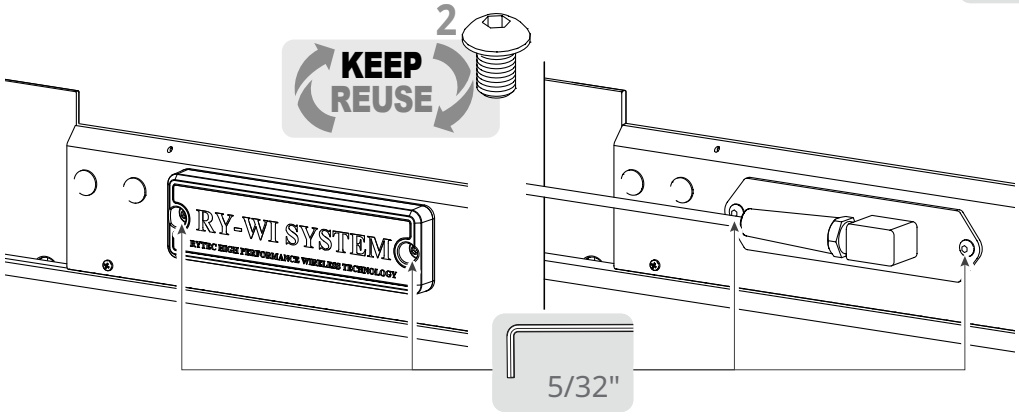
1 **Remove** the cover from the non-drive side of the bottom bar to reveal the pneumatic switch for the reversing edge.

Also remove the cover from the drive side of the bottom bar to access the drive-side end of the wires from the reversing edge switch.

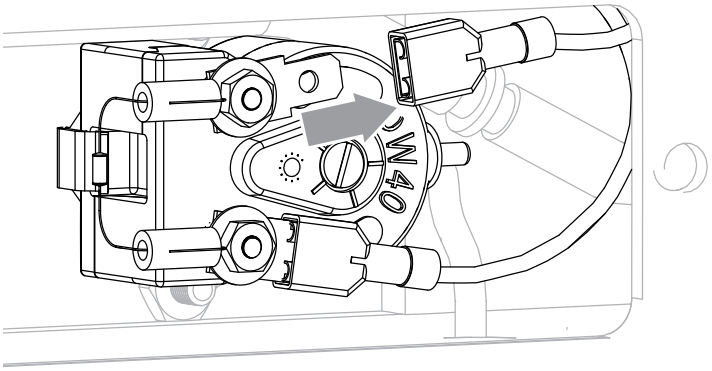
Retain the bolts.

Carefully separate the wires.



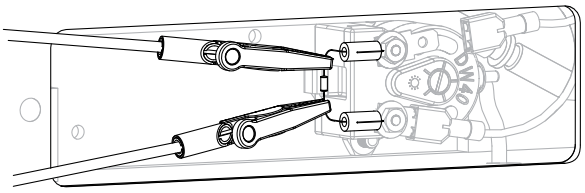


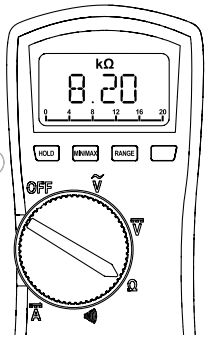
2 To isolate the switch and resistor, **remove** one of the spade connectors from the switch.



3 **Test** the resistor first.

Place the clips on the wires from the resistor without touching the contacts on the switch.





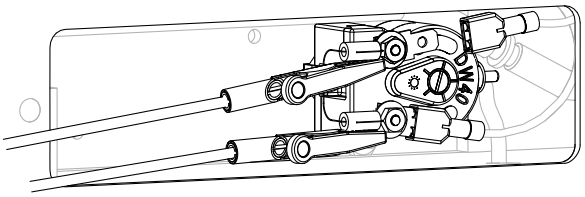
Acceptable readings are within 10% of 8.2kΩ, so any reading **between 7.4kΩ and 9.0kΩ** indicates the resistor is not broken.

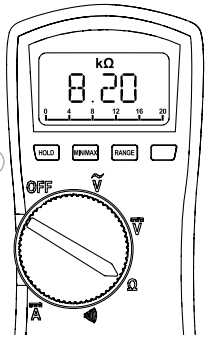
If the reading is not within this range, **it will most likely be 0 (zero).**

A reading outside of this range **indicates that the resistor needs to be replaced.**

4 **Test** the switch next.

Place the clips on the contacts on the switch.

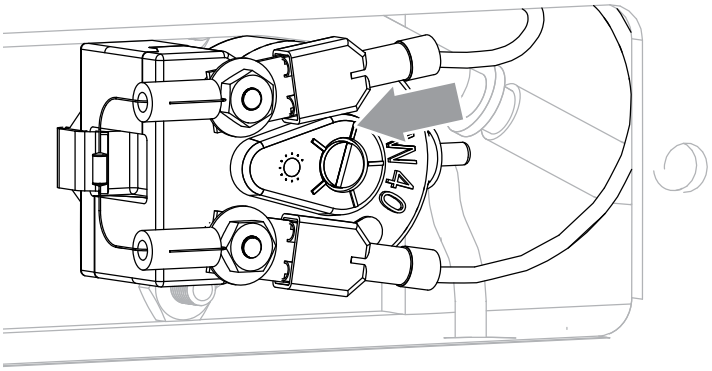




Acceptable readings are within 10% of 8.2kΩ, so any reading **between 7.4kΩ and 9.0kΩ** is acceptable.

This reading is **just a reference point** for the next step. The switch **may require adjustment** either way.

5 **Replace** the spade connector.



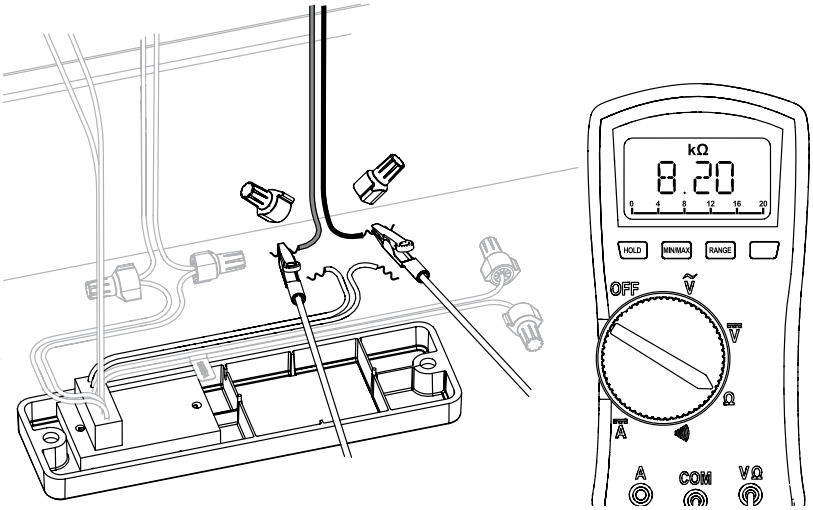
6 On the drive side, **locate** the red and black wires that run across the bottom bar and **remove** the wire nuts.

Separate the red and black wires from the wires that run to the terminal block on the mobile unit. **Set** the wires to the mobile unit aside.

- This isolates the bottom bar.

Place the clips on the exposed wires.

Acceptable readings are within 10% of 8.2kΩ, so any reading **between 7.4kΩ and 9.0kΩ** is acceptable.



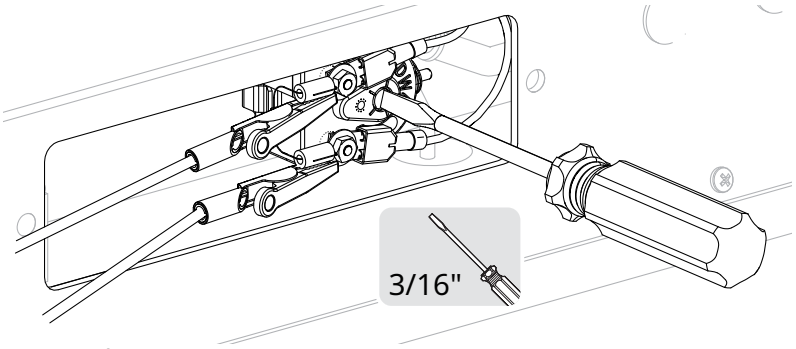
An acceptable reading at the switch, coupled with an unacceptable reading here, **indicates by a process of elimination that the wire bundle needs to be replaced.**

How to reset the sensitivity of the reversing edge pneumatic switch

1 If the switch is not still connected to the alligator clips, **connect** the clips to the terminals and **set** the multimeter to ohms.

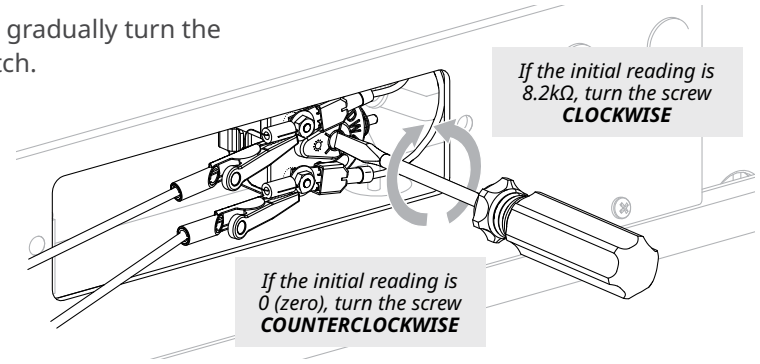
To reset the sensitivity, you must first set the switch to the **base continuity point**

This is the point where the adjustable contact and the contact on the flexible membrane are just touching and the **resistance drops from 8.2kΩ to zero**.



2 **Use** a 3/16" flathead screwdriver to gradually turn the white adjustment screw on the switch.

- **Stop** when the resistance jumps, either from zero to 8.2kΩ, or from 8.2kΩ to zero.
- **Turn** the screwdriver **back and forth** by incremental amounts to verify that you have reached the point where a small adjustment changes the switch from resistance to zero resistance.

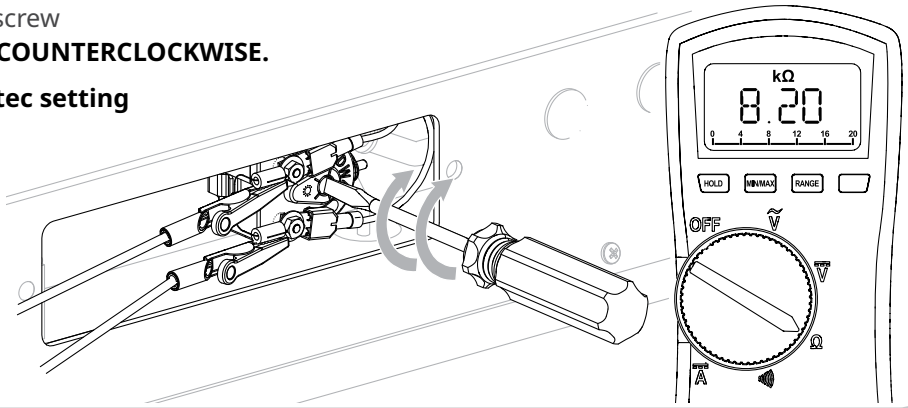


You have set the switch to the **base continuity point**.

3

Turn the adjustment screw
two full turns (720°) COUNTERCLOCKWISE.

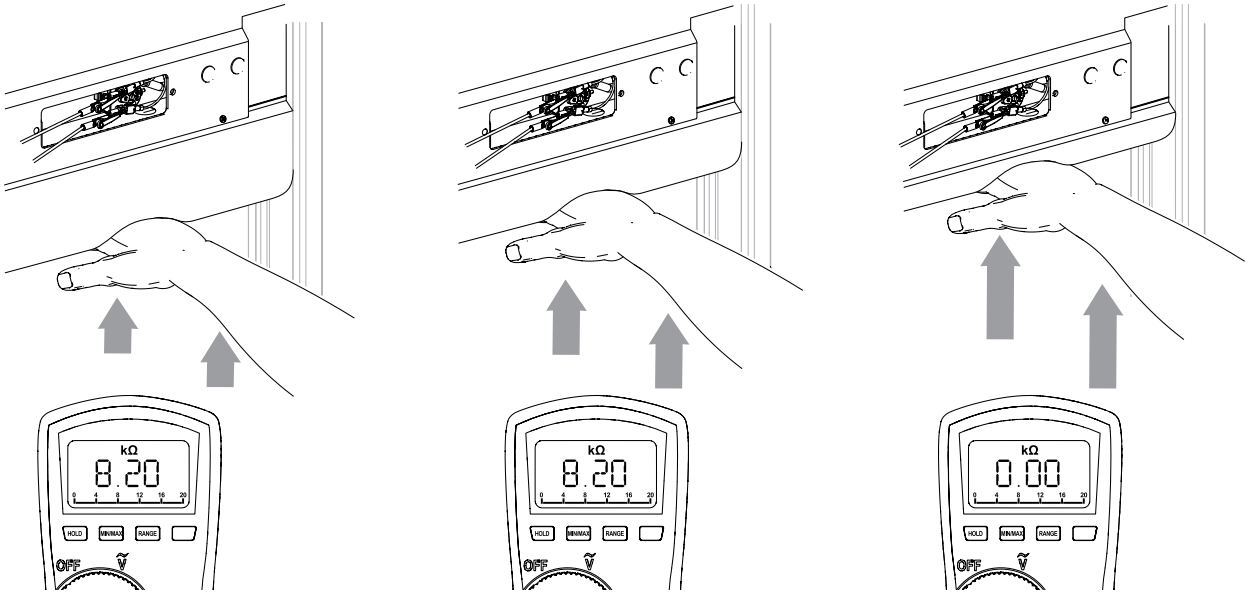
This is the **default Rytec setting** for the switch.



4

You can test the sensitivity of the switch by **striking** the reversing edge, softly at first, then gradually harder, until the multimeter responds to the strike and momentarily indicates zero resistance.

- The Rytec default setting should respond to a fairly light strike, which minimizes the chance of damage resulting from contact.



5

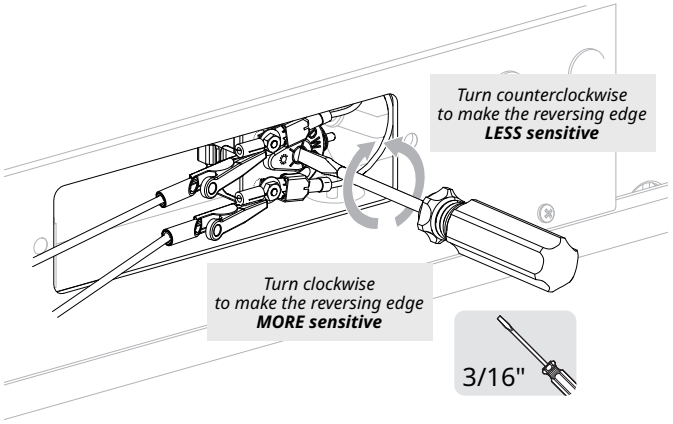
If necessary, **use** the flathead screwdriver to adjust the sensitivity from the Rytec default.

- **Counterclockwise** to make the system **LESS sensitive**, so harder contact is required to reverse the door.
- **Clockwise** to make the system **MORE sensitive**, so less contact is required to reverse the door.

IMPORTANT

Turn a half turn, then retest the door. **DO NOT** turn farther than half a turn before retesting.

Make sure to close up the bottom bar when the sensitivity is correct.

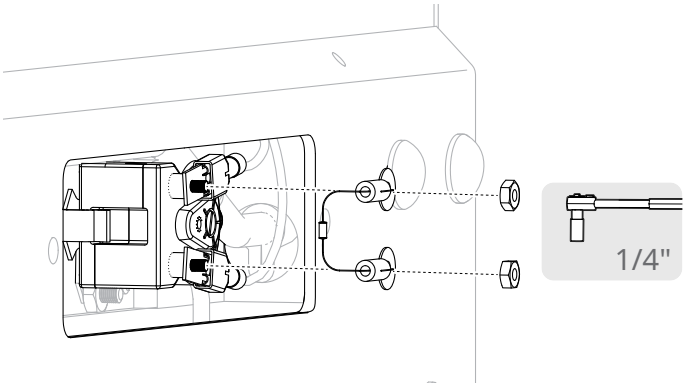


6 **Put** the door into test mode and allow it to run through multiple cycles to make sure the reversing edge is responding correctly and the controller is no longer generating errors.

How to replace the resistor on the reversing edge pneumatic switch

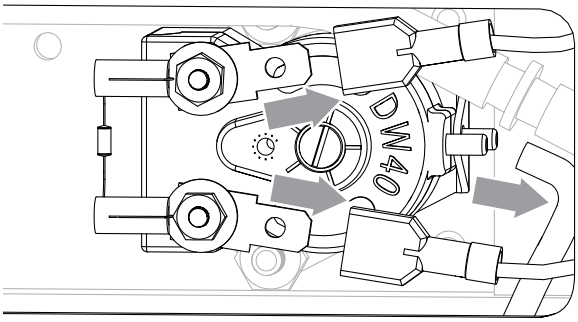
1 **Remove** the two nuts that hold the resistor assembly in place, then **slide off** the resistor assembly.

Slide in the new assembly, then **reinstall** and **tighten** the nuts.

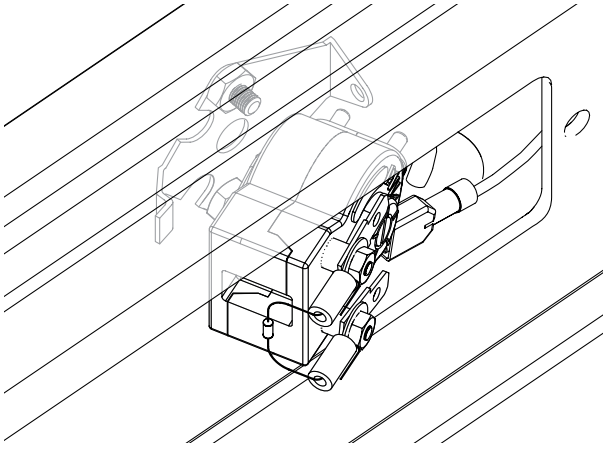


How to replace the reversing edge pneumatic switch

1 **Remove** both spade connectors from the terminals, as well as the hose connected to the reversing edge.



2 **Pull back** the tab on the mounting bracket and slide the switch out.



3 **Reverse** these steps to install the new switch.

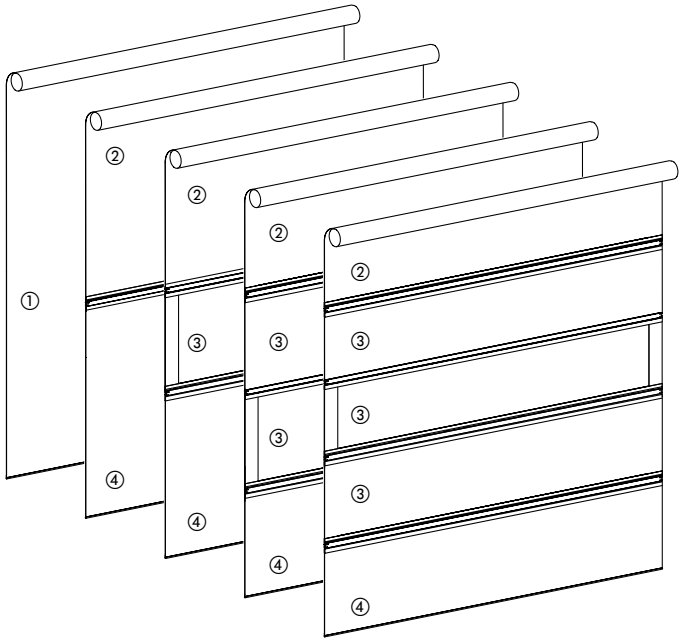
Make sure to follow the steps in *How to reset the sensitivity of the reversing edge pneumatic switch* on page 70 once the new switch has been installed and connected.

The door panel: removing and replacing door panels

PredaDoor door panels, depending on the size of the door, can have anywhere from one to five separate panels.

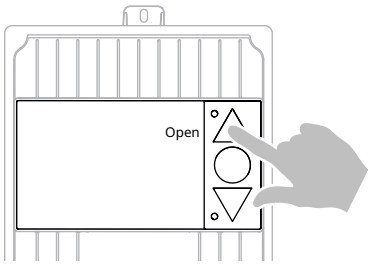
Three is the most common configuration.

The procedure for replacing a panel is different based on whether the panel is a single panel ①, a top panel ②, a middle panel ③, or a bottom panel ④.

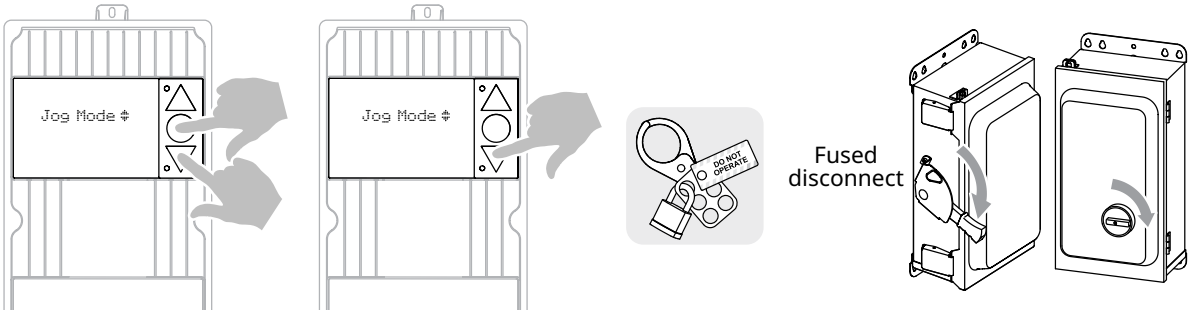


For all panel types, the first step is to take the door panel out of the door track, lower the door panel, and check that the panel and replacement panels match

1 **Press** the OPEN button to move the door to the fully open position.

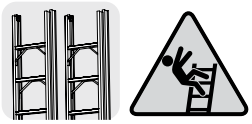


2 **Switch** the door to jog mode and **jog** the door about a foot, then **shut off power to the door** and perform a lockout/tagout.

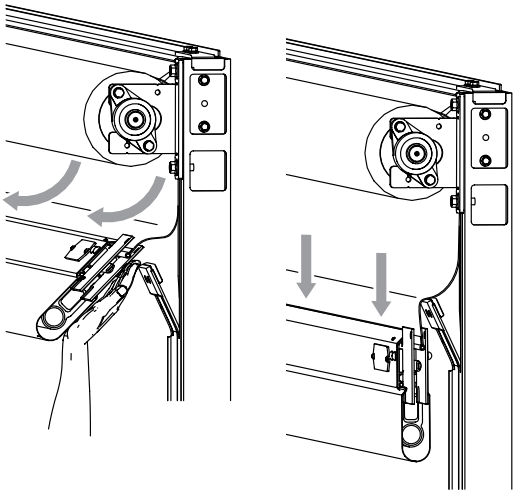


3 **Use** a scissor lift or ladders to go up to the head assembly, then use the slack in the door panel to lift the bottom bar over the refeed guide on both sides of the door.

Release the bottom bar so it hangs free in front of the guide.



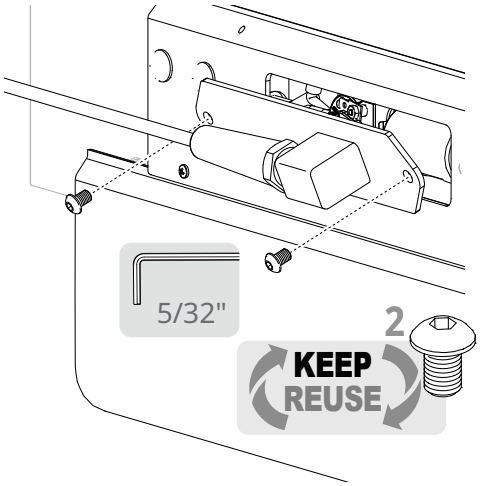
Ladder
or
Scissor lift



On coil cord doors, separate the coil cord from the bottom boar.

1 **Remove** the cover that connects the coil cord to the bottom bar.

Retain the screws.

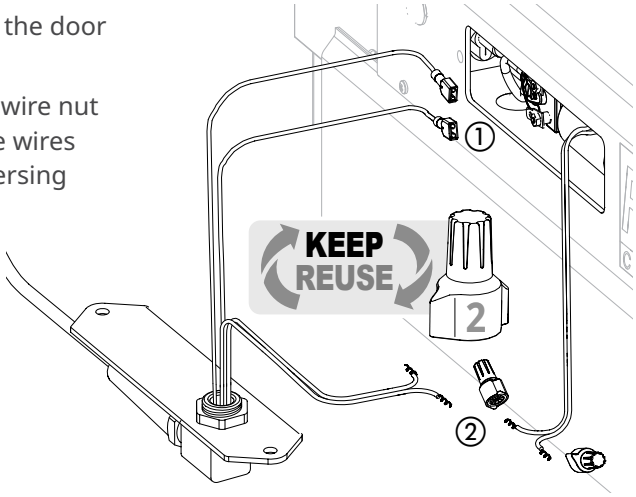


2 **Disconnect** the two spade connectors on the door ajar breakaway pneumatic switch ①.

Disconnect the two white wires from the wire nut that connects them to the black and white wires that run across the bottom bar to the reversing edge pneumatic switch ②.

Retain the wire nuts.

Tape the coil cord to the side column.



⚠ WARNING

This procedure requires you to set parameter P:980 to a value of 3. This allows you to jog the door beyond the close limit, but also deactivates the object detection and alert systems.

Do not use this setting at any other time without contacting Rytec Technical Support.

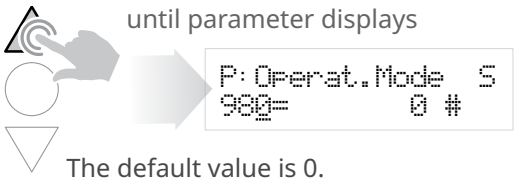
Navigate to parameter P:980, set the value to 3, then jog the door to the floor

1 **Set the controller** into parameter mode and **enter the password** for Service level access.

If you don't know how to do this, **review** *Set the controller to Parameter mode and access Service level parameters on page* 32.

Do This *Result*

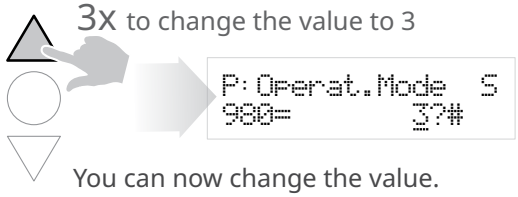
1 until parameter displays



The default value is 0.

2 1x to move cursor to the right (edit value)

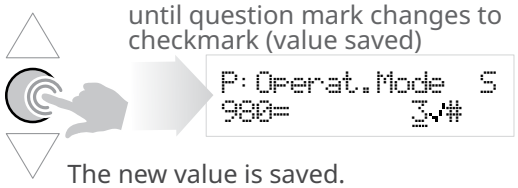
3 3x to change the value to 3



You can now change the value.

Do This *Result*

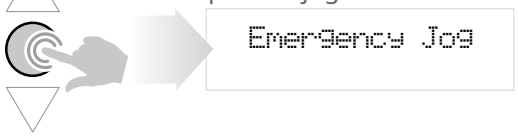
4 until question mark changes to checkmark (value saved)



The new value is saved.

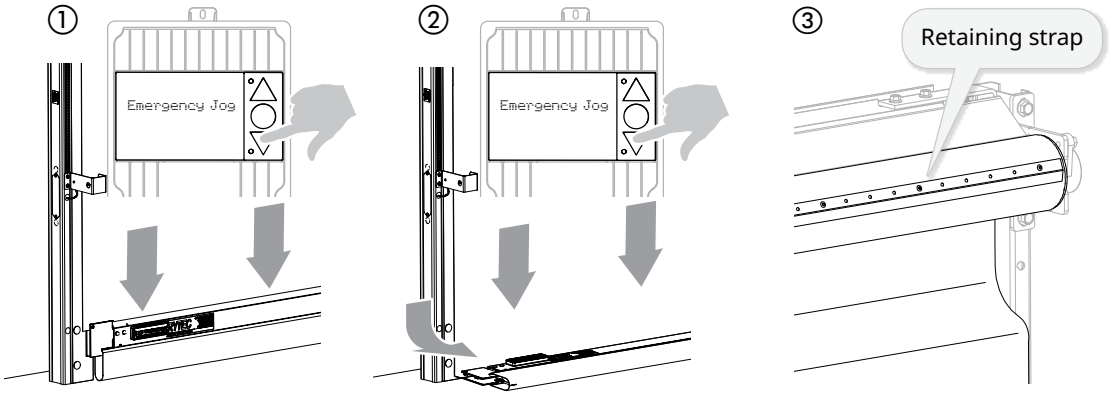
5 1x to move cursor to parameter side

6 until door opens in jog mode



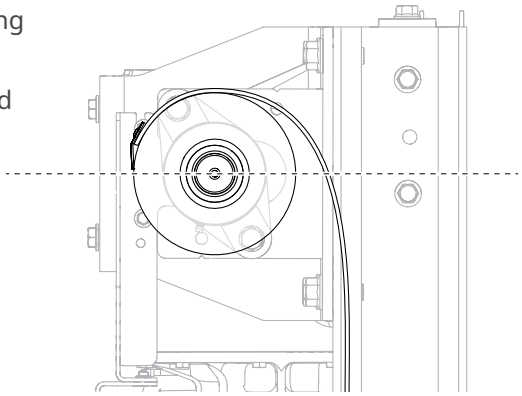
1 **Jog** the door down until the reversing edge touches the floor ①. Then **continue to slowly jog the door down** until the bottom bar lies flat on the floor ②, taking the weight off the door panel, and you can see the retaining strap for the door panel ③ on the drum up in the head assembly.

- **Make sure** the bottom bar does not scrape against the floor as the door lowers.



2 If necessary, **jog** the door panel so that the retaining strap is just above the middle of the drum.

- **This is the easiest height** for both removing and replacing the panel.



3 If the door is tall, it may be necessary to **use** ladders or scissor lifts to reach the door panel to measure it.

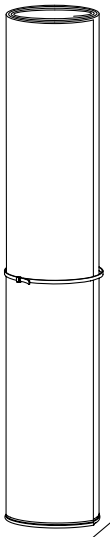
Ladder or Scissor lift

4 **Cut** the tie on the replacement panel, unroll it as much as space allows, and measure the height and width.

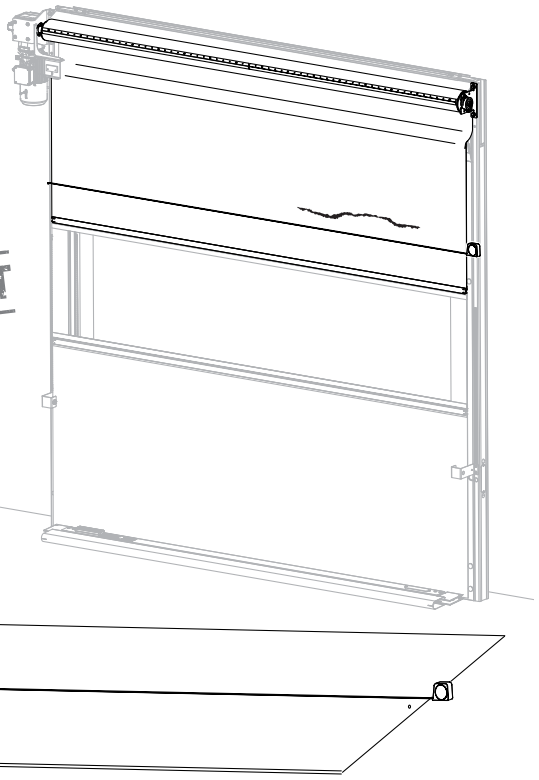
- **Then measure** the panel you are about to replace.
- **Make sure** the panel sizes match.

Cutting pliers

Measuring tape

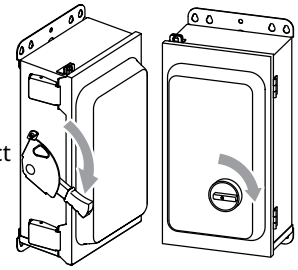


IMPORTANT



5 **Shut off power to the door** and perform a lockout/tagout.

Fused disconnect



Steps to remove and replace a single or top door panel

On a single panel door, remove the bottom bar

1 **Follow the steps** in *How to remove and replace the bottom bar* starting on page 43.

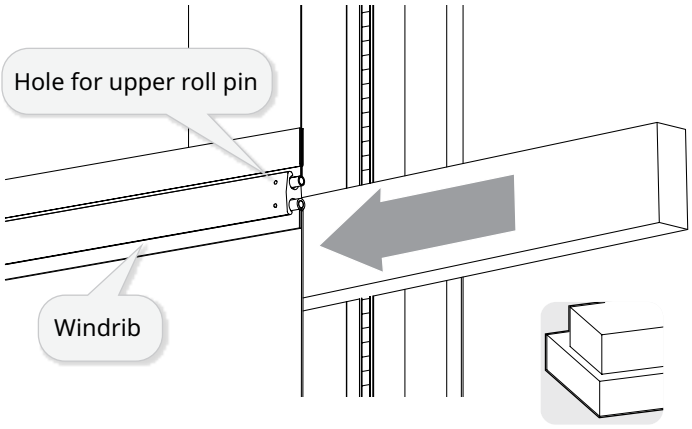
On a multi-panel door, separate the lower panel(s) from the top panel

1 **Slide** a 2x4 behind the windrib at the bottom of the panel to **brace** the windrib against the side panel.

Position the 2x4 so that the upper roll pin is unobstructed.

You **may need** to use a ladder or scissor lift.

Ladder or scissor lift



2 **Use** a hammer and 3/32" pin punch to **tap out** the upper roll pin.

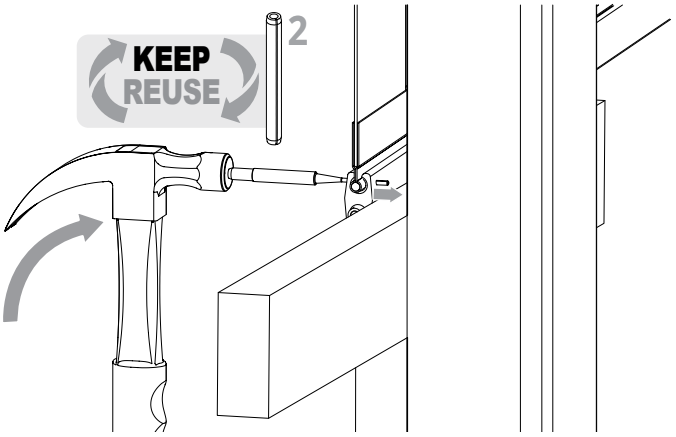
Leave the lower pin in place.

Do this on both sides of the door.

Retain the pins.

Pin punch 3/32"

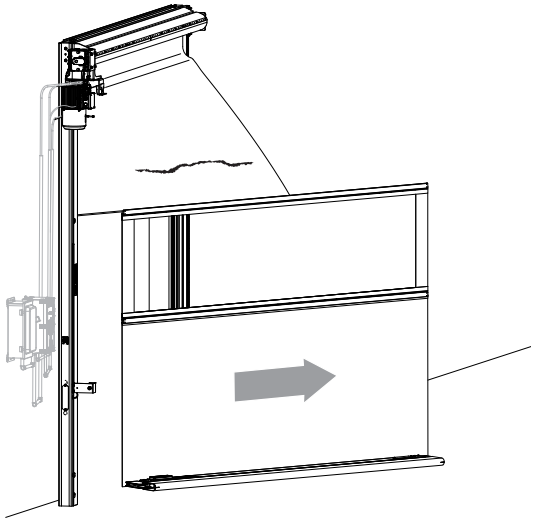
Hammer



3 **Slide** the bottom panel(s) off of the top panel.

If necessary within the space of the work site, you can **twist** the door panel and **slide to the front** of the door, rather than the side.

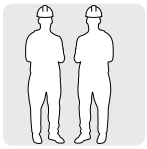
Roll up the removed panel(s) around the bottom bar and **set aside.**



Remove the old door panel from the drum and install the new panel

INSIDER'S TIP

It is easier to manage the removal and replacement of the door panel if one service tech drills out the rivets and installs the new rivets, and a second service tech holds the panel and restraining strap in place.



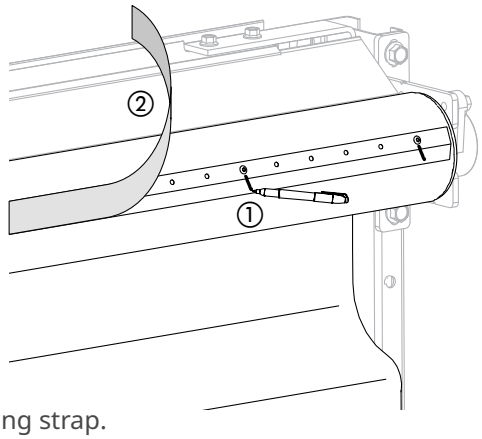
1 Pop rivets are installed into every fourth hole in the retaining strap (may vary based on installation), to match the holes in the drum.

Sharpie

Mark the holes in the strap that have pop rivets installed ①.

- You will install new pop rivets in **only these holes.**

On some doors, the retaining strap is covered by a Velcro strip to cushion the door panel when it rolls up onto the drum ②.



You will need to **peel off** the strip to access the retaining strap.

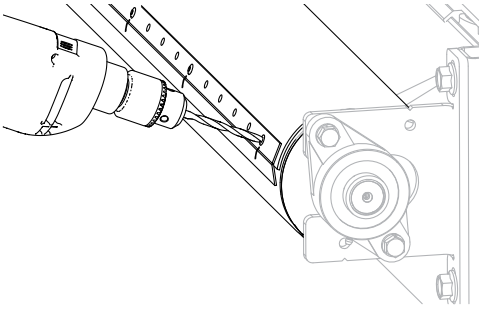
- If possible, **keep the strip intact** and **save** it to be reinstalled later.

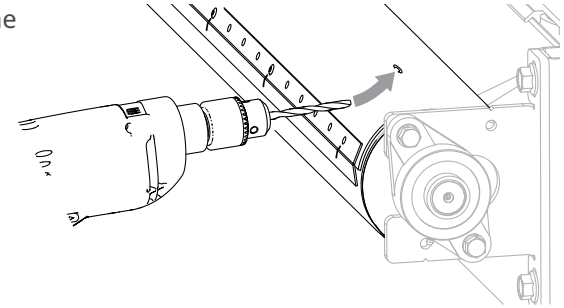
2 Starting at the outer edges, and working your way to the center, **drill out** the pop rivets.

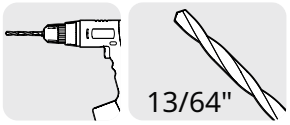
IMPORTANT

DO NOT drill past the head of the rivet, into the retaining strap or the drum. Stop as soon as the head of the rivet comes free.

The body of the rivet should **fall into the drum.** This will not interfere with the functioning of the door.



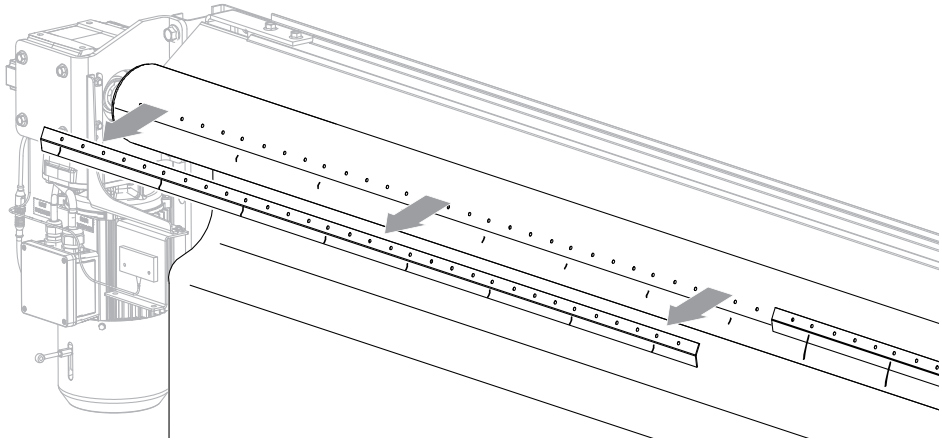




Power drill and 13/64" drill bit

3 When all rivets have been drilled out, **remove** first the left section of the retaining belt, then the right.

Then control the door panel as it slides off the drum.

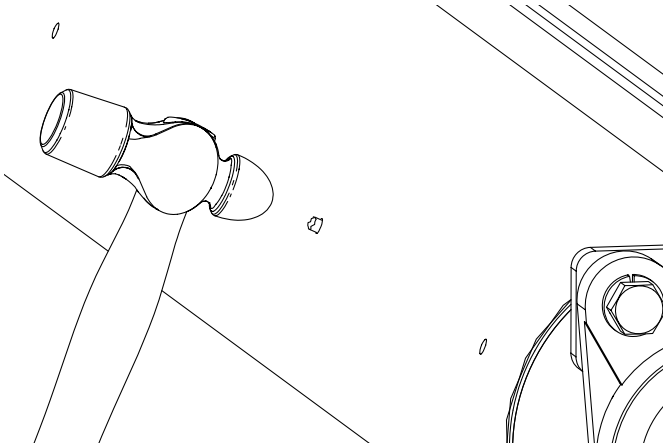


4 **Check** the drum and the retaining strap for rivet bodies that did not fall into the drum, or metal shavings from the drilling.

- **Tap** any rivet bodies into the drum using a hammer.
- **File down** an metal shavings or sharp edges with a metal file or emery paper.

Ball peen hammer

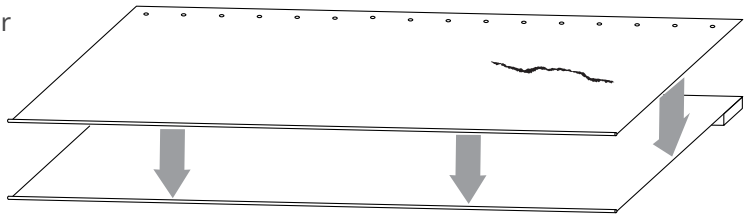
File or emery paper

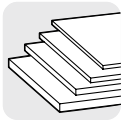


5 **Place** a piece of scrap wood under the top of the new door panel.

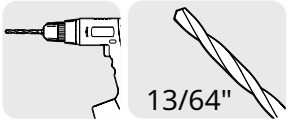
Line up the old panel on top of it.

Drill holes in the new door panel using the old one as a template.

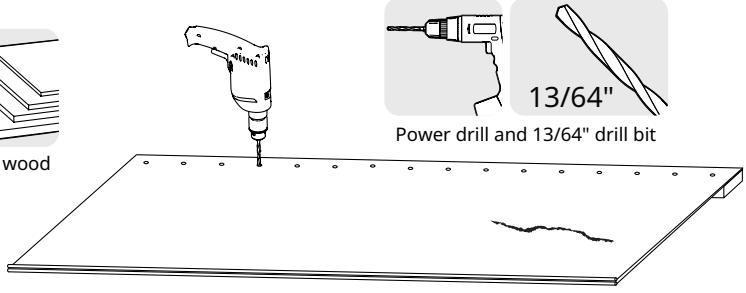




Scrap wood



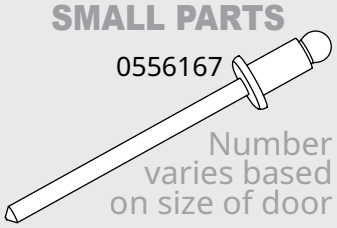
Power drill and 13/64" drill bit



6 **Locate** the new pop rivets that came with the replacement door panel.

SMALL PARTS

0556167

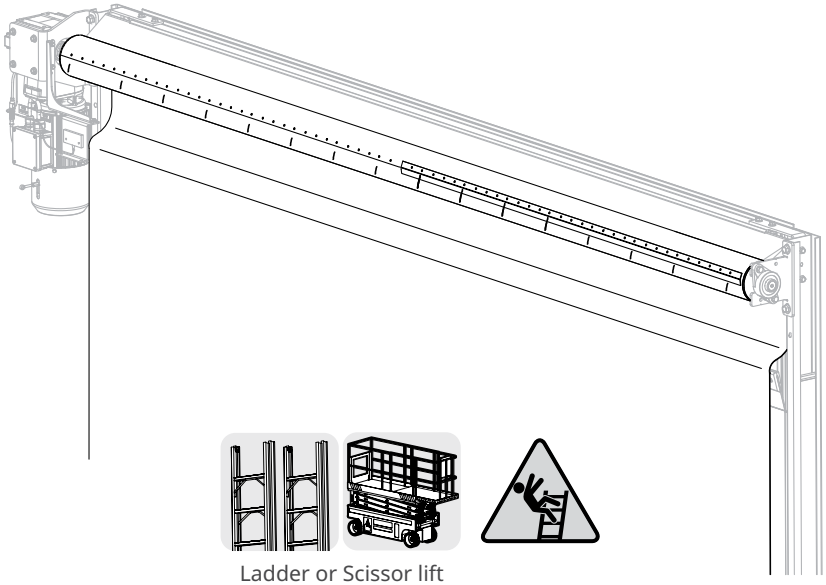


Number varies based on size of door

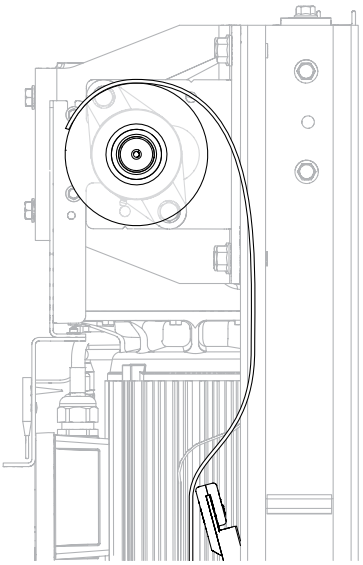
7 Back up in the head assembly, **roll** the new door panel **over** the refeed guides on both sides of the door, **around** the back of the drum, then **over** the top.

Line up the holes in the door panel with the holes in the drum and hold the panel in place until the restraining strap has been reinstalled.

Smooth down the door panel so it lies **flat against the drum** for the full width of the door and is **free of wrinkles, kinks and creases** for the full height of the door.

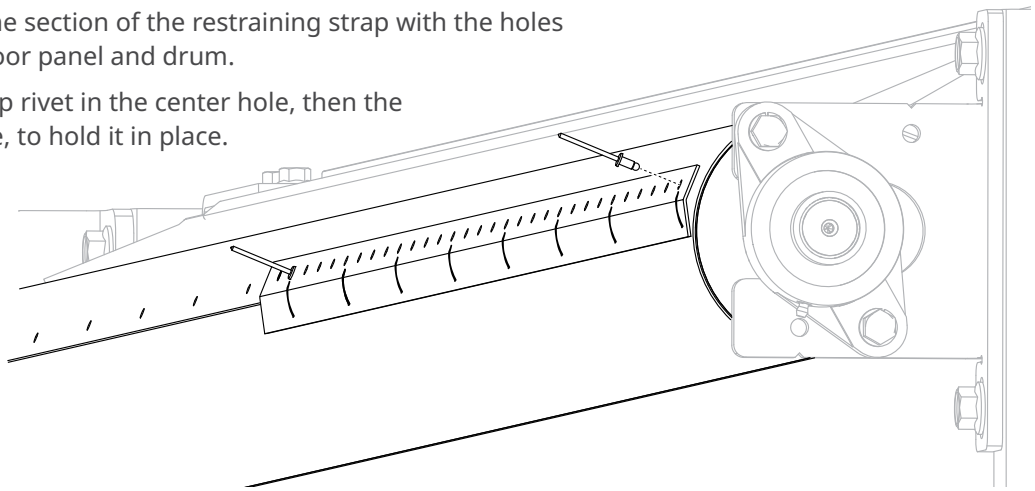


Ladder or Scissor lift



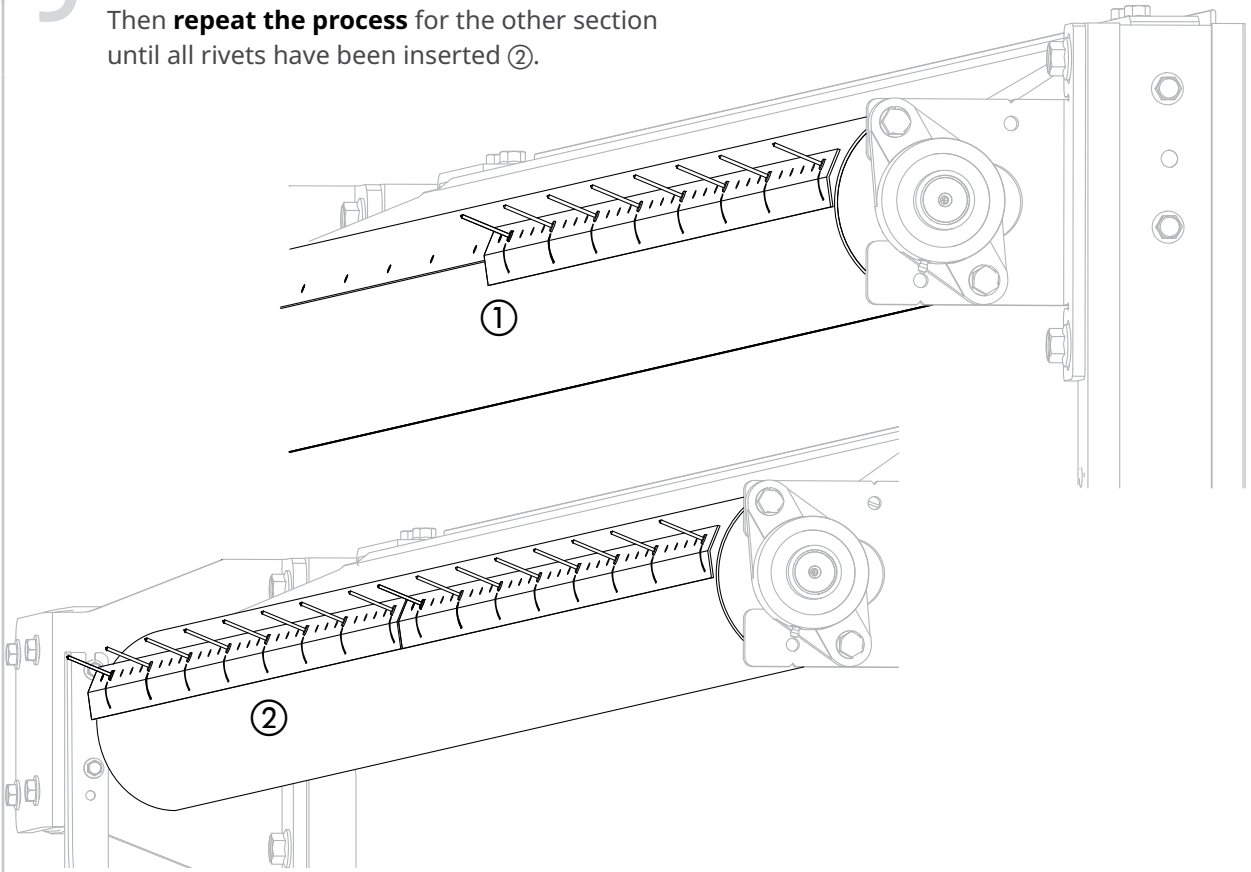
8 **Align** one section of the restraining strap with the holes in the door panel and drum.

Set a pop rivet in the center hole, then the end hole, to hold it in place.

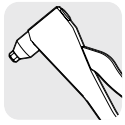


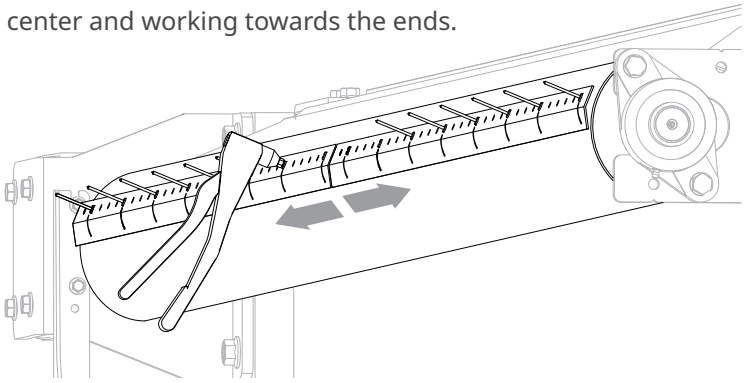
9 **Insert** the rest of the rivets in the section using the marks you made as a reference ①.

Then **repeat the process** for the other section until all rivets have been inserted ②.

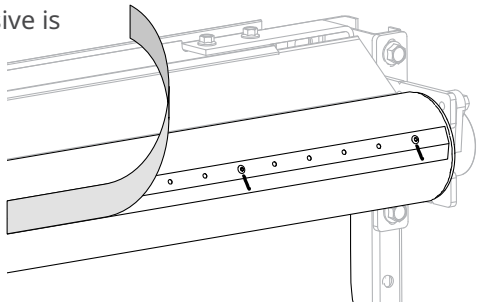


10 **Secure** the rivets, starting at the center and working towards the ends.


Rivet gun



11 If the retaining strap had a Velcro cover, and the adhesive is strong enough to hold it in place, **replace it.**



On a single panel door, replace the bottom bar

1 **Follow the steps** in *How to remove and replace the bottom bar* starting on page 43 to replace the bottom bar on the new panel.

On a multi-panel door, reinstall the lower panel(s)

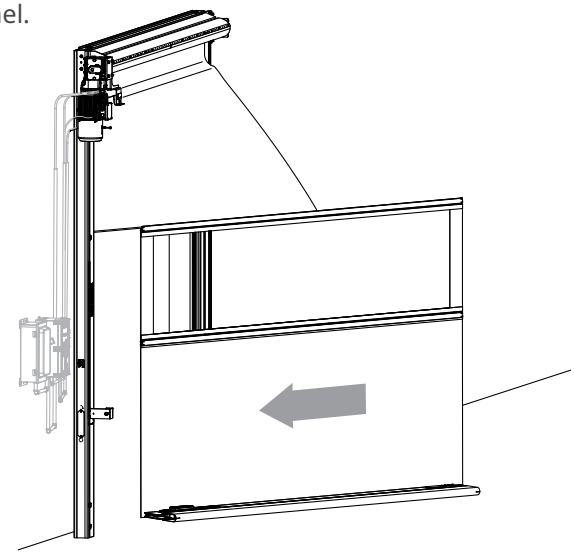
1 **Slide** the bottom panel(s) onto the new top panel.

If necessary within the space of the work site, you can **twist** the door panel and **slide to the front** of the door, rather than the side.

Make sure the panels align.

You **may need** to use a ladder or scissor lift.

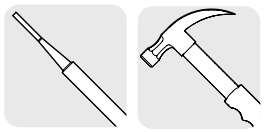
Ladder or scissor lift



2 **Use** a hammer and 3/32" pin punch to **reinstall** the upper roll pins on both sides.

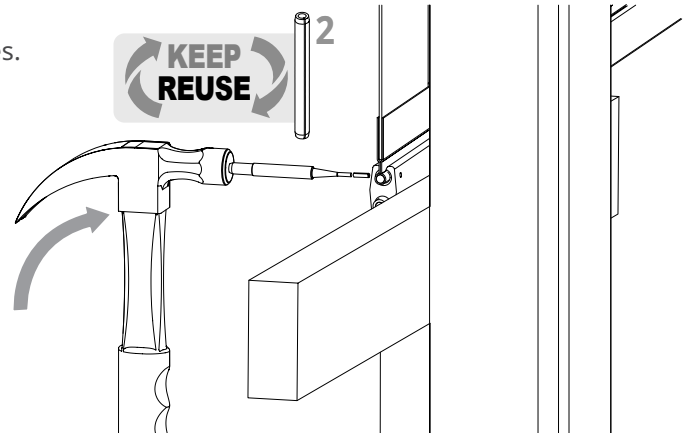
Expect some resistance as the pins push through the new panel.

Use new roll pins if the old ones do not set securely in their old holes.



Pin punch 3/32"

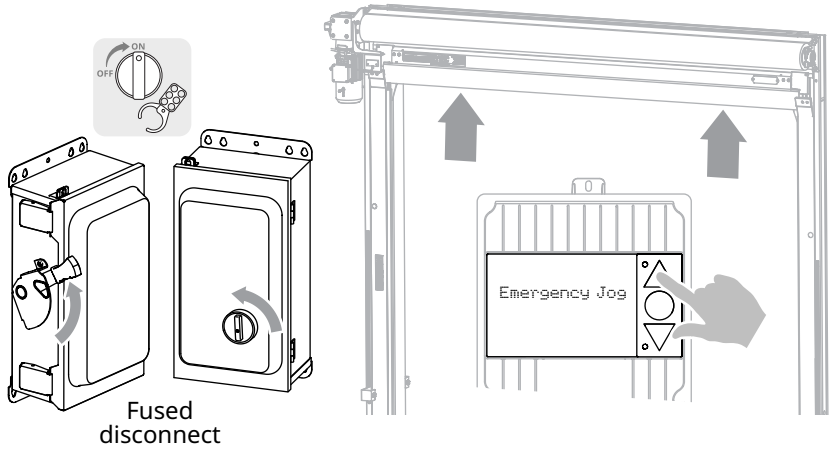
Hammer



Refeed and test the new door panel

1 **Restore** power to the door.

- The door opens in jog mode (parameter P:980=2), with the safety features operating.
- **Jog** the new door panel to the open limit of the door. The bottom bar should go over the refeed guide and into the door track. You can **jog it down** to make sure.

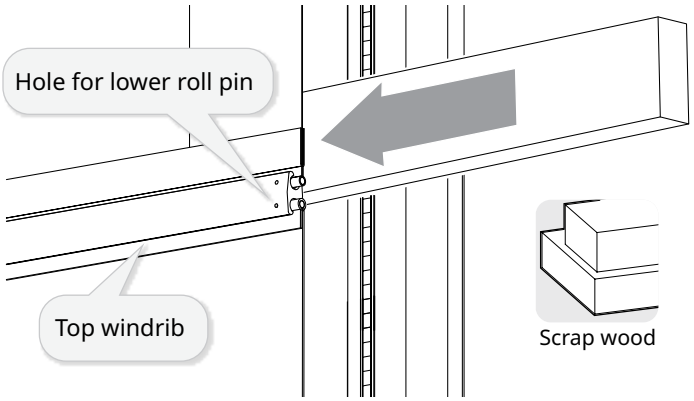


2 **Follow the steps** in *Navigate to parameter P:980 and set the value to 4 so the door will cycle continuously* on page 33 to put the door into test mode, then let the door run through multiples cycles of opening and closing with the new panel.

Steps to remove and replace a middle or bottom panel of a multi-panel door

1 **Slide** a 2x4 behind the top windrib of the panel you are replacing to **brace** the windrib against the side panel.

Position the 2x4 so that the lower roll pin is unobstructed.

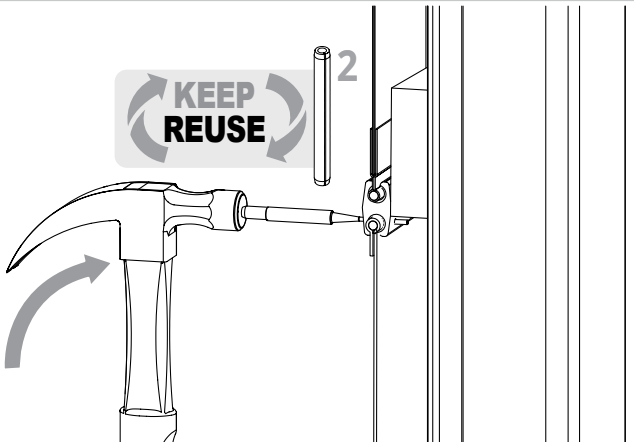


2 **Use** a hammer and 3/32" pin punch to **tap out** the lower roll pin. Try to **catch it** before it hits the floor!

Leave the upper pin in place.

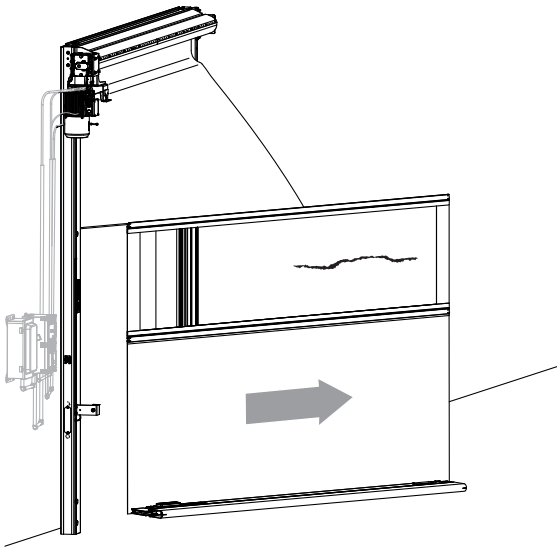
Do this on both sides of the door.

Retain the pins.



3 **Slide** the bottom panel(s) off of the top windrib.

If necessary within the space of the work site, you can **twist** the door panel and **slide to the front** of the door, rather than the side.

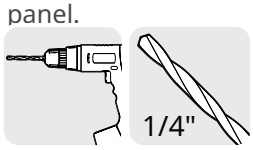


For a bottom panel, remove the bottom bar and place it on the new panel

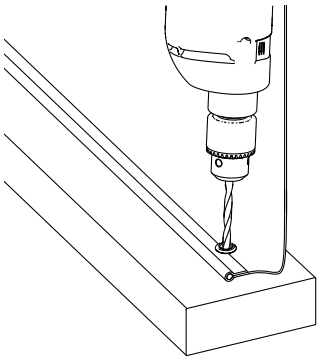
1 **Follow the steps** in *How to remove and replace the bottom bar* starting on page 43.
Swap in the new door panel when you replace the bottom bar.

2 Replacement bottom panels for vinyl or screen door panels **do not have holes pre-drilled** in the panel under the grommets.

It is easier to drill holes for the bolts before replacing the bottom bar, rather than trying to force the bolts through the panel.



Power drill and 1/4" drill bit

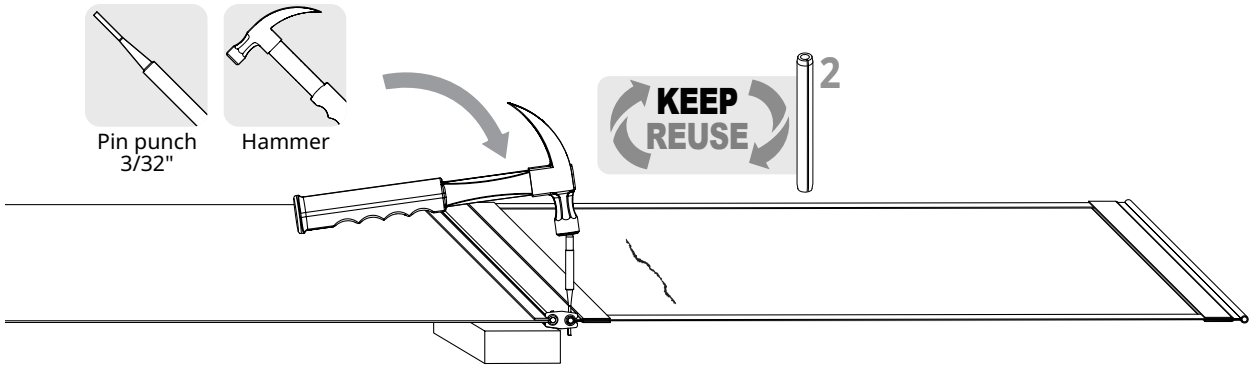


For a middle panel, separate the lower panel(s) from the panel you are replacing

1 **Lay** the bottom panel(s) flat on the floor and use a 2x4 to prop up the lower windrib of the panel you are replacing.

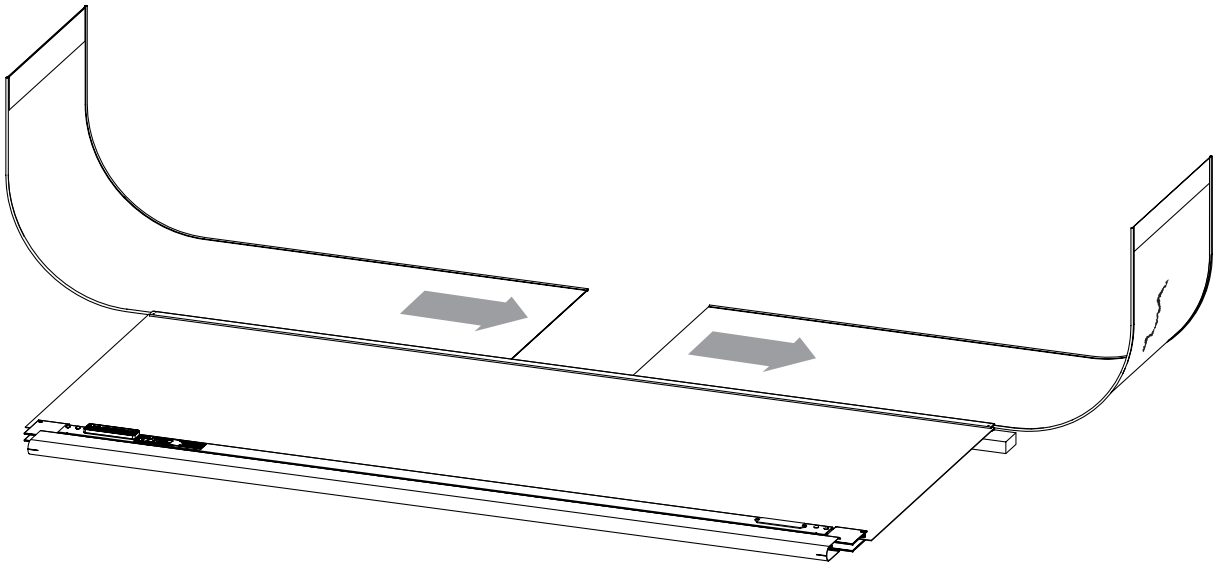
Use a 3/32" pin punch and hammer to remove the top roll pins. Leave the bottom pins in place.

Retain the pins.



2 **Slide out** the old panel and slide the new panel into the same slot in the windrib.

Line up the new panel with the lower panels.

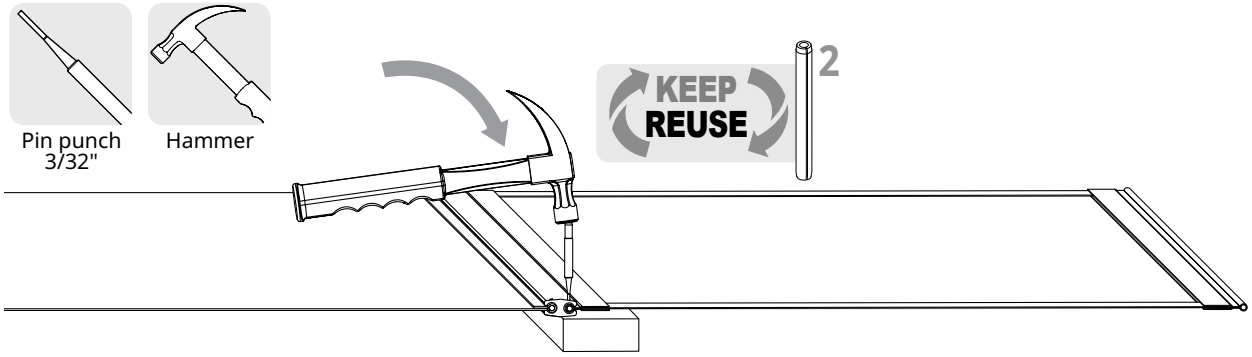


3 **Shift** the 2x4 under the top set of holes in the windrib.

Use a 3/32" pin punch and hammer to tap the roll pins back into place.

Expect some resistance as the pins push through the new panel.

Use new roll pins if the old ones do not set securely in their old holes.



On all doors, reinstall the panels that were removed

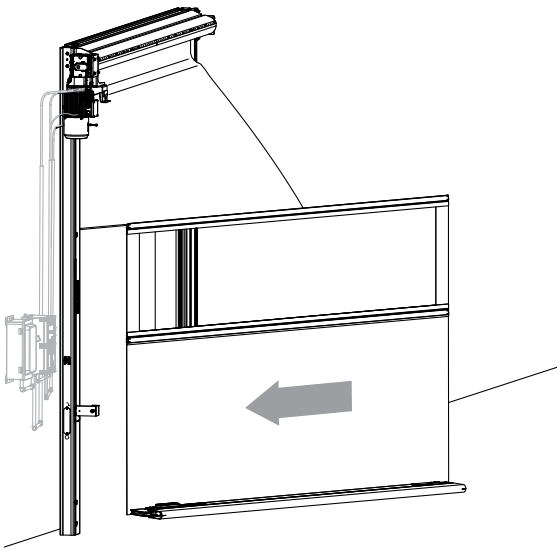
1 **Slide** the bottom panel(s) back into place.

If necessary within the space of the work site, you can **twist** the door panel and **slide to the front** of the door, rather than the side.

Make sure the panels align.

You **may need** to use a ladder or scissor lift.

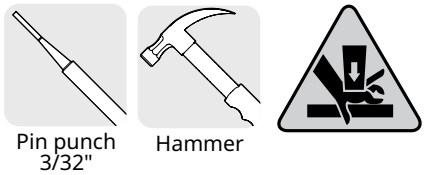
Ladder or scissor lift

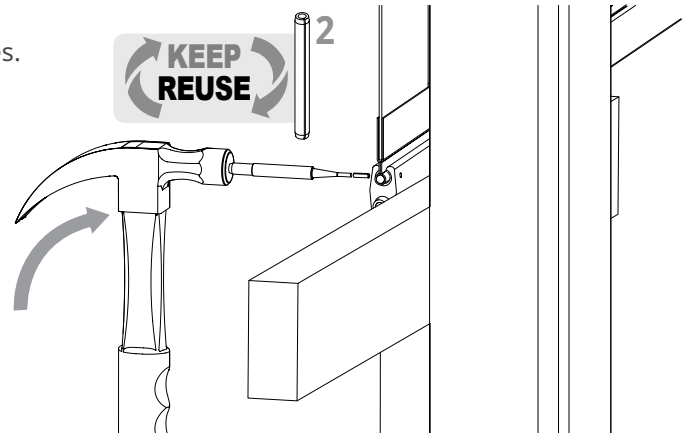


2 **Use** a hammer and 3/32" pin punch to **reinstall** the upper roll pins on both sides.

Expect some resistance as the pins push through the new panel.

Use new roll pins if the old ones do not set securely in their old holes.

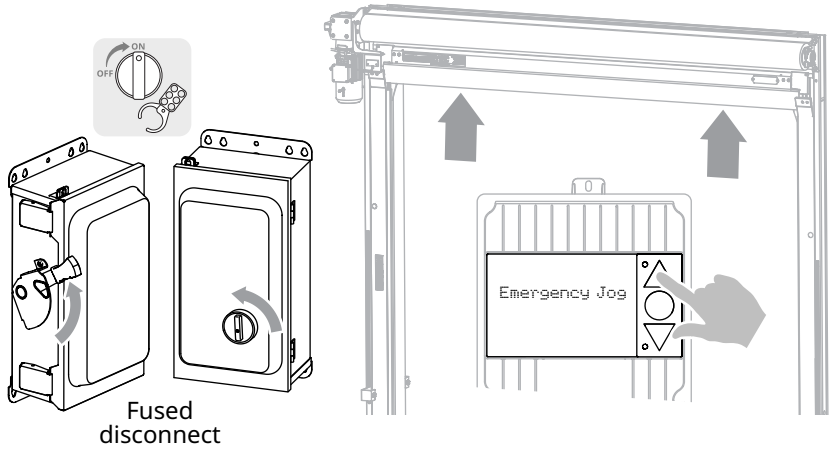




Refeed and test the new door panel

1 **Restore** power to the door.

- The door opens in jog mode (parameter P:980=2), with the safety features operating.
- **Jog** the new door panel to the open limit of the door. The bottom bar should go over the refeed guide and into the door track. You can **jog it down** to make sure.



2 **Follow the steps** in *Navigate to parameter P:980 and set the value to 4 so the door will cycle continuously* on page 33 to put the door into test mode, then let the door run through multiples cycles of opening and closing with the new panel.

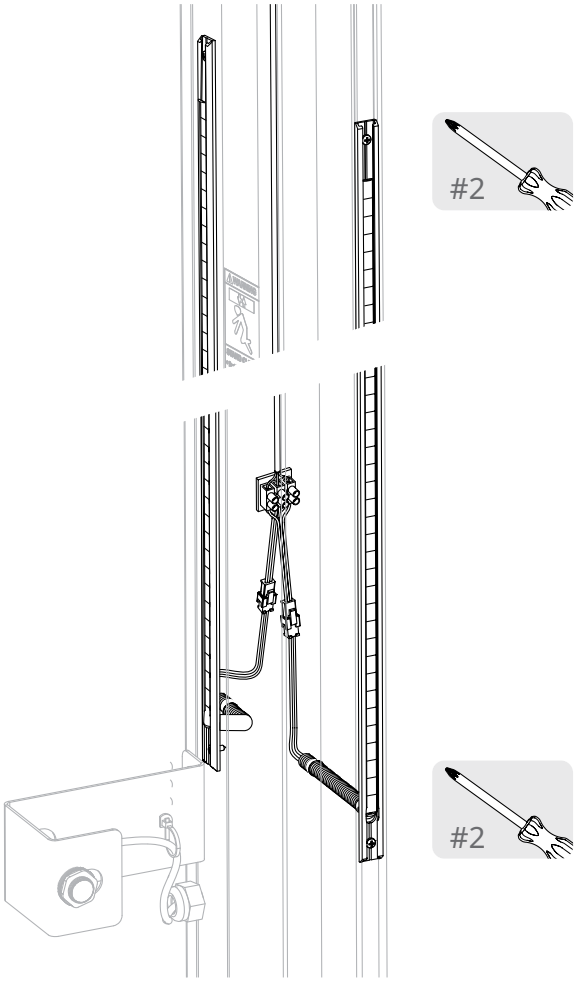
The side column components: repairs and replacements

How to remove and replace a Pathwatch LED strip

1 **Strips** are secured to the front and side of each side column by #2 Phillips head screws at the top and bottom.

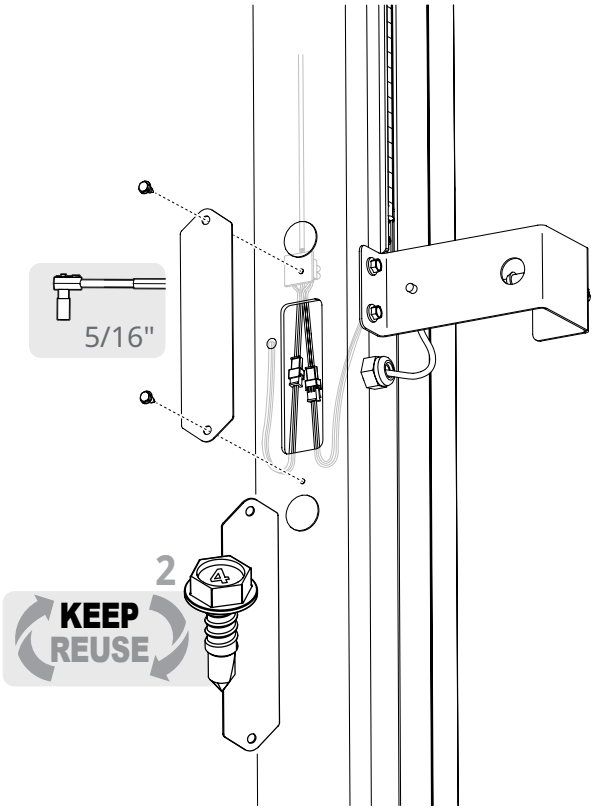
Wires from rear Pathwatch run inside a wire chase and pass through a hole in the side column into the enclosed wiring chamber.

Wires from both Pathwatch strips plug into connectors which are jumpered at a terminal block inside the chamber. The block is secured by an adhesive pad.



2 To access the wiring connection, **remove** the access port on the side of the side column.

Retain the port and screws and **reinstall** them when the LED strip has been replaced and rewired.



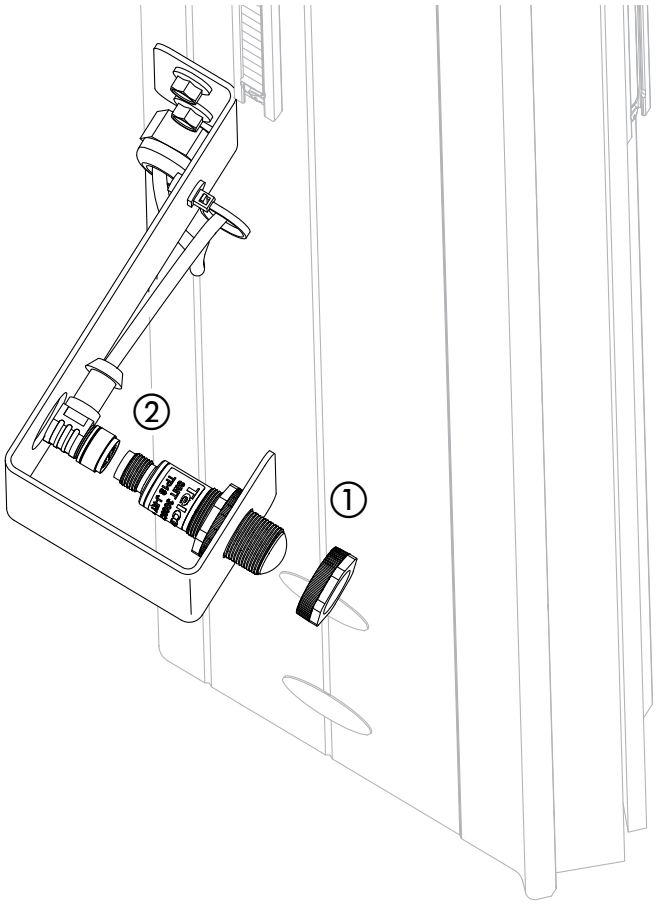
How to remove and replace a photo eye

1 **Twist off** the outer retaining nut ①. You should be able to do this by hand.

Then **unscrews** the angle connector to the wire ②. You should also be able to do this by hand.

Slide out the photo eye.

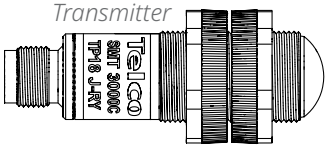
Reverse the steps to install the replacement photo eye.



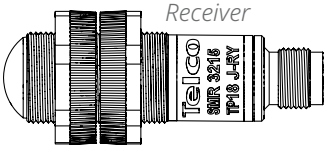
IMPORTANT

Before installing the replacement photo eye, **make sure** it matches the photo eye you removed: transmitter for transmitter or receiver for receiver.

Transmitter



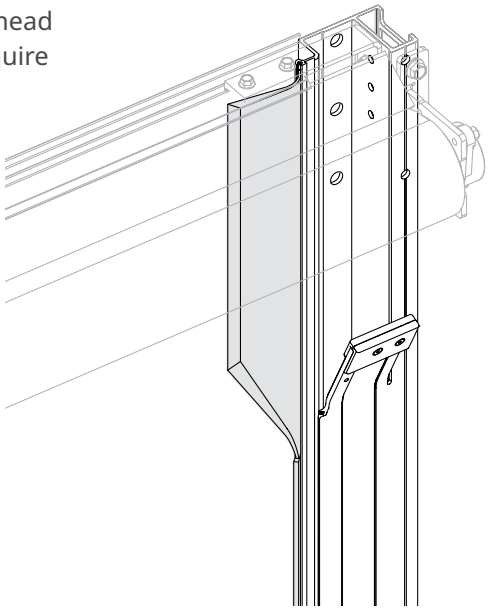
Receiver



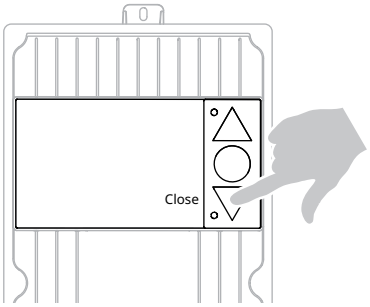
How to remove and replace the side column brush seals

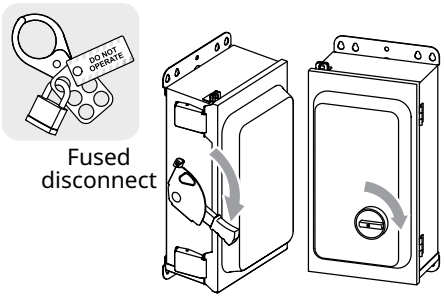
1 You will need to **remove** the brush seal assembly in the head assembly to **access** the rear side seals. This may also require **removing** hood covers.

See *How to remove and replace the head assembly brush seal* starting on page 99



2 **Set** the door to the fully closed position, to minimize the size of the door panel rolled around the drum, then **shut off power to the door** and perform a lockout/tagout.



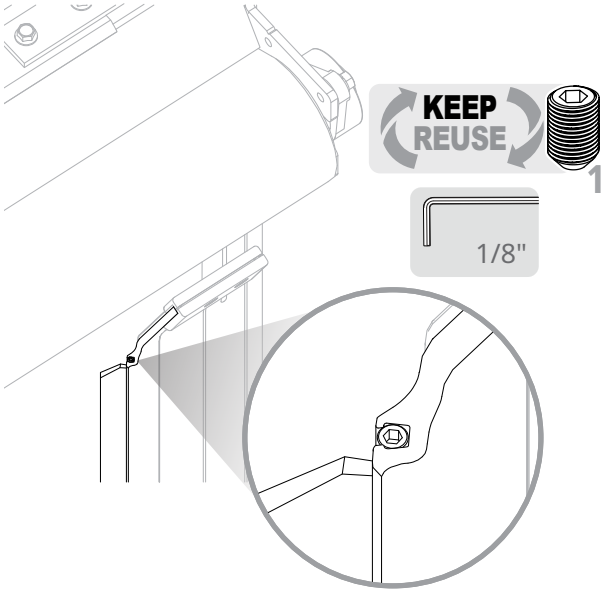


3 **Locate and remove** the hex set screw at the top of the seal.

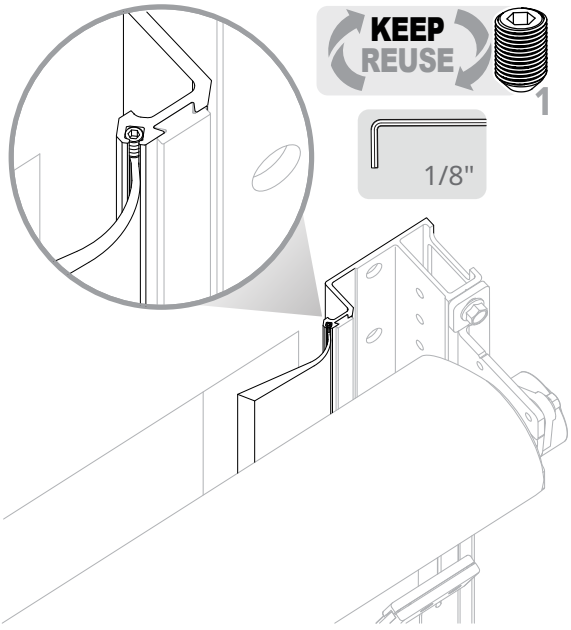
Retain the screw.


Ladder or scissor lift

Front seal



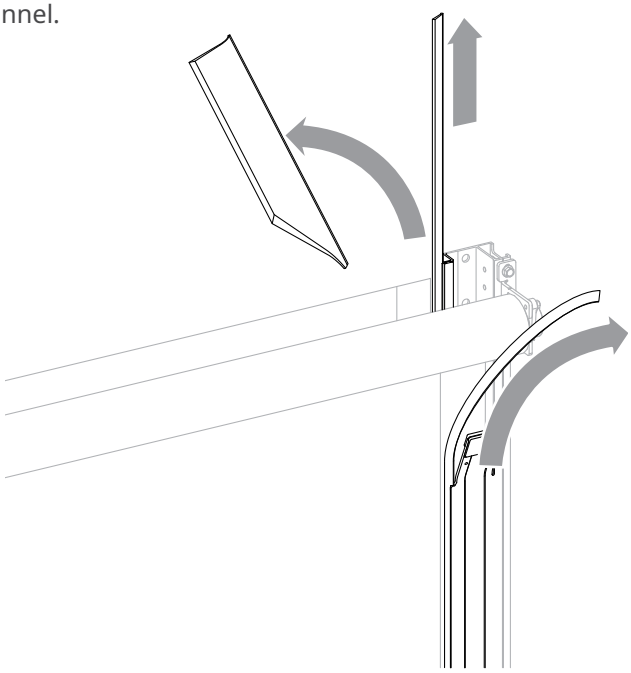
Rear seals



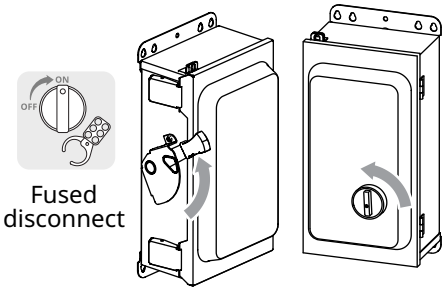
4 **Slide** the brush seal up and out of its channel.

Slide the replacement brush seal into place .

Make sure the seal is set tight against the door panel, then **reinstall** the set screw.



5 **Restore** power to the door.



Fused disconnect

6 **Follow the steps** in *Navigate to parameter P:980 and set the value to 4 so the door will cycle continuously* on page 33 to put the door into test mode, then let the door run through multiples cycles of opening and closing with the new brush seal.

How to remove and replace the side column wear strips

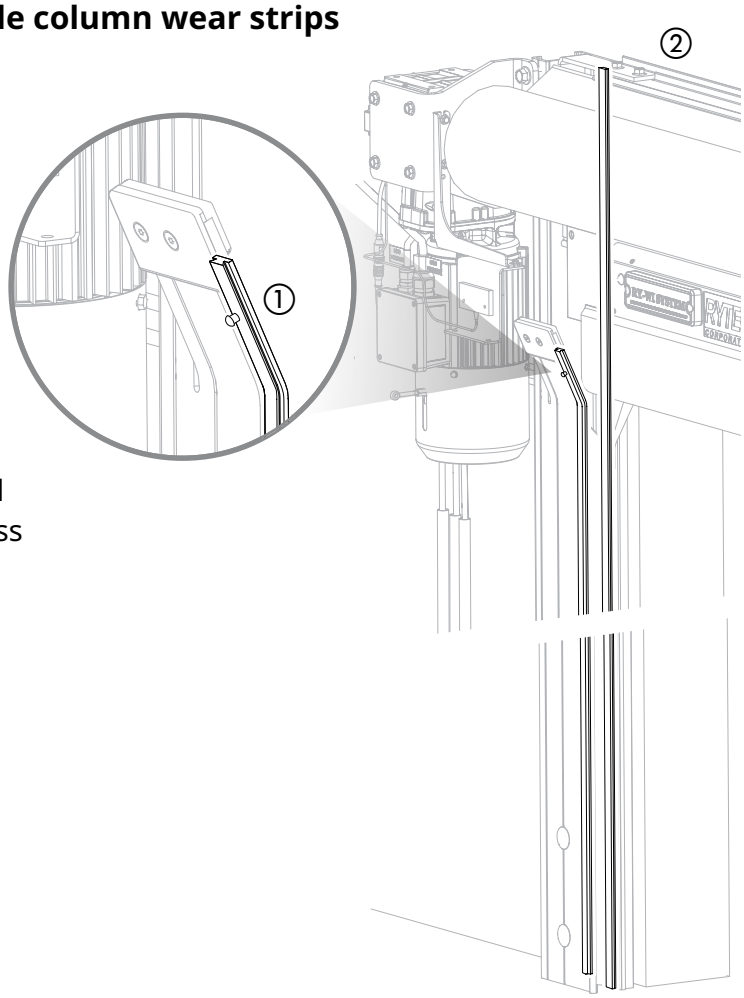
What to know about the wear strips before you start

The wear strips are secured in their tracks by a silicone sealant (Dow Corning® #732).

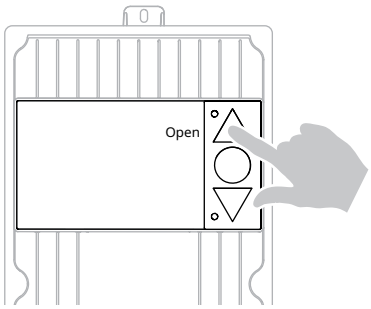
The **front wear strip** is also held in place by a **pop rivet** located directly below the refeed guide ①.

You will need to **remove the brush seal assembly** in the head assembly to access the rear side strips ②. This may also require removing hood covers.

See *How to remove and replace the head assembly brush seal* starting on page 99.



1 **Set** the door to the fully open position, then **shut off power to the door** and perform a lockout/tagout.



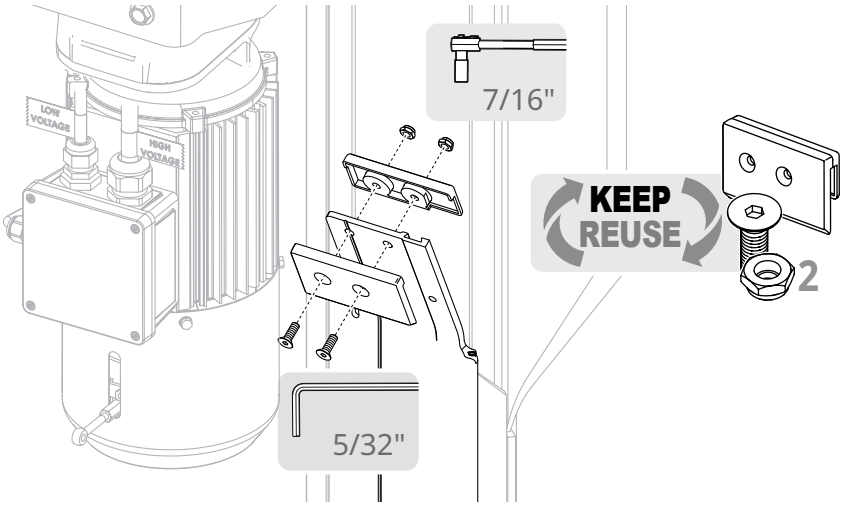
2 **Go up** to the head assembly

If necessary, **remove** the brush seal assembly and hood cover.

Ladder or scissor lift

3 If you are removing the front strip, **remove** the refeed guide.

Retain the guide and hardware. You will **reinstall** them after the replacement strip is installed

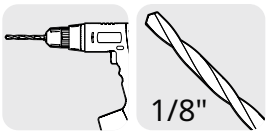


4 If you are removing the front strip, **drill out** the pop rivet ①.

IMPORTANT

DO NOT drill past the head of the rivet, into the side column, which might enlarge the pilot hole. **Stop** as soon as the head of the rivet comes free ②.

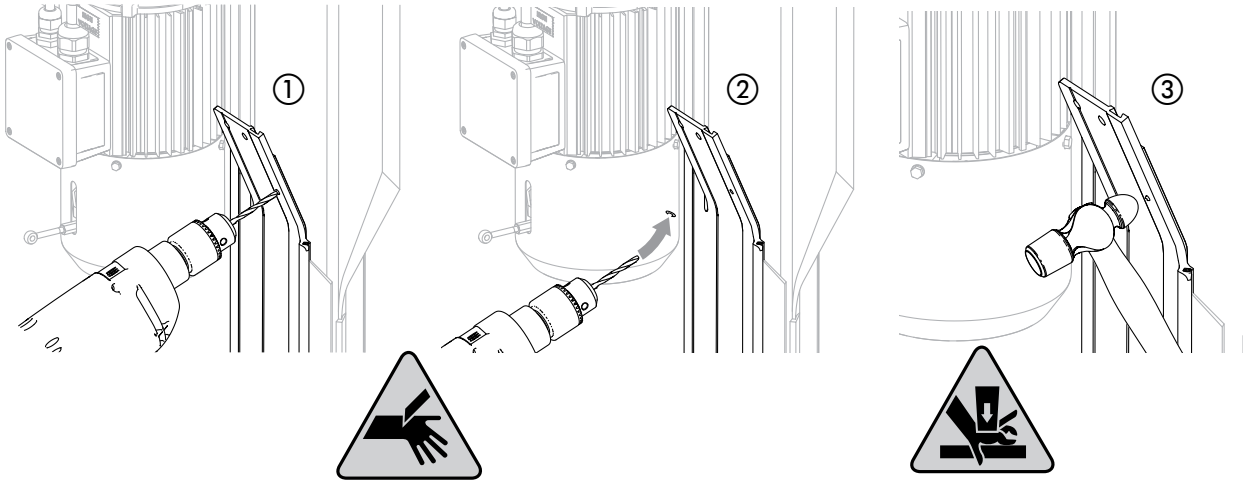
Tap the body of the rivet with a ball peen hammer to loosen it, them **remove** it ③. **File down** an metal shavings or sharp edges with a metal file or emery paper.



Power drill and 1/8" drill bit


Ball peen hammer

File or emery paper



5 If you are removing the rear strip, **follow the steps necessary** to access the strip.

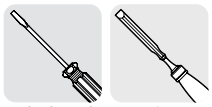
6

Peel the wear strip, front or rear, out of its track, starting at the top.

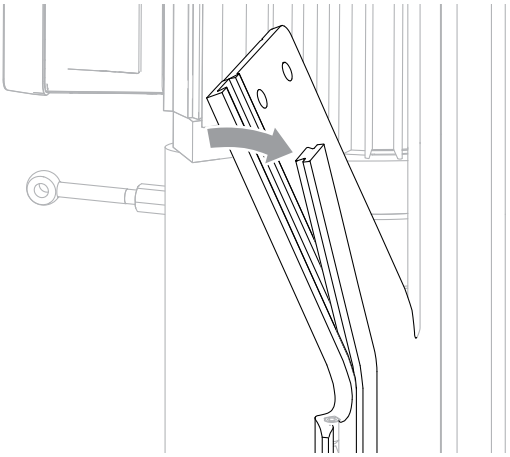
INSIDER'S TIP

You may need to use a flathead screwdriver or small chisel (not wider than the track) to pry the top of the strip out of the track. **Be careful not to damage** the extrusion of the side column.

Once the top is free of the track, you should be able to **peel** the entire strip out intact.



Flathead screwdriver or chisel



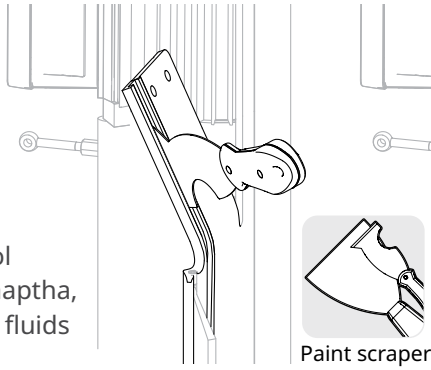
7

Use a paint scraper to remove the old silicone sealant from the track. **Make sure** you do not scratch the track.

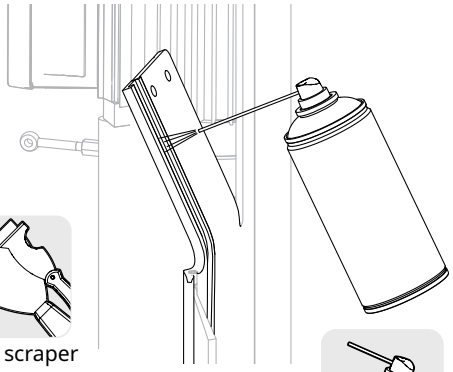
IMPORTANT

Solvents, including isopropanol alcohol (IPA), toluene, xylene, naptha, mineral spirits or DOWSIL™ OS fluids can also be used.

Make sure the solvent has been completely removed from the track before applying sealant for the replacement strip.



Paint scraper

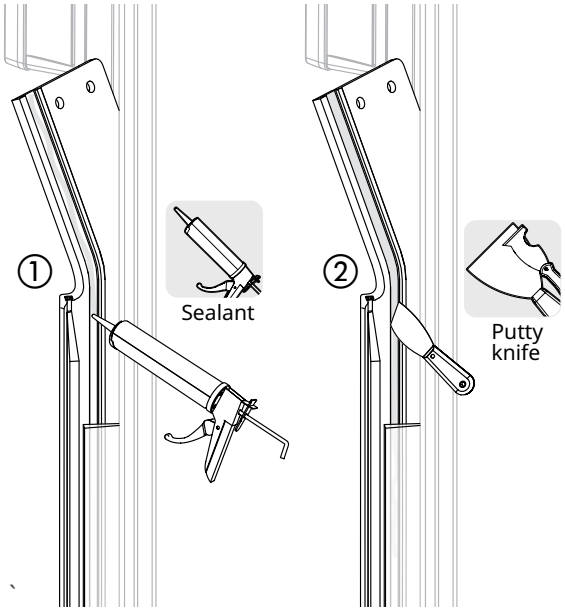


Solvent

8

Apply a bead of sealant down the entire length of the track ①.

Use a putty knife or spatula to **spread** the sealant into a thin, even layer ②.



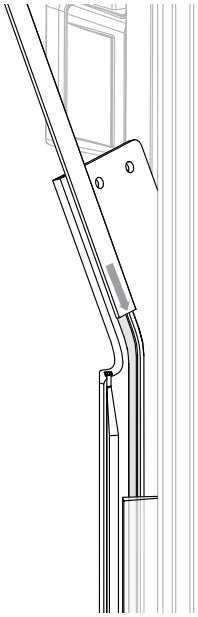
Sealant

Putty knife

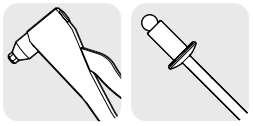
9

Immediately slide the replacement strip down the track, before the sealant has time to set and becomes tacky.

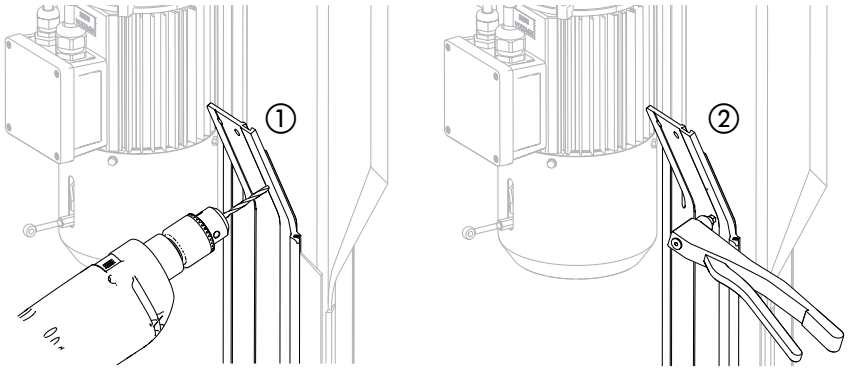
Allow 12-24 hours for the sealant to cure.



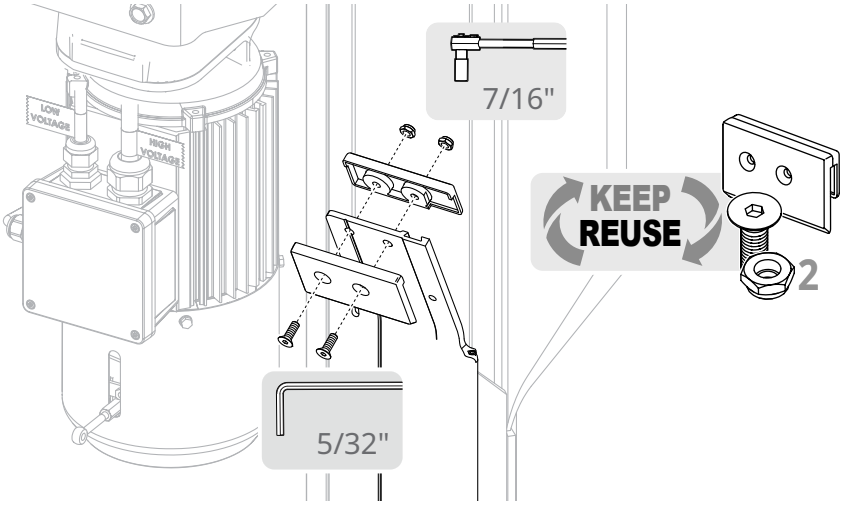
10 On a front strip, **drill** a 1/8" pilot hole through the strip to match the hole in the side column extrusion, then install a new 1/8" pop rivet.



Rivet gun and 1/8" pop rivet

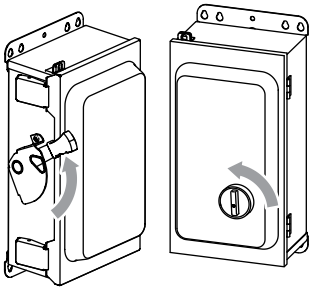


11 On a front strip, **reinstall** the refeed guide.



12 **Restore** power to the door.

Fused disconnect

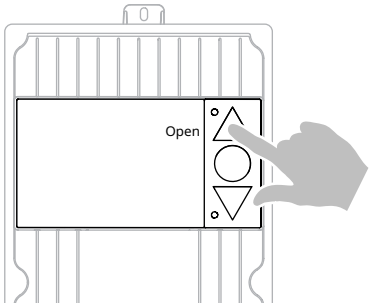


13 **Follow the steps** in *Navigate to parameter P:980 and set the value to 4 so the door will cycle continuously* on page 33 to put the door into test mode, then let the door run through multiples cycles of opening and closing with the new brush seal.

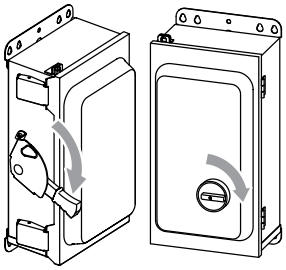
The head assembly components: repairs and replacements

How to remove and replace the bearing

1 **Set** the door to the fully open position, then **shut off power to the door** and perform a lockout/tagout.



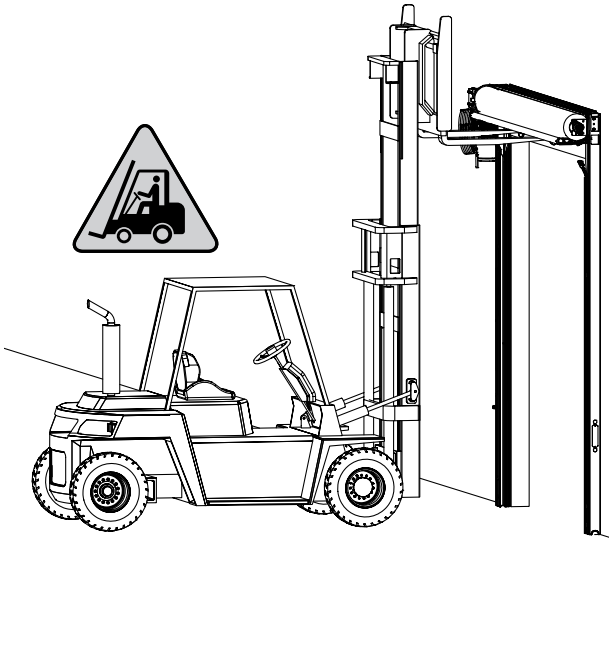
Fused disconnect

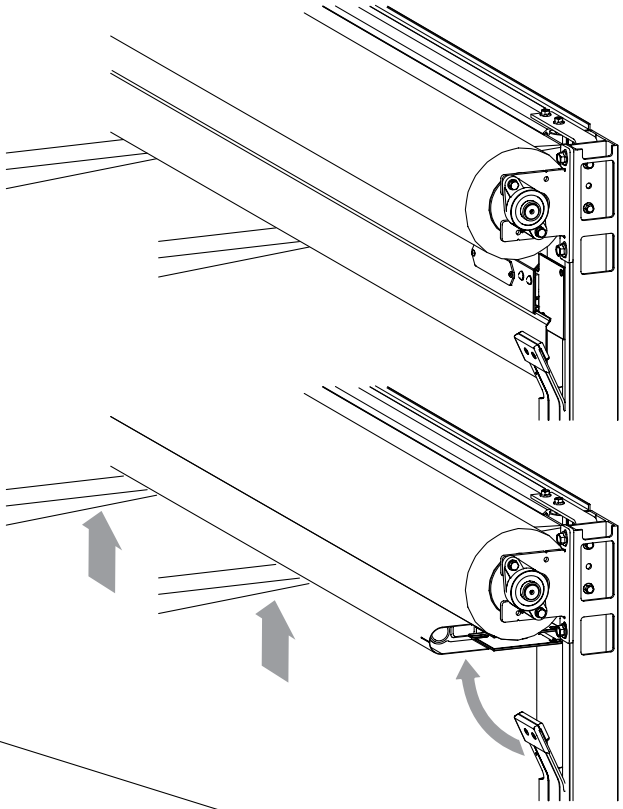


2 **Position** a forklift at the center of the door opening, then **raise** the forks until they fully support the weight of the head assembly.

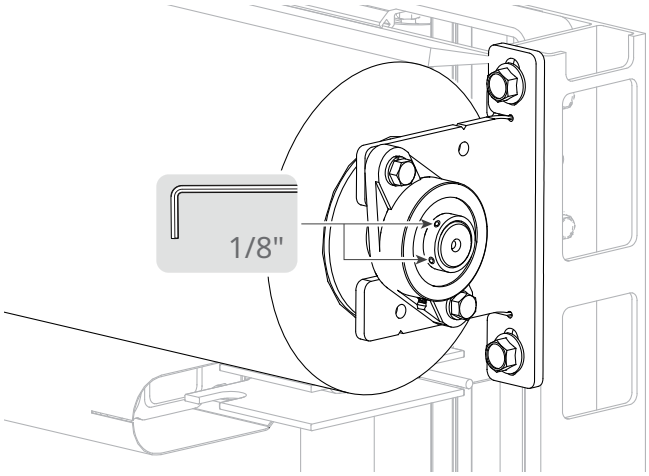
- First, **lift** the forks until they make contact with the bottom bar.
- Then **rotate** the bottom bar until it lies flat on the forks, and **lift** until the forks directly support the door panel rolled around the drum.

Ladder or scissor lift

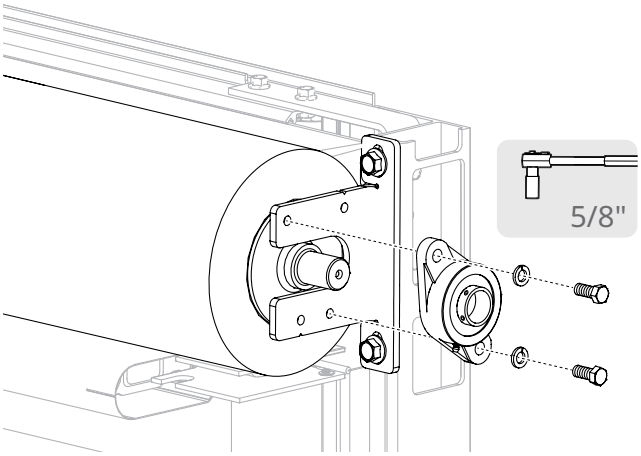




3 **Loosen** the two hex screws that secure the bearing to the drum.



4 **Remove** the two bolt/washer combinations that secure the bearing to its bracket and **remove** the bearing.

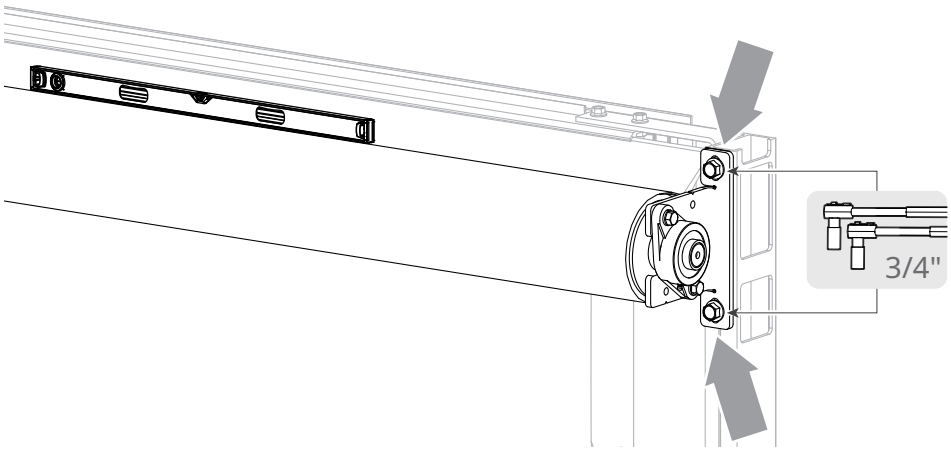


5 **Reverse Steps 3-4** to install the replacement bearing.

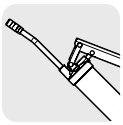
6 **Check** that the door panel is level where it rolls around the drum with the new bearing.

- If necessary, **loosen** the bolts on the bearing bracket (gray arrows) and **adjust** the height of the bearing, then **tighten** them.

Carpenter's level

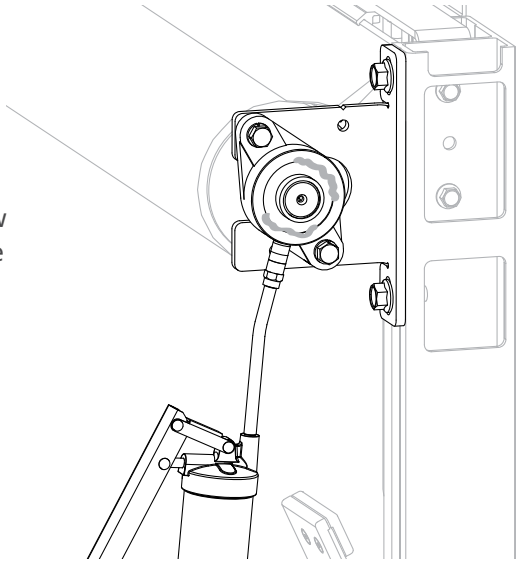


7 Make sure the bearing is properly lubricated.

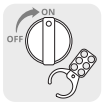


Grease gun

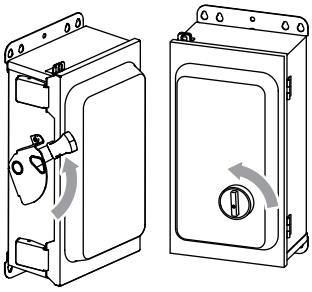
- If necessary, **lubricate** the bearing at the zerk fitting.
- Recommended lubrication is a lithium-based grease conforming to NLGI Grade 2 standards. It should be medium viscosity, low torque, with an operating temperature range of –30°F to +200°F.
- **Wipe off the old grease** as it is pushed out by the grease from the grease gun.



8 **Restore** power to the door.



Fused disconnect



9 **Follow the steps** in *Navigate to parameter P:980 and set the value to 4 so the door will cycle continuously* on page 33 to put the door into test mode, then let the door run through multiples cycles of opening and closing with the new brush seal.

How to remove and replace the head assembly brush seal

IMPORTANT

On doors with hood covers and motor covers, it will be necessary to remove the motor cover and side panels of the hood cover to remove the brush seal.

Metal hood covers

Ladder
or
Scissor lift

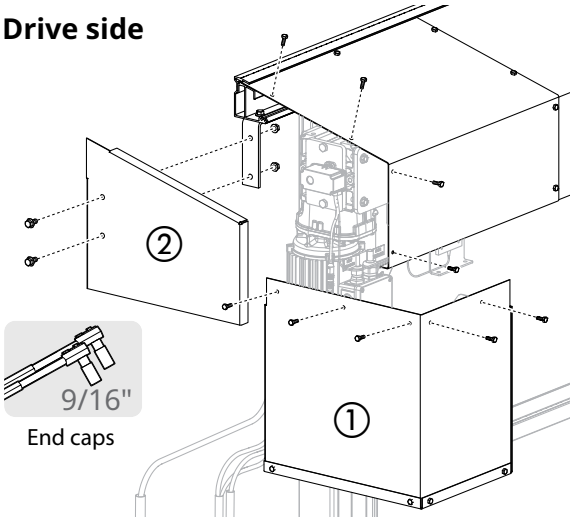
① If there is a motor cover, **remove** the five 7/16" self-tapping screws. Then the cover can be **removed intact.**

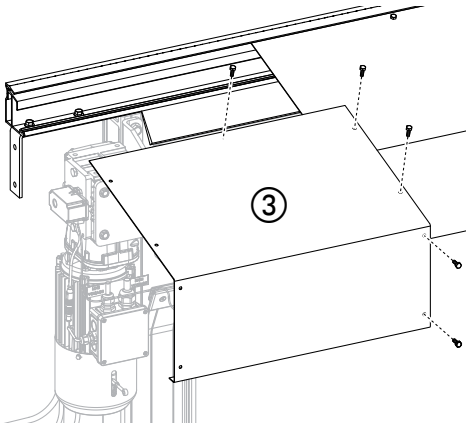
② **Remove** the two bolts and three self-tapping screws, then **remove** the drive side end cap from its mounting bracket.

③ **Remove** the five self-tapping screws, then **remove** the first top panel.

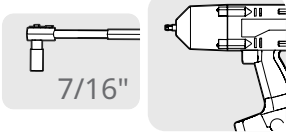
④ On the non-drive side, **remove** the end cap and first top panel. Then **remove** any middle panels.

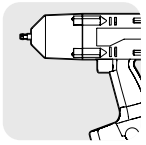
Drive side





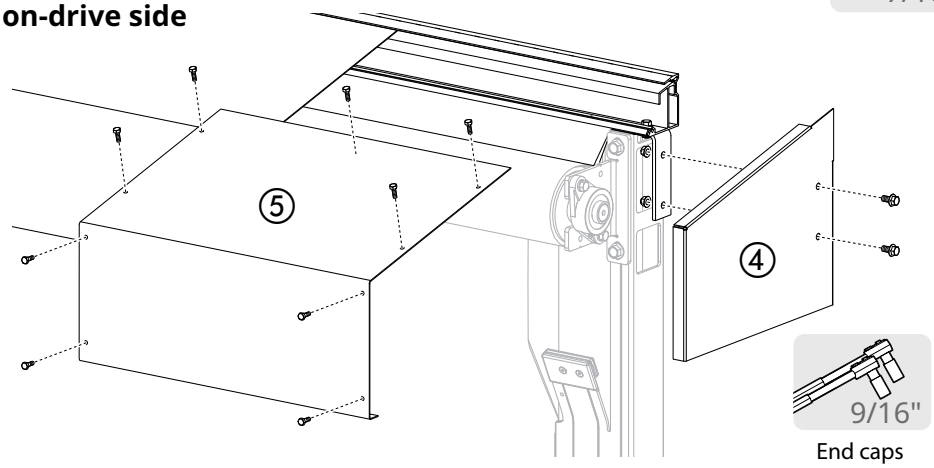
All other panels





Impact wrench
or
power drill

Non-drive side

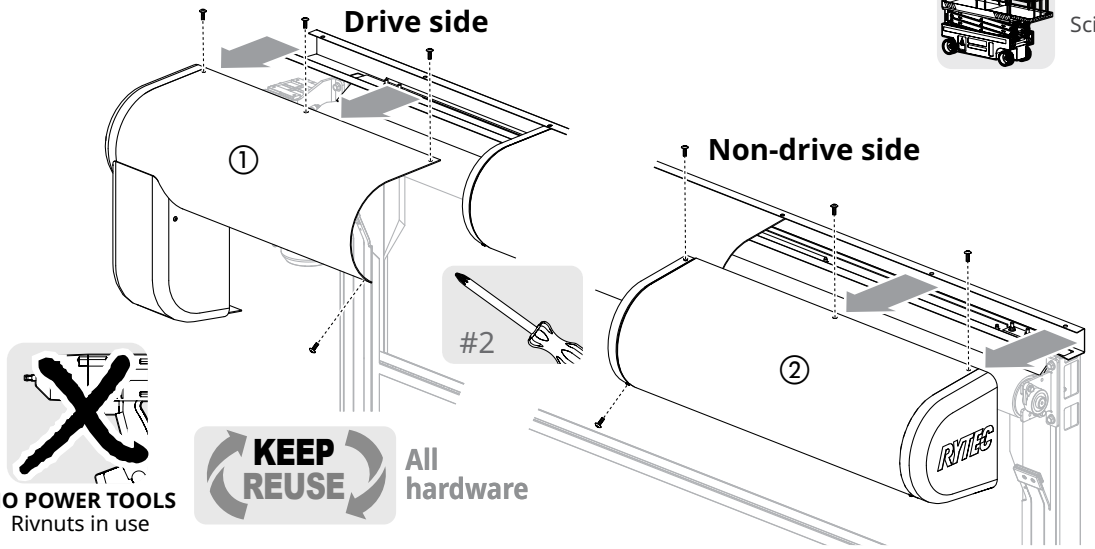


All hardware

Plastic hood covers

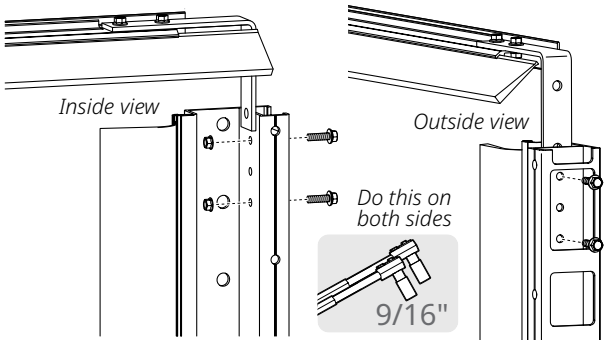
① **Remove** the four screws that hold the first panel on the drive side in place. Then the panel, end cap and motor cover (if present) can be **removed intact.**

② On the non-drive side, **remove** the end cap and first top panel the same way. Then **remove** any middle panels.

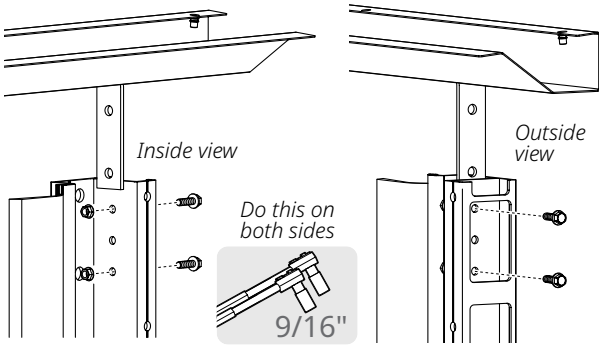


1 **Remove** the bolt/nut combinations that secure the brush seal assembly to the side columns. **Slide** the assembly up and out of the side columns.

No hood cover

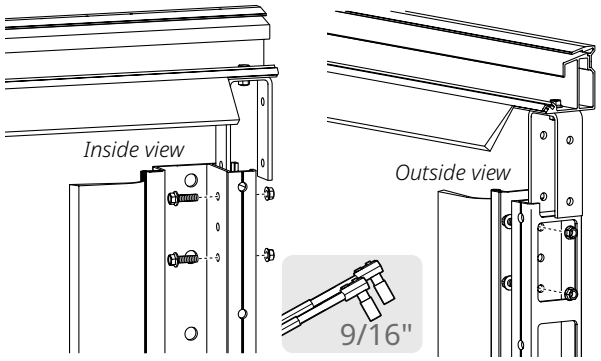


Plastic hood cover

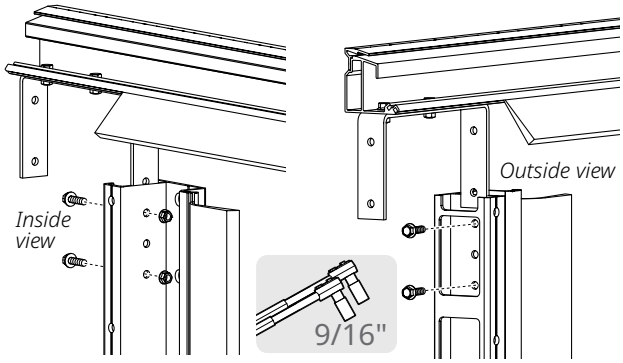


Metal hood cover

Non-drive side



Drive side



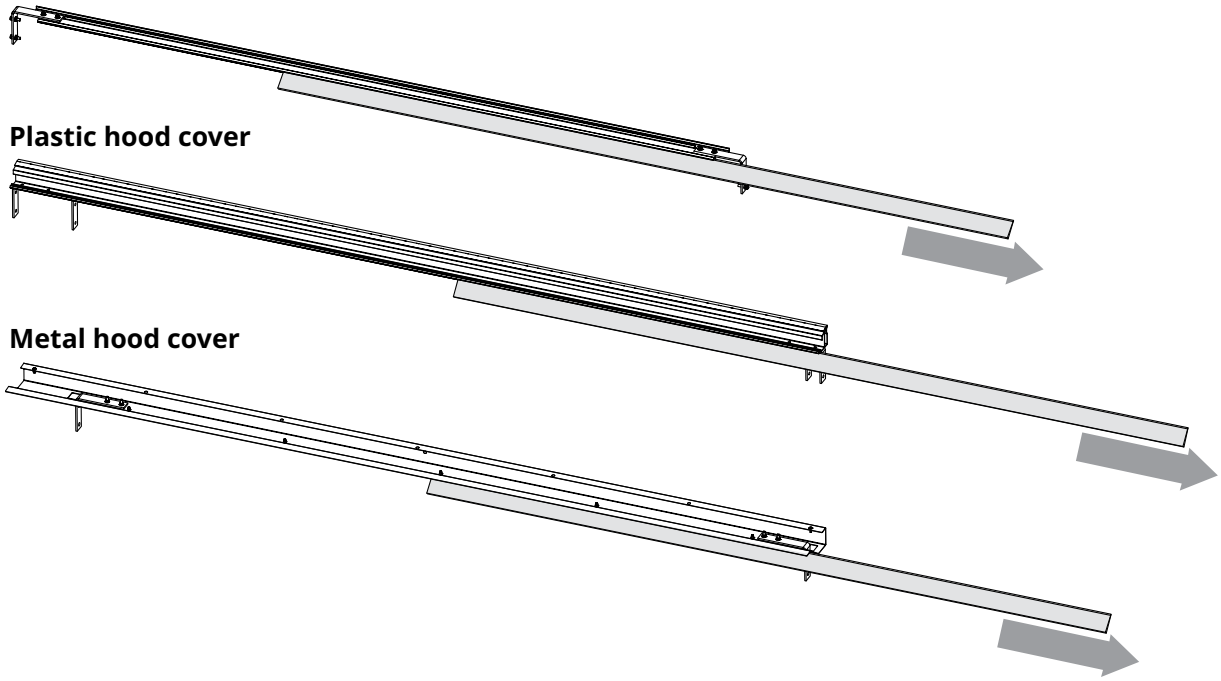
2 **Slide** the brush seal out of its track, then **slide** in the replacement.

Reverse Step 1 to reinstall the brush seal assembly.

No hood cover

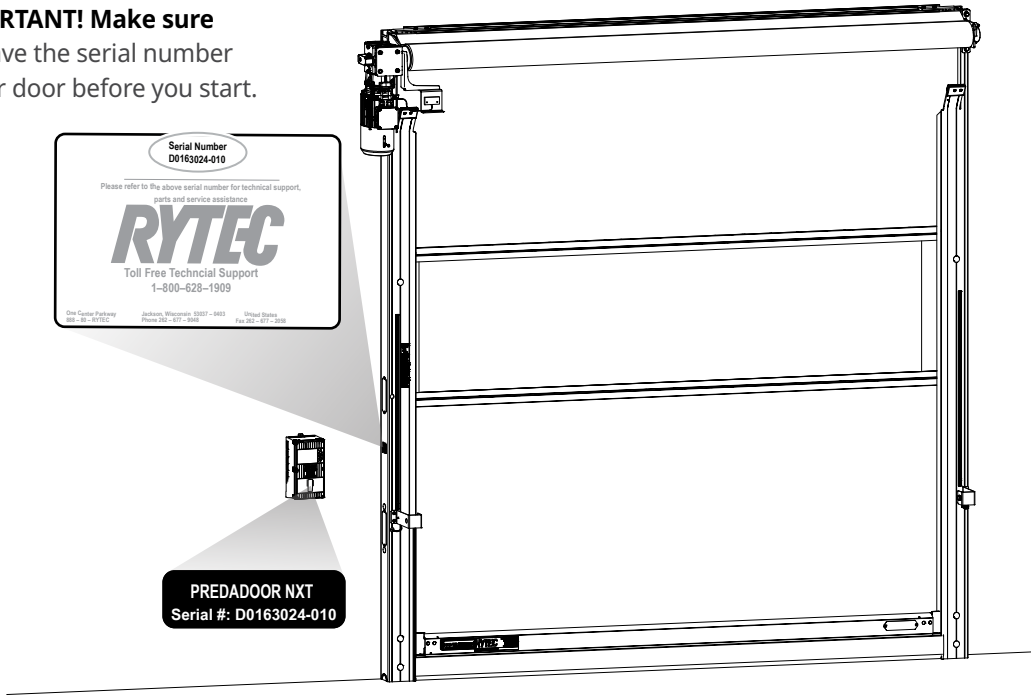
Plastic hood cover

Metal hood cover



How to order parts

1 **!IMPORTANT! Make sure** you have the serial number of your door before you start.

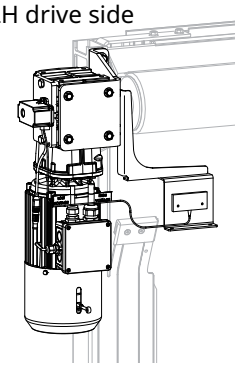


Check next to the drive track inside both side columns, and on the control box, for labels showing the serial number.

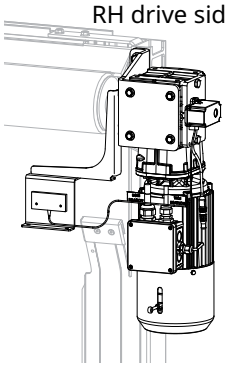
!IMPORTANT! Make sure all numbers match. Tell the person you speak with if they do not.

2 **Look** at the head assembly of your door to see if the drive side is left hand (LH) or right hand (RH).

LH drive side



RH drive side



3 **Use** the parts lists on the following pages to find the part numbers and descriptions for the parts you need.

4 **Call** your local dealer or Rytec at **800-628-1909**.

Enter **#1** for technical support, or **#2** for the parts department.

You can also e-mail the parts department at **rytec.parts@nucor.com.**

YOU MUST contact the parts department and request a quote before you can order parts. All requests for quote must include the **door's serial number**.

NOTE: Rytec Corporation also has an online parts store at ***www.rytecdoors.com***.

- You must have a user account to access the site. Contact the Rytec parts department at **800-628-1909 Ext. 2** to request an account.
- The site stocks standard parts such as bearings, spools and encoders, as well as straps at precut lengths. Parts listed as "configured" in this manual **are not available** on the site.

PARTS

How to return unwanted parts

1 **For returns covered by warranty, call** Rytec technical support at **800-628-1909 Ext. 1** for authorization.

For returns NOT covered by warranty (physical returns), call the Rytec parts department at **800-628-1909 Ext. 2** for authorization. Requests for quotes, or part orders, should also be e-mailed to **rytec.helpdesk@nucor.com.**

- Your call will be redirected if necessary to put you in touch with the correct department.
- There may be a **restock fee** for the returned part.
- **Electrical parts which have been energized,** such as the System 4® controller, the brake assembly, the mobile unit, the light curtains or third party activators, cannot be returned.
- Also, there are restrictions on returns for **configured parts** that were built to match the specifications of your door.

Warranty return

1 Rytec will create a **Return Merchandise Authorization (RMA)** and assign you an **incident number**.

2 **You will receive** replacement parts, a prepaid return label, and the RMA paperwork.

NOTE: Rytec may determine that it is not necessary to return the warranted parts in order to receive the replacement parts.

3 Use the box and prepaid label to return the warranted parts to Rytec **within 30 days of receiving the replacements.**

!IMPORTANT! You must include the RMA paperwork with the returned parts.

Physical return

1 Rytec will assign you an **incident number**.

2 **Box and return** the parts.

!IMPORTANT!
You must include the incident number with the returned parts.

Unless you are told otherwise by Rytec, shipping costs for a physical return **are your responsibility.** Call the Rytec parts department at **800-628-1909 Ext. 2** if you have any questions.

3 **When Rytec receives the parts,** we will inspect them. When we have determined the parts are in good working order, we will issue a refund to your account, or send a check by mail **within 30 days**.

Why you may be sent substitute parts

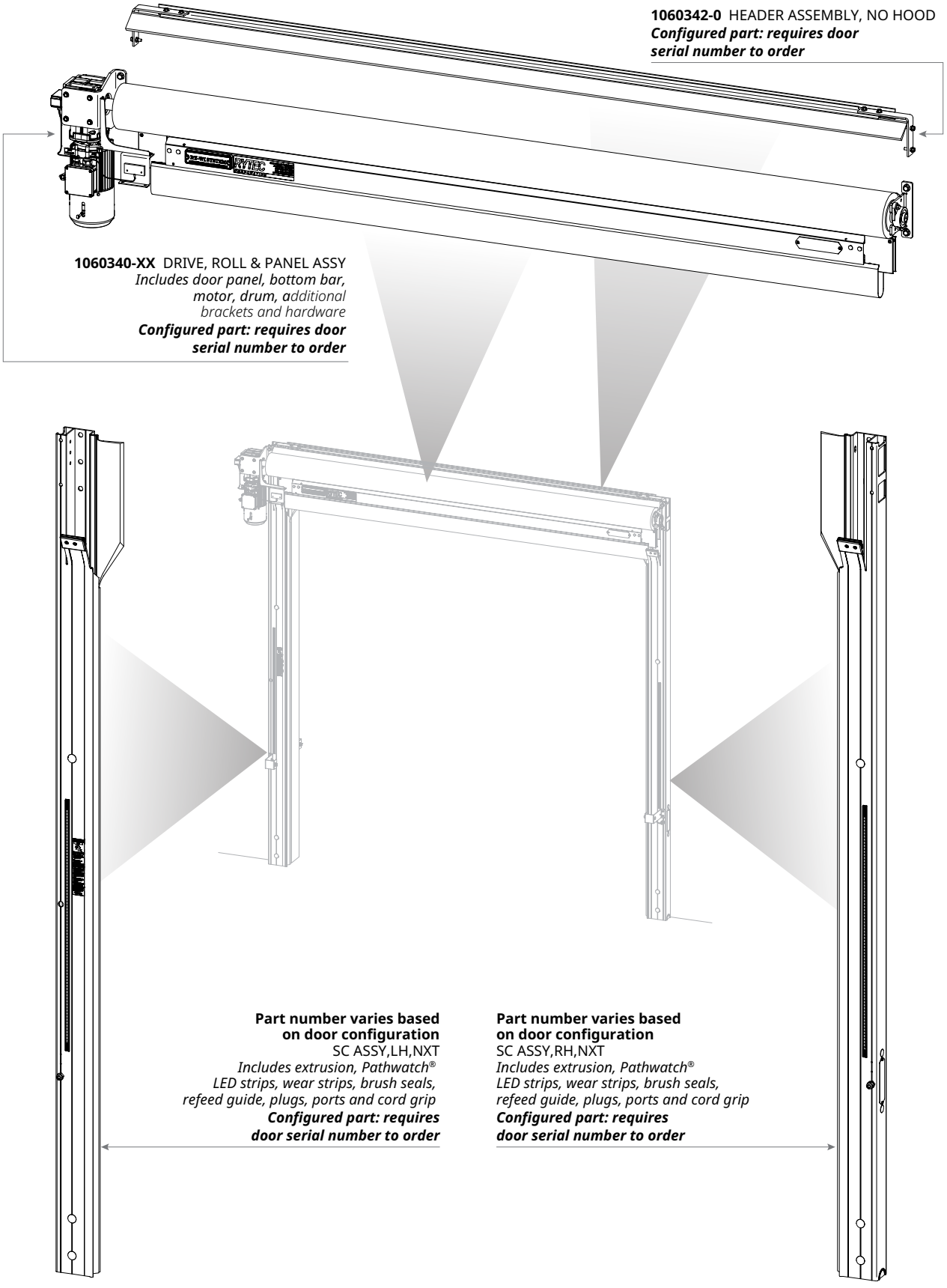
Many Rytec doors are custom engineered to meet the unique needs of the installation site, so the parts used for your door may be different from those shown in this manual.

If a part has been improved or updated since your installation, the new part will be substituted for the part ordered. The new part may have a revised part number.

Rytec Technical Knowledge Center

The Rytec Technical Knowledge Center, reached via the Customer Support page at **www.rytecdoors.com**, holds manuals, service bulletins, and video presentations for all Rytec model doors.

Main Assemblies



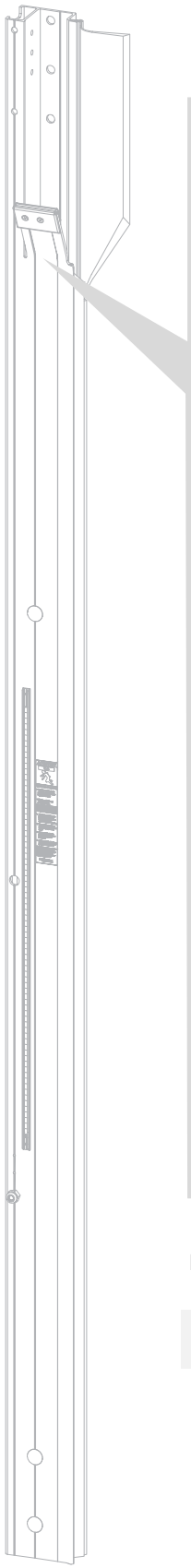
1060342-0 HEADER ASSEMBLY, NO HOOD
Configured part: requires door serial number to order

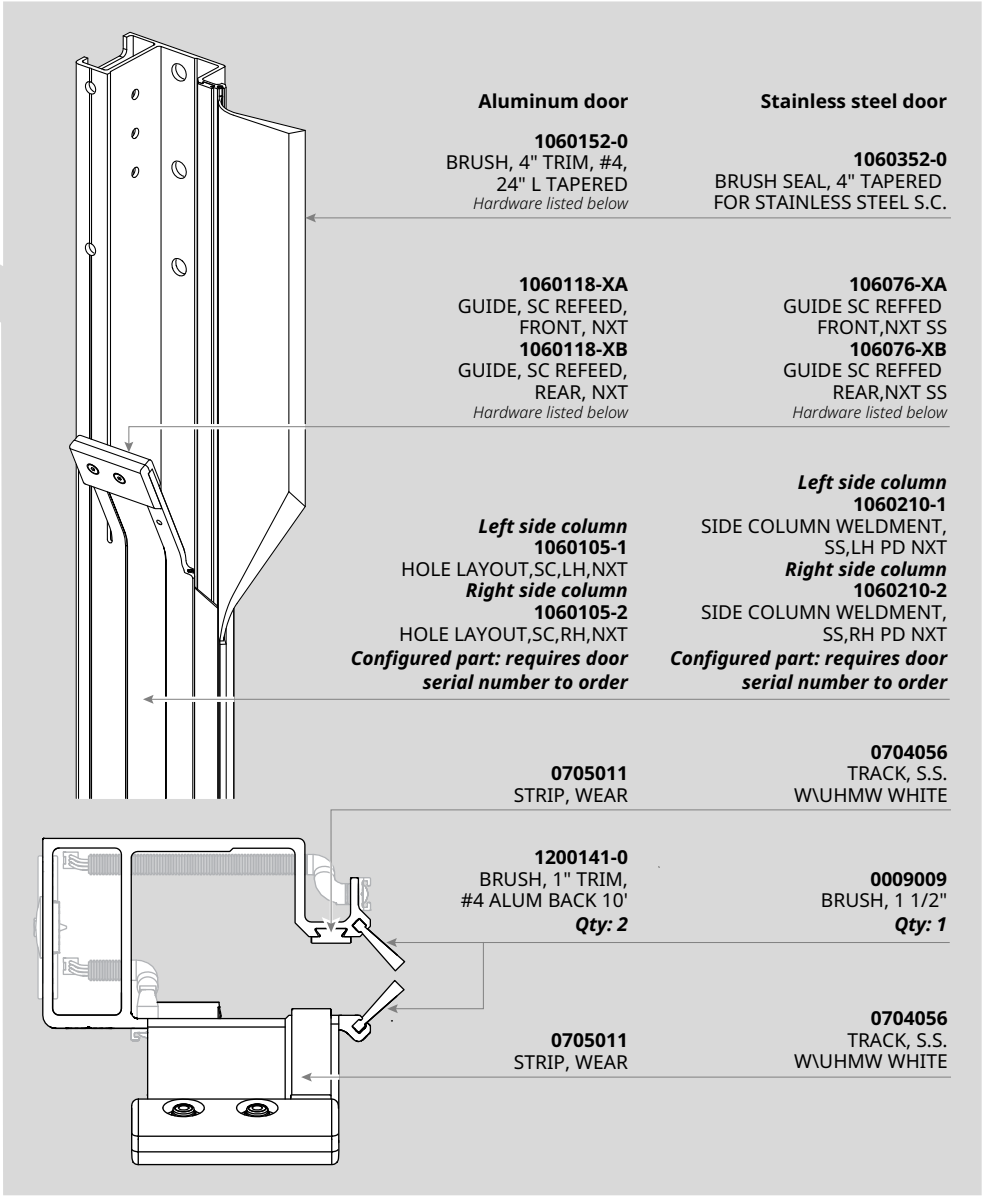
1060340-XX DRIVE, ROLL & PANEL ASSY
Includes door panel, bottom bar, motor, drum, additional brackets and hardware
Configured part: requires door serial number to order

Part number varies based on door configuration
SC ASSY,LH,NXT
Includes extrusion, Pathwatch® LED strips, wear strips, brush seals, refeed guide, plugs, ports and cord grip
Configured part: requires door serial number to order

Part number varies based on door configuration
SC ASSY,RH,NXT
Includes extrusion, Pathwatch® LED strips, wear strips, brush seals, refeed guide, plugs, ports and cord grip
Configured part: requires door serial number to order

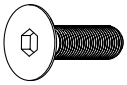
Side Columns - Top





Hardware – Order Separately

Part Number	Hardware	Description	Qty
1060118-1A/1060118-1B,	S021698	FSCS, 1/4-20 x 3/4, SS	2
1060210-1A/1060210-1B	0553277	NUT,1/4-20,HEX,NYLOC,ZN,THIN	2
1200141-0,	5550160-0Z04	SSCUP M6-1.0X10	1
1060152-0			

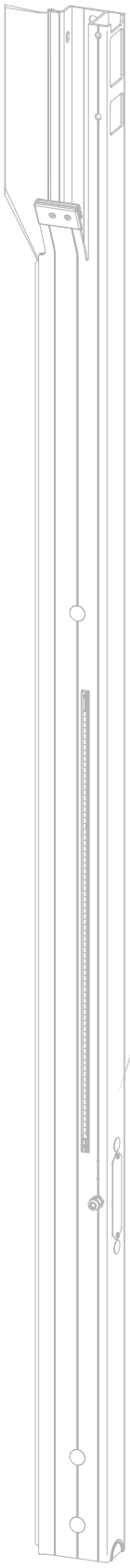


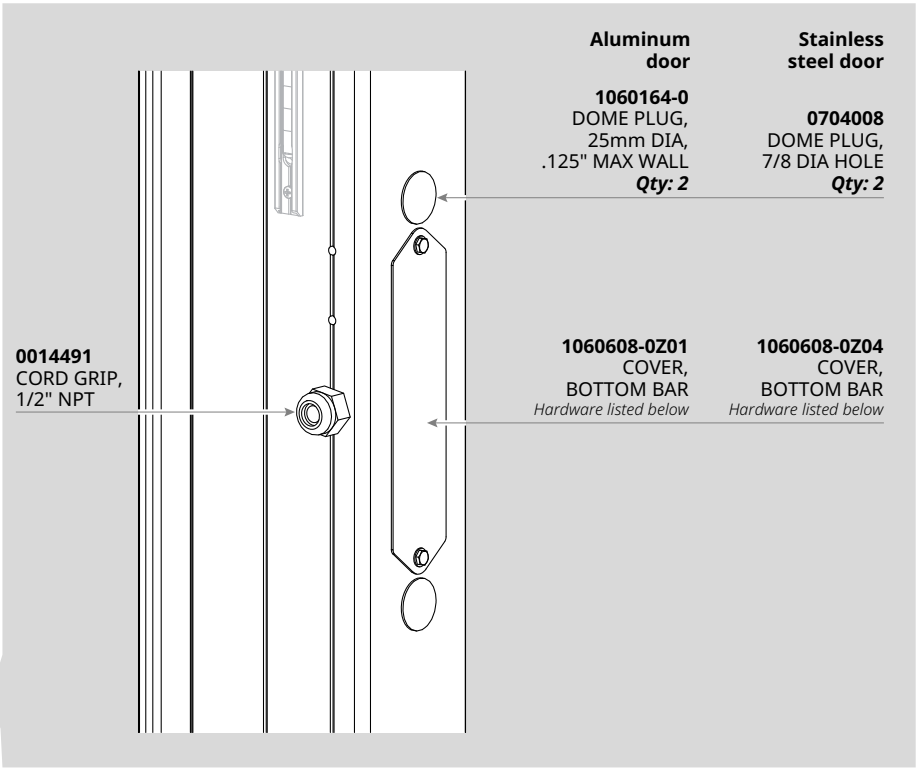
S021698

0553277

5550160-0Z04

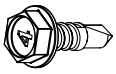
Side Columns - Middle/Bottom

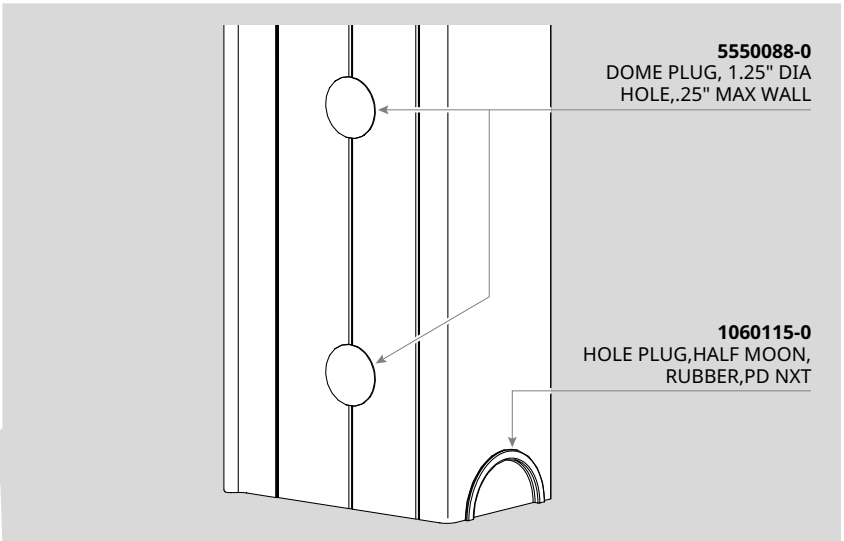




Hardware – Order Separately

Part Number	Hardware	Description	Qty
1060608-0Z01, 1060608-0Z04	S551325	#12-14 THREAD CUTTING HEX HEAD SCREW	12



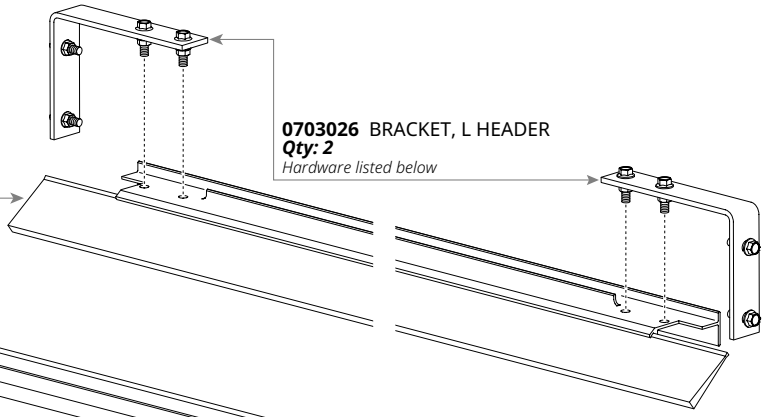


Brush seals

Door with no hood cover

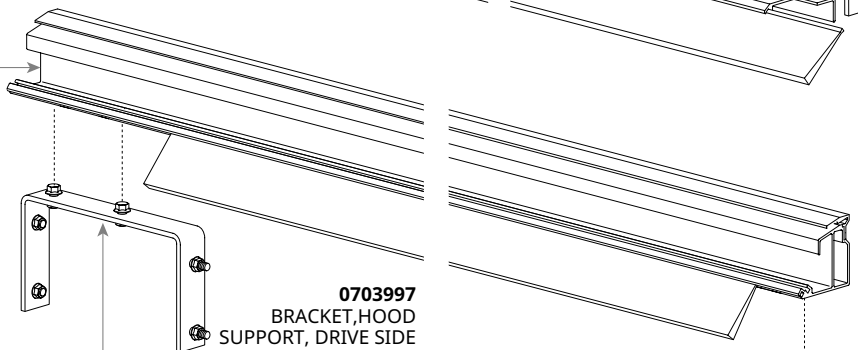
1060342-0
HEADER ASSEMBLY, NO HOOD
Includes brush
Configured parts: require door serial number to order

0703026 BRACKET, L HEADER
Qty: 2
Hardware listed below



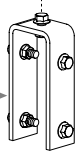
Door with metal hood cover

1060344-XX
HEADER ASSEMBLY,HOOD
Includes brush
Configured assembly: requires door serial number to order



0703997
BRACKET,HOOD SUPPORT, DRIVE SIDE
Hardware listed below

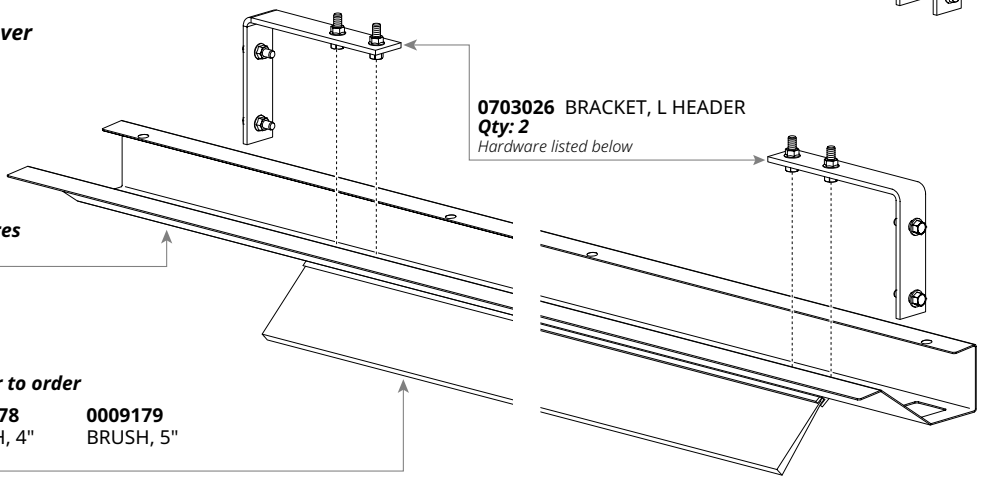
0703024
BRACKET,HOOD SUPPORT, NON-DRIVE SIDE
Hardware listed below



Door with plastic hood cover

1060264-1
ASSEMBLY, SUPPORT, HOOD, PLEXLINE STYLE, LH
1060264-2
ASSEMBLY, SUPPORT, HOOD, PLEXLINE STYLE, RH
Includes brush
Configured assembly: requires door serial number to order

0703026 BRACKET, L HEADER
Qty: 2
Hardware listed below

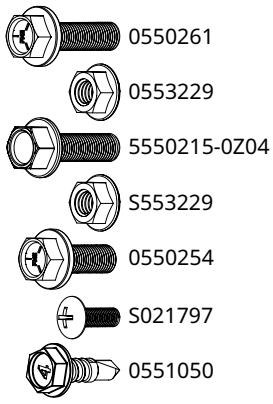


All brush seals have one of the following brushes:
Requires door serial number to order

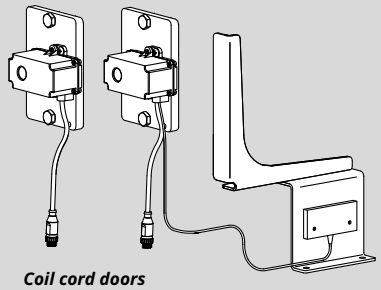
0009177	**0009178**	**0009179**
BRUSH, 3" TRIM, #4 ALUM BACK	BRUSH, 4"	BRUSH, 5"

Hardware – Order Separately

Part Number	Hardware	Description	Qty
0703024 *(No hood cover)*	0550261	HFSMS, 3/8-16 x 1-1/4, GR5 ZN	4
	0553229	HLNSF, 3/8-16, STL ZN	4
0703024 *(Plastic hood cover)*	5550215-0Z04	HFSMS, 3/8-16X1.25, 18-8 SS, LOCTITE PCH	4
	S553229	3/8-16 HEX SERR FLNG L/N 18-8 SS	4
0703026,0703837	0550254	HFSMS, 3/8-16 x 3/4, GR5 ZN	3,4
	0550261	HFSMS, 3/8-16 x 1-1/4, GR5 ZN	2
	0553229	HLNSF, 3/8-16, STL ZN	5,6
1060265-0	S021797	BSCS,1/4-20 X 3/4 LG,SS TRUSS	*Varies with length*
0703839	0551050	HWSDS, #12-14 x 3/4, STL ZN	*Varies with length*



Motor and Encoder



Coil cord doors
1060618-0
ENCODER ASSY, FEIG, ABM KG252
Includes encoder and mounting plate
Wireless doors
1060612-XX
ENCODER,NON-WRLS,PIGTAIL
Includes encoder assembly, mounting plate and wireless antenna bracket
Configured part: requires door serial number to order

Parts used vary based on door configuration: requires door serial number to order

1060611-0B01
BRACKET, ABM MOTOR, 2.88CL
Hardware listed below

1060611-0A01
BRACKET, ABM MOTOR, 3.63CL
Hardware listed below

0703353
SPACER, MOTOR SIDE, PD

1170774-0
MOUNTING PLATE, FEIG ENCODER, ABM KG252
Hardware listed below

1060617-0Z01
WIRELESS ANTENNA BRACKET
Hardware listed below

Coil cord doors
00141134
ENCODER,FEIG,TST
Wireless doors
1170775-0
ENCODER ASSY, FEIG, WIRELESS, ABM KG252
Includes encoder, encoder mounting plate and wireless antenna bracket

0005401
TIE, CABLE, PUSH STUD MTG.

00141086
ENCODER CABLE FEMALE,A,8PIN,15

1170767-0
ASSY, ABM MOTOR
Configured part: requires door serial number to order

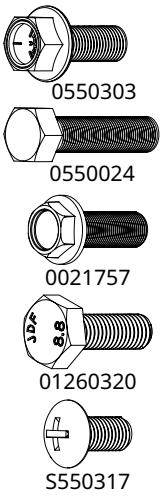
0704038
CRANK, HAND, PD5000

1050036-0Z03
BRACKET,ANTENNA MOUNTING
Hardware listed below

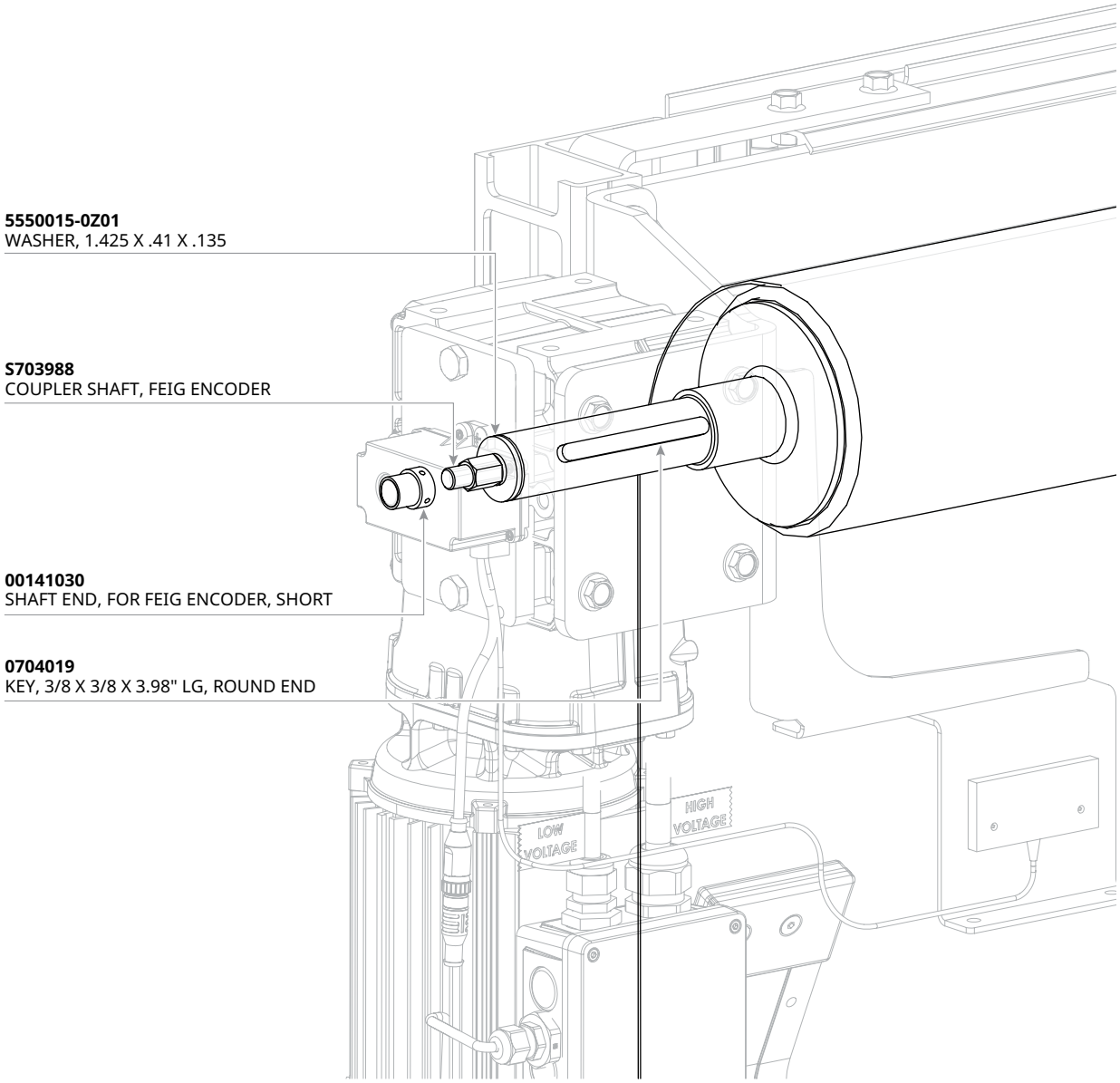
5550264-0
RATCHET FASTENER, 0.160 HOLE X 0.040 - 0.250 THICK, BLACK NYLON
For wireless antenna
Qty: 2

Hardware – Order Separately

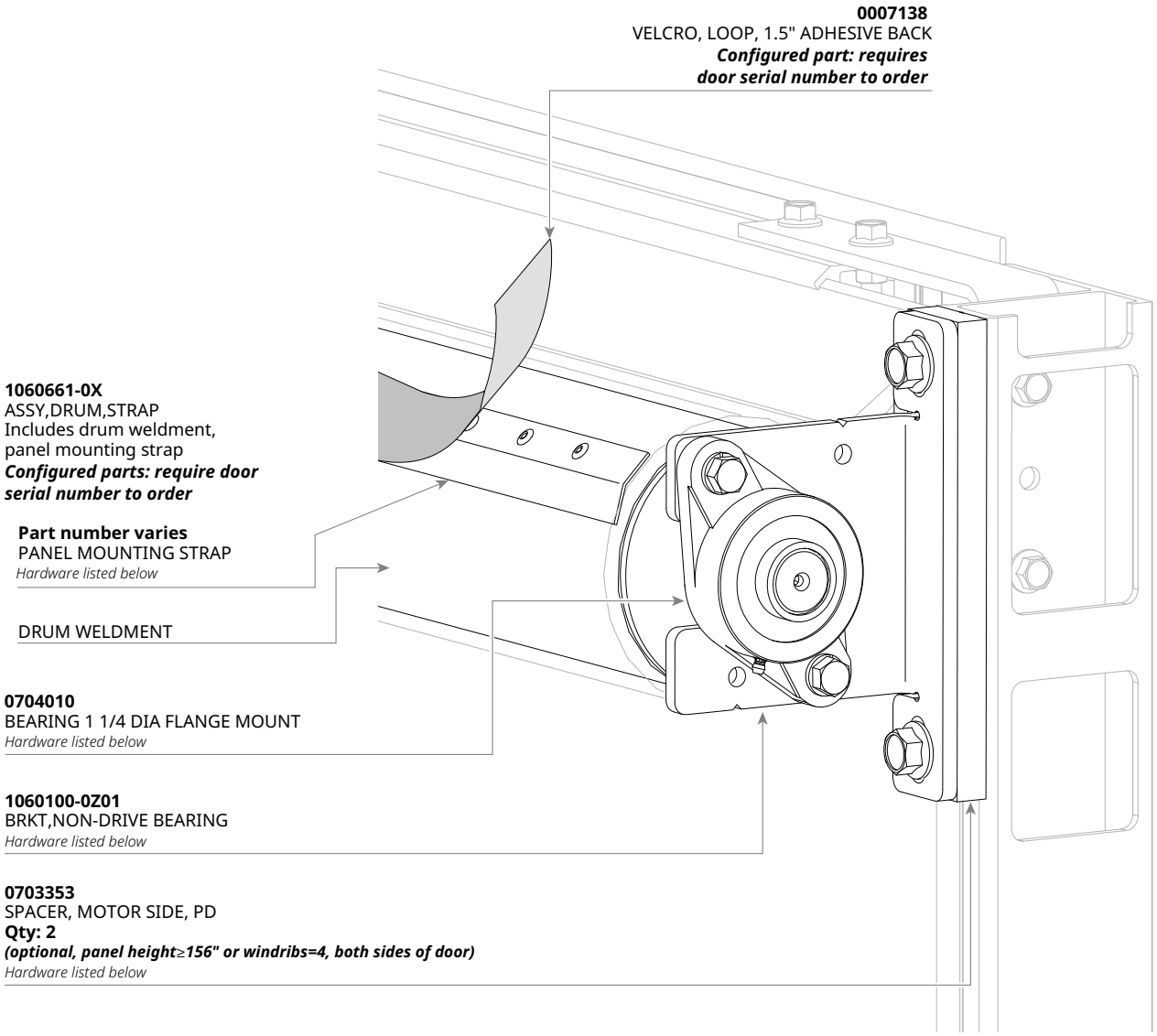
Part Number	Hardware	Description	Qty
1050036-0	5550054-0Z04	PFMS, M4 X 0.70 X 12MM LG, SS	2
	5550057-0Z01	HLNNI M4-0.7 SS	2
	5550329-0	WF (DIN 9021) M4 SS	2
1060611-0B01,	0021757	HFSCS, M10 X 30, ZN	4
1060611-0A01 no spacer used	0550303	SCREW, 1/2-13UNC X 1 1/4 LG SERRATED	2
	0553100	NUT,1/2-13,HEX,FLNG,LOCK,ZN	2
1060611-0A01 with spacer	0021757	HFSCS, M10 X 30, ZN	2
	40550024	HHCS, 1/2-13 UNC X 2, GR5 ZN	2
	0553100	NUT,1/2-13,HEX,FLNG,LOCK,ZN	
1060617-0	0021048	HFSMS, 1/4-20 x 1/2, GR5 ZN	2
1170774	01260320	HHCS, M10 X 25, DIN 933.8-8 ZN	2
1170775, 00141134	S550317	SCREW, #10-24 x 1/2 PTMS, SS	2



Motor and Encoder - Hidden Components

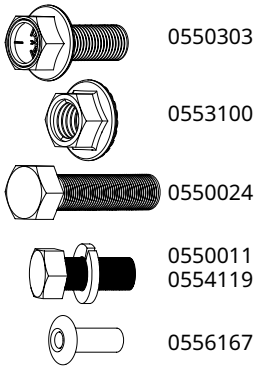


Drum and Bearing



Hardware – Order Separately

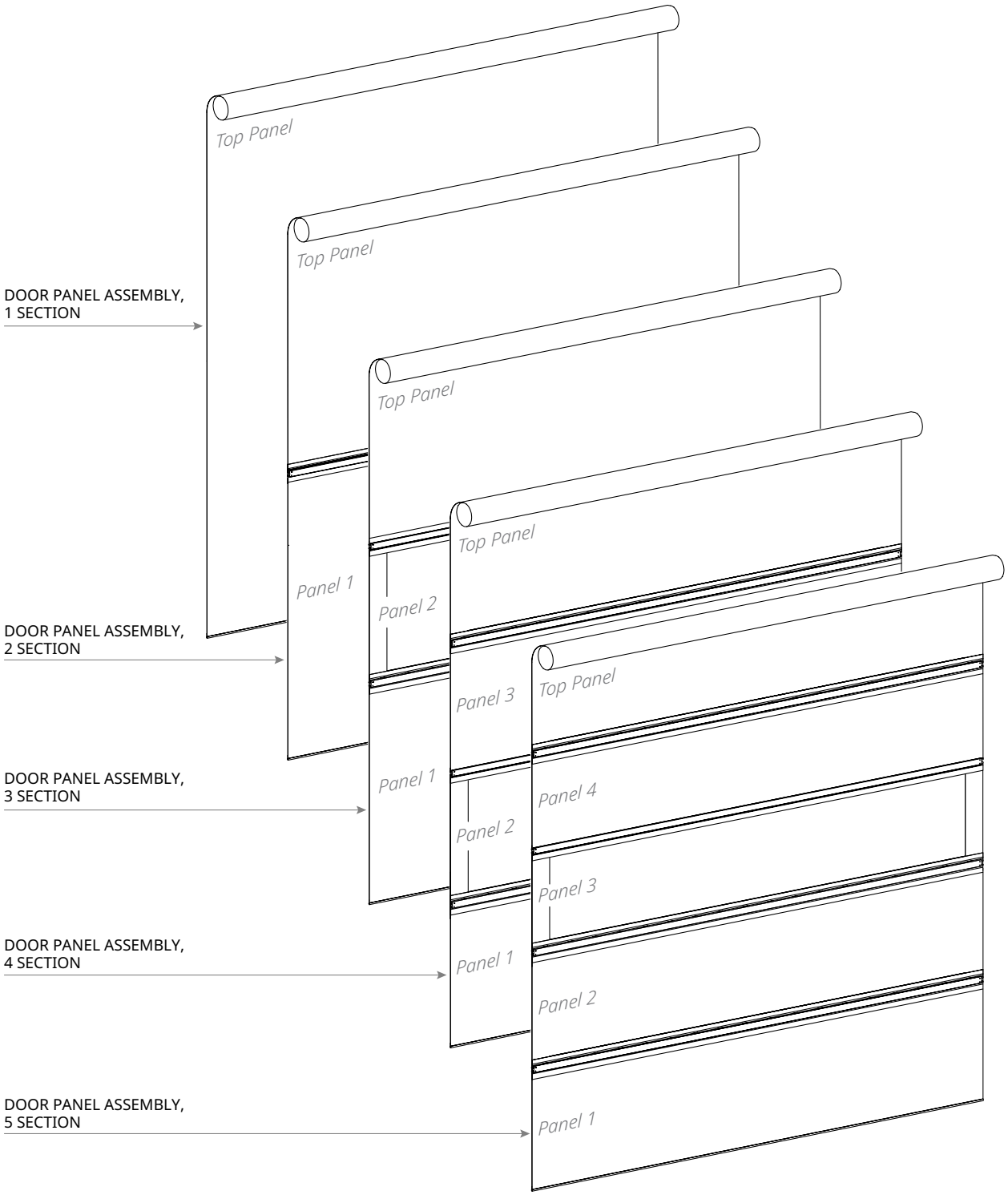
Part Number	Hardware	Description	Qty
1060100-0Z01	0550303	SCREW, 1/2-13UNC X 1 1/4 LG SERRATED, GRADE 5	2
no spacer used	0553100	NUT,1/2-13,HEX,FLNG,LOCK,ZN	2
1060100-0Z01 with spacer	0550024	HHCS, 1/2-13 UNC X 2, GR5 ZN	4
	0553100	NUT,1/2-13,HEX,FLNG,LOCK,ZN	4
0704010	0550011	HHCS, 7/16-14 x 1, GR5 ZN	2
	0554119	WSR 7/16 STL ZN	2
Panel mounting Strap	0556167	RIVET, 3/16 DIA X 1/2 GRIP, SS/SS 68D	*Varies with length*



Door Panels - Full Assemblies

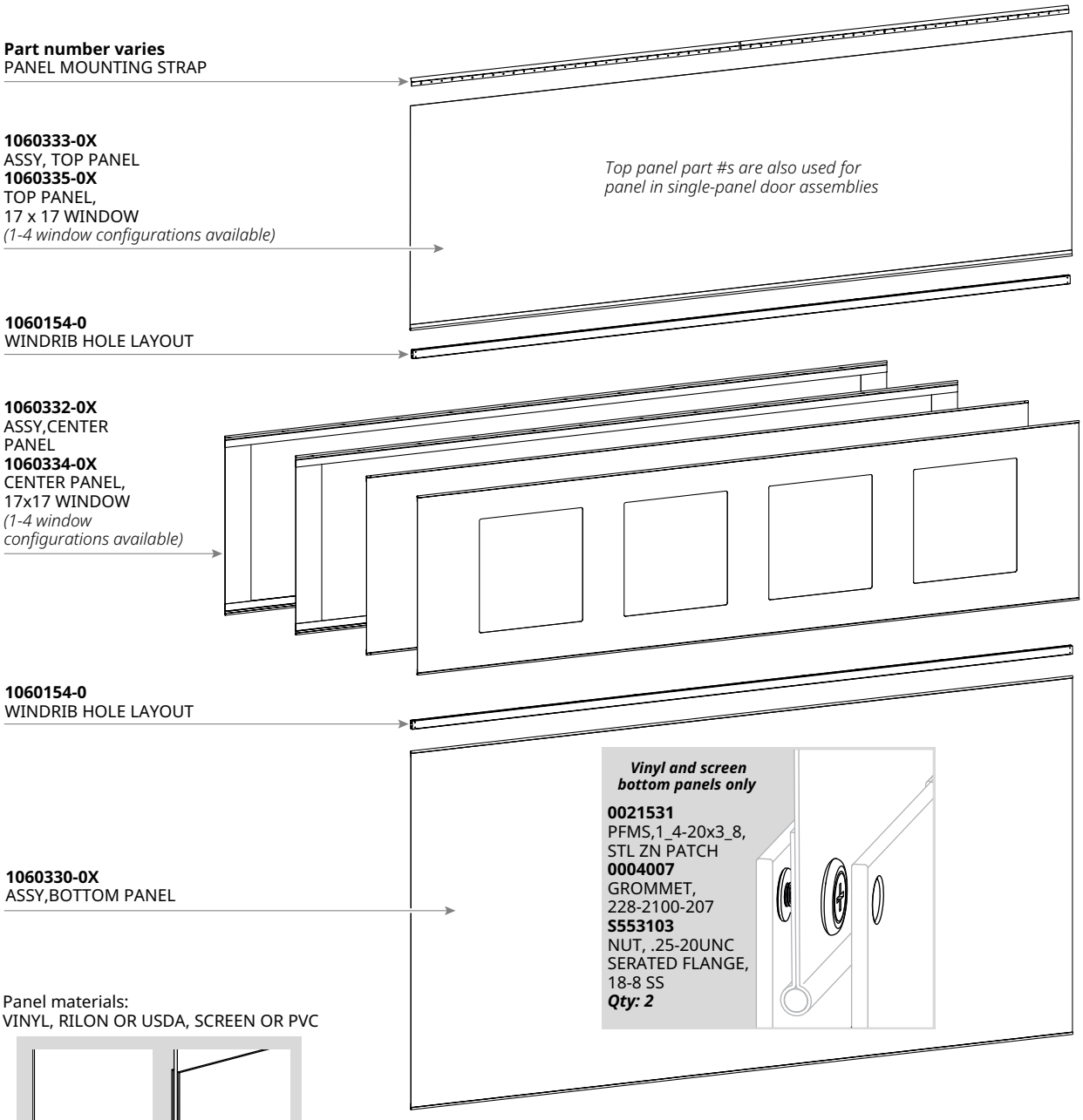
Door panel assemblies are configured parts, and require door serial number to order. Bottom bars must be ordered separately.

*The panel which attaches to the drum is referred to as the **Top Panel** in all doors, including single-panel doors. All other panels in multi-panel doors are **numbered from 1 to 4**, starting at the bottom. You can request individual panel sections (see next page) or a complete panel assembly.*



Door Panels - Individual Panels

All parts in door panel assemblies are configured parts, and require door serial number to order



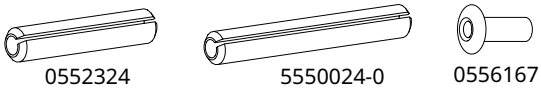
Panel materials:
VINYL, RILON OR USDA, SCREEN OR PVC

Vinyl door panel ***Rylon™ door panel***

Hardware – Order Separately

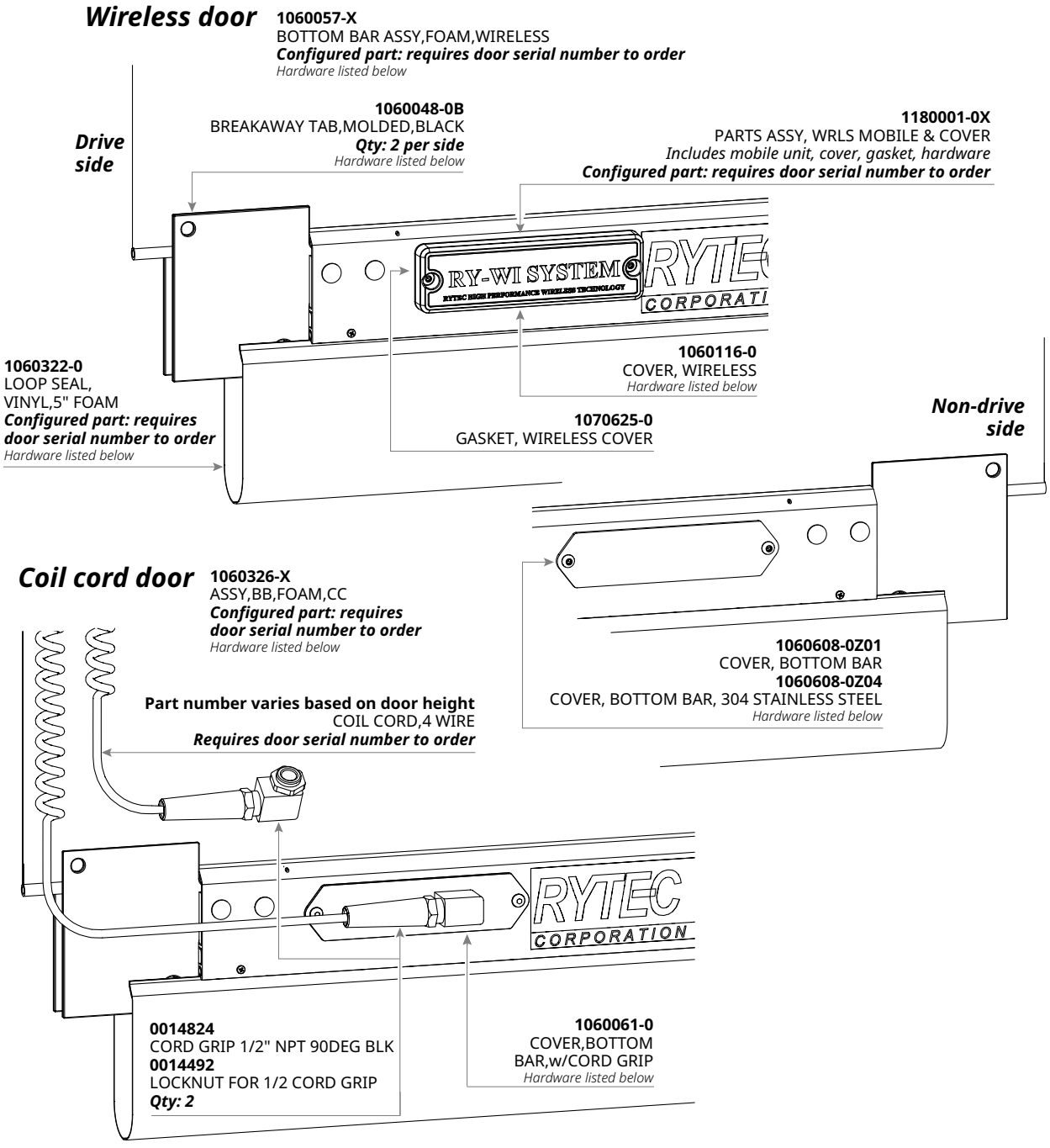
Roll pins (spring pins) or rivets (top panel and mounting strap only) should be ordered whenever door panels or windribs are replaced. Number varies by order.

Hardware	Description
0552324	PIN, ROLL, .125 DIA X .625 LG, SLOTTED,ZINC
5550024-0	PIN,1/8 X 1-1/4,SPRING,SS (bottom panel only)
0556167	RIVET, 3/16 DIA X 1/2 GRIP, SS/SS 68D (top panel only)



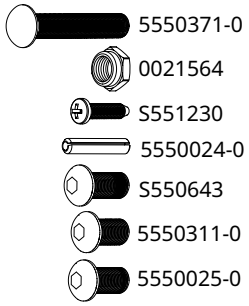
0552324 5550024-0 0556167

Bottom Bars - External Parts

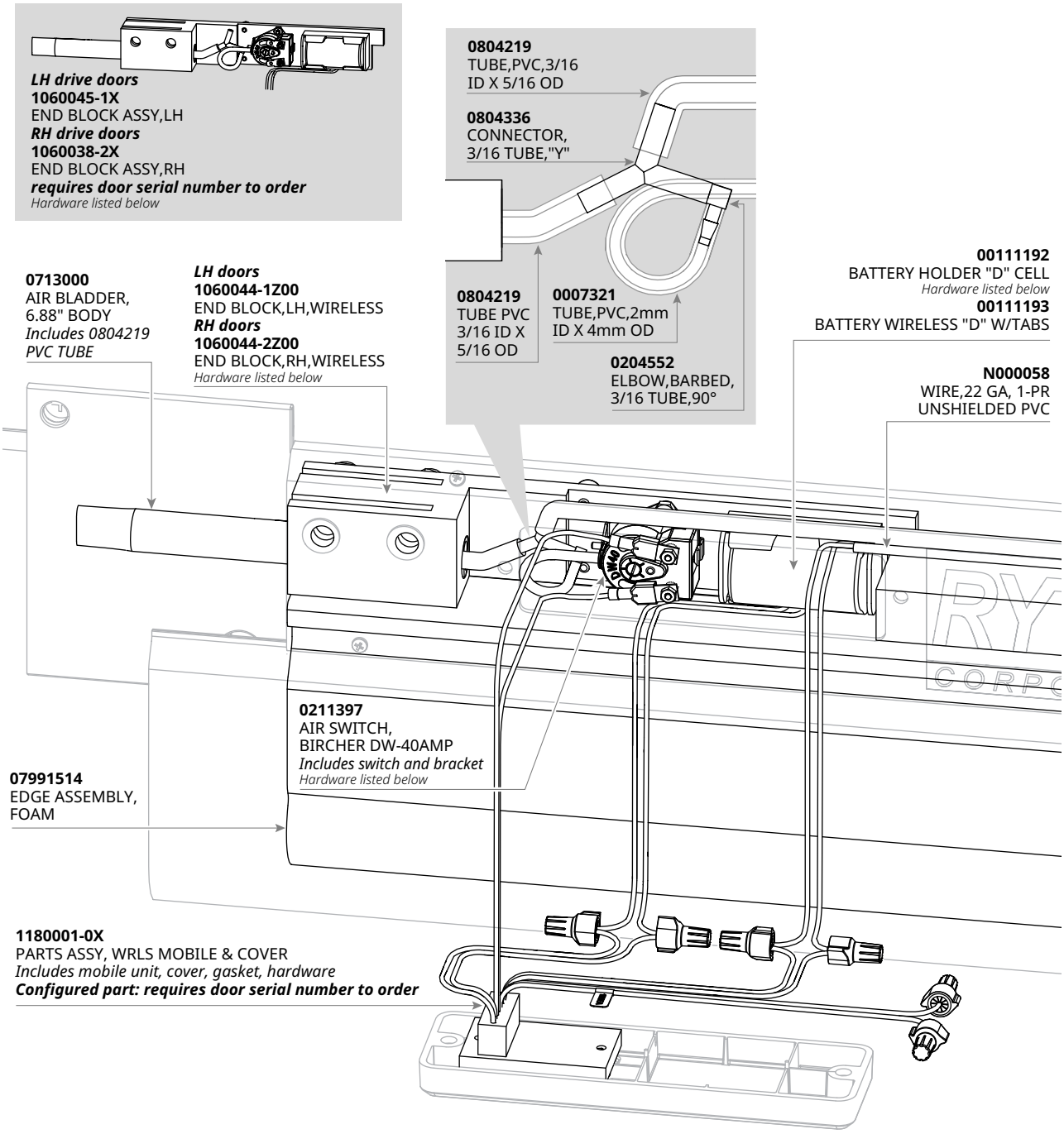


Hardware – Order Separately

Part Number	Hardware	Description	Qty
1060048-0B	5550371-0	BSCS 3/8-16X2.25 STL ZN	4
	0021564	NUT, 3/18-16UNC X HEX NYLOCK THIN NUT	4
1060061-0	5550025-0	BSCS,1/4-20 X 3/8,SS	2
1060322-0	S551230	SCREW, #6 X .63 LG TAPPING PAN HD S.S.	2
1060326-X, 1060057-X	5550024-0	PIN,1/8 X 1-1/4,SPRING,SS	2
1060016-0	S550643	SCREW, 1/4-20UNC X 0.75 LG, BHCS, 18-8 SS	2
1060608-0	5550311-0	BSCS, 1/4-20 X 1/4, SS	2

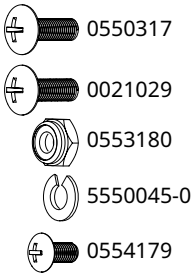


Bottom Bar - Internal Parts, Drive Side, Wireless Door

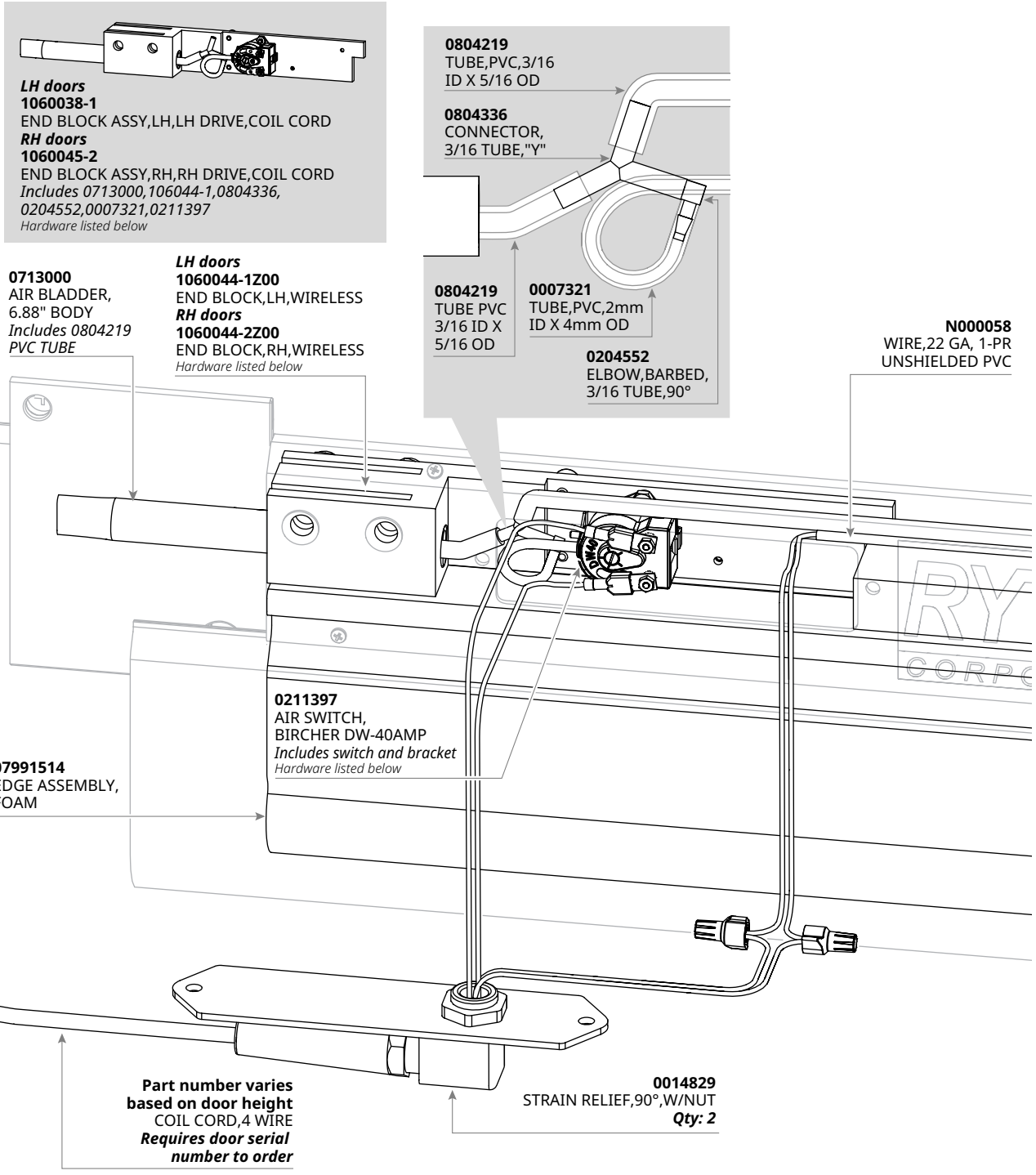


Hardware – Order Separately

Part Number	Hardware	Description	Qty
1060044-XZ00, 1060038-2X 1060045-1X	0550317	SCREW, 10-24 UNC x 1/2, PHILIPS TRUSS HEAD	2
0211397	0021029	PPMS, #8-32 X 1/2, STL ZN	2
	0553180	HEX NUT, #8-32, STL ZN	2
00111192	0554179	WASHER, #8 SPLIT LOCK, STL ZN	2
	5550045-0	PPMS,#6-32UNC X .375,ZN	2

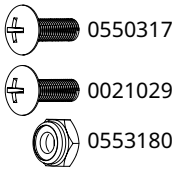


Bottom Bar - Internal Parts, Drive Side, Coil Cord Door

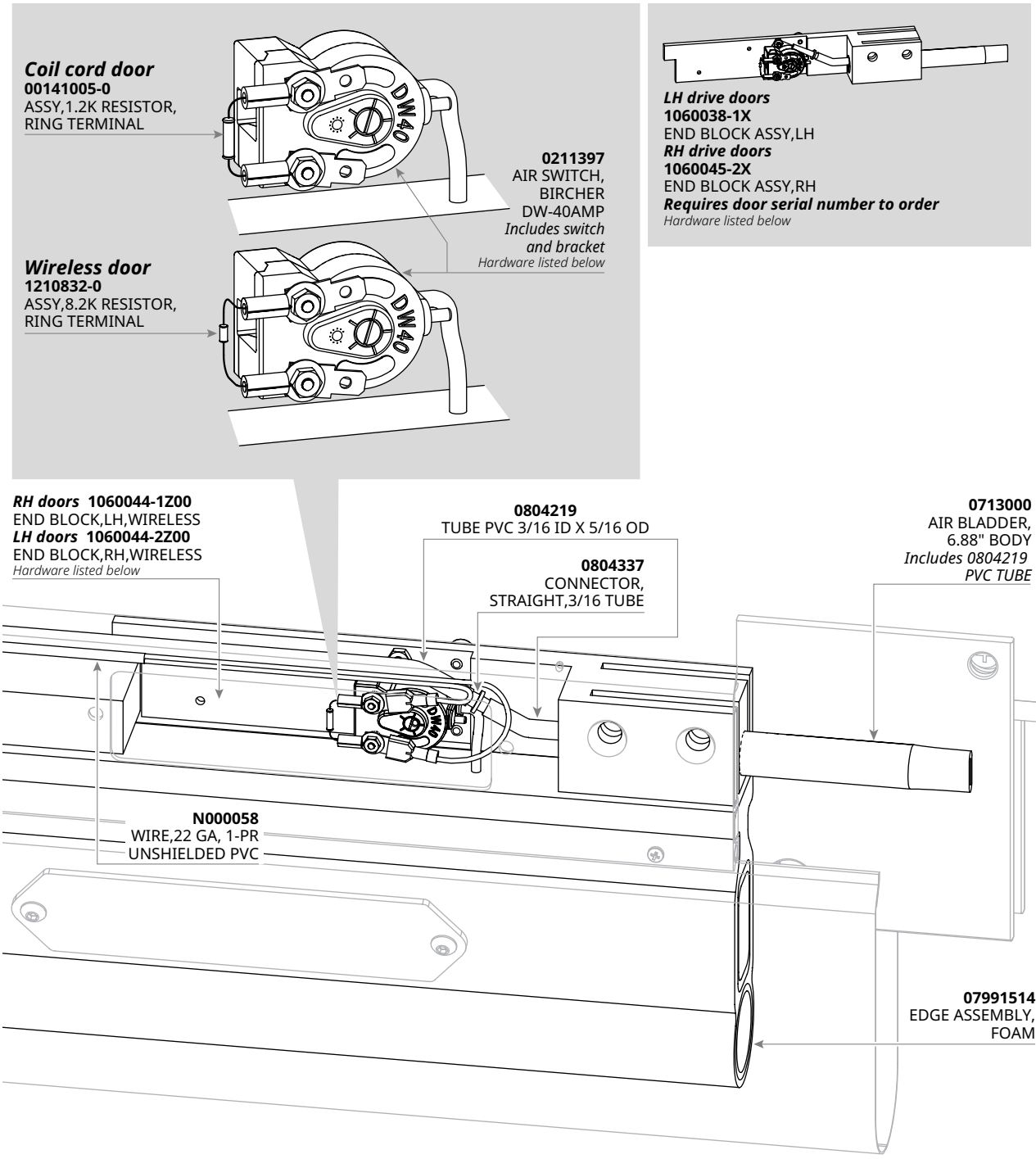


Hardware – Order Separately

Part Number	Hardware	Description	Qty
1060044-X, 1060045-1, 1060038-2	0550317	SCREW, 10-24 UNC x 1/2, PHILIPS TRUSS HEAD	2
0211397	0021029	PPMS, #8-32 X 1/2, STL ZN	2
	0553180	HEX NUT, #8-32, STL ZN	2



Bottom Bar - Internal Parts, Non-Drive Side, All Doors



Hardware – Order Separately

Part Number	Hardware	Description	Qty
1060044-XZ00, 1060038-1X, 1060045-2X	0550317	SCREW, 10-24 UNC x 1/2, PHILIPS TRUSS HEAD	2
0211397	0021029	PPMS, #8-32 X 1/2, STL ZN	2
	0553180	HEX NUT, #8-32, STL ZN	2

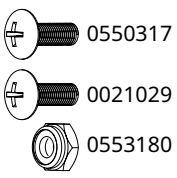
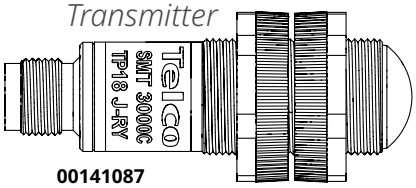


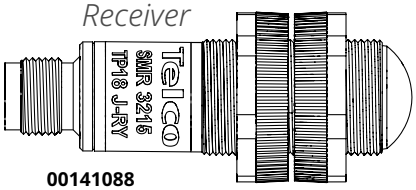
Photo Eyes

Transmitter

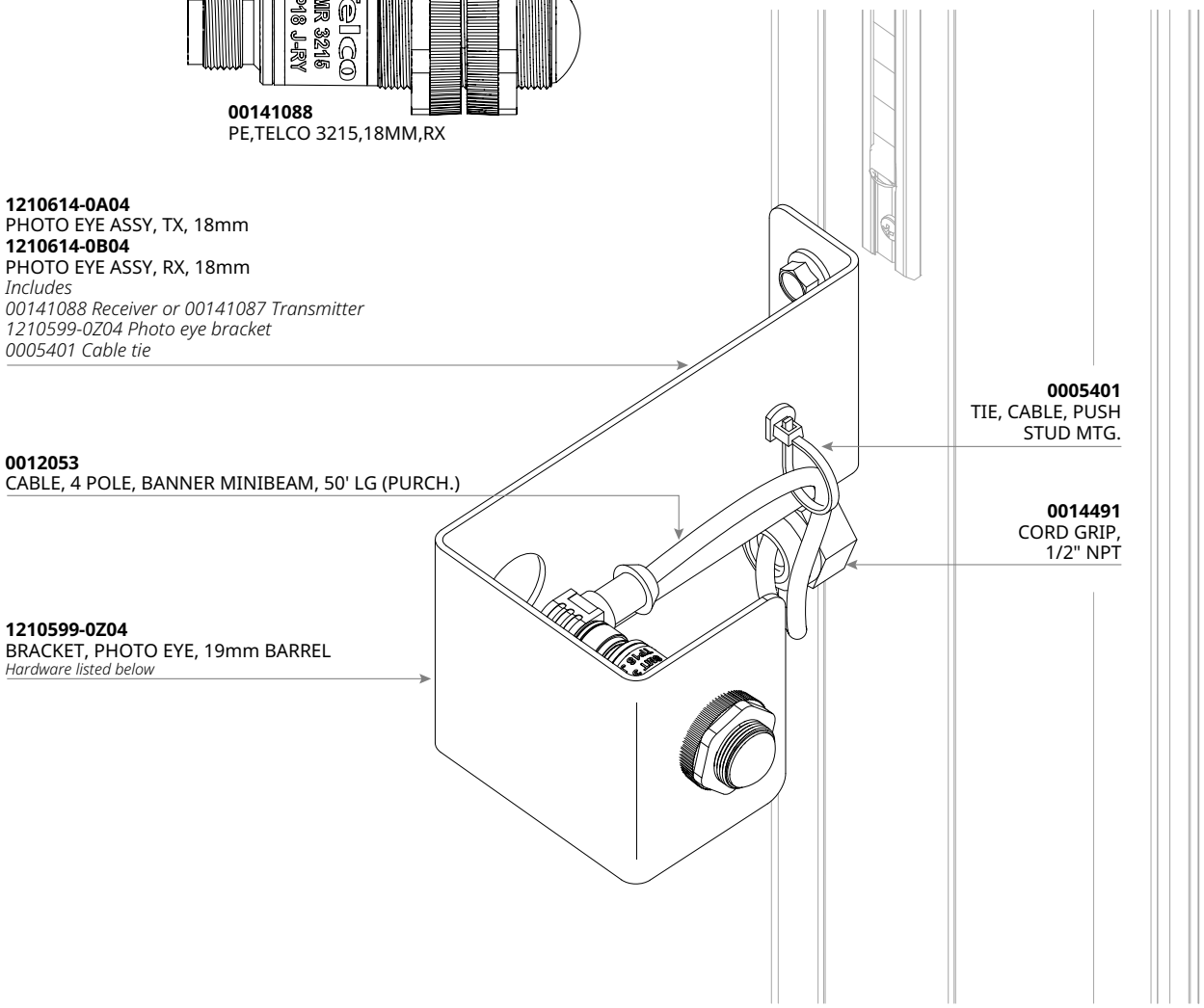


00141087
PE,TELCO 3000,18MM,TX

Receiver



00141088
PE,TELCO 3215,18MM,RX



1210614-0A04
PHOTO EYE ASSY, TX, 18mm
1210614-0B04
PHOTO EYE ASSY, RX, 18mm
Includes
00141088 Receiver or 00141087 Transmitter
1210599-0Z04 Photo eye bracket
0005401 Cable tie

0005401
TIE, CABLE, PUSH STUD MTG.

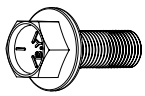
0012053
CABLE, 4 POLE, BANNER MINIBEAM, 50' LG (PURCH.)

0014491
CORD GRIP, 1/2" NPT

1210599-0Z04
BRACKET, PHOTO EYE, 19mm BARREL
Hardware listed below

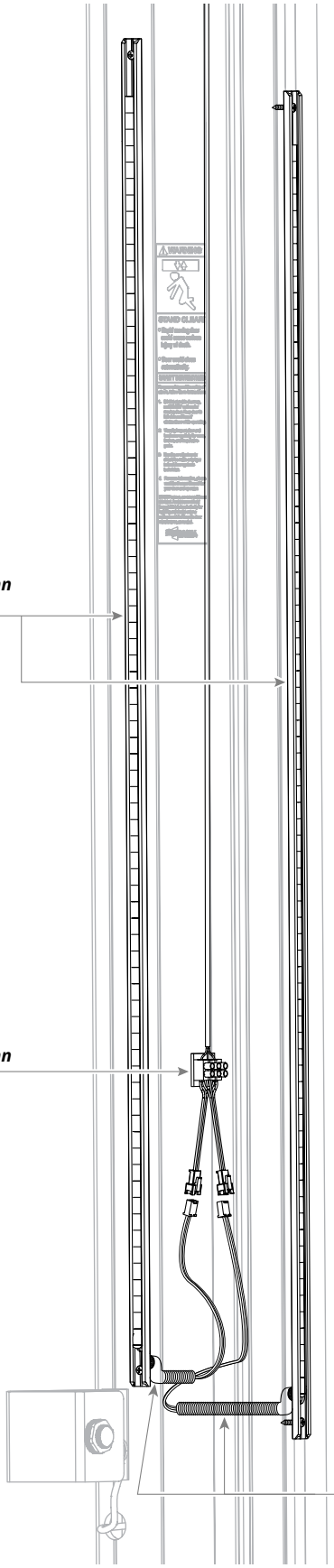
Hardware – Order Separately

Part Number	Hardware	Description	Qty
1210599-0	0550016	HFSMS, 1/4-20 x 3/4, GR5 ZN	2



0550016

Pathwatch™ LED Strips



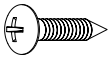
1210173-0
LED WARNING STRIP
Qty: 2 per side column
Hardware listed to right

1210181-0
PREWIRE ASSY,
LED TERM BLOCK
Qty: 1 per side column

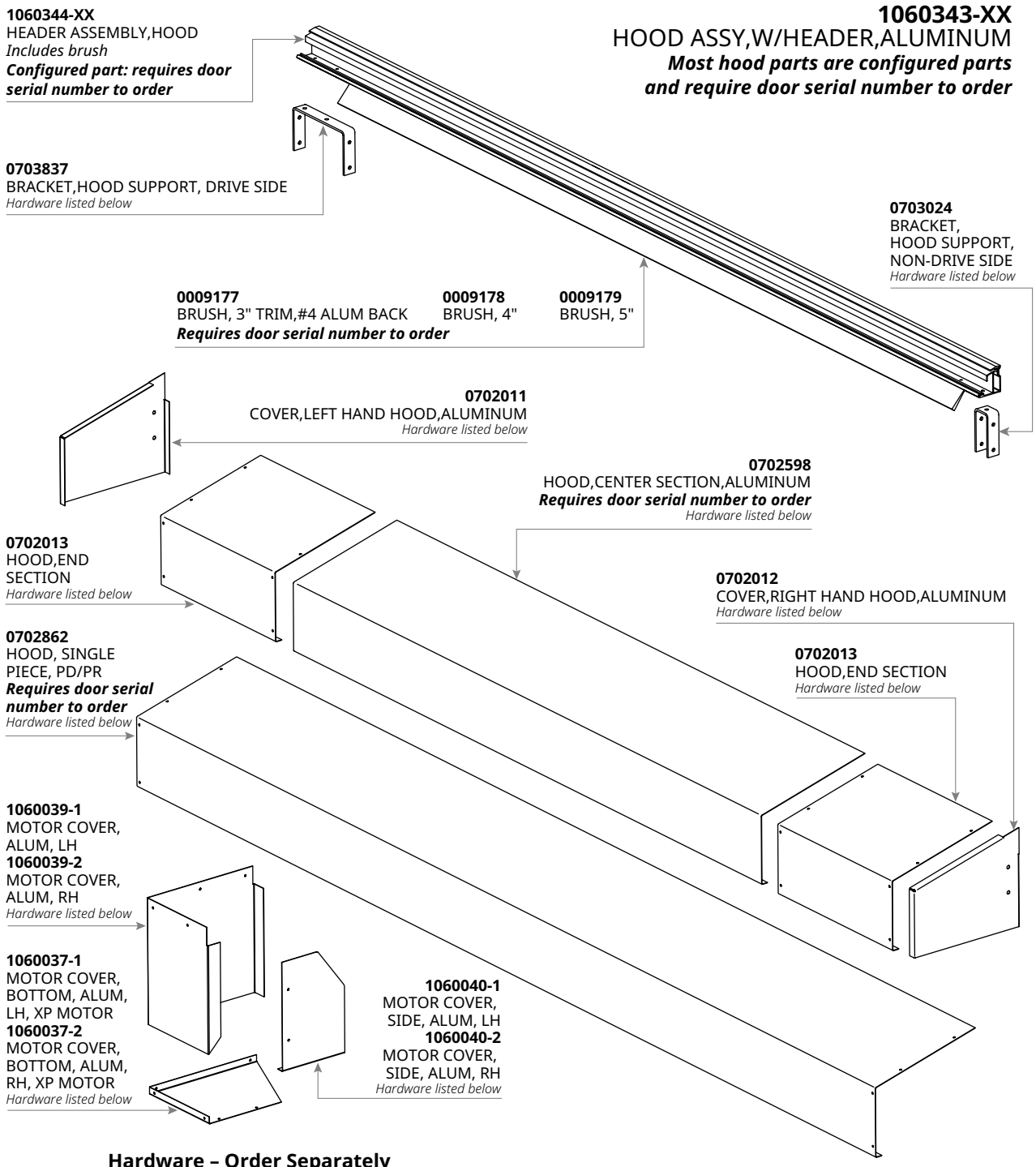
1210180-0
CORRUGATED LOOM
TUBING SLIT,.25",BLACK
Qty: 1 per side column

Hardware – Order Separately

Part Number	Hardware	Description	Qty
1210173-0	5550143-0Z04	PPTS #6 x 3/4, SS	2

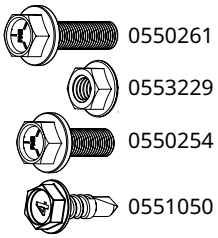

5550143-0Z04

Hood Covers - Aluminum

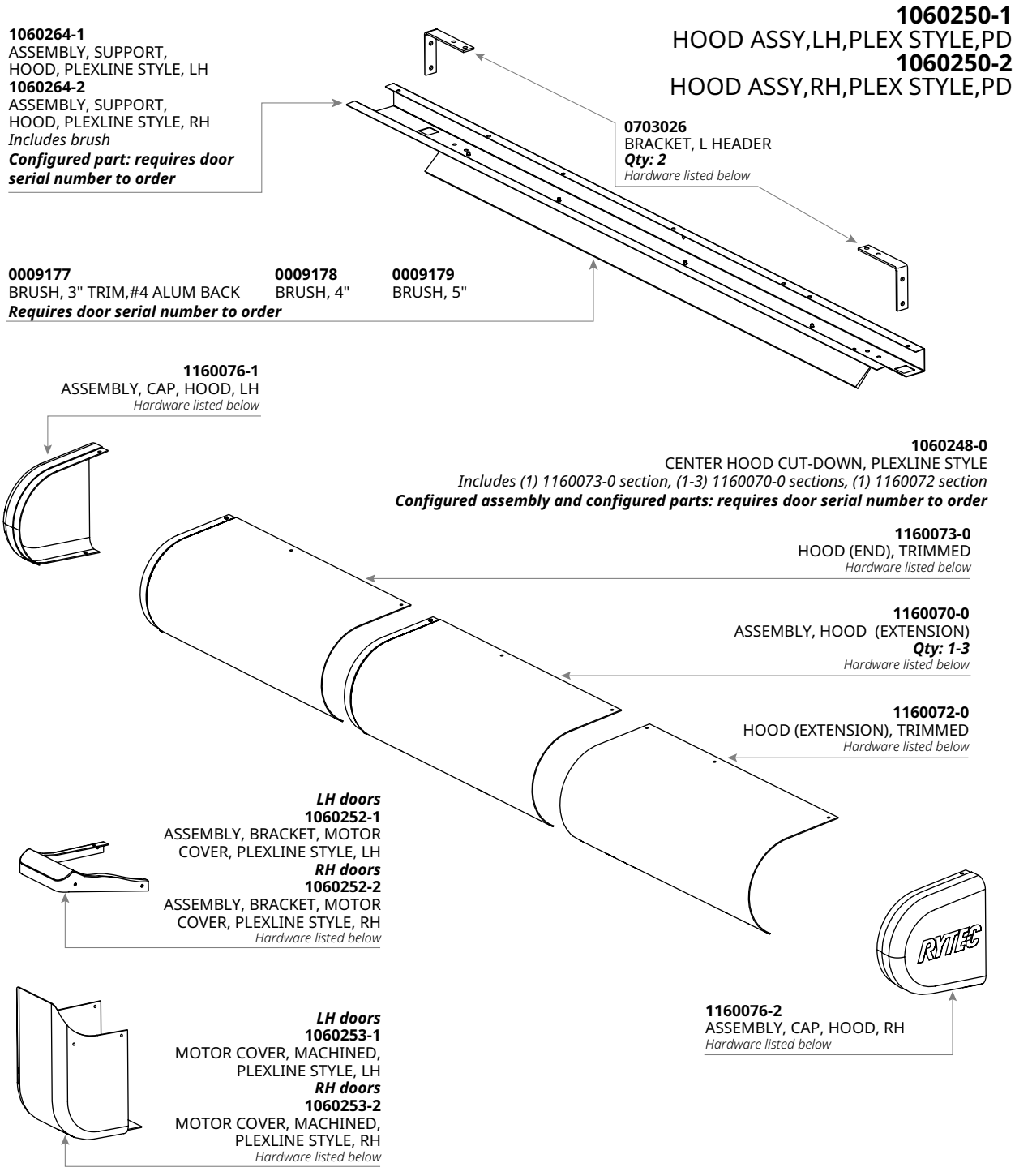


Hardware – Order Separately

Part Number	Hardware	Description	Qty
0703024, 0703837	0550254	HFSMS, 3/8-16 x 3/4, GR5 ZN	1,2
	0550261	HFSMS, 3/8-16 x 1-1/4, GR5 ZN	2
	0553229	HLNSF, 3/8-16, STL ZN	3,4
0702011, 0702012	0550254	HFSMS, 3/8-16 x 3/4, GR5 ZN	2
	0553229	HLNSF, 3/8-16, STL ZN	2
All other parts	0551050	HWSDS, #12-14 x 3/4, STL ZN	*Varies*

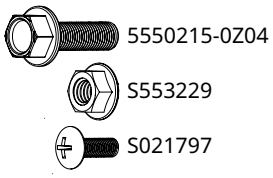


Hood Covers - Plastic

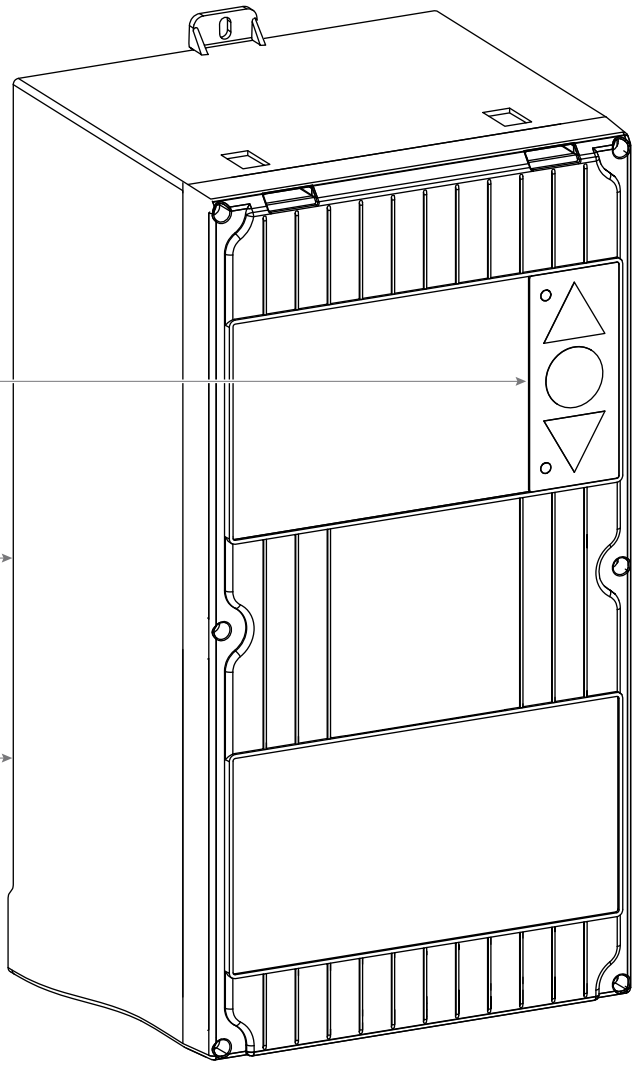


Hardware – Order Separately

Part Number	Hardware	Description	Qty
0703024	5550215-0Z04	HFSMS, 3/8-16X1.25, 18-8 SS, LOCTITE PCH	4
	S553229	3/8-16 HEX SERR FLNG L/N 18-8 SS	4
All other parts	S021797	BSCS,1/4-20 X 3/4 LG,SS TRUSS	*Varies by part*



System 4® Controller and Accessories



00142013
KEYPAD WITH R/G LED, OCS

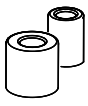
00142000
SYSTEM 4 CONTROL ASSY,PER DOOR
Configured part: requires door serial number to order

00142051
ENCLOSURE,EMPTY

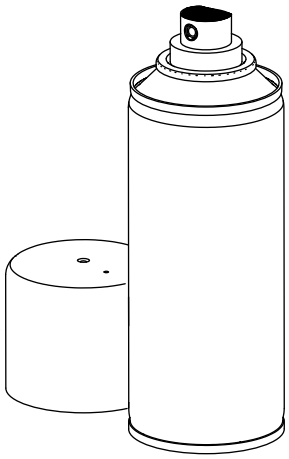
00142020 USB DRIVE

00142015 BATTERY,BUTTON CELL,CR2032,3V LITHIUM

00112023 MAGNETIC FILTER, 14.2 MM FERRITE CORE
Qty: *3*
00112001 MAGNETIC FILTER, 26 MM FERRITE CORE
Qty: *2*

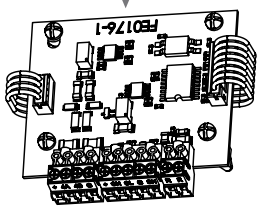


0016281
AEROSOL PAINT GRAY

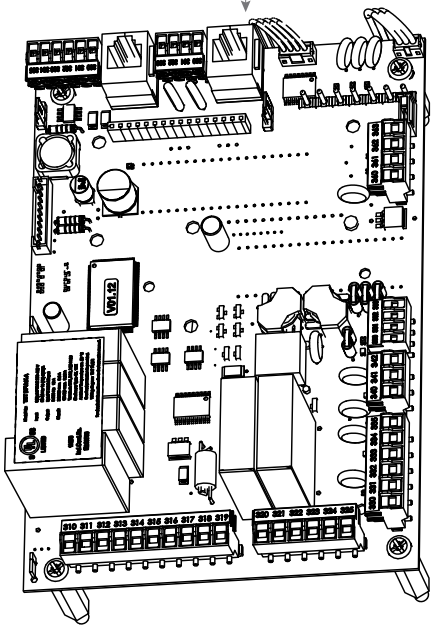


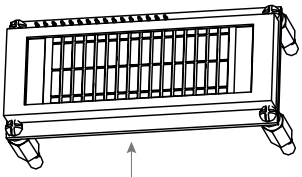
Expansion Boards

00142225 EXTENSION BOARD, COMMUNICATION

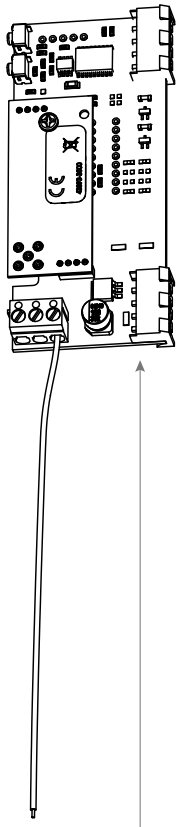


00142014 EXPANSION CARD WITH I/O & 2 CH LOOP

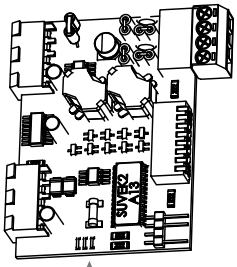




00142008 DISPLAY ONLY, SYS4



00121045 RC RECEIVER, 24VDC AM, 2 CHANNEL



00122000 LOOP DETECTOR MODULE, 2 CHANNEL, SYS4

PREDADOOR® NXT®, PD5000 NXT, PD5500 NXT LIMITED WARRANTY

Rytec Corporation ("Seller"), an Illinois corporation with its principal place of business at One Cedar Parkway, PO Box 403, Jackson, WI 53037, warrants to the original registered end-user commercial purchaser ("Buyer") that the **PredaDoor® and PredaCool™ Door Series** ("Product") sold to the Buyer will be free of defects in materials and workmanship (ordinary wear and tear excepted) for the time periods set forth below:

- **Mechanical components** for a period of Five (5) Years from the date of shipment of the Product from the Seller's plant ("Shipment"). Note: Motor assembly is a mechanical component.
- **Electrical components** for a period of Two (2) Years from Shipment.
- **Door panels**
  - **2-ply Rylon™, 2-Ply USDA, and 3-Ply Rylon™** for a period of **Five (5) Years** from Shipment.
  - **Vinyl,** for a period of **One (1) Year** from Shipment.
  - **Screen, windows,** for a period of **One (1) Year** from Shipment.
- **Coil cords, brush or vinyl seals, side column wear strips, side column self-repair guides, vinyl loop seal, wireless mobile unit battery** are considered wear items and are not covered under this Limited Warranty.
- **Aftermarket parts, accessories and assemblies** for a period of **ninety (90) days** from the date of Shipment.

Remedies

Seller's obligation under this Limited Warranty is limited to repairing or replacing, at Seller's option, any part which is determined by Seller to be defective during the applicable warranty period. Such repair or replacement shall be the Seller's sole obligation and the Buyer's exclusive remedy under this Limited Warranty.

Labor

Except in the case of aftermarket parts, accessories and assemblies, labor is warranted for one year. This means that Seller will provide warranty service without charge for labor in the first year of the warranty period. Thereafter, a charge will apply in to any repair or replacement under this Limited Warranty. In the case of aftermarket parts, accessories and assemblies, Seller will provide replacement parts only.

Claims

Claims under this Limited Warranty must be made (i) within 30 (thirty) days after discovery and (ii) prior to expiration of the applicable warranty period. Claims shall be made in writing delivered to the Seller at the address provided in the first paragraph of this warranty. Buyer must allow Seller and Dealer, or their agents, a reasonable opportunity to inspect any Product claimed to be defective and shall, at Seller's option, either (x) grant Seller and Dealer or their agents access to Buyer's premises for the purpose of repairing or replacing the Product or (y) return of the Product to the Seller, f.o.b. Seller's factory.

Original Buyer

This Limited Warranty is made to the original Buyer of the Product and is not assignable or transferable. This Limited Warranty shall not be altered or amended except in a written instrument signed by Buyer and Seller.

Not Warranted

Seller does not warrant against and is not responsible for, and no implied warranty shall be deemed to cover, damages that result directly or indirectly from: (i) the unauthorized modification or repair of the Product, (ii) damage due to misuse, neglect, accident, failure to provide necessary maintenance, or normal wear and tear of the Product, (iii) failure to follow Seller's instructions for installation, operation or maintenance of the Product, (iv) use of the Product in a manner that is inconsistent with Seller's guidelines or local building codes, (v) movement, settling, distortion, or collapse of the ground, or of improvements to which the Products are affixed, (vi) fire, flood, earthquake, elements of nature or acts of God, riots, civil disorder, war, or any other cause beyond the reasonable control of Seller, (vii) improper handling, storage, abuse, or neglect of the Product by Buyer or by any third party.

DISCLAIMERS

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, AND THE SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE. SELLER SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, WITH RESPECT TO THE PRODUCTS SOLD OR SERVICES RENDERED BY THE SELLER, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO.

LIMITATION OF LIABILITY

IN NO EVENT WILL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Such excluded damages include, but are not limited to, personal injury, damage to property, loss of goodwill, loss of profits, loss of use, cost of cover with any substitute product, interruption of business, or other similar indirect financial loss.

Product Descriptions

Any description of the Products, whether in writing or made orally by the Seller or the Seller's agents, including specifications, samples, models, bulletins, drawings, diagrams, engineering or similar materials used in connection with the Buyer's order, are for the sole purpose of identifying the Product and shall not be construed as an express warranty. Any suggestions by the Seller or the Seller's agents regarding the use, application, or suitability of the Product shall not be construed as an express warranty unless confirmed to be such in writing by the Seller.

Limited Warranty Void

This Limited Warranty shall be void in its entirety if:

(a) The Product is modified in a manner not approved in writing by Seller; or

(b) Buyer fails to maintain the Product in accordance with instructions contained in the Owner's Manual for the Product.

Owner's Manual

PredaDoor® and PredaCool™ Doors

HIGH PERFORMANCE DOORS

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