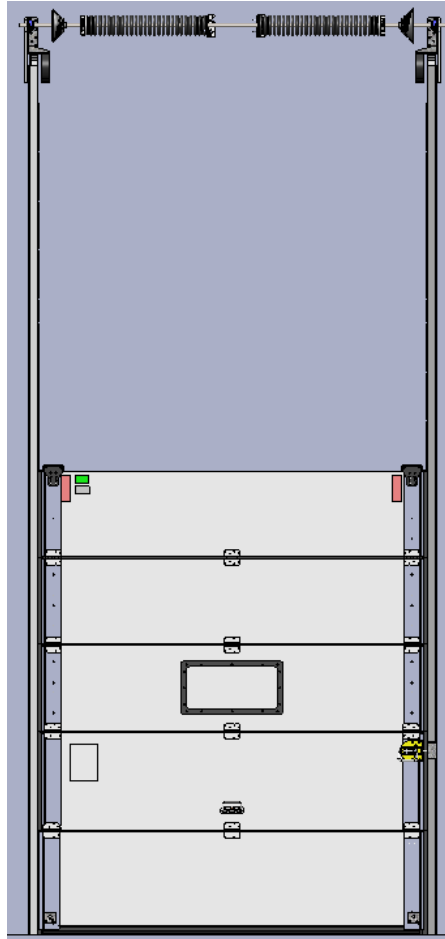


PxV™ INSTALLATION GUIDE

Vertical Doors

Models DR0880-TS/SCW-1 thru DR0888-TS/SCW-1
Vertical Doors (Torsion Spring and Shaft Driven
Counterweight)



PxV™
ENERGY-ABSORBING DOCK DOOR

A Product of



340 Gateway Park Drive
North Syracuse, NY 13212

Phone: 315-463-7348

Toll Free: 866-235-7468

Fax: 315-463-8559

Email: sales@dlmanufacturing.com

www.dlmanufacturing.com

PxV Door Installation Guide

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>WARNING!!!

Installers should completely review this manual prior to starting. Please use extreme caution and proper techniques when handling springs, counterweights and associated parts to avoid injury. Only qualified professionals are recommended for installation of this product.

Do not expose panels to outside elements during storage. Painting of the panels will void DL Manufacturing warranty. Direct handling of panels with forklifts or other machinery is not advised. In all cases above, damage outside of warranty will be caused to product.

PxV Door Installation Guide

Approved Installer-Supplied Hardware & Fasteners

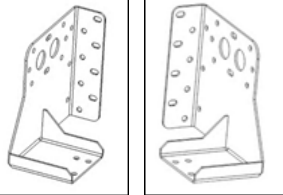
	Fastener Type / Hardware	Quantity
<input type="checkbox"/> Hardware for 4 Mounting Rails	<ul style="list-style-type: none"> Hollow Concrete Block –3/8" x 1-1/2" hollow set drop in anchor and 3/8" washer. Concrete –3/8" x 2" sleeve anchor and 3/8" washer. Structural Steel –3/8" x 1-1/2" self tapping screws and 3/8" washer (If Welding, see welding section below). Wood backed by solid material –3/8" x 3" Anchor and 3/8" washer. (Type of anchor used will depend on type of solid backing. See above methods). 	28
<input type="checkbox"/> Hardware for 2 Bearing Plates	<ul style="list-style-type: none"> Hollow Concrete Block –3/8" x 1-1/2" hollow set drop in anchor and 3/8" washer. Concrete –3/8" x 2" sleeve anchor and 3/8" washer. Structural Steel –3/8" x 1-1/2" self tapping screws and 3/8" washer (If Welding, see welding section below). Wood backed by solid material –3/8" x 3" Anchor and 3/8" washer. (Type of anchor used will depend on type of solid backing. See above methods). 	12
<input type="checkbox"/> Hardware for Header Seal Brush	<ul style="list-style-type: none"> Hollow Concrete Block –5/16" x 1" TAPCON screws. Concrete –5/16" x 1" TAPCON screws. Structural Steel –5/16" x 1/2" self tapping screws and 5/16" washer. Wood –5/16" x 1" Anchor and 5/16" washer. 	5-10
<input type="checkbox"/> Hardware for Top Side Seal Brushes	<ul style="list-style-type: none"> 5/16" x 1/2" Self Tapping screws. 	4

Approved Welding Methods

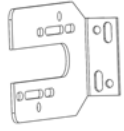
<input type="checkbox"/> Fillet Welds	1/8 Fillet Weld 1-1/2" long every 18"
<input type="checkbox"/> Plug Welds	Plug weld every hole

PxV Door Installation Guide

Manufacturer-supplied hardware & fasteners Common Parts



DR4789&DR4790
Bearing Bracket (LH&RH)

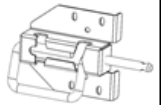


DR4582
Center
Bracket



DR4695
Universal
Lock Receiver

DR2280
Slide
lock



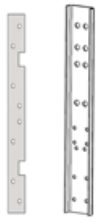
DR2184
Universal Lock



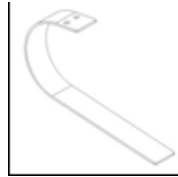
HEX HEAD BOLTS
CP2104 3/8"-16x1-1/2
CP2105 3/8"-16x1"



CP2046
1/4" -20 Flange
Lock Nut



DR4261/DR4955
Junction Plate



DR2195
Leaf Bumper

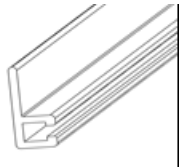


WASHERS
AT2012 3/8"
CP2061 1/2"



AT2018
1/4" -20x3/4
Flange Bolt

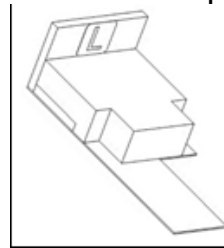
NYLOCKS
CP20915/16-18
CP20563/8-16
CP20601/2-13



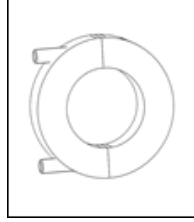
DR2121
Header Seal



Door Cables
DR5299/DR5300/DR5301
5/32" Door Cable (Qty 2)



DR5431/DR5432
Upper Track Seal



DR2095
1" Split Shaft Collar



DR4696
Corrective slot backer plate



DR2102
1" Bearing



DR2228
3/16"x1/4" Shaft Key



DR2035
Pulldown Rope



DR2102
1" Bearing

DR2210
1" Hollow shaft (keyed)

PxV Door Installation Guide

Counterweight Parts

DR2340

3/8" x 1" polyester foam with PSA one side



DR2087
(4") Standard Lift
Drums 1 Left (Red)



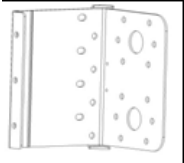
DR2187
(5.25") Standard Lift Drums



DR4709
6" CW Tub Bracket



DR4896
Counterweight Keeper



DR4797
Counterweight Bracket



CP2034
29" Tie Wrap
Qty3 or 6



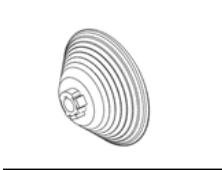
CT5016
Cable Cop

DR5543, DR5544, DR5545
Counterweight Basket



DR5478
3/16" Counterweight Cable

Torsion Spring Parts

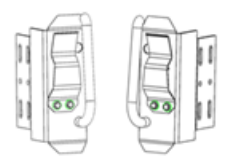


DR2086
Vertical Lift Drums

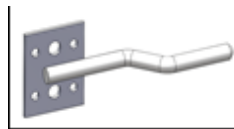


Torsion Spring
1L (Red) & 1R (Black)

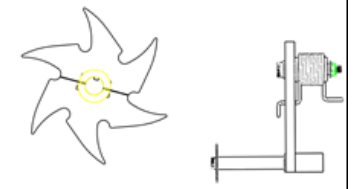
Optional Feature Parts



DR5165/DR5166
Hold Down Brackets



DR5502
Hold Down Bars



DR5540
Free Fall Safety Kit
Counterweight doors only

PxV Door Installation Guide

**ALL DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS PER JOB ARE LOCATED IN PARTS BOX**

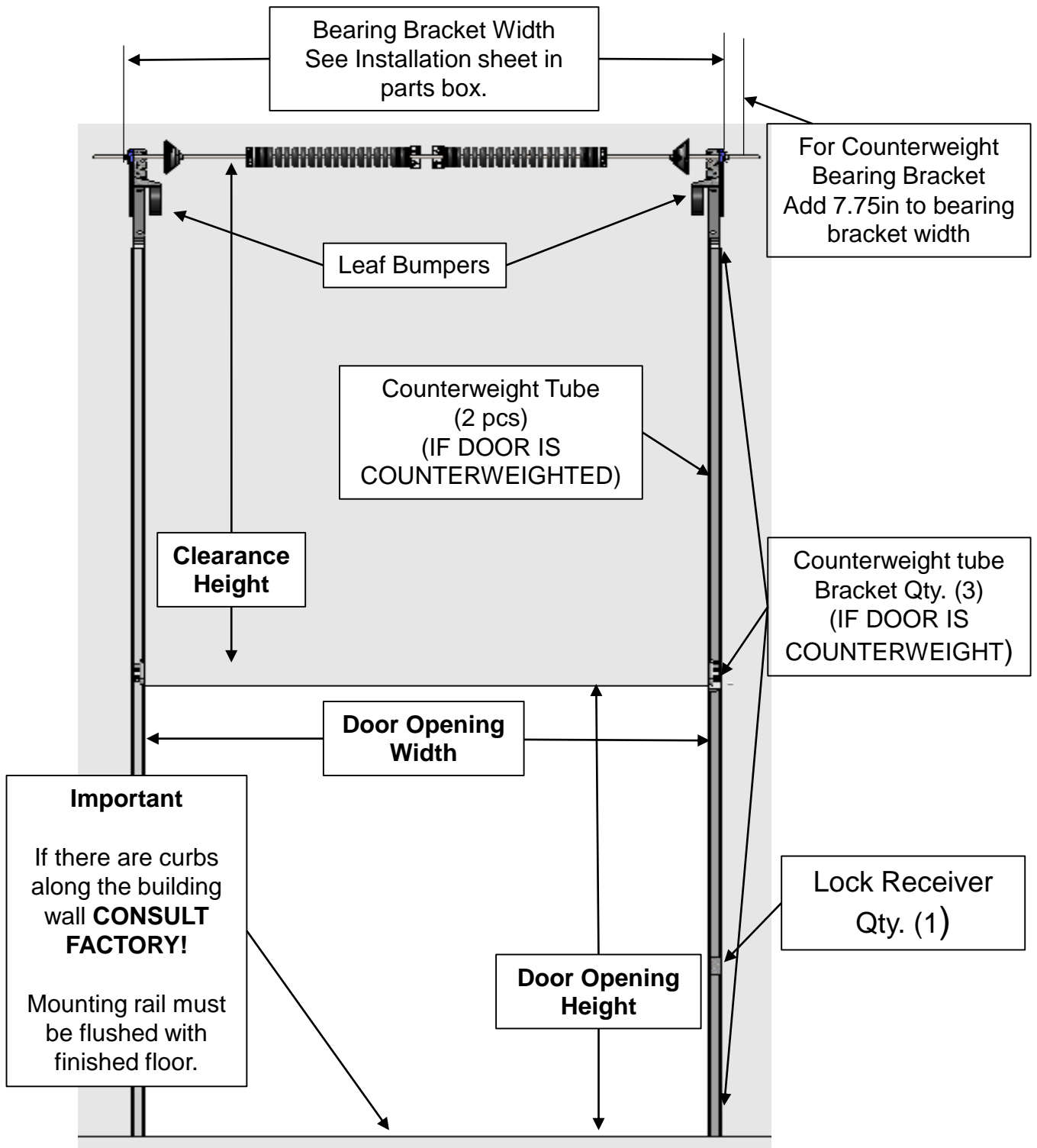


Figure 1 Key Measurements and Locations of Mounting Rails and End Bearing Assemblies.

PxV Door Installation Guide

>IMPORTANT!!

Track support and alignment are critical!!!

The following conditions are required for the installation of the PxV door:

1. Door jamb is plumb and true.
2. Adequate mounting surface available for Mounting Rails and End Bearing Assemblies.
3. Door jamb and walls must be inspected for decay, damage, crumbling etc. If a solid surface does not exist, the door jamb or wall must be repaired or rebuilt.

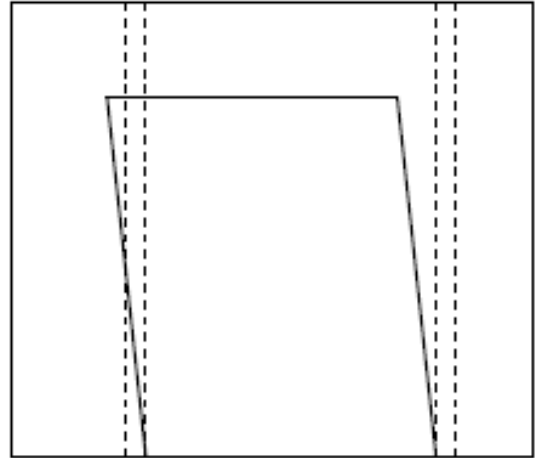


Figure 2. Proper track alignment when door frame is out of square (drawing not to scale).

Required Tools & Supplies

<input type="checkbox"/> Measuring Tape	<input type="checkbox"/> 1/8" hex Driver
<input type="checkbox"/> Plumb Bob	<input type="checkbox"/> Screwdrivers
<input type="checkbox"/> Drill with 1/4" drill bits	<input type="checkbox"/> 3/8" Wrench or Nut Driver
<input type="checkbox"/> Pliers or Vise Grip	<input type="checkbox"/> 7/18" Wrench nut Driver
<input type="checkbox"/> 4" Long Level	<input type="checkbox"/> 1/2" Wrench or Nut Driver
<input type="checkbox"/> Torsion Spring Winding Bars	

Proper alignment of the Mounting Rails is critical to proper operation of the door. Use a plumb bob and level to ensure that each rail is level and square before fastening it to the door frame. In addition, if the door frame is not square, set rails so that they align with each other rather than with the door frame (SEE FIGURE 2).

>IMPORTANT!!

Installers may determine that installation conditions require welding mounting rails to the facility wall rather than using fasteners. *Do not attach track to the Mounting Rail before welding).*

INSTALLERS MUST FOLLOW O.S.H.A. & LOCAL SAFETY GUIDELINES!!!

PxV™ Vertical Door Installation Guide

> Preparing To Install PxV Mounting Rail and Track

NOTE:

The PxV door is built to customer specifications. Verify that measurements taken on the job site match those specified in the approval drawing provided with the door. If measurements DO NOT match those specified in the approval drawing please call our Service Department toll free for assistance. **1-866-235-7468**

1. Check parts list to verify that all required factory-supplied parts are present.
2. Gather all required installer-supplied fasteners and hardware (**See "Approved Installer-supplied Hardware & Fasteners" See page 5**).
3. Verify the minimum clearance to the sides and above the door. (**SEE FIGURE 1**).

>Installing the Mounting Rails and Plastic Track

NOTE:

All four mounting rails are identical and may be reversed. If door jamb or wall conditions restrict you from installing the mounting rails as indicated, flip the rail around and attach them so that the short leg is facing away from the door opening and flush to the wall. Snap a new plumb line $2\frac{1}{4}$ " to the outside of the initial line. The mounting rails should end up $4\frac{1}{2}$ " plus door opening width apart (**SEE FIGURE 3**).

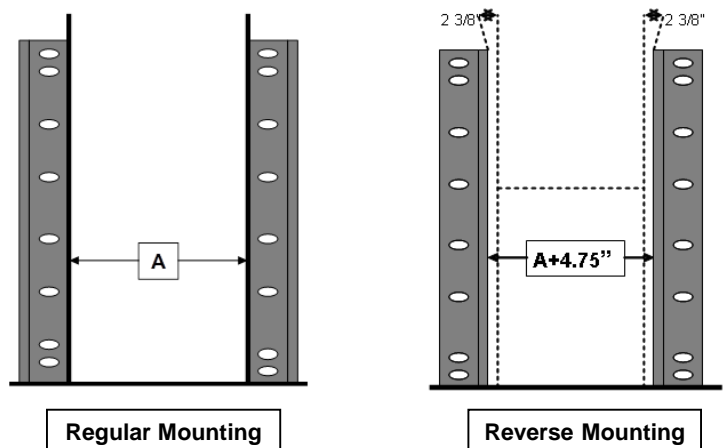


Figure 3. Regular and reverse mounting of Mounting Rails.

1. Take polyester foam strip and stick the side with PSA against mounting rail. Place foam on exterior face of the mounting rail's short leg. The foam should be compressed between the mounting rail and wall when door is installed (**See Figure 4**).
2. Ensure that foam does not totally cover the mounting holes in the short leg of the mounting rail.

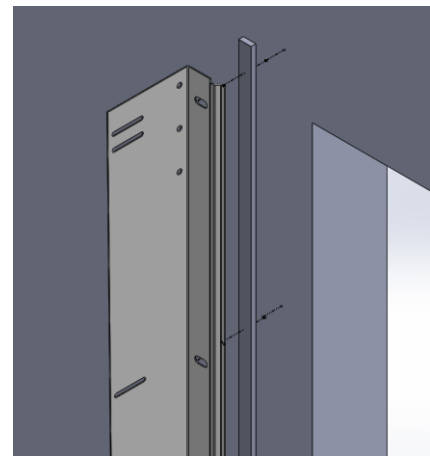


Figure 4

Attaching Mounting Rail Foam

PxV Door Installation Guide

NOTE:

Mounting Rails may be shimmed out from the door frame up to ½" to align them with each other. If the door frame is out of plumb by more than ½", contact factory before proceeding with install.

1. The lower mounting rail can be comprised of two sections. For doors greater than 8ft use the shorter mounting rail section on the bottom and secure using the junction plates DR4261 (**SEE FIGURE 5**).
2. Align the short leg of Mounting Rails with the door jamb so the distance apart matches the "A" dimension on the approval drawing. If you cannot locate this measurement in the included paperwork, please call DL Manufacturing. If reverse mounting is required (**SEE FIGURE 3**).
3. Attach Mounting Rails to wall using approved installer-supplied fasteners. Ensure Mounting Rails maintain the same spacing all the way to the top. Rails **MUST BE** kept level/plumb throughout. MOUNTING RAIL SPACING tolerance is (+¼ in,-0 in). Re-measure spacing between Mounting Rails now.

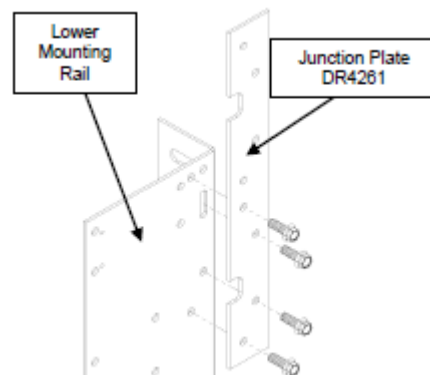


Figure 5. Attaching Junction Plate to tops of bottom Mounting Rails.

>IMPORTANT!!

Do not attach plastic track to mounting rail until mounting rail is attached to the wall.

4. Attach upper Mounting Rails to the lower Mounting Rails using the provided 1/4-20x3/4 bolts and 1/4-20 Flange Nuts and are secured using the junction plates DR4261. Ensure Upper Mounting Rails maintain the same spacing all the way to the top (**SEE FIGURE 6**).

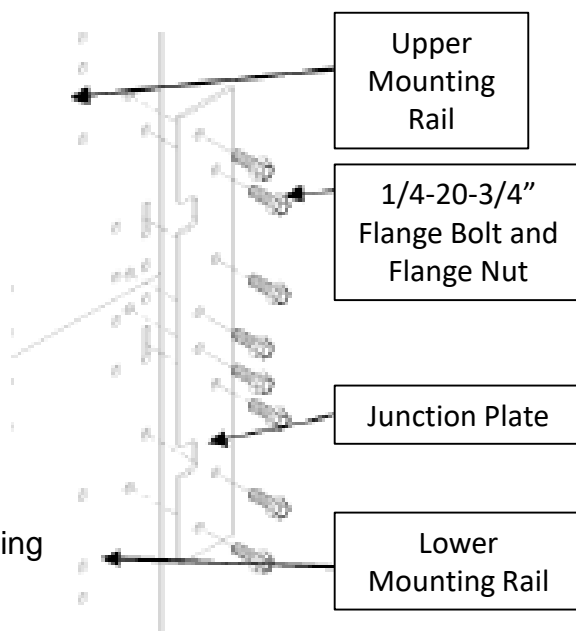


Figure 6. Attaching Upper Mounting Rail to Lower Mounting Rail.

PxV Door Installation Guide

NOTE:

Plastic tracks are mounted on the Mounting Rails. Plastic tracks are labeled to indicate position. BL=bottom left, TL=top left, BR=bottom right, TR=top right.

5. Attach the lower plastic door tracks onto the installed Mounting Rail on both sides of the door opening (BR + BL) and (TR + TL).
 - Slide the track over the Mounting Rail so the webbed portion is pointing into the door opening.
 - Ensure that the track is flush to the floor and fully seated over the Mounting Rail.
 - Using the pre-drilled holes in the mounting rail as guides, drill $\frac{1}{4}$ " holes through the track. Apply heavy pressure to the track while drilling the holes to ensure the track will be fully seated.
 - Insert $\frac{1}{4}$ " -20 x $\frac{3}{4}$ " flange bolt through the holes so that the head is outside the track (touching the Mounting Rail) and the $\frac{1}{4}$ "-20 flange nuts are inside the track (touching the plastic track). Exclude previously drilled holes for Junction Plate **(SEE FIGURE 7)**.
6. Re-attach the Junction Plates on both sides **(SEE FIGURE 7)**.
7. The mounting rails below the door header need to be caulked to seal air and light leaks. Run a $\frac{3}{8}$ " bead or larger of caulk along the lower mounting rails and the wall. If mounting to lumber it will also have to be caulked **(SEE FIGURE 8)**.

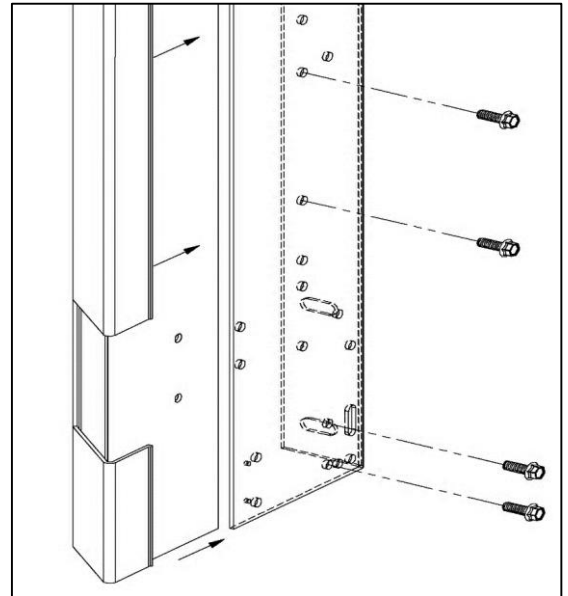


Figure 7. Attaching plastic door track.

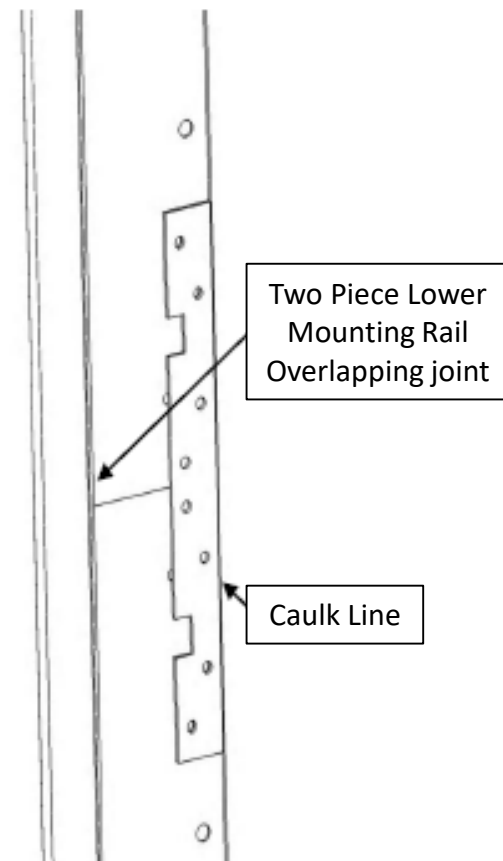


Figure 8. Attaching 2 pcs mounting rail and track.

PxV Door Installation Guide

> Installing Door Panels

NOTE:

Door panels are numbered to indicate the order of installation. Panel 1, which has the bottom rubber or optional brush seals, goes on the floor. Panels 2, 3 or 4 are middle panels. The panel with the header seal and lift bracket is at the top.

1. Position panel 1 with the bottom rubber seal at the floor (optional bottom brush is pointed toward the inside of the building). **THE HINGES ARE ON THE INSIDE.**
2. Feed the brushes into the brush guide ensuring all bristles are captured in the brush guide.
3. Lower the panel to the floor.
4. Insert Panel 2 in the same fashion as Panel 1, lowering to the top edge of the previously installed panel. Be sure not to pinch bristles or gap flaps between panels. Continue stacking all panels before fastening the hinges
5. Using the ¼-14x1" Tek screws (4 each), secure the hinges from panel to panel. (See **Fig 9**) Be sure to use all the holes in the hinge total of 8 screws per hinge.

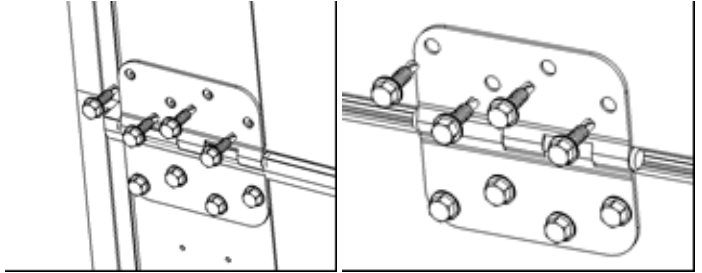


Figure 9. Hinge Installation.

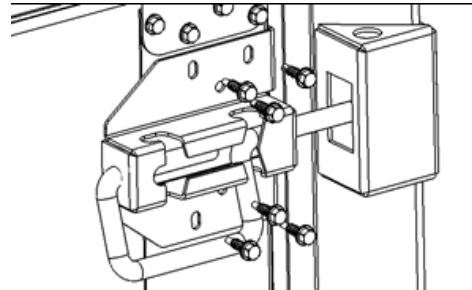


Figure 10-A. Attaching Lock and Receiver.
(Right Side shown with DR2280)

> Installing Locks and Receivers

1. Install the slide lock on the top right hand side of panel #2 using (5) CP2189 tek screws.
2. Engage the slide bar of the lock and position the lock receivers so the top of the slot in the receiver is bottomed out on the top of the slide lock.
3. Once positioned properly, fasten the lock receiver to the track and mounting rail using at least (2) CP2189 screws.
4. Attach the pulldown rope to the eyelet on the bottom of the slide lock.

(See **Figure 10**)

Note: Standard door has a single lock, Dual locks is a separate option.

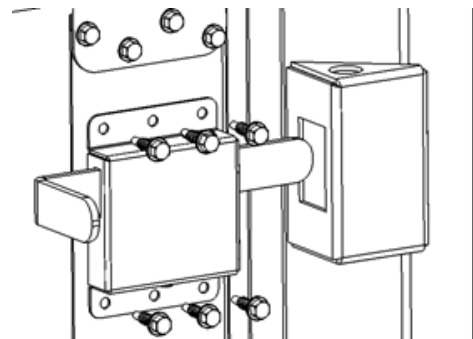


Figure 10-B. Attaching Lock and Receiver.
(Right Side shown with DR2280)

PxV Door Installation Guide

> Installing the Bearing Brackets and Leaf Bumpers

1. Secure the bearing brackets to the mounting rail using the side alignment piece (3) 3/6-16 x 1 bolts and nylocks.
2. Secure side alignment piece to mounting rail using (3) 1/4-20x3/4 flange bolts with flange lock nut.
3. Level and plum the brackets, making sure they are right distance apart. See the installer build sheet for exact dimensions.
4. Secure the bearing brackets to the wall using the appropriate fasteners.
5. Install the leaf spring using (2) 3/6-16x1 bolts and nylocks.

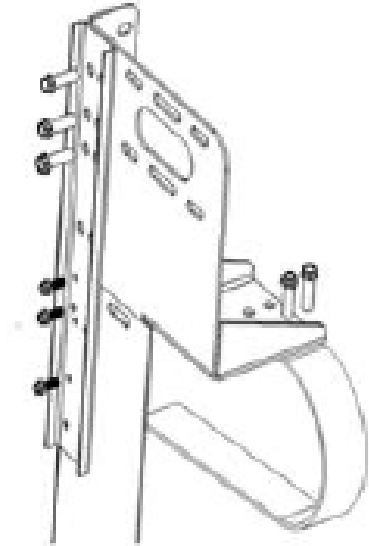


Figure 11. Bearing bracket and leaf spring installation.

>IMPORTANT!!

FOR TORSION SPRING DOORS DR0880-TS THRU DR0888-TS GO TO PAGE# 11.

FOR COUNTERWEIGHT DOORS DR0880-SCW THRU DR0888-SCW GO TO PAGE#12.

PxV Door Installation Guide

<Installing the Torsion Spring, Shaft and Drums

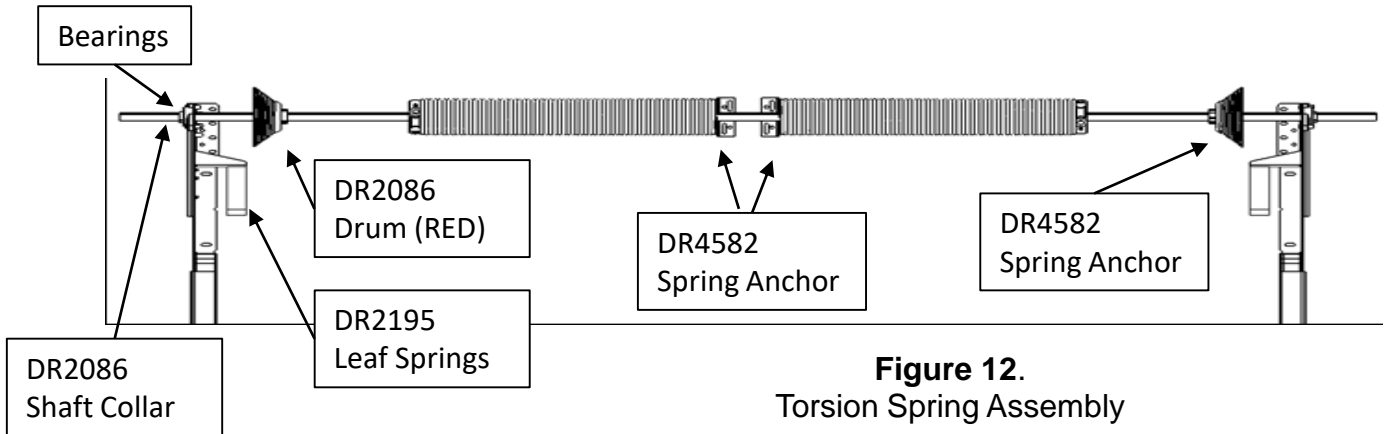


Figure 12.
Torsion Spring Assembly

1. Prepare the shaft for assembly. Slide the springs onto the shaft (**BLACK** on right, **RED** on left). Check that spring bearings DR2101 are installed.
2. Slide vertical lift drums DR2086 onto both sides (**BLACK** on right, **RED** on left)
3. Slide the bearing on the shaft
4. Install entire shaft/spring assembly into the bearing brackets. The shaft must go through the holes farthest away from the wall.
5. Secure the bearings with 3/8-16x1-1/2 bolts and Nylocks
6. Install the center support brackets and secure
7. Install the (2) shaft collars and tighten
 - A. Using 1/8" Hex Driver, tighten the set screws in bearings in so the shaft does not slide from side to side.
 - B. Slide Split Shaft Collars over the ends of shaft on each side, slide to Bearing Assembly and tighten.
 - C. Align the drums so the cable does not rub (Approx 5-3/4" from the bearing bracket). Install the shaft keys and tighten both set screws.
 - D. Attach cable to the lift bracket on the top panel of PxV door. (**SEE FIGURE 13**)
 - E. Attach the cable to the drum and wrap cable around Cable Drum until the cable is taught.
 - F. Clamp a vise grip around shaft and wedge it against the wall so the shaft can no longer turn freely. (*Ensure the vise grip is very secure.*)
8. Wind torsion springs according to the number of turns suggested on the PxV Packing Checklist. This number is just a starting point and tension may need to be added or removed accordingly. The PxV door should be slightly upward biased

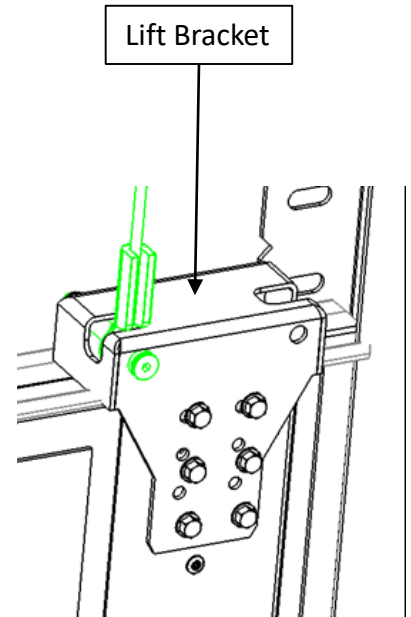


Figure 13.
Cable Attachment

PxV Door Installation Guide

>Installing the Counter Weights, Bearing Brackets, Shaft and Drums

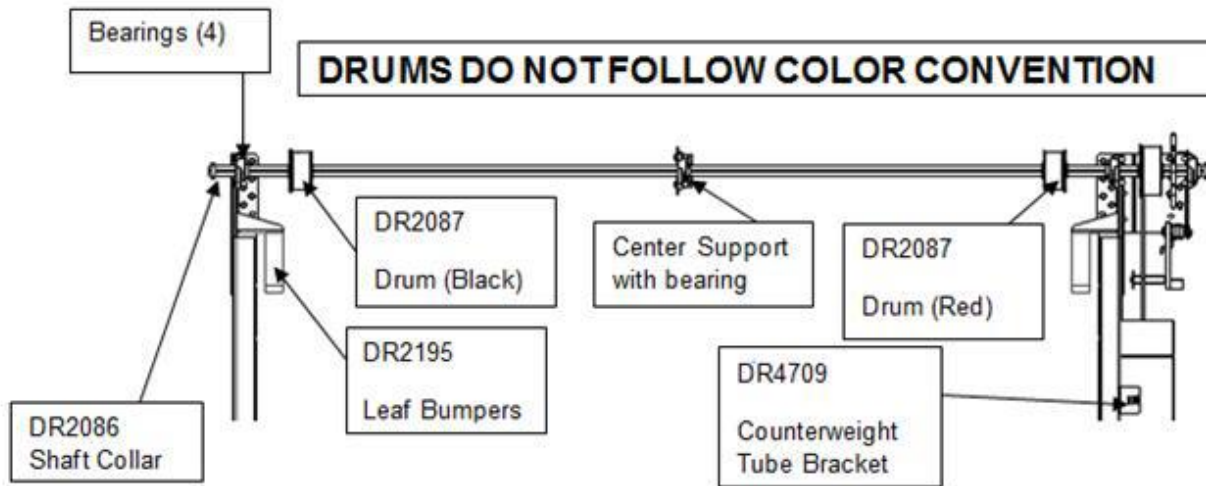


Figure 13. Counter Weight Bearing Assembly.



Figure 14. Counter Weight Assembly.

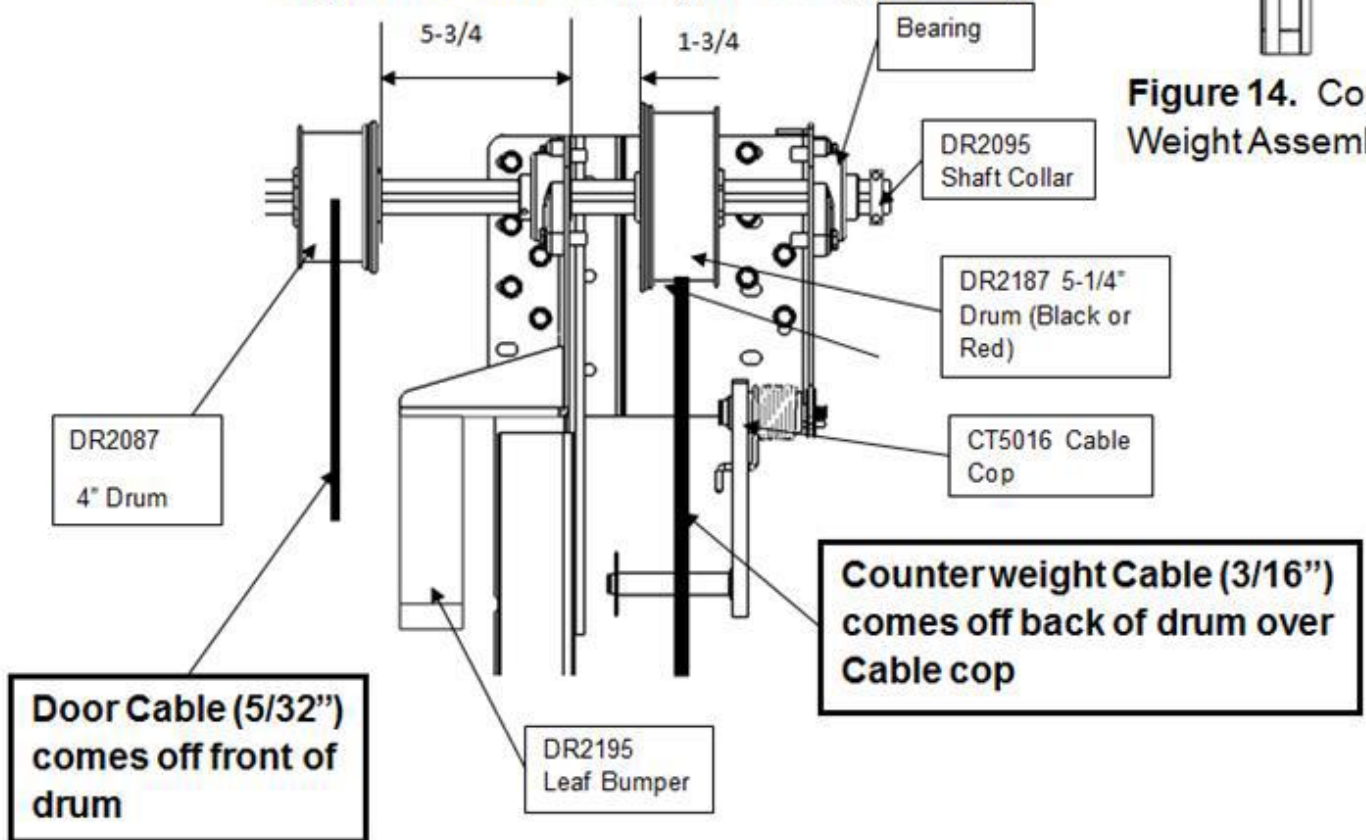


Figure 14 Counter weight bracket and cable cop assembly

PxV Door Installation Guide

1. Check stacked panels to make sure they are level.
2. Determine which side of the door the counterweight stack will be located. The normal position is on the right side of the door, but can be reversed for left side CW mounting. Position the counterweight bearing bracket DR4797 next to the bearing bracket and bolt to the bearing bracket.
3. **Using additional fasteners, secure the counter weight bracket to wall use at least 4 fasteners. See Figure 16.**
4. Installing the Shaft. **THE DRUMS ARE REVERSED and ROTATED**
 - a. Slide Left Cable Drum (**BLACK4"** drum with cable coming off the front), Two Bolt Flange Bearing for the center support and Right Cable Drum (**RED4"** drum with the cable coming off the front) onto the shaft in the order above. **IMPORTANT:** Drums should be positioned so cables come off the front of the drums.
 - b. Bring the assembly up to the Bearing Assemblies and insert one end of the shaft into one Bearing Assembly and then the other end into the other Bearing Assembly (you may need to loosen the bearings and set screws in order to slide the shaft through the bearings).
 - c. Slide the shaft slightly to the left to get the third right Cable Drum (**BLACK5.25"** drum with cable coming off back side) onto the shaft in between the outer bearing support bracket and bearing bracket. (Drum should be positioned so the cable comes off the back of the drum.) (**SEE Figure 14**). Do the opposite if mounting on left hand side.

NOTE: If installing an operator, be sure to bias the shaft to the side of the door that the operator will be positioned on.

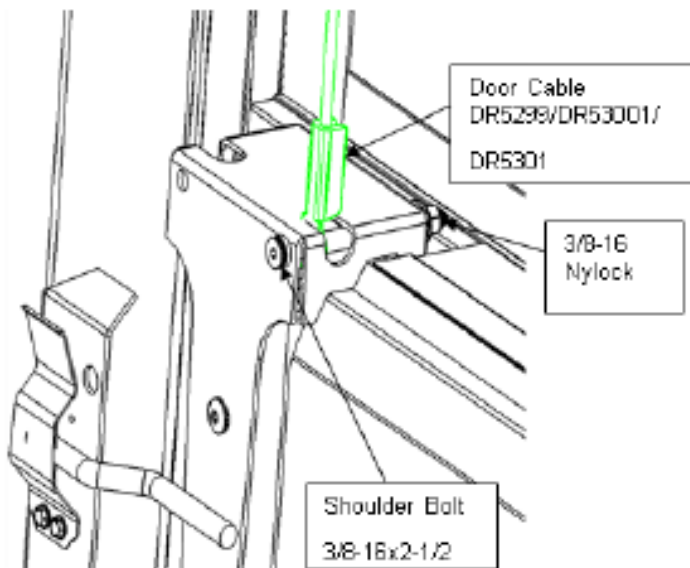


Figure15.Cable Attachment to door

**NOTE: IF COUNTERWEIGHT
CABLE SAFETY DEVICE
DR5540 IS SUPPLIED GO TO
PAGE #21**

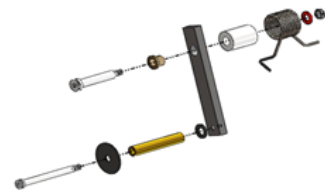


Figure 16. Cable Cop Exploded View.

PxV Door Installation Guide

- d. Using 1/8" Hex Driver, tighten the set screws in bearings in the Bearing Assemblies so the shaft doesn't slide from side to side.
 - e. Slide the Split Shaft Collars over the ends of shaft on each side, slide to Bearing Assembly and tighten.
 - f. Install the Shaft Keys and tighten Cable Drum Set Screws for the door drums only.
 - g. Attach the Door Cables to the lift brackets on the top panel of the PxV door (**SEE FIGURE 15**).
 - h. Insert the ends of the Door Cables through the top slots on the side of the Cable Drums and wrap cables around drums until the cable is taught. Cables should be coming off the front side of the drum, away from the wall. Clamp a vise grip around shaft and wedge it against the wall so the shaft can no longer turn freely (**ensure the vise grip is very secure**).
5.
 - a. Install the cable tensioning device on the same side as the counterweight Bracket DR4797(**SEE FIGURE 14 and 16**).
 - b. Attach the counterweight cable to the drum and over the cable tensioning device. Rotate the drum, wrapping the cables around the drum until there is approximately 6"-8" of cable hanging off the drum. **Cables should be coming off the back side of the drum. The eyelet should be just below the tensioned cable cop.** Position the drum 1-3/4" from the bearing bracket, install the shaft key and tighten the set screws (**SEE FIGURE 14**).

>Installing the Counterweights

Counterweights are very heavy; please use extreme caution and proper lifting techniques when handling to avoid injury. Only qualified installation professionals should handle counterweights.

NOTE:

- See included PxV Build Sheet for suggested Counterweight stack.
- Verify there are no curbs along the building wall, they will interfere with the counterweight path.

1. Remove the 1/2" Bolt and Nylock to gain access to the interior of the basket.
2. Install the counterweights per the factory build sheet stacking the weights largest to smallest.
3. Re-attach the vertical strap using the hardware removed in step 1.
4. **USING CAUTION**, Place assembled counterweights upright and connect to the DR2012 Quick Link on the end of the cable.

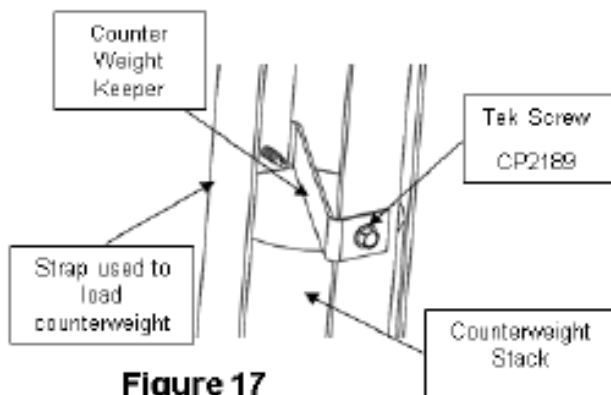


Figure 17

Counterweight Reference Chart

DL Mfg Part#	Weight	Length
DR4901	42.7 lbs	12"
DR4902	21.3 lbs	6"
DR4903	10.6 lbs	3"
DR4904	7.1 lbs	2"
DR4905	3.5 lbs	1"
DR4906	1.7 lbs	1/2"

PxV Door Installation Guide

>WARNING!!

Ensure the door is locked before attaching counterweights. If PxV Vertical Lift Door does not have the lock option, adequately secure PxV door by tying off the pull down strap to ensure door does not fly up when counterweights are attached.

5. Attach the DR2012 Quick Link to the Pad Eye on top of the counterweight basket (make sure the cable is hanging off the back of the drum and in front of the tensioning arm).
 6. Test operation of PxVdoor. A properly balanced door should be slightly upward biased, the door will always clear the header but will not bounce back into the opening.
 7. Add or remove smaller counterweight shims as necessary to properly balance the PxV door.
 8. Install the counterweight keeper DR4896, making sure it is tight against the weight stack.
 9. Using (2) CP2189 TekScrews, secure the keeper to the two vertical straps so the weights are secure (**SEE FIGURE 17A**).
- NOTE: DO NOT ATTACH TO THE KEEPER TO THE STRAP USED TO LOAD THE COUNTERWEIGHTS. USE THE STRAPS EITHER SIDE OF THE REMOVABLE MEMBER.**
10. Once the keeper is installed, wrap the Counterweight basket with TyeWraps (CP2034) to prevent any clanging (the first at 1/3 from bottom, the second at 2/3 from bottom). The tyewraps should never be used to hold or secure counterweights. Cut the tyewraps close to the basket.
 11. Attach the DR4709 Counterweight Tube Brackets to the Mounting Rails using the supplied CP2189 tek screws (**SEE FIGURE 18**). There are 3 brackets per side, place one bracket near the floor, one towards the top and the other equal distant between the two.
 12. Fit one long and one short Counterweight Tube tightly together and slide them over the counterweights, with the longer tube on the bottom, until the tubes are flush to the mounting rail. Be sure to seat the tubes all the way, otherwise they may pull apart resulting in damage. Utilizing the slots on the Counterweight Tube Brackets, attach the Counterweight Tubes to the Counterweight Tube Brackets with the provided CP2034 Tie Wrap (**SEE FIGURE 18A**).

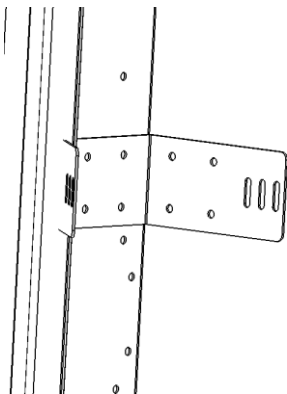


Figure 18. Attaching Counterweight Tube Brackets.

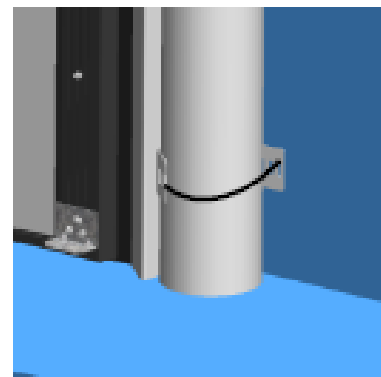


Figure 18A. Attaching Counterweight Tubes

Continue to Page 18

PxV Door Installation Guide

>Installing the Header Seal Assembly

NOTE:

The Header Seal Brush Assembly must make contact with the brush attached to the top panel at all points. This creates the seal at the top of the door.

1. Attach Header Seal to header using approved fasteners. When the door is closed the brush should be touching the underside of the door header seal. **(SEE FIGURE 19).**

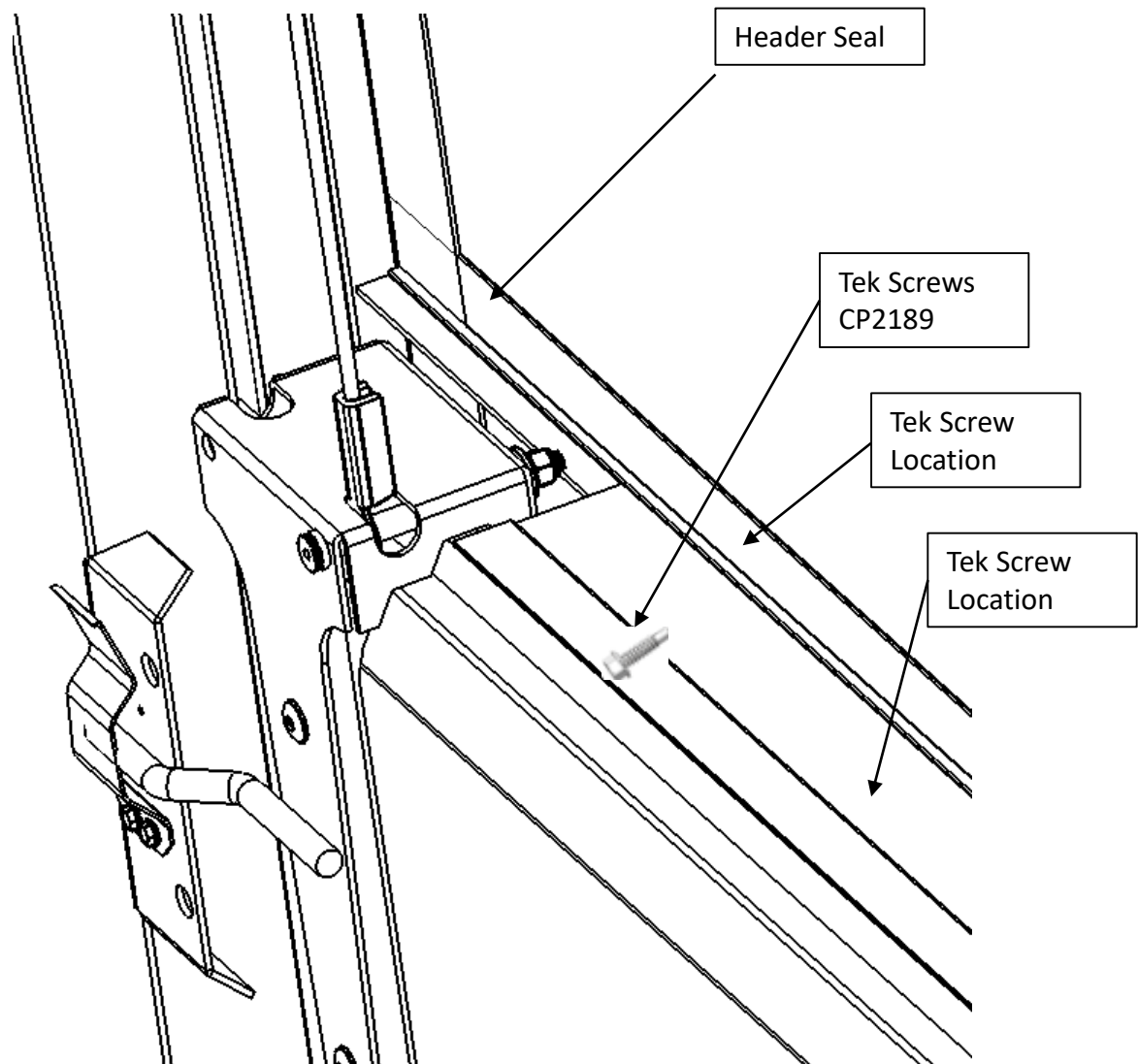


Figure 19. Installing Header Seal Brush Assembly.

PxV Door Installation Guide

>Installing the Upper Side Seals

NOTE:

To make the installation of the Upper Track Seal easier, raise the door all the way and pull the bottom two panels out of the track towards the inside of the building. This will allow you better access to the area where the Upper Track will attach.

1. Locate the upper left and right track seals DR5431 and DR5432 (they are labeled L/R).
2. Starting on the left side of the door, locate the upper track seal as shown in **FIGURE 20**. Fasten the seal to the mounting rail using the supplied tekscrews CP2189.
3. Verify that all gaps are sealed between the door, header brush and wall when the door is in the closed position.
4. Repeat on other side.

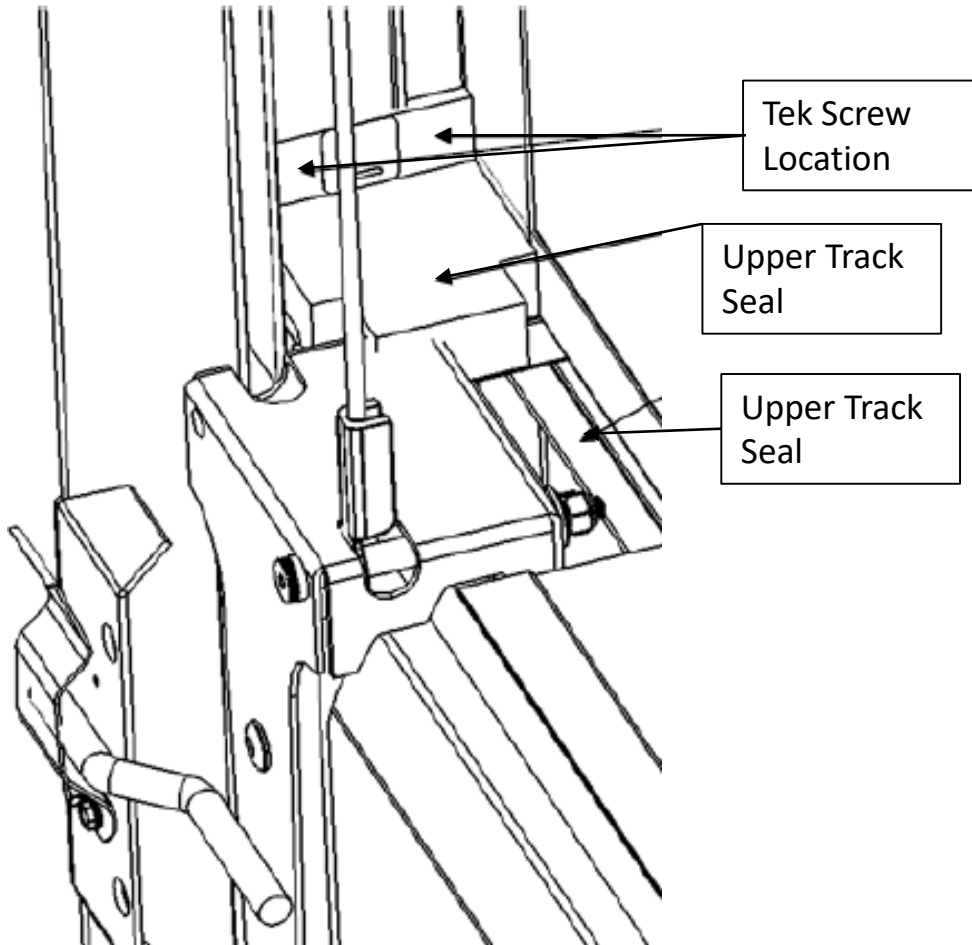


Figure 20. Installing Upper track Seal.

PxV Door Installation Guide

>Installing the Toe Plates and Safety Cables

1. The toe plates are located at the outside bottom corners of panel #1.
2. Turn the toe plate so it is parallel with the floor and install the (2) tek screws to prevent rotation. Ensure that the toe plate is parallel to the floor. **(SEE FIGURE 21).**
3. Repeat for other side of panel.

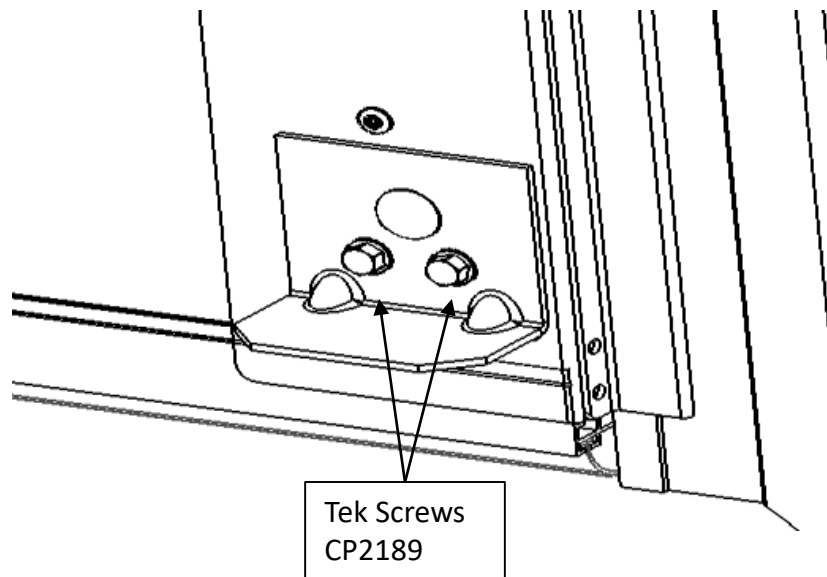
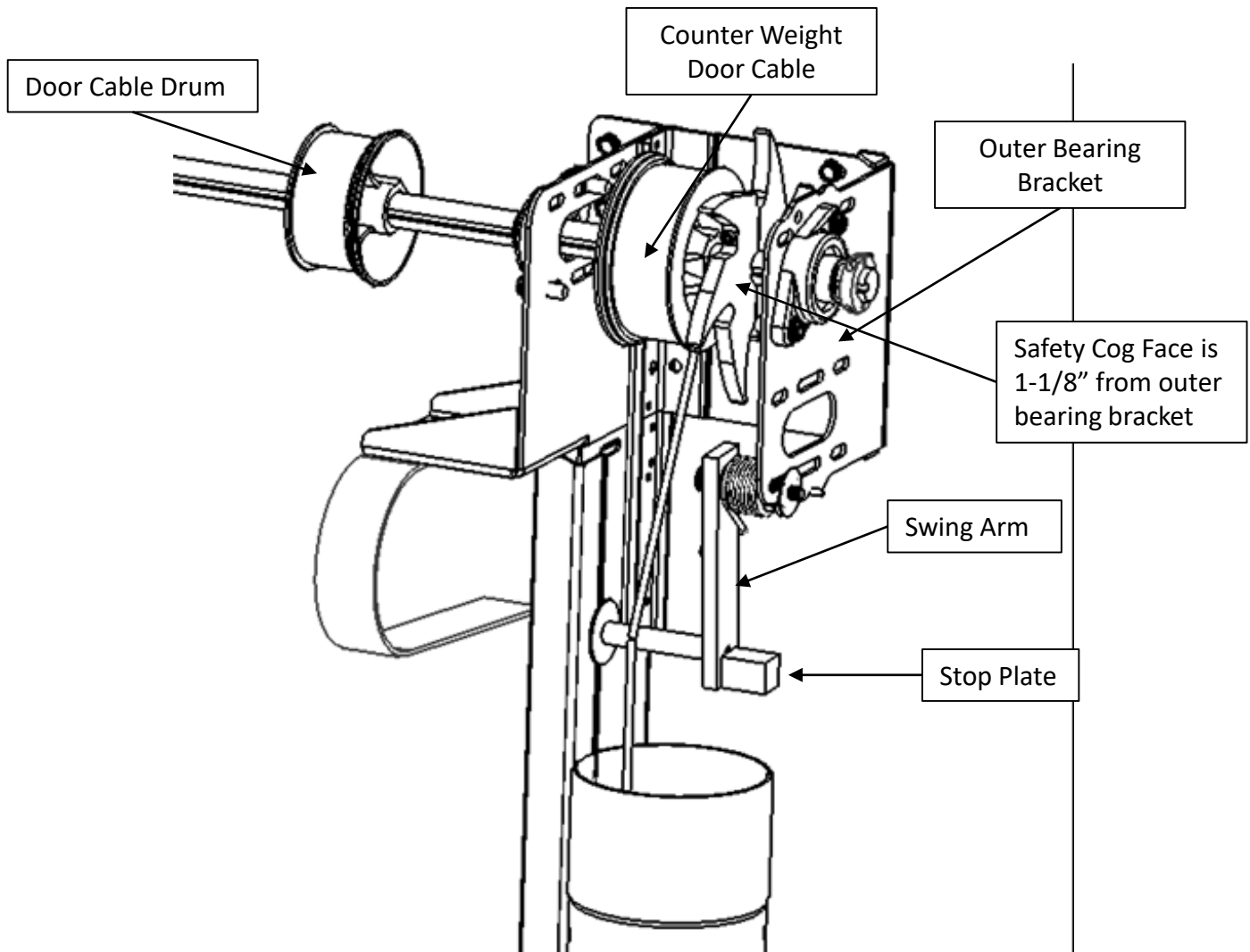


Figure 21. Installing Toe Plates.

PxV Door Installation Guide

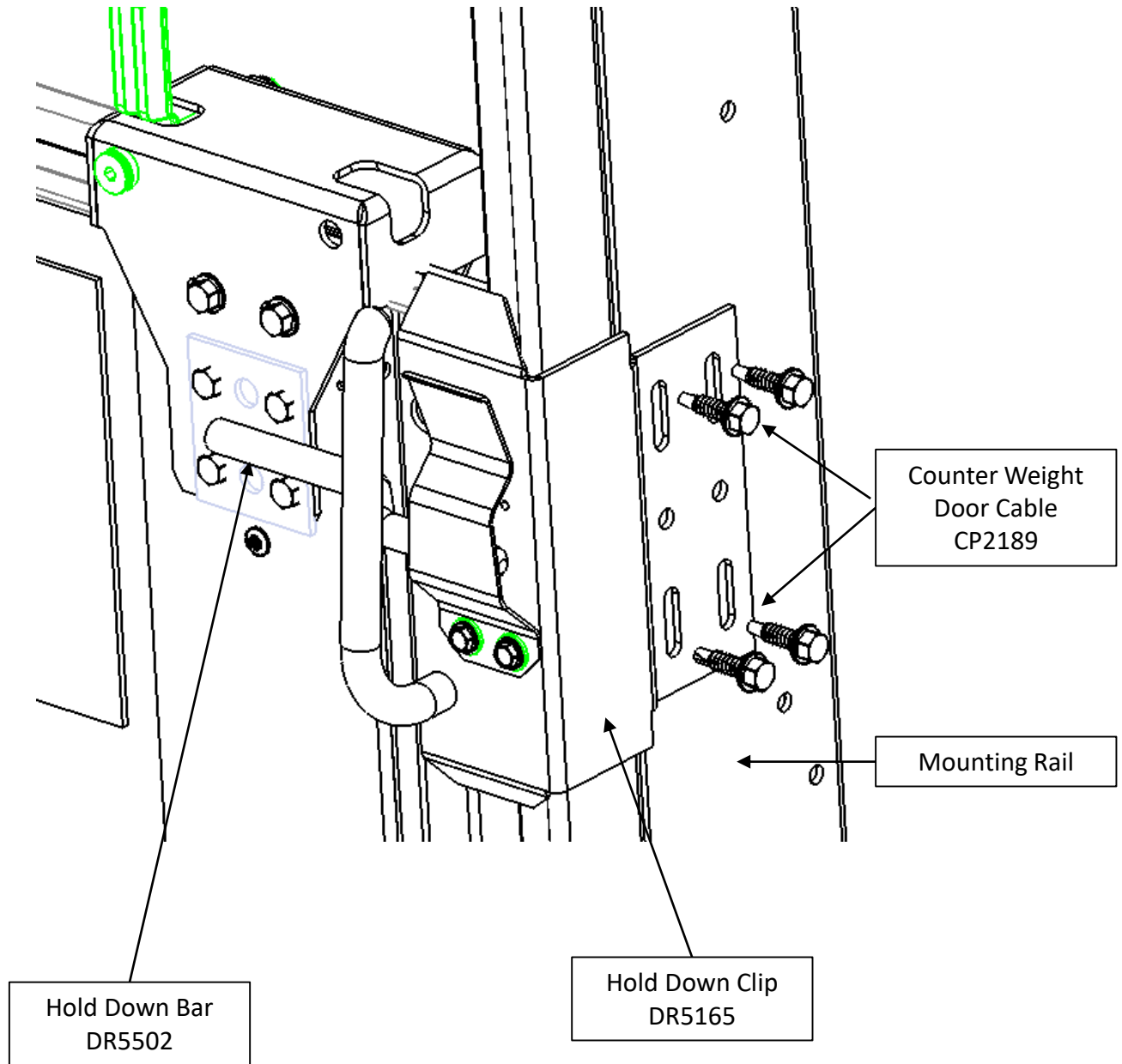


The DR5540 Free Fall Safety Kit is designed to stop the PxV door falling in the event of a counterweight cable failure.

- 1) Separate the safety cog by removing the screws from the shaft collar.
- 2) Align the cog halves on the shaft between the counterweight drum and outer bearing bracket. The shaft collar should be towards the outer bearing bracket.
- 3) Verify that the tab on one half of the cog aligns with the keyed shaft.
- 4) Install the swing arm assembly.
- 5) Verify that the safety cogs outside face is 1-1/8" from the outer bearing bracket and that the swing arm assembly can rotate by the cog. The stop plate should engage one of the teeth of the cog.
- 6) Tighten the shaft collar to the shaft.
- 7) Continue with remainder of install. **GO TO PAGE 15.**

PxV Door Installation Guide

>Installing Wind Load bars (optional)



1. Line hold down clip so hold down bar is in center of clip.
2. Push hold down clip into track. Secure Hold Down Clip to mounting rail with tek screws CP2189.
3. Left side mirrors right.

PxV Door Installation Guide

>Final Door Installation Checklist

1. Cycle door to confirm smooth, easy operation
 - Door does not drift down into door opening when fully opened.
 - Once started, door raises on its' own.
 - Brush is fully seated in the brush guide of the track.
 - Door does not drift up when Spring Clips are properly positioned.
 - Cables move freely over cable tensioning arms.

2. PxV door is sealed at all points
 - Top Side Seals are contacting the Header Seal.
 - Header Seal is contacting Top Panel Brush at all points.
 - Gap Flaps are properly seated in the brush guide of the track and are not pinched between panels.
 - Bottom Seal Flaps are fully seated in the brush guide of the track in the bottom corners.

NOTE:

Optional Bottom Seal Brush may not sit completely flush with the floor upon initial installation. Typically the brush will set to the uneven contours of the floor within 24-48 hours.

3. Ensure the Mounting Rail and Bearing Assemblies are securely mounted after several cycles of operation.

4. Ensure the PxV door can be knocked out into the door jamb and reset.
 - Knock door out into the door jamb.
 - Pull door back in past the door jamb, into plane of the plastic track.
 - Raise door slowly to reset brushes back into the door track.

5. If PxV door has lock option, ensure all locks can be engaged and disengaged.

Installation Company:

Installer Name: _____

Date of Installation: _____

Jobsite Name and Location:

Installer Notes:

PxV Door Installation Guide

>Door Troubleshooting Guide

SYMPTOM	PROBABLE CAUSE	SOLUTION
CABLES RUBBING ON CABLE TENSIONING ARMS	<ul style="list-style-type: none"> A. Cable Drum is not properly aligned. B. Shaft is not aligned properly. 	<ul style="list-style-type: none"> A. Loosen set screws on Cable Drum and slide drum into proper position over cable guide. (See Figure 15) B. Move spring shaft to align properly.
DOOR RAISES EASILY, CLOSES HARD	<ul style="list-style-type: none"> A. Too much counterweight 	<ul style="list-style-type: none"> A. Remove some counterweight shims.
DOOR RAISES HARD, CLOSES EASILY	<ul style="list-style-type: none"> A. Not enough counterweight 	<ul style="list-style-type: none"> A. Add more counterweight shims.
DOOR OPERATES WITH TOO MUCH RESISTANCE	<ul style="list-style-type: none"> A. Door is not level. B. Door tracks are not plumb. 	<ul style="list-style-type: none"> A. Check cable length and adjust accordingly. B. Re-measure track spacing and adjust accordingly.
DOOR DOES NOT ENGAGE LOCK RECEIVER	<ul style="list-style-type: none"> A. Lock Receiver is not properly installed. 	<ul style="list-style-type: none"> A. Properly align Lock Receiver.
AIR LEAKAGE OR LIGHT SHOWING	<ul style="list-style-type: none"> A. Side Brushes are pinched or damaged. B. Door tracks are not plumb. C. Side Brushes and/or Gap Flaps are not in the track guide. D. Gap Flap is pinched between panels. 	<ul style="list-style-type: none"> A. Check and repair Side Brushes B. Re-measure track spacing and adjust accordingly. C. Reset Side Brushes and/or Gap Flaps into the track Guide. D. Separate panels and reset Gap Flap in proper position.
DOOR DOES NOT KNOCK OUT OF DOOR JAMB	<ul style="list-style-type: none"> A. Door tracks are not centered on door opening. B. Obstruction in door jamb. 	<ul style="list-style-type: none"> A. Detach and re-center door tracks. B. Remove obstruction from door jamb.

PxV Door Installation Guide

>MxV Maintenance Procedures

	ITEM	PROCEDURE	MAINTENANCE INTERVALS	
			6 Months	12 Months
1	Cable Drums	Check all set screws and shaft keys and securely tighten.	X	
2	Cables	Lube & check for signs of abnormal wear or damage. Inspect all cables. Replace if needed.	X	
3a	Counterweight Doors	Inspect and check cable assembly, safety cog, cable tensioning device and counterweight basket assembly. Check and securely tighten all screws. Looks for signs of wear on cable.	Every 6 months	
3b	Counterweight Doors	Inspect bushing on tensioner arm for signs of wear every 6 months. Replace bushing after 15,000 cycles, or if showing signs of wear.	Every 6 months	
4	Torsion Spring Doors	Lubricate torsion spring, operate door to ensure the door clears the header. Adjust spring as necessary.	Every 6 months	
5	Seals	Check to ensure that seals aren't torn or fray.	As Needed	
6	Brush	Inspect for fraying	X	
7	End Caps/Hinges	Check for signs of abnormal wear or damage.	X	
8	Panels	Check for signs of abnormal wear or damage.		X
9	Track	Check for signs abnormal wear or damage		X
10	Track	Check for proper track spacing and alignment.		X
11	Track	Check and properly secure all track anchors.	X	
12	Track	Inspect corrective slots in tracks to ensure brush is properly resetting in track.	X	
13	Fasteners	Check and properly secure all fasteners.	X	
14	Spring Plate	Check the spring clip for proper positioning.	X	
15	Labels	Inspect all labels. Replace as needed.	X	
16	Panels	Clean with soap and hot water only. Call DL Manufacturing before using other cleaners.	As Needed	

PxV Door Installation Guide

WARRANTY POLICY

NOTE: Do not paint doors. Painting door without factory written authorization will void all warranties

~ All Products (excluding bulbs) manufactured by DL Manufacturing are warranted to be free from defects for a period of 12 months from the date of shipment, excluding doors, which have a warranty period of 12 months from date of installation or 18 months from shipment, whenever occurs first.

This warranty is subject to unreasonable/improper use or use beyond rated conditions, improper storage, negligence or accident; damage because of incorporated use of equipment with Goods, after Customer has or reasonably should have, knowledge of any defect; or improperly installed by any other Person that is unauthorized by DL Manufacturing.

This warranty is subject to customer covenants to inform all subsequent buyers of the Goods of the limitation on and exclusive of warranties provided for herein. Customer hereby indemnifies and agrees to hold DL Manufacturing harmless from and against all losses, costs and expenses, including reasonable attorney's fees incurred by DL Manufacturing as a result of any third party claim relating to the purchase, sale or use of, or otherwise relating to, the Goods covered by this agreement.

In no event shall DL Manufacturing be required to repair, replace or reimburse Customer for more than the part or material that is found to be defective and DL Manufacturing's liability shall in such event be no greater than the invoiced price of the item and shall not include labor, shipping or other costs incurred in connection with the reshipment of defective Goods to DL Manufacturing or the reinstallation of such Goods after any repair or replacement. The remedy set forth in this paragraph is expressly agreed to be the sole and exclusive remedy for any breach of warranty. This warranty is exclusive and in lieu of all other warranties expressed or implied, including but not limited to any warranty of merchantability or of fitness for a particular purpose.

Limitation of Liability -In no event as a result of breach of contract, warranty or negligence shall DL Manufacturing be liable for special, or consequential damages including but not limited to loss of profits or revenues, loss of any equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs or claims of purchasers of the Customer for such damages. Additionally, DL Manufacturing will not be liable for any delay in the performance of contracts and orders, or in the shipment and delivery of goods, or for any damage suffered by the Customer by reason of delay, when such delay is, directly or indirectly, caused by force majeure, including war, Government interference, strikes, embargoes, shortage of labor, fuel, fires, floods, or any other cause or cause whether or not similar in nature to any of those herein before specified beyond DL Manufacturing's control.