

6300 Series

Full Feature Low Energy Operator

Models 6311, 6351 (Pull Side)

Installation Instructions

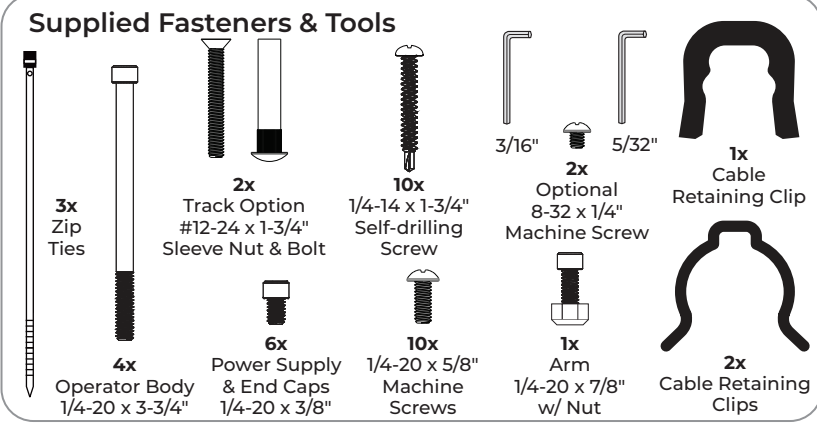
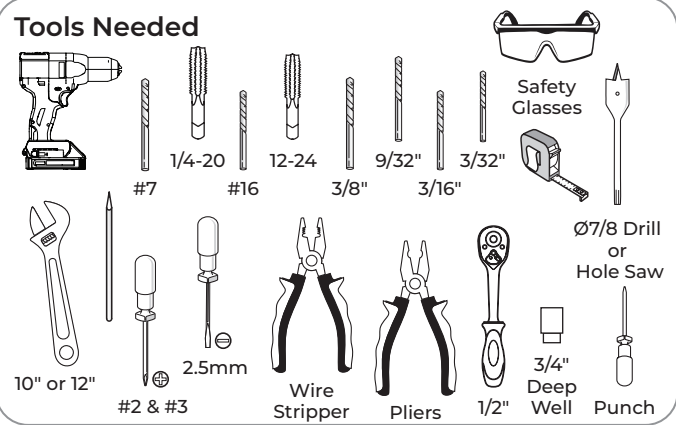
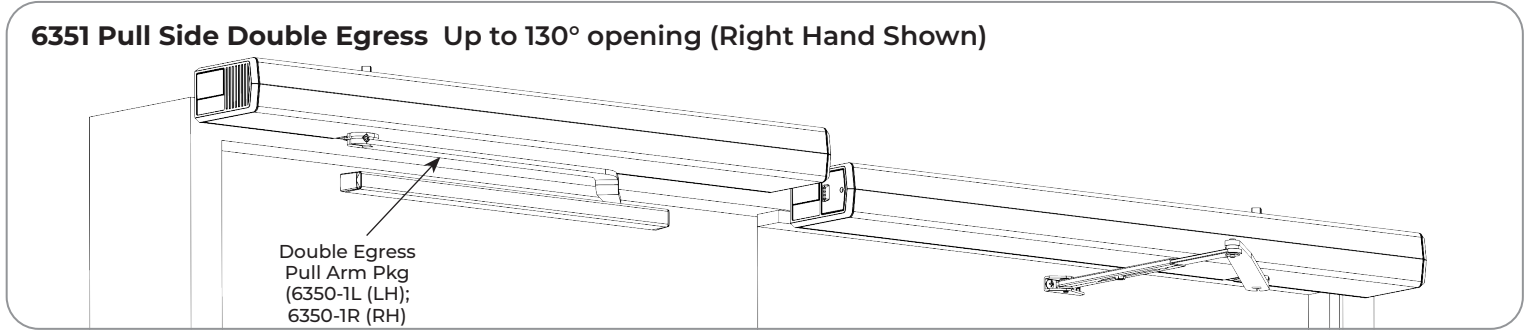
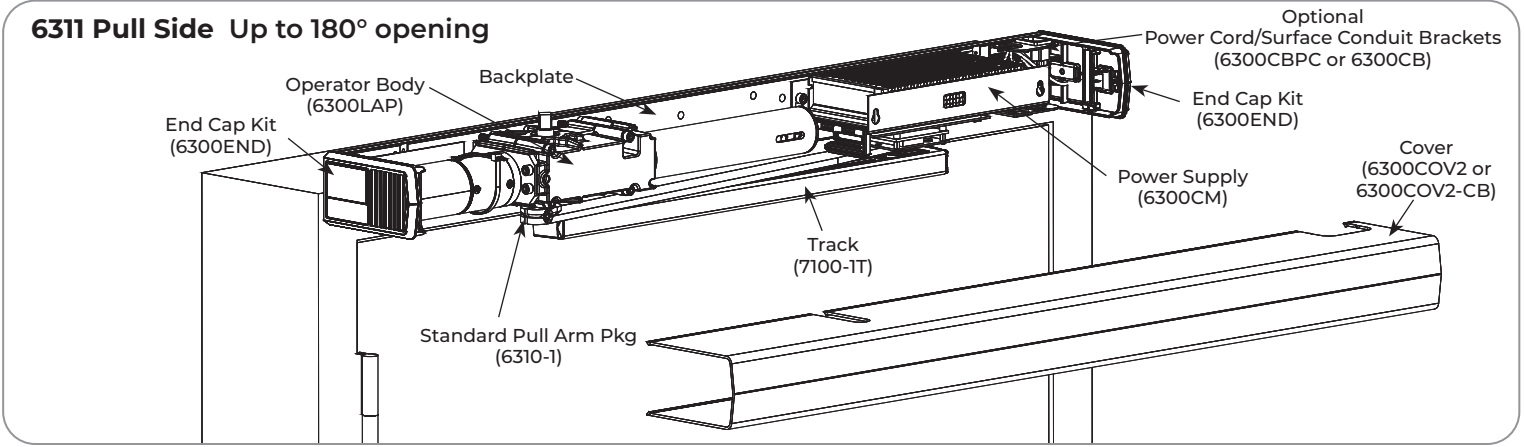


⚠ WARNING

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65warnings.ca.gov.

Pour la version française voir NortonRixson.com.

READ AND FOLLOW ALL INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.



The table below provides a list of documents associated with this product. These documents are available for download from www.nortonrixson.com. If additional information or assistance is needed, contact Technical Product Support.

Document Title	Document Number
6300 Series Quick Start Guide	80-9363-0014-020
6300 Series Operator Programming Guide	80-9363-0015-020
6300 Series Operator, 6312/6352 Pull Side Double Egress Installation Instructions	80-9363-0008-020
6311/6351 Pull Side Template, 36-48" Door Width, 90-250 lb. Door Weight, 180° Max Open Angle	80-7363-0001-020

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Certifications and Standards

- UL Certified: Operator conforms to ANSI/UL standard 325 for automatic closing doors and UL10C Positive Pressure Fire Test for Door Assemblies.
- ANSI A156.19: These products are designed to conform to this specification “for power assist and low energy power operated doors.” These products are designed to exceed all the requirements for “Low Energy Power Operated Door”.
- Americans with Disabilities Act (A.D.A.): These door operators can be installed and adjusted to conform with A.D.A. regulations.
- ANSI A117.1: These door controls permit door assemblies to conform to the requirements of this specification “for buildings and facilities - providing accessibility and usability for physically handicap people”.

Technical Data

Input power:	120VAC, 60Hz 3.0A
Power supply:	24 V DC, max. 6.5 Amp. ; 1.3A Available for Acc.
Door width:	36 - 48" (91-122 cm)
Door weight:	90-250 lb. (41-113 kg)
Push min angle:	110° with reveal of 6-3/4" max
Push max angle:	130° with reveal of 1/8" min
Pull max angle:	180°
Hold open time:	5-30 seconds (A.D.A. 5 seconds min.) Indefinite for Hold Open Input or End Cap 3 Position Switch

NOTES:

- Permanent wiring is to be employed as required by local codes.
- Activation devices: push plates, access control, mats, touchless wall switches, etc.
- Maximum wire size is:
 - 12AWG at terminals LINE and NEUTRAL (120VAC; 60Hz) on Power Input Terminal
 - 14AWG at all other terminals

Product Safety Warnings

WARNING: To reduce risk of injury to person, use this operator only with Pedestrian Swing doors. FOR INDOOR USE ONLY

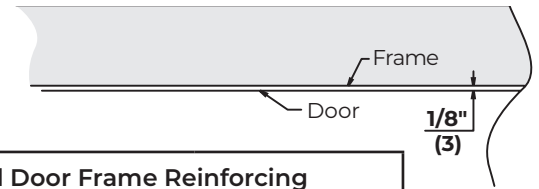
1. READ AND FOLLOW ALL INSTRUCTIONS.
2. Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to any hardware before installing the operator.
3. Remove, or make inoperative, all locks (unless mechanically and/or electrically interlocked to the power unit) that are connected to the door before installing the operator.
4. Do not connect the door operator to the source power until instructed to do so.
5. Never let children operate or play with door controls. Keep remote control (when provided) away from children.
6. Personnel should keep away from a moving door in motion.
7. Test door's safety features at least once a month. After adjusting either force or limit of travel, retest door operator's safety features. Failure to adjust operator properly may cause severe injury or death.
8. KEEP DOOR PROPERLY OPERATING. See Door Manufacturer's Owner's Manual. An improperly operating door could cause severe injury or death. Have a trained door systems technician make repairs.
9. SAVE THESE INSTRUCTIONS.

Before You Begin

- Thickness recommended for reinforcements in hollow metal doors and frames is charted.
- This template information based upon use of 5" maximum width butt hinges.
- Maximum frame reveal is 1/8" for 6311 units and 1/8" up to 2-3/4" maximum for 6351 units.
- Before beginning the installation, verify that the door frame is properly reinforced and is well anchored in the wall.
- Concealed electrical conduit and concealed switch or sensor wires should be pulled to the frame before proceeding.

Fasteners for Frame:

- 1/4-20 Machine screws for hollow metal and aluminum.
- 1/4-14 x 1-3/4" (44mm) self-drilling sheet metal screws for wood.



Hollow Metal Door Frame Reinforcing		
Frame Material	Reinforcing	
	Recommended	Min. Required
12 Ga. .105 (2.66)	12 Ga. .105 (2.66)	18 Ga. .048 (1.21)
14 Ga. .075 (1.90)	10 Ga. .134 (3.41)	12 Ga. .105 (2.66)
16 Ga. .060 (1.52)	10 Ga. .134 (3.41)	12 Ga. .105 (2.66)
18 Ga. .048 (1.21)	8 Ga. .164 (4.18)	10 Ga. .134 (3.41)

Installation

A. Mount backplate.

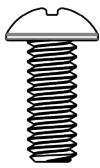
1. Determine right hand or left hand installation. (Fig. 1)
2. Measure, mark, and drill the first mounting hole according to the template (available for download from www.nortonrixson.com). (Fig. 2)

For Metal Frames:

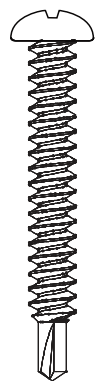
Use #7 drill and 1/4-20 tap for 1/4-20 machine screws.

For Wood Frames:

Use 3/16" drill and 1/4-14 x 1-3/4" self-drilling sheet metal screws.



OR



3. Place backplate against the frame so that the first hole in the backplate is aligned with the first mounting hole in the frame. Attach backplate with provided screw. **Do not fully tighten screw at this time.**
4. Ensure backplate is aligned with door frame. Using the backplate as guide, mark and drill second mounting hole. (Fig. 3)
5. Insert second screw and tighten both screws.
6. Using backplate as a guide, drill and tap remaining eight (8) holes in frame. (Fig. 3)
7. Secure with eight (8) screws and tighten.
8. **For concealed wiring:** Using the backplate as a guide, mark and pre-drill two (2) conduit holes with the 3/16" drill. Then use the Ø7/8" hole saw or equivalent to drill two (2) conduit holes.

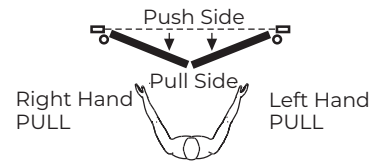


Fig. 1

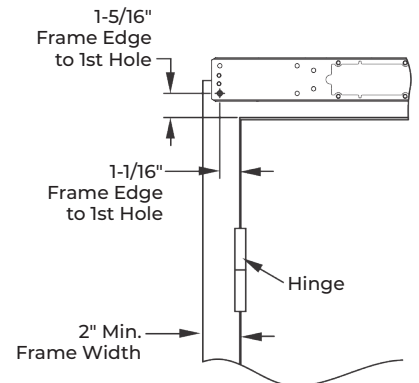


Fig. 2

Right Hand Shown

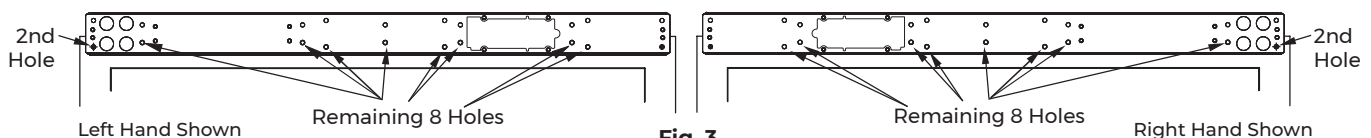


Fig. 3

Installation (cont.)

B. Mount track.

1. Using the template (available for download from www.nortonrixson.com), measure and mark the first track mounting hole. (Fig. 4)
2. Drill the first mounting hole.
 - **For metal reinforced doors:**
Drill and tap the holes with #16 drill and #12-24 tap to use the #12-24 x 1-3/4" screw.
OR
Reference Fig. 5 and use a #12-24 x 1-3/4" screw with sleeve nuts.
 - **For wood doors:**
Reference Fig. 5 and use a #12-24 x 1-3/4" screw with sleeve nuts.

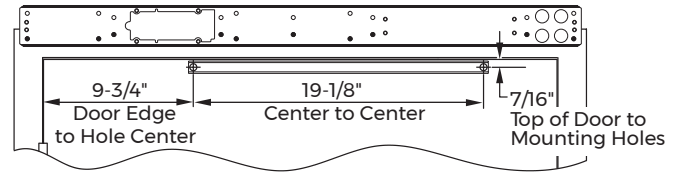
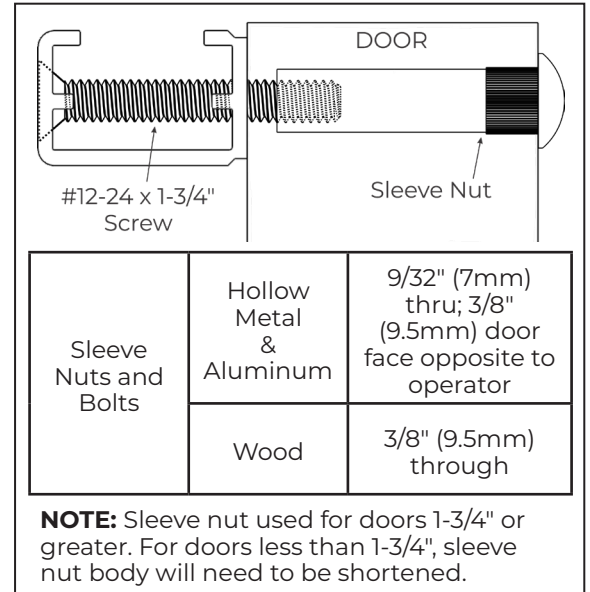


Fig. 4

3. Prepare the track for mounting:
 - a. Remove the caps from the end of the track.
 - b. Slide off the track cover and slider piece.
 - c. Replace the slider piece back into the track.
4. Orient the track so the recessed screw holes face away from the door and the slider is facing the top of door. The first mounting hole is located nearest the door hinge. (Fig. 6)
5. Replace the cap on the end of the track closest to the first mounting hole.
6. Insert the #12-24 x 1-3/4" screw through both the track and cap and attach the track to the first mounting hole. **Do not fully tighten.**

NOTE: The head of the screw should sit flush with the front of the track.

7. Level the track with the top of the door. Using the track as a guide, mark and drill the second track mounting hole. (Refer to Step 2 above)
8. Repeat steps 5 and 6 for second mounting hole and tighten both screws. **Do not over tighten. Slider must move freely in the track.**
9. Snap the cover onto the track, making sure the open side with tabs is facing up. (Fig. 6)



NOTE: Sleeve nut used for doors 1-3/4" or greater. For doors less than 1-3/4", sleeve nut body will need to be shortened.

Fig. 5

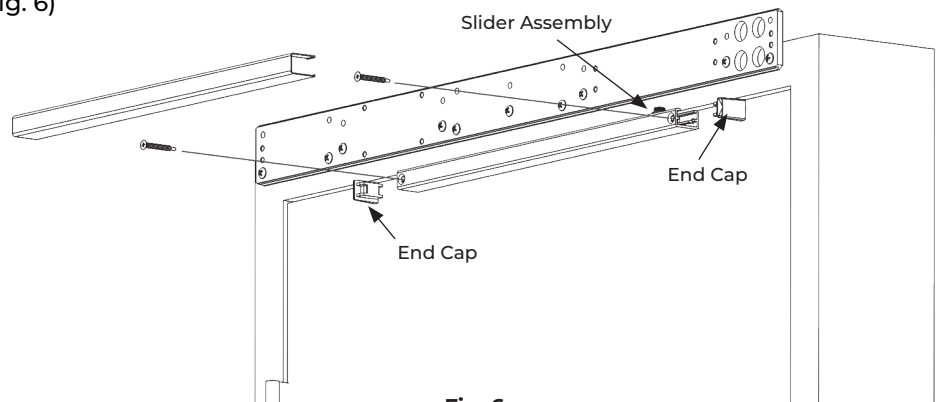


Fig. 6

Installation (cont.)

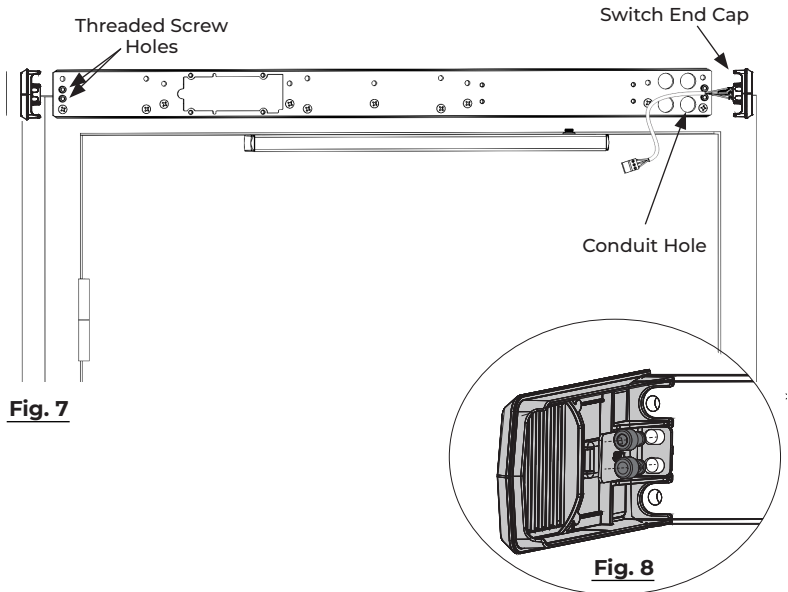
C. Install end caps.

1. Hold the endcap against the backplate so the flat edge is flush against the backplate's outer edge and the holes in the L-bracket align with the threaded mounting holes. (Fig. 7)
2. Fasten the endcap to the backplate by placing two (2) endcap mounting screws through the L-bracket slots into the threaded holes and tighten. (Fig. 8)

NOTE: End cap with 3-position switch is always located on conduit side of backplate.

NOTE: To retrofit the assembly to an existing operator, screws and fan inside of the end cap must be removed.

Refer to the LAPW Replacement document 80-9363-0028-020, available for download from www.nortonrixson.com.



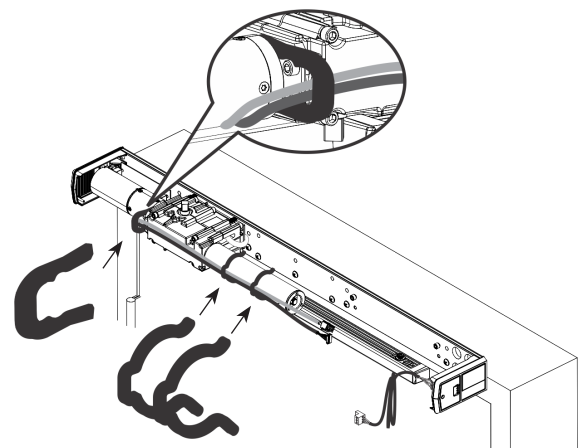
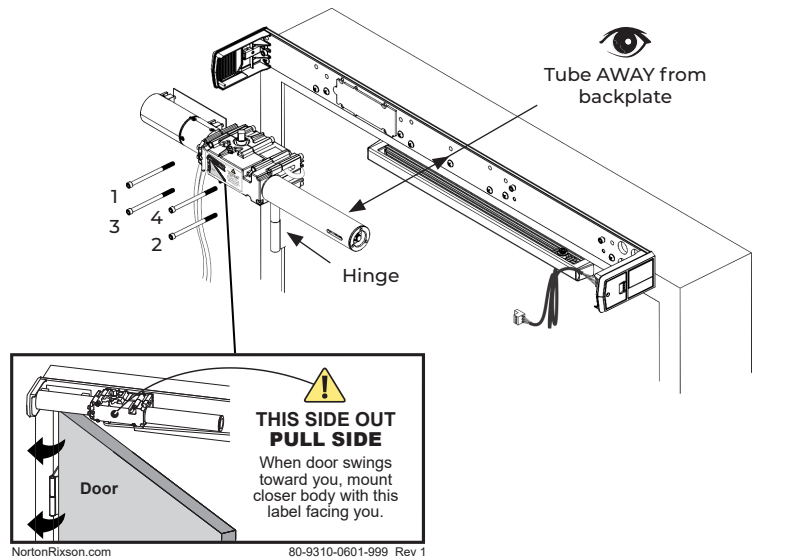
D. Install operator body assembly.

1. Using the four (4) screws provided, install the operator body to the backplate. (Fig. 9)

NOTES:

- Tighten screws in a cross pattern until all four (4) screws are tight. (Fig. 9)
- The operator body is properly oriented for PULL SIDE application when:
 - The motor is toward the hinge
 - The autobrake board is located toward the backplate.
 - “This side out PULL SIDE” label is facing away from the backplate. (Fig. 9)

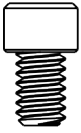
2. Using three (3) supplied cable management clips, secure cables along operator body. (Fig. 10)



Installation (cont.)

E. Install power supply assembly.

1. Insert two (2) screws. Leave 3/16" gap between head of screw and backplate. (Fig. 11)



2. Slide power supply key holes over screws allowing narrow slots of key holes to rest on screws. (Fig. 10)

NOTE: To properly orientate the power supply:

- The narrow slots of key holes are at the top.
- The control board always faces down.
- The power supply harness faces the switch end cap.

3. Tighten both screws.

4. **Optional:** PC Conduit Bracket Assembly OR Surface Conduit Assembly installation. (Fig. 12 - PC Conduit Assembly shown)

- Place the bracket against the backplate between the power supply and end cap. The conduit hole(s) should be facing up toward the frame header and the mounting side of the bracket will face the backplate.
- Secure the bracket to the backplate using two (2) #8-32 x 1/4" machine screws.
- Plug the bracket's wiring harness into the pre-wired harness of the power supply. (Fig. 12)

5. Connect the motor cable and ribbon cable from the operator body to the control board. (Fig. 14)

- To connect the ribbon cable, spread the tabs on the control board connector before inserting.

6. Connect the 3-position switch to the power supply. (Fig. 14)

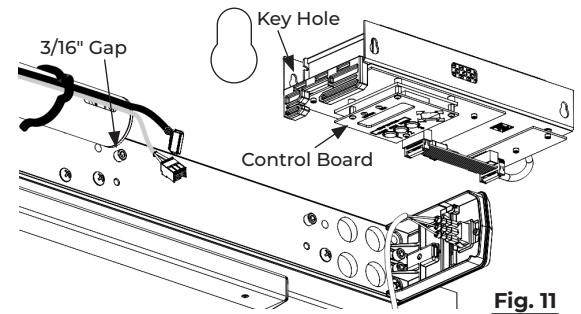


Fig. 11

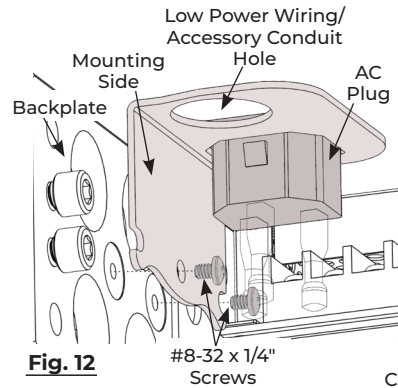


Fig. 12

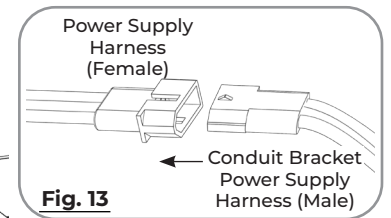


Fig. 13

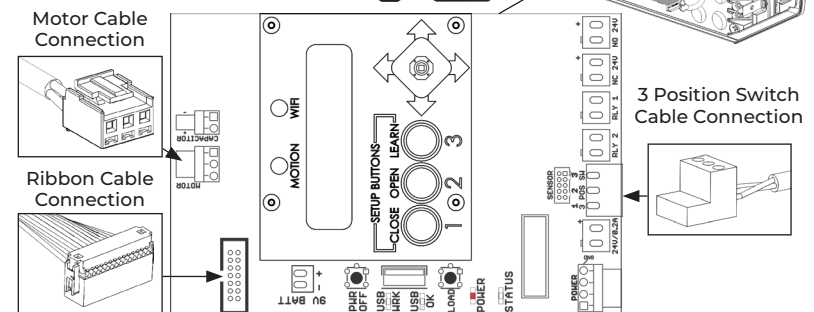


Fig. 14

F. Install arm.

1. Using an adjustable wrench, rotate top pinion 45 degrees toward door hinge. You will feel resistance from spring. (Fig. 15)
2. **While holding pinion at 45 degrees**, slide arm on bottom pinion at orientation shown. (Fig. 15)
3. Using hex wrench, secure arm to pinion with screw and nut. (Fig. 16)
4. Open door approximately 30 degrees and attach arm to slider in track. Use hex wrench to tighten slider bolt counter clockwise until slide is tight in arm. (Fig. 16)
5. Close door.

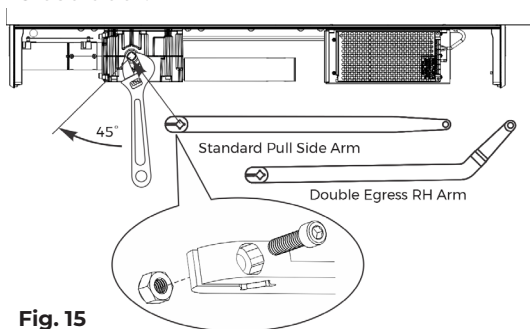


Fig. 15

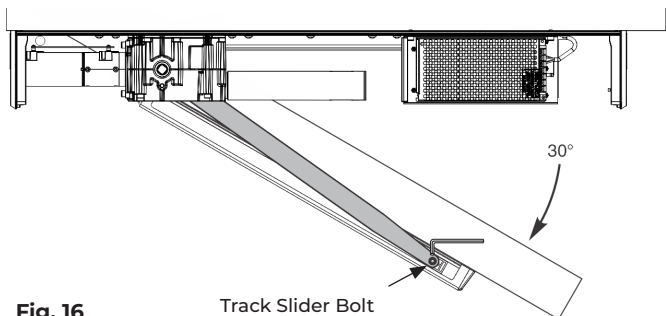


Fig. 16

Installation (cont.)

G. Adjust closing force.

NOTE: The amount of effort to manually open or close a door is called closing force.

1. Using 1/2" socket wrench with 3/4" deep well socket, turn nut in end of operator body tube to desired force. (Fig. 17)

NOTE: Window in operator tube shows spring. (Fig. 18)

NOTE: If additional closing force is only required in latching region, see Latch Boost and Lock Release features in separate programming manual 80-9363-0015-020.

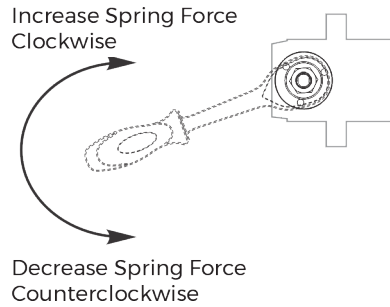


Fig. 17

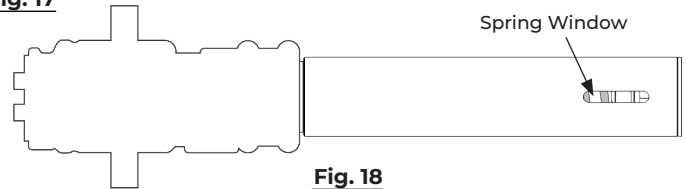


Fig. 18

The **6311 or 6351 PULL SIDE Low Energy Operator** has now been installed.

Continue with separate Programming Manual 80-9363-0015-020 to set up and adjust operator. Once programming and adjustments have been completed, attach cover and label plates, as shown below.

H. Attach cover and end cap label plates.

NOTE: Attach cover after initial programming has been done. See separate programming manual 80-9363-0015-020.

1. Align cut-outs in cover to pinion shafts. (Fig. 19)
2. **Optional:** If the PC Conduit Bracket or Surface Conduit Bracket is installed, use pliers to remove the appropriate knockout located at the top of the cover. (Fig. 20)
3. Slide the cover onto the unit using end caps as guides.
4. Snap the cover securely to back plate.
5. Attach a label plate to each end cap by snapping into place by hand with gentle pressure. (Fig. 19)

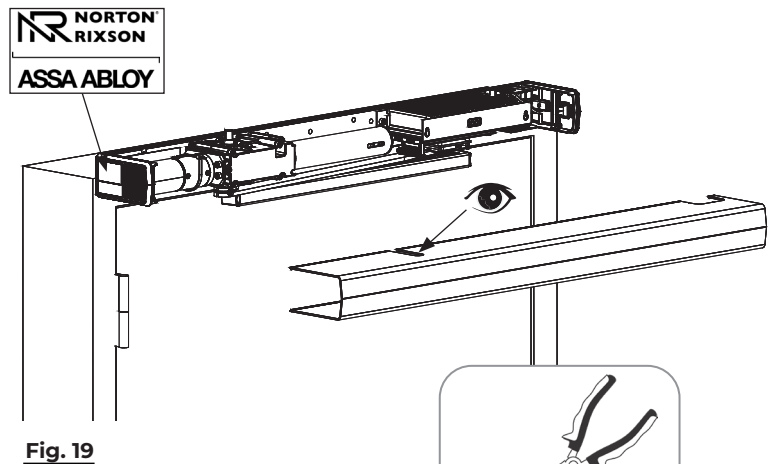


Fig. 19

Fig. 20



WARNING: Make sure no wiring is loose or can be caught by cover when it is snapped into place.

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