

# INSTALLATION INSTRUCTIONS

## Commercial Supplemental Instructions

(For use with Commercial & Industrial Sectional Doors Installation & Maintenance Manual)

### Things to Know Before You Begin

This is a supplement to the “Commercial & Industrial Sectional Doors Installation & Maintenance Manual” (referred to as MANUAL). It covers important information on the items listed below:

- 1) Sure Stop Bottom Bracket
- 2) Commercial Extension Spring Installation
- 3) Double Shaft Power Unit Assembly
- 4) Center Lift Cable Assembly

#### **⚠ WARNING**

For additional information and safety warnings concerning your Commercial Door, see the MANUAL.

### Sure Stop Bottom Bracket

In the event that the cable breaks, the knife edge on the Sure Stop Bottom Bracket will flip up and bite into the outside of the track, bringing the door to a halt.

#### **⚠ WARNING**

Do not remove safety tape from knife edge. Removal of safety tape could prevent proper function of the Sure Stop Bottom Bracket, causing sever injury or death.

**Step 1: Install track.** Refer to MANUAL for track install instructions. **The track must be set 1/2" [13 mm] wider than normal installation.**

**Step 2: Attach bracket.** Attach Bottom bracket to bottom section using #14 x 3/4" [6 mm x 19 mm] red-colored self-drilling screws. (Fig. 1)

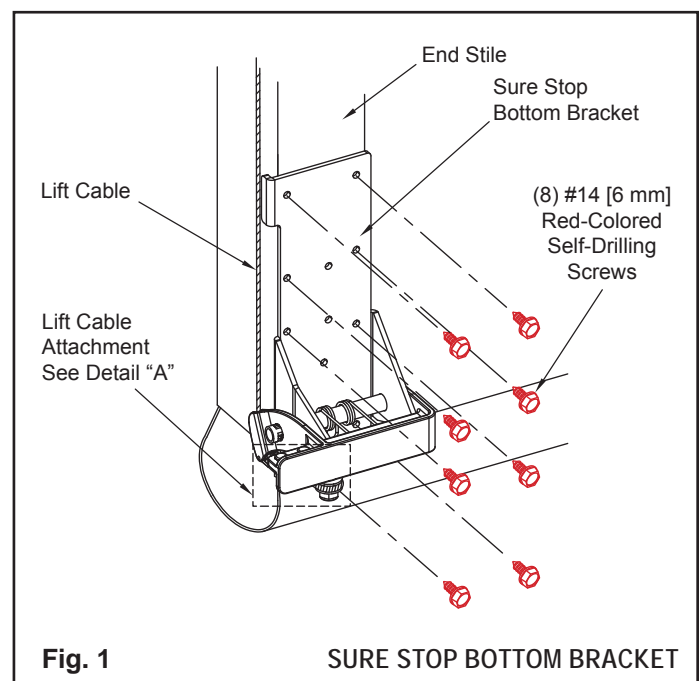
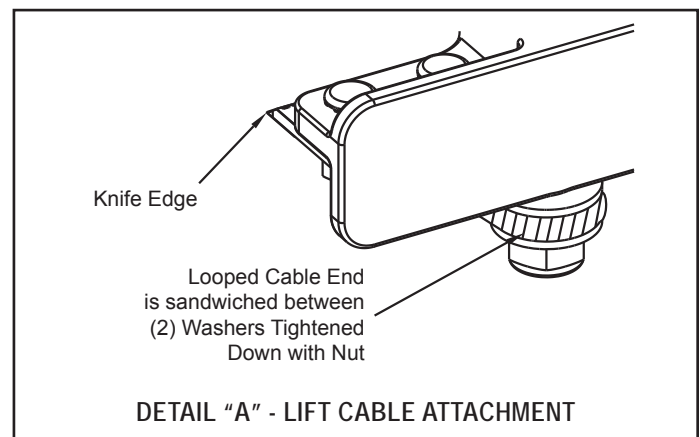
**Step 3: Attach Cable.** String cable through bend, slide looped end on bolt between two washers & tighten nut.

**Step 4: Wind Cable.** Bring cable up between wall and roller shafts, behind drum and into notch in edge of drum. Turn drum and shaft until cable tightens

enough to hold the knife edge in the open position. Tighten drum set screws. Wind springs as instructed in the MANUAL. Cable & Bottom bracket are now set.

#### **⚠ WARNING**

When sure stop bottom bracket is under high tension, it could cause severe injury or death. Under no circumstances should you loosen or remove the bottom bracket without disengaging the spring tension.



# Commercial Extension Spring Installation

## ⚠️ WARNING

Each extension spring requires a Spring Safety Containment Kit. In the event a spring breaks while under tension, or the hook end lets go, serious injury and property damage can occur if the extension spring is not secured with safety cables.

## Headroom Requirements

12" [305mm] Radius Track require 10" [254 mm] of headroom.

15" [381 mm] Radius Tracks require 12" [305 mm] of headroom.

**Step 1: Horizontal Sheaves.** Attach sheave to horizontal angle, 3" - 4" [76 mm - 102 mm] from wall using a round hole on the angle not a square/slotted hole. Use 3/8" x 1-1/2" [10 mm x 38 mm] machine screws & nuts. (Fig. 2)

**Step 2: Rear eye bolt.** Fasten 5/16" x 3-3/4" [8 mm x 95 mm] eye bolt to back hang using two nuts for each.

**Step 3: Assemble springs.** On the ground, slide sheave fork through one end on extension spring. Insert nylon bushing into the angle clip. Attach second sheave and angle clip to sheave fork, as shown. (Fig. 2)

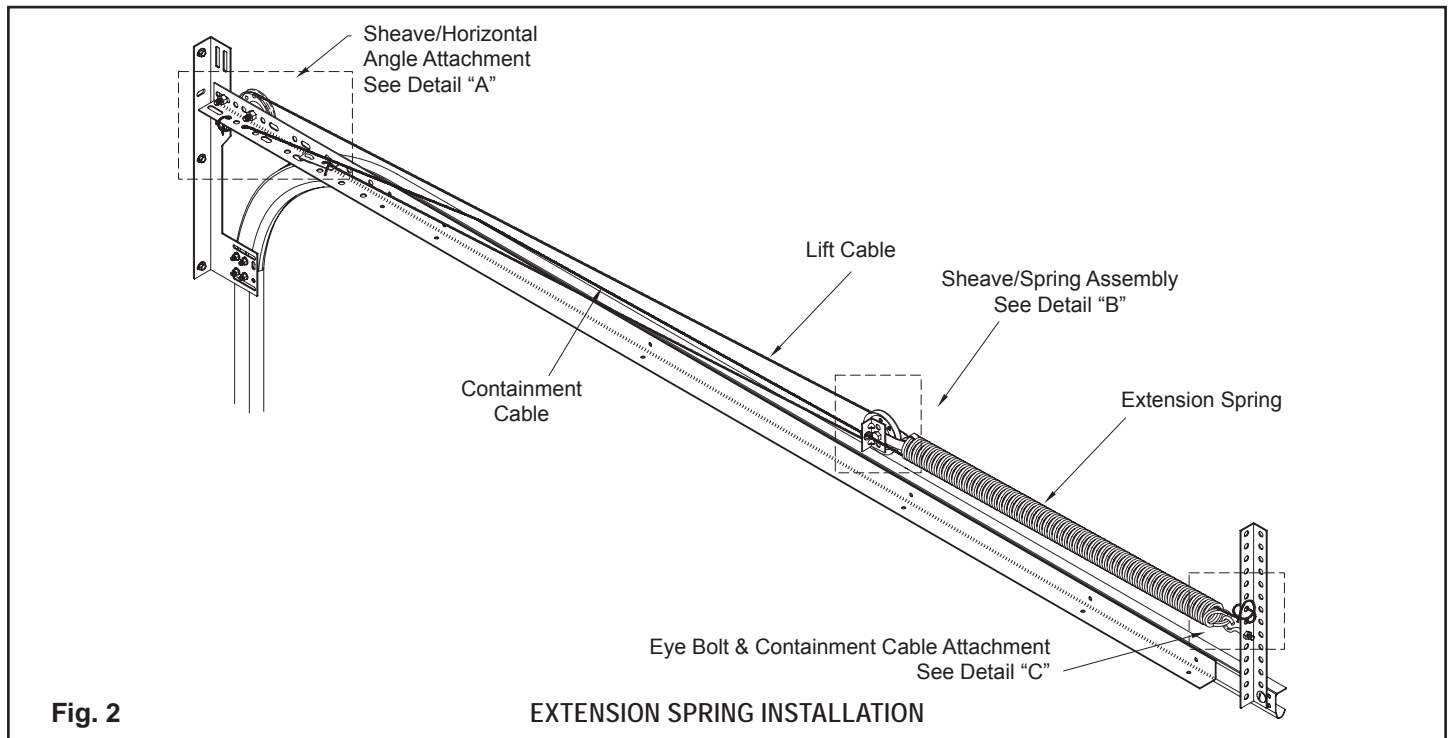
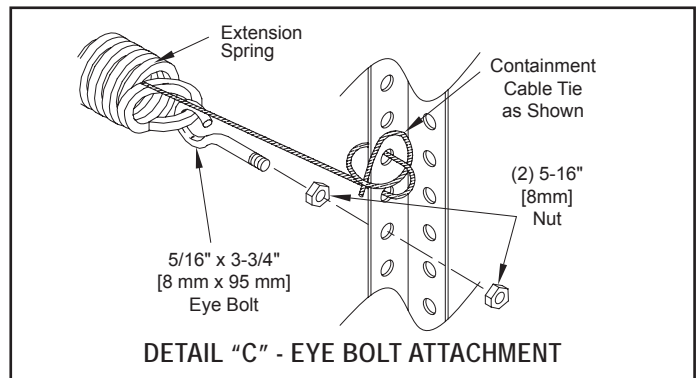
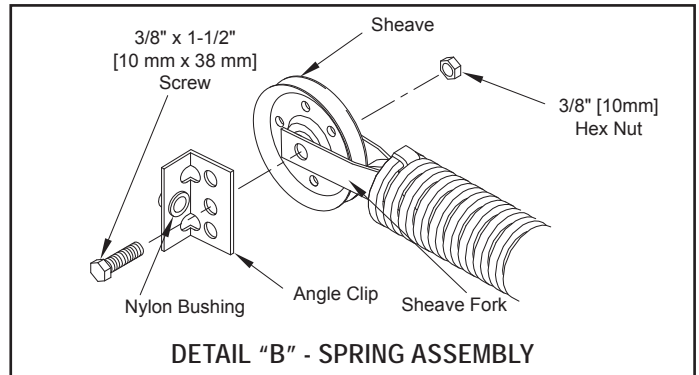
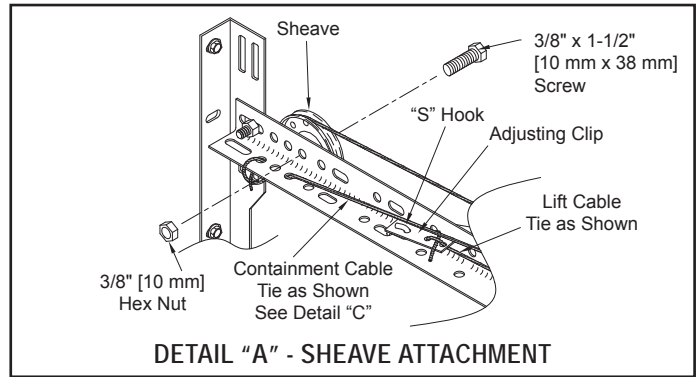


Fig. 2

EXTENSION SPRING INSTALLATION

**Step 4: Adjust Track Hangers.** Raise the door to the full open position. Place “C” clamps or locking pliers securely in the track so the door cannot be lowered. Check to see that the door is level and that there is approx. 1/2" [13 mm] of space between the horizontal track and the edge of the door. Adjust the track hangers, if necessary, and fasten them permanently.

**Step 5: Attach springs.** Lift spring assembly & attach to the eye bolt installed on the rear backhang.

**Step 6: Lift Cables.** With the door in the open position, thread lift cables from the bottom corners of the door through sheave on the horizontal angles, then over the sheave attached to the spring. Tie the cable to the cable adjusting clip and hook the adjusting clip to the horizontal angle with a “S” hook. Cable should be taut and hold the spring up off the door. This should be done on both sides of the door with equal tension on the springs.

**Step 7: Safety Containment Cable.** From parts bag remove 1/8" [3 mm] containment cable. Tie cable, as shown, to rear backhangs. (Fig. 2) Thread cable through the center of the extension spring and through bushing in the angle clip. Tie the end to the horizontal angle, as shown. (Fig. 2)

**Step 8: Adjustment.** Remove “C” Clamp or locking pliers from track. Lower door to the “closed’ position. Open and close door a few times to test operation. Adjust springs tension if necessary.

To adjust springs, raise door to the full “open” position. Place “C” clamp or locking pliers on track so door cannot be lowered. Adjust the springs by taking up more or less cable at the cable adjusting clip. Maintain equal tension on both sides of the door. Extension spring install finished, refer to MANUAL to complete door install.

# Double Shaft Power Unit

## ⚠ WARNING

**IMPORTANT! Read and follow ALL instructions and safety warnings contained in the MANUAL concerning spring winding and installation.**

**NOTE:** Double Shaft Power Unit Assemblies typically come with four, six, or eight springs. Each shaft will typically have an equal number of springs.

If door uses a jackshaft opener or chain hoist, it must drive the lower (Primary) shaft.

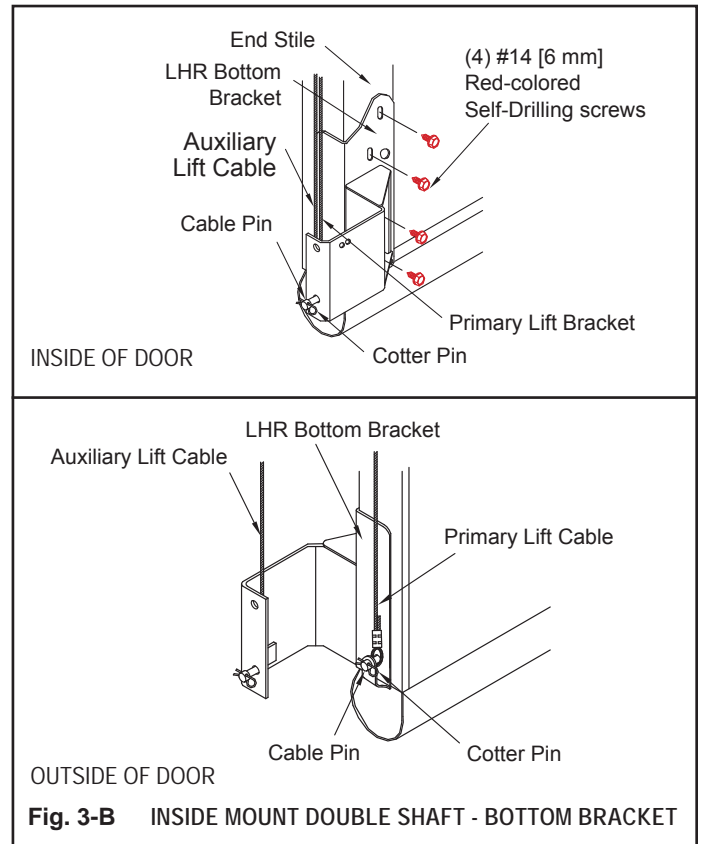
There are two Double Shaft arrangements. One utilizes 2 points of cable attachment on the same bottom bracket (Fig. 3-A), the other utilizes 2 separate brackets for cable attachment (Fig. 3-C). Refer to appropriate instructions base on the arrangement ordered.

## Inside Mount Double Shaft

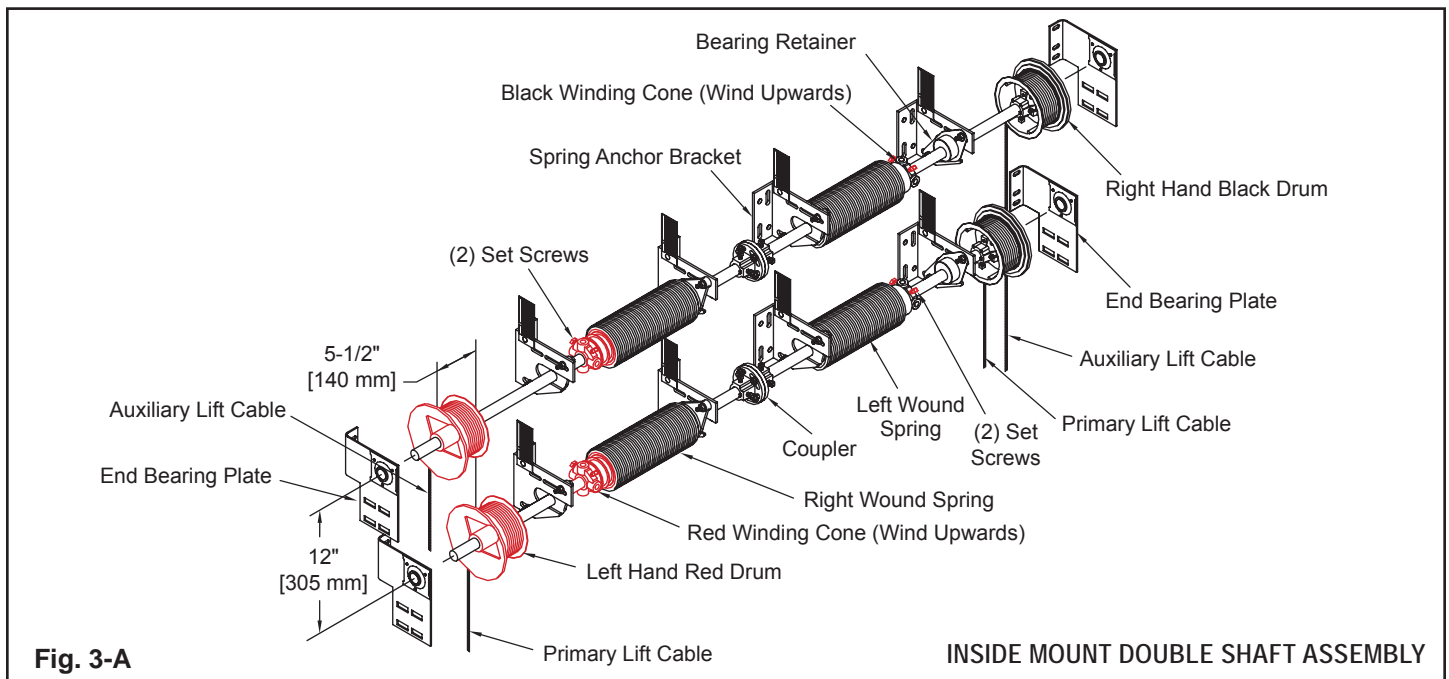
**Step 1: Lower Shaft Install.** The lower shaft is the primary shaft. End bearing plates, spring anchor brackets & spring/shaft assemblies are assembled & installed the same as a single shaft door. Refer to “Spring Installation” in the MANUAL. Attach shorter lift cable to the inboard cable pin on the bottom bracket, as shown. (Fig. 3-B) Run cable between wall and roller shafts behind drum on lower shaft & into notch in edge of drum. (Fig. 3-A)

**Step 2: Upper Shaft.** Mount end bearing plates 12" [305 mm] above & approx. 5-1/2" [140 mm] outboard from the end bearing plates on each end of the lower

shaft. (Fig. 3-A) Spring anchor brackets are mounted 12" [305 mm] above spring anchor brackets for lower shaft. The spring/shaft assemblies are assembled and installed according to “Spring Installation” in the MANUAL. Attach longer lift cable to the outboard cable pin on the bottom bracket, as shown. (Fig. 3-B) Run behind drum on upper shaft & into notch in edge of drum. (Fig. 3-A) Inside Mount Double Shaft Power Unit Spring installation now completed, refer to MANUAL to complete door install.



**Fig. 3-B** INSIDE MOUNT DOUBLE SHAFT - BOTTOM BRACKET



**Fig. 3-A**

INSIDE MOUNT DOUBLE SHAFT ASSEMBLY

## Outside Mount Double Shaft

**Step 1: Lower Shaft Install.** The lower shaft is the primary shaft. End bearing plates, spring anchor brackets & spring/shaft assemblies are assembled & installed the same as a single shaft door. Refer to "Spring Installation" in the MANUAL. Attach shorter lift cable to the inboard clevis pin on the bottom bracket, as shown. (Fig. 3-D) Run cable between wall and roller shafts behind drum on lower shaft & into notch in edge of drum, as shown. (Fig. 3-C)

**Step 2: Center Lift Bracket install.** Slit the bottom weatherstrip under the end stile to allow the external lift cable bracket to pass through. The long leg of the bracket it to be on the inside of the door. Position the lift cable bracket against the bottom edge and interior surface of the end stile. Drill (4) 5/16" [8 mm] holes through the section using the bracket holes as a template, as shown. (Fig. 3-D) Place the lift cable channel on the exterior side of the door & confirm the four holes line up. The channel edge should contact the lift cable bracket flange. Drill the remaining two top holes using the channel holes as a template. Install spacers in each hole. Secure Lift Bracket & Lift Cable Channel in place with 1/4" x 2-3/4" [6 mm x 70 mm] carriage bolts & flange nuts. **NOTE:** On aluminum frame bottom sections, DO NOT drill (4) 5/16" [8 mm] holes through section. Attach, Center Lift Bracket to section using (4) 5/16" x 1-14" [8 x 32 mm] self-drilling screws. Use bracket as template. Lift cable channel is not required.

**Step 3: Upper Shaft.** Mount end bearing plates 12" [305 mm] above & approx. 5-1/2" [140 mm] inboard from the end bearing plates on each end of the lower

shaft. Spring anchor brackets are mounted 12" [305 mm] above spring anchor brackets for lower shaft. The spring/shaft assemblies are assembled and installed according to "Spring Installation" in the MANUAL. Attach longer lift cable to the clevis pin on the External Lift Bracket, as shown. (Fig. 3-D) Run up outside of door and behind drum on upper shaft & into notch in edge of drum. (Fig. 3-C) Outside Mount Double Shaft Power Unit Spring installation now complete, refer to MANUAL to complete door install.

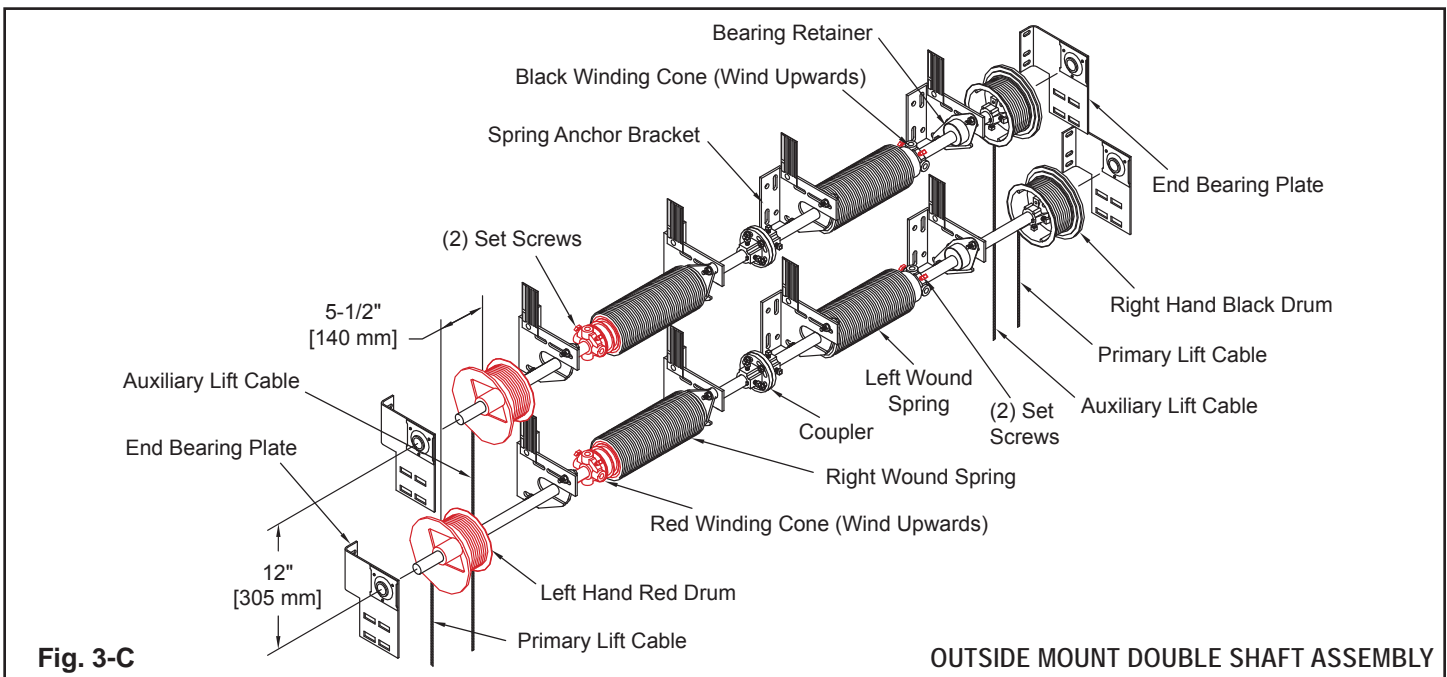
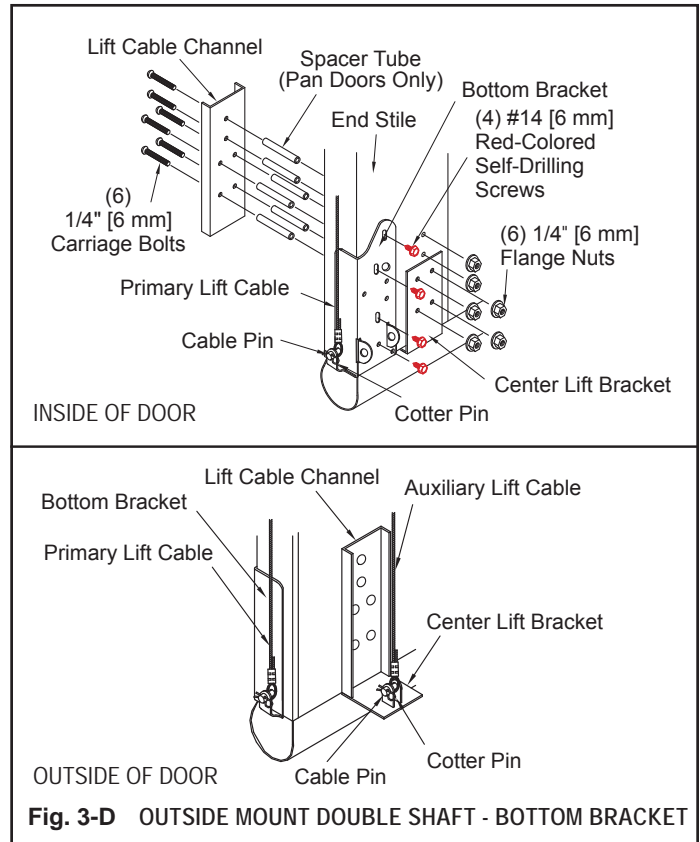


Fig. 3-C

OUTSIDE MOUNT DOUBLE SHAFT ASSEMBLY

## Center Lift Cable Assembly

### **⚠ WARNING**

**IMPORTANT! Read and follow ALL instructions and safety warnings contained in the MANUAL concerning spring winding and installation.**

There are (2) Center Lift Cable Setups. One for single shaft arrangements (Fig. 4-A), the other for double shaft arrangements (Fig. 4-B). Double shaft arrangements can employ as many as two center lift assemblies, for instruction purposes (1) cable lift assembly is shown.

**NOTE:** If door uses a jackshaft opener or chain hoist, it must drive the lower (Primary) shaft.

**Step 1: External Lift Bracket.** Slit the bottom weatherstrip under the applicable stile(s) to allow the external lift cable bracket to pass through. The long leg of the bracket it to be on the inside of the door. Position the lift cable bracket against the bottom edge and interior surface of the door. Drill (4) 5/16" [8 mm] holes through the section using the bracket holes as a template, as shown. (Fig. 4-C) Place the lift cable channel on the exterior side of the door & confirm the four holes line up. The channel edge should contact the lift cable bracket flange. Drill the remaining two top holes using the channel holes as a template. Install spacers in each hole. Secure Lift Bracket & Lift Cable Channel in place with 1/4" x 2-3/4" [6 mm x 70 mm] carriage bolts & flange nuts. **NOTE:** Aluminum frame doors do not require the lift cable channel.

Refer to either single shaft or double shaft instructions to complete install.

### **Single Shaft Center Lift**

**Step 2: Shaft Install.** Shaft is broken into three pieces. End Bearing Plates, Spring Anchor Bracket, & springs are assembled/mounted on the outside shaft portions in accordance to "Spring Installation" in the MANUAL. A center cable drum is mounted on the center shaft portion. Shaft is assembled as shown. (Fig. 4-A)

**Step 3: Run Cable.** Attach lift cable to the clevis pin on the External Lift Bracket, as shown. (Fig. 4-C) Run up outside of door and behind drum on upper shaft & into notch in edge of drum. (Fig. 4-A) Lift cables from bottom brackets to outside drums have typical install, refer to "Spring Installation" in the MANUAL for

instruction. Single Shaft Center Lift installation now complete, refer to MANUAL to complete door install.

### **Double Shaft Center Lift**

**Step 2: Lower Shaft.** The lower shaft is the primary shaft. End bearing plates, spring anchor brackets & spring/shaft assemblies are assembled & installed the same as a single shaft door. Refer to "Spring Installation" in the MANUAL.

**Step 3: Upper Shaft.** Mount end bearing plates 12" [305 mm] above the end bearing plates on the lower shaft. Spring anchor brackets are mounted 12" [305 mm] above spring anchor brackets for lower shaft. Drum is mounted in center of shaft, as shown. (Fig. 4-B) The spring/shaft assemblies are assembled and installed according to "Spring Installation" in the MANUAL.

**Step 4: Run Cable.** Attach lift cable to the clevis pin on the External Lift Bracket, as shown. (Fig. 4-C) Run up outside of door and behind drum on upper shaft & into notch in edge of drum. (Fig. 4-B) Lift cables from bottom brackets to outside drums have typical install, refer to "Spring Installation" in the MANUAL for instruction. Single Shaft Center Lift installation now complete, refer to MANUAL to complete door install.

