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) Low Headroom Rear Torsion Cast Iron Sheave Assembly
2) Sure-Stop Bottom Bracket
3) Commercial Extension Spring Installation
4) Double Shaft Power Unit Assembly
5) Center Lift Cable Assembly.

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

Sure-Stop Bottom Bracket

Attach the bottom bracket (Figure 1). String cable through bend and attach looped end on bolt and sandwich the cable between the two washers (View C). **The track must be set 1/2" wider than normal installation.** In the event that the cable would break, the knife edge on the Sure-Stop Bottom bracket would flip up and grind against the outside of the track, bringing the door to a halt.

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.

For doors with Sure-Stop Bottom Bracket requiring double shaft, the upper track is to be connected to the main shaft using a chain and sprocket setup (Figure 2). Only use two cables, each attached to each Sure-Stop Bottom Bracket.

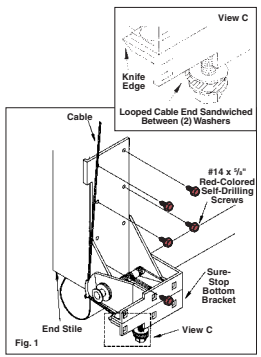


Fig. 1

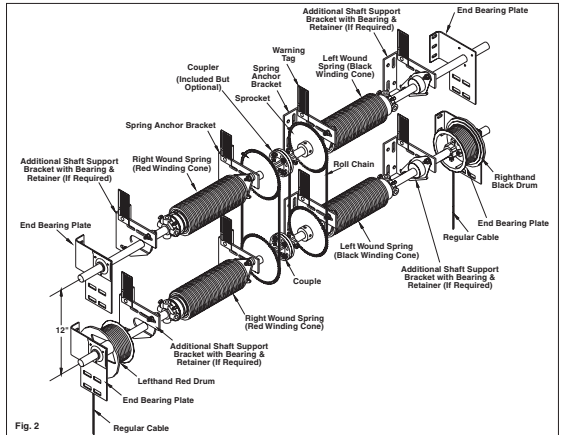


Fig. 2

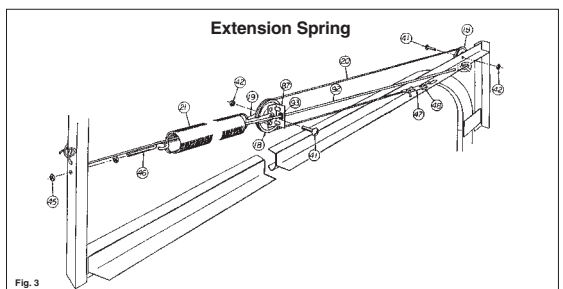


Fig. 3

Commercial Extension Spring

See Figure 3 (on page 2)

Purpose

An Extension Spring Safety Containment Kit consists of a length of aircraft cable that is threaded the length of the spring through its center. Each end is then fastened to the angle iron that is used to secure the track to the beams in the garage. In the event a spring breaks or the hook end lets go, the spring pieces are "contained" on the length of aircraft cable. Without a properly installed Extension Spring Containment Kit the spring fragments would become dangerous projectiles capable of causing serious injury.

Headroom Required

12" Radius Tracks require 10" of headroom.

15" Radius Tracks require 12" of headroom.

NOTE: Power Unit Installation to follow steps of MANUAL

Step 1

Assemble the sheaves (18) to the horizontal angles with 3/8" x 1 1/2" slotted machine screws and nuts. The sheaves are to be mounted 3" to 4" from the wall using a round hole in the angle (not a slotted hole).

Step 2

Fasten the 5/16" x 3 3/4" eye bolts (46) to the track hangers in the rear as shown in the illustrations using two nuts for each.

Step 3

Assemble the springs (21) on the floor with the sheave (18) and sheave fork (19), and angle clip (87).

Step 4

Raise the door to the full open position. Place "C" clamps or locking pliers securely in the track so that the door can not come down. Check to see that the door is level and that there is approximately 1/8" of space between the horizontal track and the edge of the door. Adjust the track hangers if necessary and fasten them permanently.

Step 5

Hook the springs to the eye bolts at the rear.

Step 6

Thread the lift cables from the bottom corners of the door over the sheave on the horizontal angle, then over the sheave on the springs. Tie the cable to the cable adjusting clip (47) and hook to the horizontal angle with an "S" hook. The cable should be taut and hold the springs up off the door. This should be done at both sides of the door with equal tension on the springs.

WARNING

Garage door extension springs can cause serious injury and property damage if they break under tension and are not secured with safety cables. Do not neglect the following step.

Step 7

Tie one end of the 1/8" containment cable (92) to the rear track hangers. Tie the cable as shown in the illustration. Thread the cable through the center of the extension spring and through the bushing (93) in the angle clip. Tie the remaining end to the horizontal angle as shown. This is to be done for each of the springs.

Step 8

Open and close the door a few times to test operation. To adjust spring tension, raise the door to the full open position and be sure to use "C" clamps or locking pliers in the track to keep the door from coming down. Adjust the springs by taking up more or less cable at the cable adjusting clip. Maintain equal tension on both sides of the door.

Step 9

Reposition the wood door stops at the outside of the door and nail firmly in place to the jambs. Allow the thickness of a dime between the door and the door stops.

Double Shaft Power Unit

Assembly Installation

Typical Double Shaft Power Unit Assemblies come with four springs or four duplex springs. The Assembly is also available with eight springs or eight duplex springs. Place equal number of springs on each shaft as shown. (FIG. 3)

Two spring anchor brackets are always necessary. Use Additional spring anchor brackets if required. The distance between the two shafts is 12" O.C. (On Center).

There are 2 bottom bracket cable attachment points for doors using the double shaft. One application utilizes 2 points of cable attachment on the same bottom bracket (Fig 3a), the other utilizes 2 separate brackets for cable attachment; one attachment point inside and one outside the door (Fig 3b).

Inside Mount Double Shaft

For inside mount, the lower shaft (primary) is mounted and configured the same as a single shaft door (See page 21 of commercial instructions). The shorter cable is attached to this shaft and to the inboard clevis pin on the bottom bracket. The upper (secondary) shaft is positioned 12" above the primary shaft. The end bearing plate for the secondary shaft is mounted approximately 11" outboard from the end bearing plate on the primary shaft. The longer cable is attached to this shaft and to the outboard clevis pin on the bottom bracket. Repeat on the other side (Fig. 3, View A).

Outside Mount Double Shaft

For Outside mount: Attach the longer lift cable to the auxiliary lift bracket using clevis pin provided. Slit the bottom astragal to allow the short side of the bracket to go through the astragal. Position the auxiliary lift cable bracket over the inside stile of the double end stile. Be sure that the longer side of the auxiliary lift bracket is on the inside of the door. Fasten the bracket in place using #14x5/8" self-drilling screws. The lower shaft (primary) is mounted and configured the same as a single shaft door (See page 21 of commercial instructions). The shorter cable is attached to this shaft and to the clevis pin on the standard bottom bracket. The upper (secondary) shaft is positioned 12" above the primary shaft. The end bearing plate for the secondary shaft is mounted approximately 11" inboard from the end bearing plate on the primary shaft. The longer cable is attached to this shaft and to the auxiliary lift bracket. Repeat on the other side (Fig 3, View B).

IMPORTANT! Read and follow ALL instructions and safety warnings contained in the MANUAL concerning spring winding and installation. Be sure to prepare the top shaft first.

Center Lift Cable Assembly

Attach the center lift cable with the clevis pin on the lift cable bracket. Slot the bottom weathertrip under the center, center stile to allow the lift cable bracket and auxiliary lift cable to go through it, being sure the long arm goes to the inside of the door. Fasten the bracket to the center, center stile at the bottom of the door with (2) #14 x 5/8" self-drilling screws. Repeat on the other side. The cables are to be on the outside of the door (FIG 3, View C).

There are two setups for center lift depending on single shaft (FIG. 3c) or double shaft (FIG. 3d).

After assembly is complete as shown, adjust the center drum left or right so that the portion of the drum that the cable will be coming from, if the door were in the full up position, is directly in line with where the cable will be attached to the bottom of the door.

IMPORTANT! Read and follow ALL instructions and safety warnings contained in the MANUAL concerning spring winding and installation. Be sure to prepare the top shaft first.

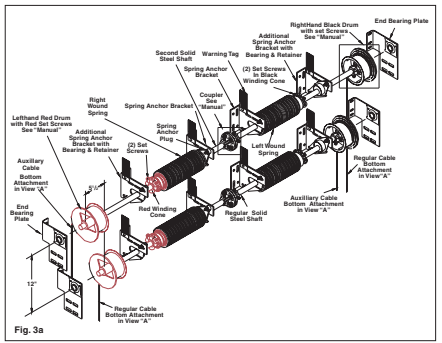


Fig. 3a

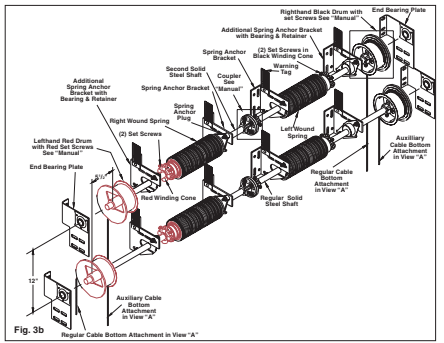


Fig. 3b

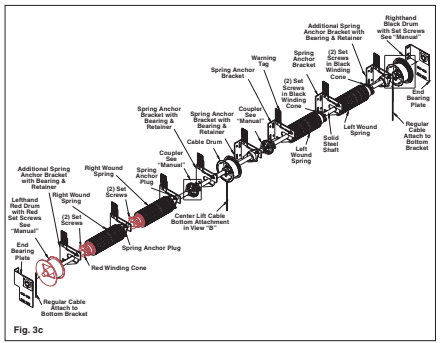


Fig. 3c

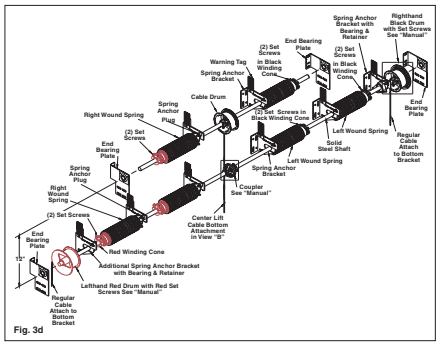
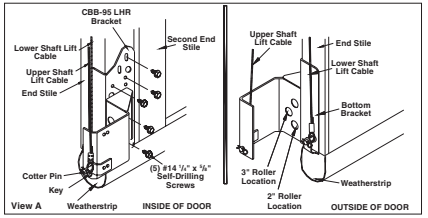
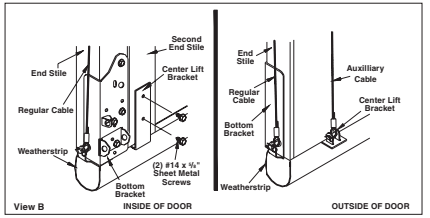


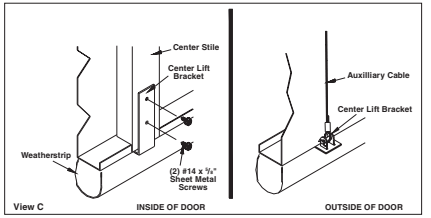
Fig. 3d



View A



View B



View C