

Extension Springs, For Doors With Standard Lift

Wayne Dalton

Supplemental Instruction Insert

This supplemental installation instruction is to be used as a supplement to the main Installation Instruction and Owner's Manual provided with the door. The instructions included in this document are only those which deviate from the standard installation. All warnings and cautions listed in the main manual are applicable to this supplemental instruction as well.

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Attaching Front Cable Lift Sheaves

Tools Required: Wrench: 3/8", Step Ladder, Safety glasses, Gloves

Using (1) 3/8" - 16 hex nut, attach the front cable lift sheave in the appropriate hole (left hand shown).

IF YOU HAVE 3" FRONT CABLE LIFT SHEAVE AND A 12" RADIUS HORIZONTAL TRACK:

Bolt the front cable lift sheave to the 13/32" hole near the top of the flag angle, as shown.

IF YOU HAVE 3" OR 4" FRONT CABLE LIFT SHEAVE AND A 15" RADIUS HORIZONTAL TRACK:

Bolt the front cable lift sheave to the first 13/32" hole in the horizontal angle, as shown.

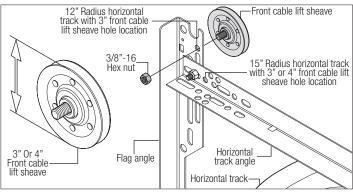
Remove the locking pliers from the vertical tracks. With assistance, raise the door slowly into the open position making sure the door travels smoothly through the tracks. Clamp locking pliers to the back leg of both horizontal tracks, below the bottom track rollers to keep the door from lowering.

↑ WARNING

GET HELP TO RAISE THE DOOR. DOOR IS VERY HEAVY. RAISE DOOR SLOWLY.

⚠ WARNING

IF HORIZONTAL TRACKS ARE SET TOO FAR APART AT REAR, DOOR MAY FALL FROM TRACKS RESULTING IN SERIOUS PERSONAL INJURY. RAISE DOOR SLOWLY SO THAT DISTANCE BETWEEN TRACKS CAN BE CHECKED.





Attaching Extension Springs

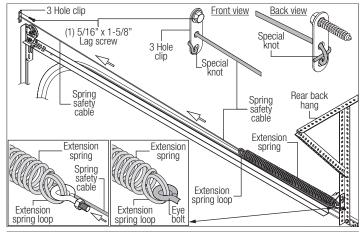
Tools Required: Wrench: 3/8", Step Ladder, Safety glasses, Gloves

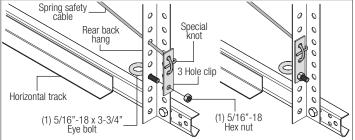
Position (1) 5/16" - $18 \times 3-3/4$ " eye bolt and (1) 5/16" - 18×10^{-1} hex nut in the rear back hang, 6" to 8" above the horizontal track, as shown. Feed the spring safety cable through the rear back hang and tie the special knot around the "room side" of the 3 hole clip, as shown. Secure the eye bolt and 3 hole clip to the rear back hang with (1) 5/16" - 18×10^{-1} hex nut. Hook one end of the extension spring onto the eye bolt. Feed the spring safety cable through the rear extension spring loop and center of the extension spring then front spring loop, pull the spring safety cable taut and tie the special knot around the "jamb side" of the 3 hole clip. Attach the "jamb side" 3 hole clip to the jamb near the flag angle with (1) 5/16" x 1-5/8" lag bolt.

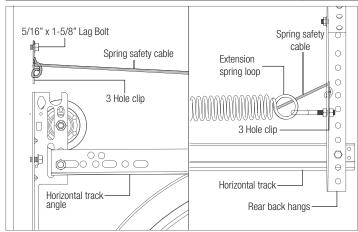
NOTE: Spring safety cables must be taut.

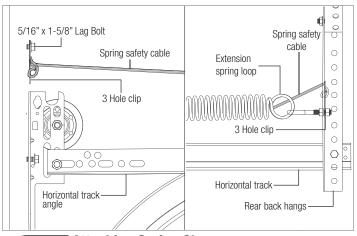
⚠ WARNING

PROPER INSTALLATION OF THE SPRING SAFETY CABLES IS IMPORTANT. THESE SPRING SAFETY CABLES HELP PREVENT PERSONAL INJURY OR PROPERTY DAMAGE BY RETAINING THE BROKEN PIECE OF THE SPRING IN CASES OF EXTENSION SPRING FAILURE.









Attaching Spring Sheaves
Tools Required: Wrench: 3/8", Step Ladder, Safety glasses, Gloves

Thread the counterbalance lift cable over the front cable lift sheave and around the rear cable lift sheave and tie the special knot around the "horizontal angle" using a 3 hole clip, as shown.

Insert one end of the large "S" hook into the "horizontal angle" with the 3 hole clip and the other end into the second slot of the horizontal angle, as shown.

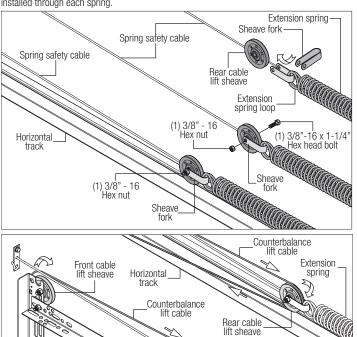
Repeat for the other side

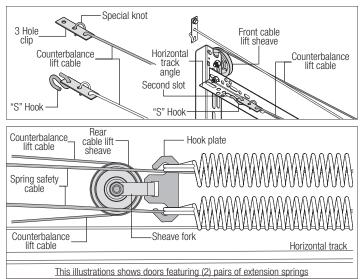
IMPORTANT: CLOSE "S" HOOKS AND EYE BOLTS TO PREVENT SPRINGS FROM COMING LOOSE.

△ WARNING

FAILURE TO CLOSE "S" HOOKS AND EYE BOLTS CAN RESULT IN SEVER OR FATAL INJURY IF SPRINGS COME LOOSE.

NOTE: Some larger doors feature 2 pairs of extension springs. A spring safety cable must be installed through each spring.





Cable Adjustments
Tools Required: Tape measure, Safety glasses, Gloves

Adjust counterbalance lift cables to create about 1" to 2" (25 mm to 50 mm) of initial extension spring stretch, with the door in the fully opened position.

Measure relaxed extension spring length for your door height and verify with chart. Spring length must be the same for both extension springs to allow even door balance.

Carefully remove the locking pliers from the horizontal track and lower the door into the closed position.

Once the door is closed, measure the extension spring length in tension for both sides. Using the chart, verify the spring length in tension, is correct with your door height.

NOTE: It may be necessary to adjust spring length for proper door balance.

DOOR HEIGHT	Spring Length Relaxed	Spring Length Extended
	(Door Open)	(Door Closed)
6'0"	25"	61"
	(635 mm)	(1549 mm)
6'3"	25"	62.5"
	(635 mm)	(1588 mm)
6'6"	25"	64"
	(635 mm)	(1626 mm)
7'0"	25"	67"
	(635 mm)	(1702 mm)
7'6"	27"	72"
	(686 mm)	(1829 mm)
7'9"	27"	73.5"
	(686 mm)	(1867 mm)
8'0"	27"	75"
	(686 mm)	(1905 mm)

Final Adjustments
Tools Required: None

Now lift the door and check its balance. If the door is hard to pull down or lifts by itself, adjust extension spring length by moving the "S" hook backward (towards the rear back hangs) to a different hole in the horizontal angle.

If the door is difficult to lift or too easy to pull down, adjust extension spring length by moving the "S" hook forward (towards the header) to a different hole in the horizontal angle.

IMPORTANT: WHENEVER ADJUSTING EXTENSION SPRING LENGTH FOR DOOR BALANCE, ALWAYS OPEN THE DOOR TO THE FULLY OPEN POSITION AND RETURN THE LOCKING PLIERS TO THE HORIZONTAL TRACKS BELOW THE BOTTOM TRACK ROLLERS.

If the door still does not operate easily, lower the door into the closed position and recheck the following items:

- 1.) Check the door for level.
- 2.) Check the distance between flag angles must be door width plus 3-3/8" + 1/4" 0".
- 3.) Check the counterbalance lift cables for equal tension- adjust by re-tieing the special knot.