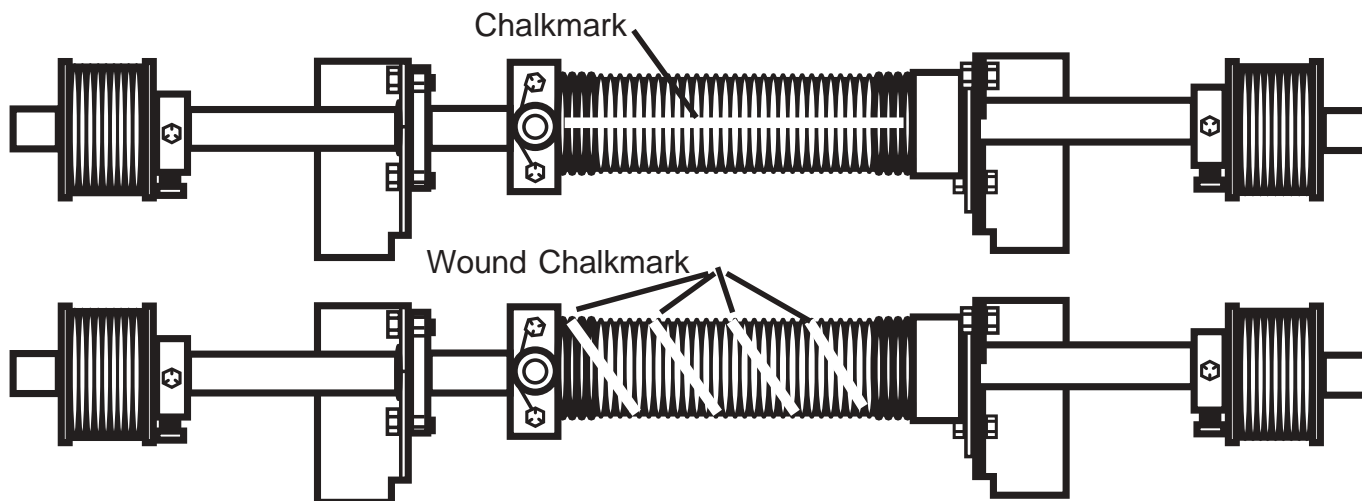


# COUNTERBALANCE INSTALLATION INSTRUCTIONS



## WARNING!

High tension spring can cause severe injury or death. Repairs and adjustments must be made by trained service personnel.

Remove entire counterbalance from vehicle, After removing the cables, tape loose top ends to top of door. Disassemble counterbalance assembly. Reverse procedure for assembly with new spring. Install balancer in vehicle.

With the door closed, bring the road side cable up between the drum and the header. Hook it in the slot in the outer groove of the left cable drum. Take up the slack by hand until snug. Push drum against bearing. Tighten the set screws. Now, clamp the counterbalance shaft with vice grips (handle of vice grips against the ceiling) to hold the cable taut.

Repeat the procedure with the curb side cable and drum. Tighten the set screws. *Important.. set screws must be tight.* Be sure the drums are snug up against the bearings and that the cable properly tracks in its groove on each drum. Both cables should have equal tension.

To determine the amount of winds on the counterbalance spring, divide 10 into the door opening height in inches and add 3 turns.

*Example: 75 divided by 10 =*

*7.5 turns + 3 turns = 10.5 or 10 and one-half turns.*

Run a chalk mark the full length of the counterbalance spring. (See top picture) Leave the vice grip clamped to the shaft to keep tension on the cables. Place a 1/2" dia. x 18" winding bar in the hole in the spring winding plug. (**Note: do not use bent winding bars, screwdrivers or tapered punches for winding.**) Wind the spring by lifting up the bar. While holding the first bar, place a second bar in the next hole and lift in the same manner after removing the first bar. Repeat this until the correct number of turns are obtained by counting the chalk marks which should show up as strips as the spring is wound.

## IMPORTANT:

1. Cable drums must be tight against bearings.
2. Cable is properly tracking in cable drum grooves.
3. Cables must have equal tension.
4. Set screws must be tight.

To check the operation of the door: Properly tighten both set screws on the spring winding plug and without taking the uppermost bar out of the plug, remove the lower bar. Now slowly release tension on the other bar. If the door leaves the floor by itself, the spring is wound too tight and a few quarter turns should be released. If the door can be lifted only by bearing down hard on the bar, a few more quarter turns should be added. If the spring has the correct amount of tension, the door will raise with only slight downward pressure on the winding bar. If the door operates properly, remove the bar and vice grip. A properly counterbalanced door should, when stopped, remain at any given location.

**PRE-WOUND COUNTERBALANCE:** If the door is equipped with a pre-wound counterbalance, disregard above instructions and release spring tension as follows. (Caution: Make sure cables are attached to door and cable drums, that cables have proper tension, and cable drums are properly secured to shaft.)

Clamp vice grips above roller to track, clamping door in down position. Loosen and remove the two set screws found in the spring anchor plug. This plug is found on the right hand end (inside looking out) of the spring. Spring tension has now been transferred to the cables. Remove vice grips and check door operation.