

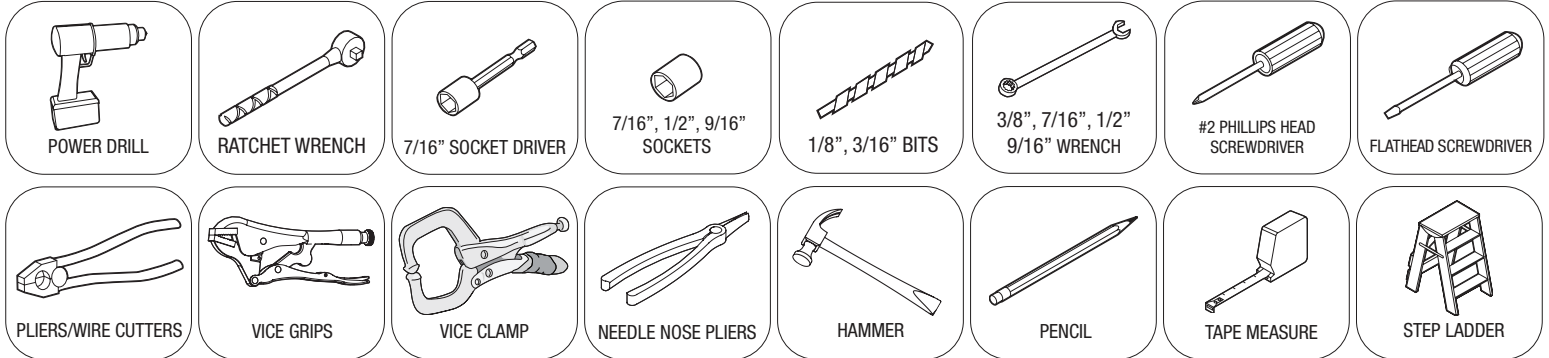
TORQUEMASTER SPRING

REPLACEMENT INSTRUCTIONS

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- SPRING INSTALLATION Page 4
- FAQS & TIPS Page 6

Tools Required

WD-TMS-INST



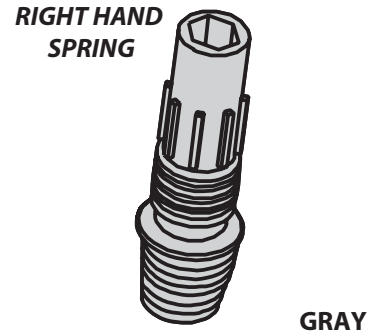
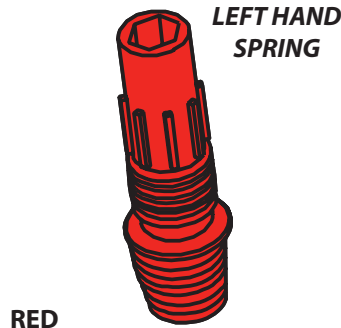
Pre-Install

1

The left hand spring is marked with a red slash of paint on the winding cone. The right hand spring cone will be gray or silver. Side is determine from inside garage looking out.

2

Save the plastic sleeves from your old springs to reuse. Trim to fit your new springs. This is a noise dampener.



Spring Looks Different

Spring manufacturing has changed, so there may be some differences as outlined below. This is **NORMAL**.

1

Springs may be a different **length** (can be up to a foot shorter), **diameter**, or **wire size** than your old springs. This is due to changes in the manufacturing process.

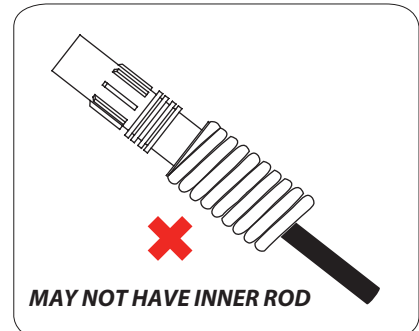
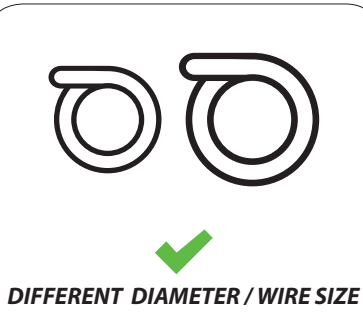
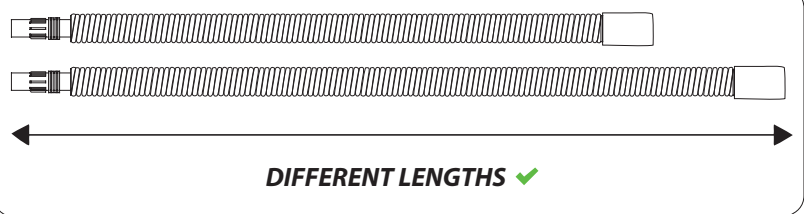
2

Did your old spring have an inner rod and the new ones don't? That's normal too! Due to manufacturing changes, some spring sizes don't need the inner rod now. If your spring needs it, it will come pre-installed that way.

3

Spring pairs may also be different lengths than each other. This is the way they are designed to work together.

You can go ahead and install your new springs!



ATTENTION: The installation of this product can be dangerous. A powerful spring releasing energy suddenly can cause severe, even fatal, injury. If you are unsure of how to properly install this product, please consult a local Wayne Dalton garage door dealer.

SINGLE AND DOUBLE SPRING - REMOVAL INSTRUCTIONS

IMPORTANT! RIGHT/LEFT IS DETERMINED FROM INSIDE GARAGE LOOKING OUT.

Check left side for dial on end bracket. A double spring system has a dial on both sides of end bracket assemblies. A single spring has no dial on the left side.

Step 1

Check for spring tension by pulling the cable on the right side away from door (FIG 2-1). If there is no spring tension, the cable will be loose and the spring tube should rotate freely. If cable is loose: Loosen the lock nut 1/4 turn (FIG 2-2) and proceed to Step 3.

If the cable isn't loose and spring tube is difficult to rotate: place a mark on the drive gear tooth and an adjacent mark on the right hand end bracket (FIG 2-2). Loosen the lock nut 1/4 turn using a 7/16" wrench.

Step 2

Using an electric drill with a 7/16" hex head driver, unwind the right hand winding bolt head counterclockwise (FIG 2-3) and count the number of turns the mark on the drive gear passes the adjacent mark on the end bracket. Referencing the chart below, by door height, stop unwinding the spring once the counted turns have reached the listed number of turns.

6'-0" Door Height = 14 turns
6'-3" Door Height = 14 1/2 turns
6'-6" Door Height = 15 turns
6'-9" Door Height = 15 1/2 turns
7'-0" Door Height = 16 turns
7'-3" Door Height = 16 1/2 turns
7'-6" Door Height = 17 turns
7'-9" Door Height = 17 1/2 turns
8'-0" Door Height = 18 turns

Test spring tension again. If cables aren't loose and spring tube is difficult to rotate, repeat steps 1 and 2 for releasing spring tension on left side.

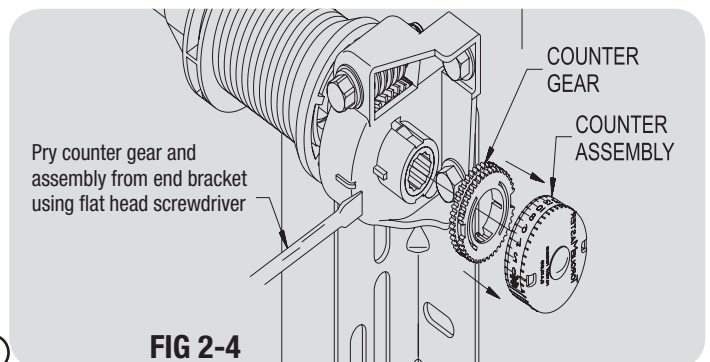
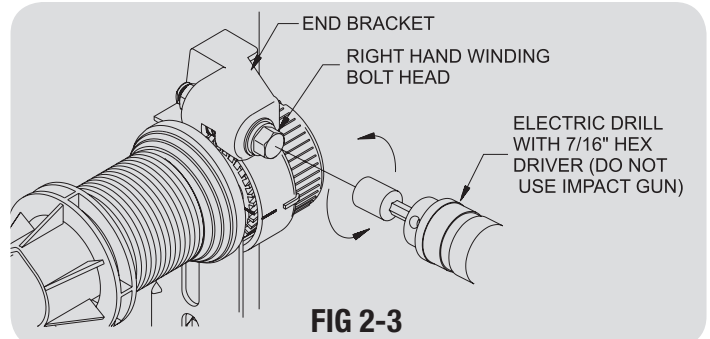
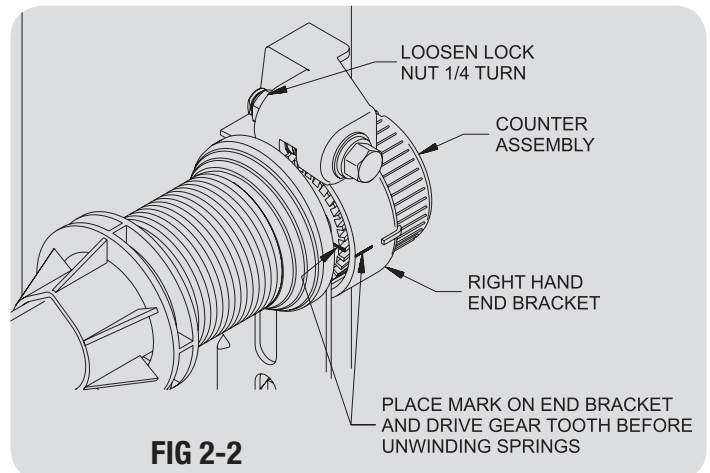
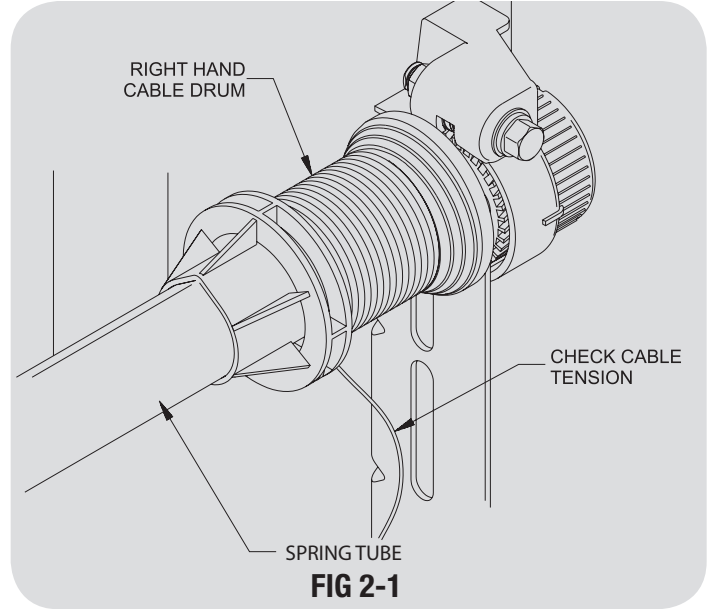


DO NOT USE IMPACT GUN TO UNWIND SPRINGS.

IMPORTANT! DO NOT REFERENCE THE COUNTER ASSEMBLY WHEN COUNTING THE NUMBER OF TURNS BEING UNWOUND ON THE SPRING. USE INSTRUCTIONS ABOVE.

Step 3

Using a flat head screwdriver, pry the counter gear and counter assembly from the right hand end bracket - FIG 2-4.



Step 4

Remove the top lag screw from the right hand end bracket - **FIG 2-5**. Attach locking pliers to the upper portion of the end bracket and hold the housing steady while removing the bottom lag screw and phillips head screw from the end bracket - **FIG 2-6**.

Step 5

Holding the right hand end bracket steady with locking pliers, carefully pry the end bracket and drive gear off the winding shaft using a flat head screw driver - **FIG 2-7**. Repeat steps 3 - 5 for left hand side.

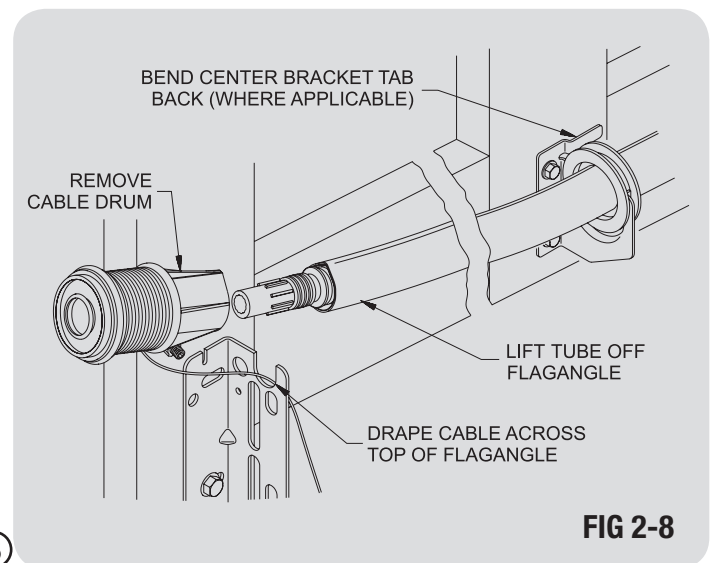
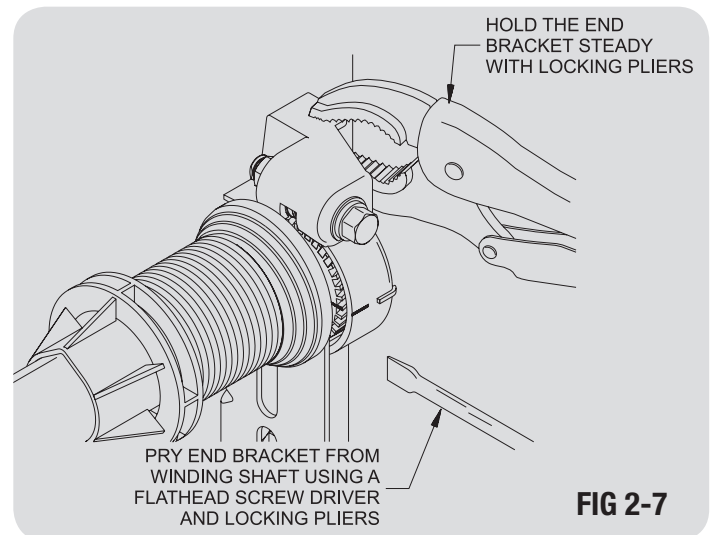
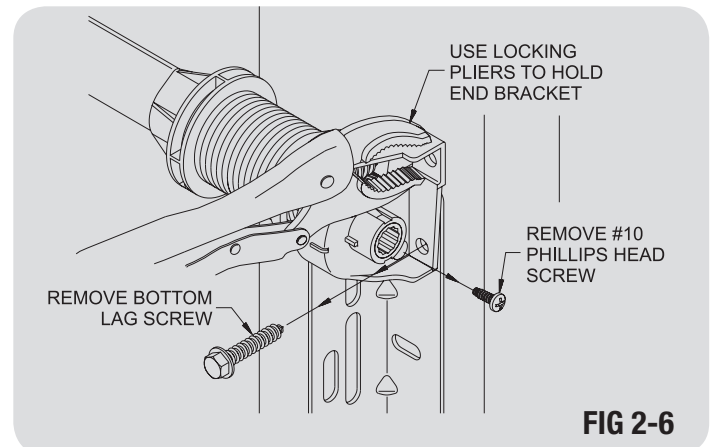
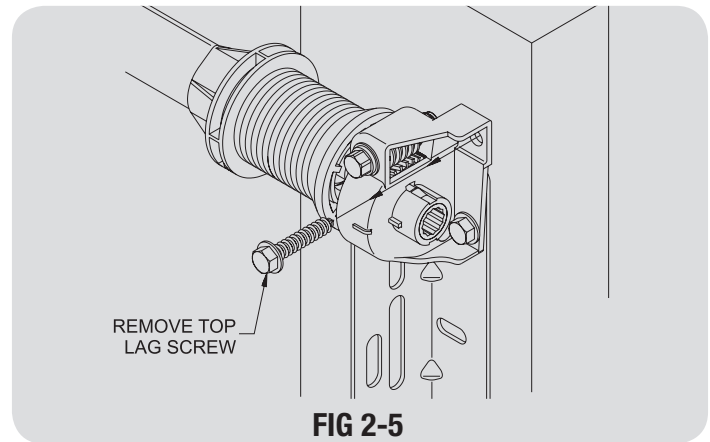
! THE WINDING SHAFT MAY ROTATE WHEN REMOVING END BRACKET AND DRIVE GEAR.

Step 6

Lift the right hand side of spring tube and slide cable drum off. Realign groove in the winding shaft with notch on top of the flag angle. Drape cable with drum over flag angle. Repeat for left side **FIG 2-8**

Bend the center bracket tab over to allow lifting the tube up. Lay tube on the floor and remove all contents including plastic sleeve, rod, and spring pieces. Tube should be completely empty and free of debris.

! **NOTE:** The cable drums and spring may be hard to remove. If so, lightly tap cable drum and spring cone with a hammer to loosen. Do not dent the spring tube.



SINGLE AND DOUBLE SPRING - INSTALLATION INSTRUCTIONS

IMPORTANT! RIGHT/LEFT IS DETERMINED FROM INSIDE GARAGE LOOKING OUT.

Single Spring system is applicable for door weights equal to 110lbs and below. The single spring will always be on the right hand side. Double spring system is applicable for door weights equal to 110lbs or greater.

Step 1 - Tube & Cable Drums

- 1 Slide new spring(s), perch end first in spring tube. Single spring applications will not have a left spring - **FIG 2-9**
- 2 Lift tube up and align center bushing into center bracket. Push right cable drum over winding shaft until seated against spring tube and winding shaft groove is exposed - **FIG. 3-0**
- 3 Align groove in winding shaft with top notch on flag angle. Insert left winding shaft into left cable drum until shaft groove is exposed. Push left drum on until seated against tube and align winding shaft groove with top notch on flag angle - **FIG. 3-0**
- 4 Check tube for level and adjust as needed. Bend center bracket tab back over center bushing (if applicable) - **FIG 3-1**

Step 2 - End Brackets

Lubricate gears as needed. Align splines of drive gear with right winding shaft and press til seated against flag angle - **FIG 3-2**
Fasten to flag angle using a phillips head screw. Attach end bracket to jamb using lag screws - **FIG 3-3**

- 1 **For Double Springs:** Repeat above step for left side.
For Single Springs: No drive gear is required for left side. If converting from a double spring to a single spring, remove left spring and gears on left bracket. Left side will need a winding cone as a spacer to support assembly. Reuse old left spring cone.
- 2 On right side install counter gear with missing tooth towards outside, away from right bracket. Gear snaps in place. Align "0" on right counter assembly with raised rib on right bracket and align hex of counter cam with winding shaft. Press counter assembly against counter gear until it locks in place - **FIG 3-4**
For Double Springs: Repeat step for left side.

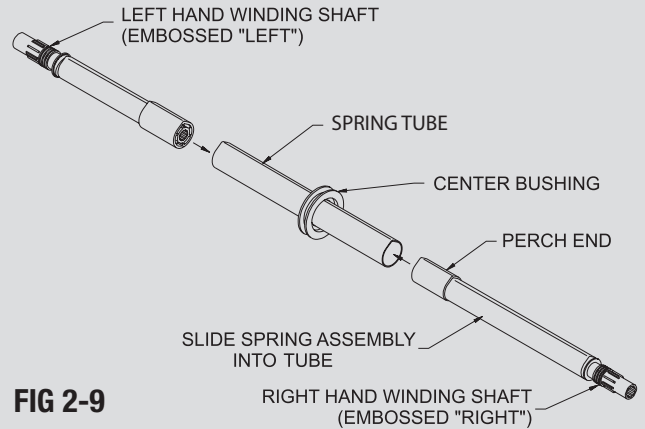


FIG 2-9

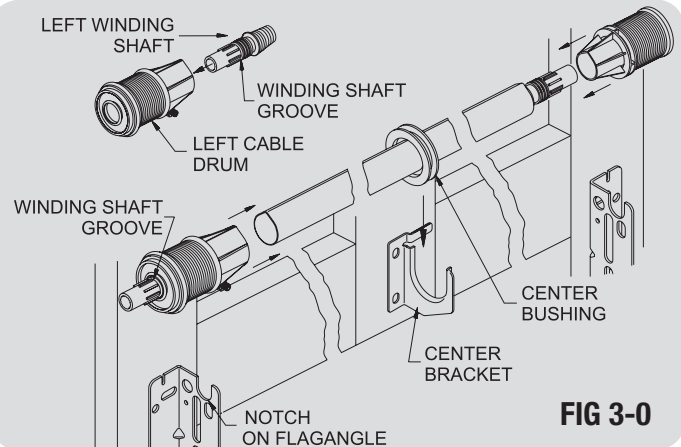


FIG 3-0

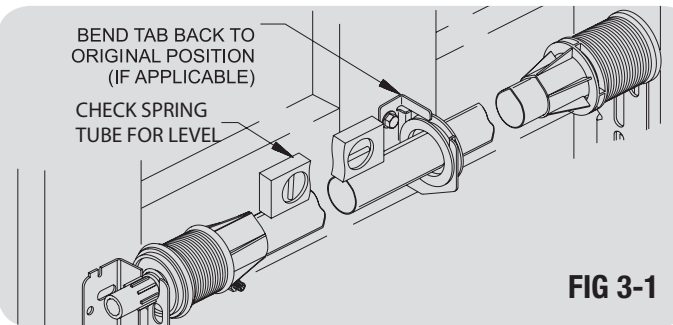


FIG 3-1

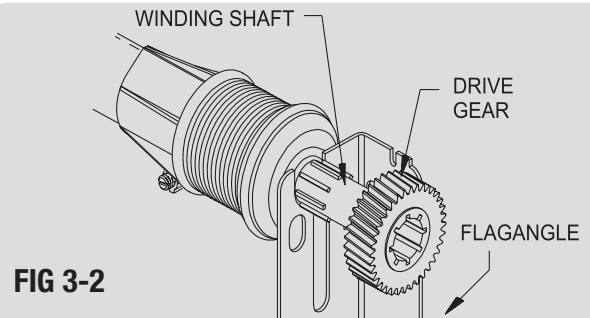


FIG 3-2

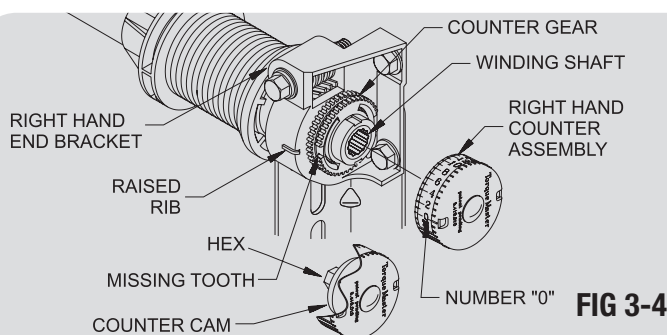


FIG 3-4

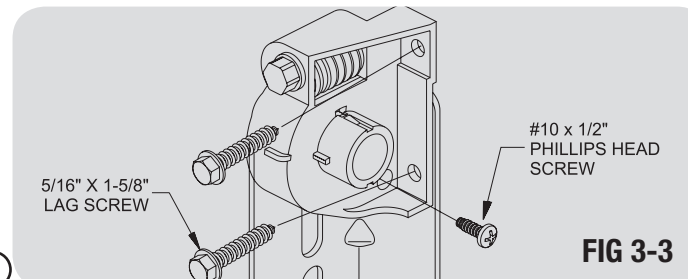


FIG 3-3

Step 3 - Cable Adjustments

Adjust right cable by rotating the cable drum until set screw faces directly away from garage door. Check to ensure cable is aligned and seated tightly in first groove of drum - **FIG 3-5**. If cable is slack, loosen set screw and pull end of cable to remove slack. Snug set screw, and tighten 1 to 1-1/2 turns.

Step 4 - Winding Springs

- 1 Place locking pliers on both vertical tracks just above third roller to prevent door from raising while winding springs. Double check cable is aligned in first and second grooves of drums.
- 2 Use an electric drill with a 7/16" hex head driver. Rotate right side winding bolt head clockwise while pressing in on the canoe clip, until counter cover assembly shows 2 to 3 turns. This keeps cable tight while adjusting left cable - **FIG 3-6**
- 3 Ensure left cable is aligned and seated in first groove of drum and cable is tight. If cable slack, loosen set screw and pull cable to remove all slack. Snug set screw and tighten 1 to 1-1/2 turns.

FOR SINGLE SPRING:

Return to right hand side and continue rotating winding bolt head clockwise until counter cover assembly shows the correct number of turns for your door height - **FIG 3-6**

After right hand spring is correctly wound, hold lock nut stationary with a 7/16" wrench while rotating winding bolt head clockwise until snug. Tightening lock nut prevents spring from unwinding.

FOR DOUBLE SPRINGS:

Start on left side. Rotate winding bolt head clockwise, til counter cover shows correct number of turns for door height - **FIG 3-6**

Return to right hand side and continue rotating winding bolt head clockwise until counter cover assembly shows the correct number of turns for your door height.

After both springs are correctly wound, hold lock nut stationary with a 7/16" wrench while rotating winding bolt head clockwise until snug. Tightening lock nut prevents spring from unwinding.

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6'-6" Door Height = 15 turns
6'-9" Door Height = 15 1/2 turns
7'-0" Door Height = 16 turns
7'-3" Door Height = 16 1/2 turns
7'-6" Door Height = 17 turns
8'-0" Door Height = 18 turns

IMPORTANT: Turns to balance door may vary from suggested chart values. Make adjustments $\pm 1/4$ turn on each side as needed until door is balanced.

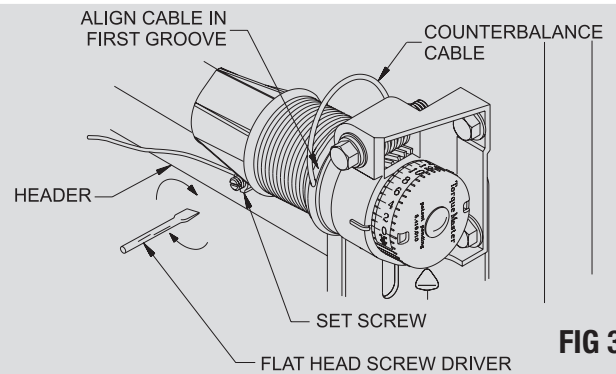


FIG 3-5

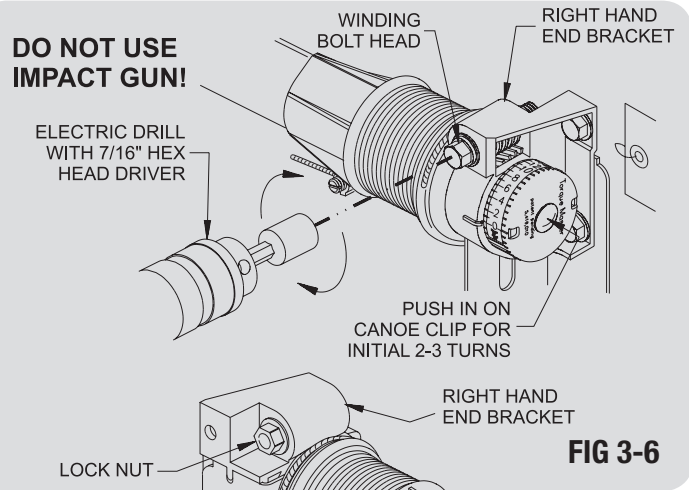


FIG 3-6

Step 5 - Balancing Door

- 1 Remove locking pliers from track slowly. Lift door to check its balance. Adjust spring(s) if door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down). An unbalanced door can cause operation issues.
Remove spring tension: If door is hard to pull down or lifts by itself, adjust spring tension by rotating winding bolt head counter clockwise 4 revolutions (approximately 1/4 spring turn).
Add spring tension: If door is hard to lift or too easy to pull down, adjust spring tension by rotating winding bolt head clockwise 4 revolutions. Anytime spring adjustments are made, lock nuts must be loosened to begin with and retightened afterwards.
Adjust both springs equally (on double spring applications). Recheck the door balance and repeat if necessary.
- 2 If door does not operate easily, close door and unwind right hand spring to zero and check the following:
 1. Check door, spring tube and flag angles for level.
 2. Check distance between flag angles, must be door width plus 3-3/8" to 3-1/2"
 3. Check cables for equal tension. Adjust as needed.
 4. Rewind the spring(s).
 5. Make sure door isn't rubbing on jambs
- 3

FAQS & TIPS

Why is the spring I received much shorter than my old spring?

The torquemaster springs you receive will not always match the length of your old springs due to the switch from an oil tempered spring to a new high tensile strength music wire spring. It may be different in length, diameter, or wire size than your existing spring, but it is the correct part that you ordered for the size of your garage door.

The springs I received are too short for the width of my door. How do I connect it on the inside?

The springs you received are what is rated for the height and weight of your door as ordered. The width of your door is not a factor because Torquemaster springs are self anchoring to expand and contract inside the spring tube. There must be empty space inside the tube for this to happen. Torquemaster spring tubes are teardrop shaped. The anchor cone on the end of the spring that goes inside the tube is also teardrop shaped. This design allows the anchor cone to lock into place when wound to provide the tension needed to lift and lower your door. As this happens the spring coils will stretch and contract. You do not connect the inside cone with anything inside the tube. Make sure your spring tube is completely empty before installing.

My old spring had a rod inside of it and the new spring doesn't. What do I do with this part?

You can safely discard the rod and any broken spring pieces found inside your spring tube. Some of the newer springs no longer require an inner rod. If all the information you provided when ordering is correct, the spring that you receive will be the spring currently manufactured for your garage door.

My new spring didn't come with plastic sleeves. What do I do?

You can reuse your old spring sleeves. Just remove them from the spring tube, trim them down to fit inside the cones on your new spring, slide onto new spring prior to reinstalling spring in tube. Don't have the sleeves anymore? That's ok. The spring sleeves only serve as a noise dampener and springs can be installed without them.