20

Cable Drum Installation

Tools Needed:
None

Shake the TorqueMaster® spring tube gently to extend the winding shafts out about 5" on each side. For single spring applications, there will be no left hand spring in the TorqueMaster® spring tube.

Lift the TorqueMaster® spring tube and rest it on the top of the flagangles. Orient TorqueMaster® spring tube so that back of opener is flat against header/mounting surface.

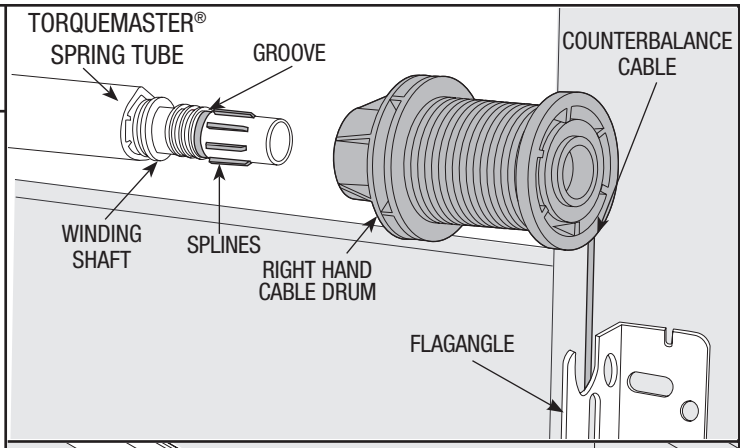
NOTE: Cable drums are marked right and left hand. Cable drums and TorqueMaster® spring tube are cam shaped to fit together only one way.

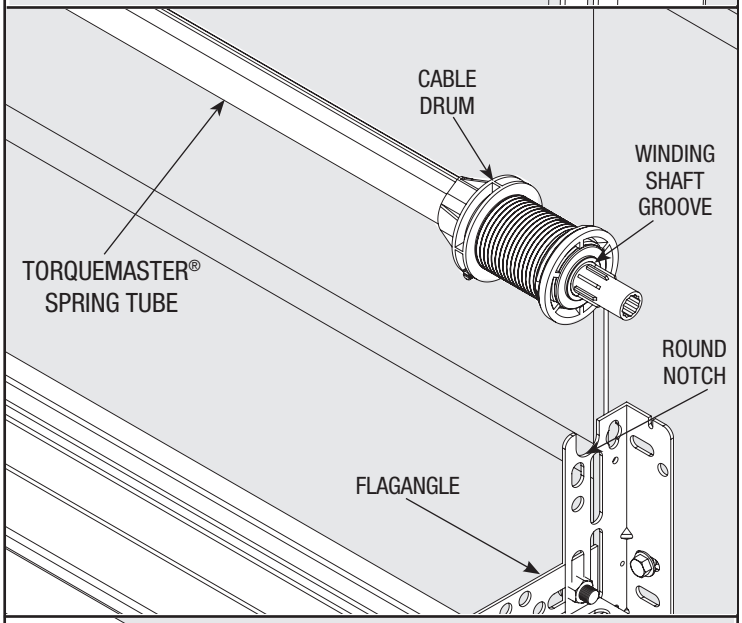
To install the cable drum, slide the correct cable drum over the winding shaft until the cable drum seats against the TorqueMaster® spring tube. The winding shaft must extend past the cable drum far enough to expose the splines and the groove. Align the winding shaft groove with the round notch in the flagangle.

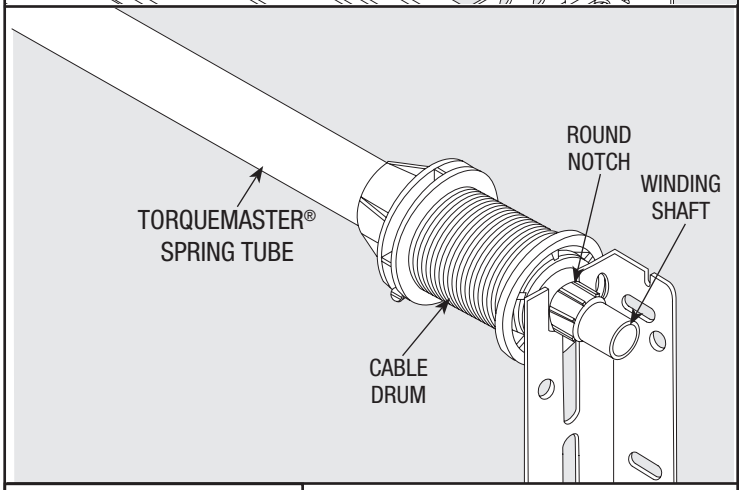
For Double Spring Applications: Repeat for opposite side.

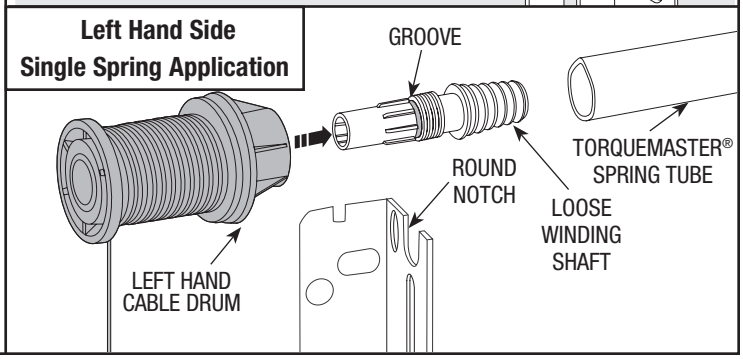
For Single Spring Applications: Insert the loose winding shaft into the left hand cable drum prior to sliding the cable drum over the TorqueMaster® spring tube.

NOTE: On single spring applications, take care in handling the loose winding shaft (left side) so that it does not slide back into the TorqueMaster® spring tube.









21

Drive Gear Installation

Tools Needed:

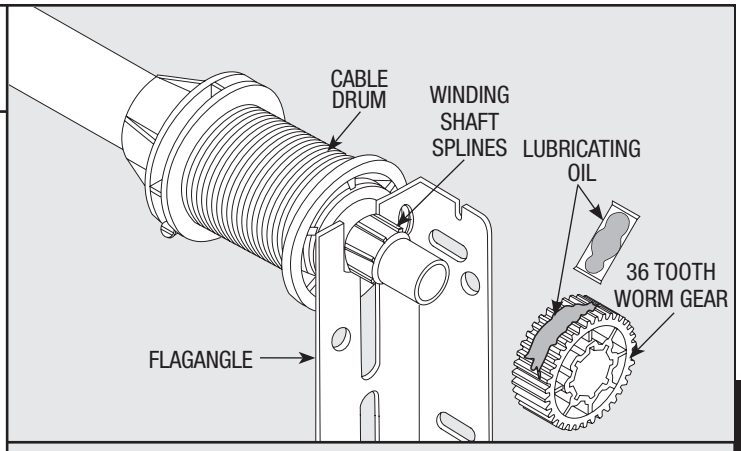
Lubricating Oil

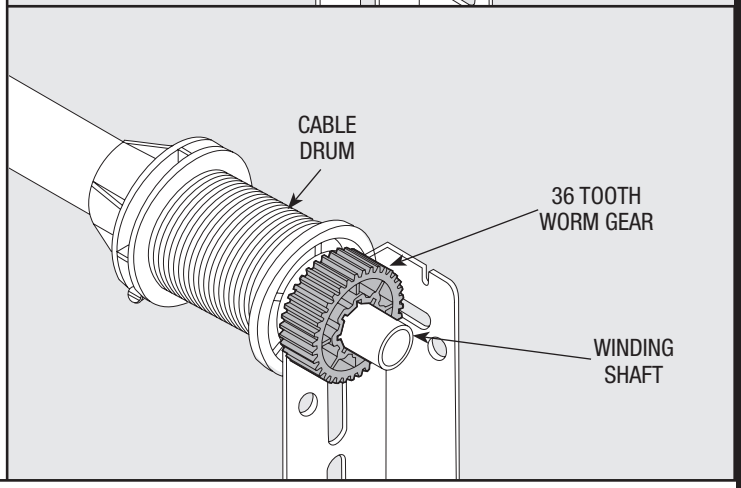
36 Tooth Worm Gear

Beginning with the right hand side, lubricate entire circumference of the 36 tooth worm gear with the lubricating oil provided. Slide the 36th worm gear onto the winding shaft splines until it touches the flagangle.

NOTE: On single spring applications, 36th worm gear is required on the left side.

NOTE: If additional lubricating oil is needed, use "Dura Lube® Engine Oil Treatment".





22

End Brackets

Tools Needed:

Power Drill

3/16" Drill Bit

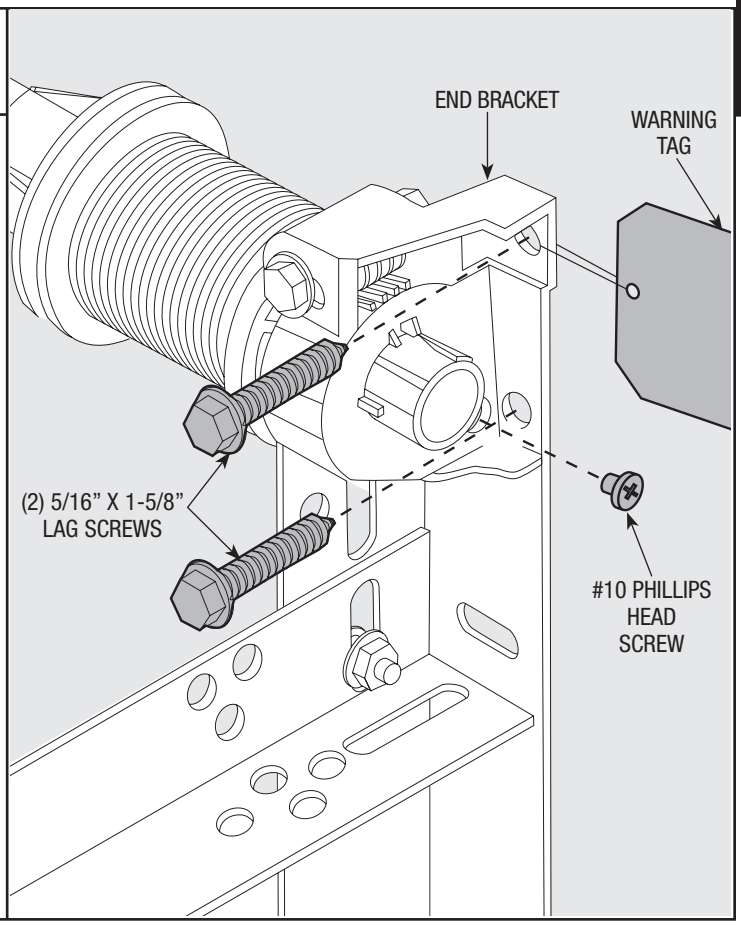
7/16" Socket Driver

Phillips Head Screwdriver

IMPORTANT: WARNING TAGS MUST BE SECURELY ATTACHED TO BOTH END BRACKETS.

Slide the right hand end bracket over the drive gear and fasten to the flagangle using a #10 self-tapping screw. Drill 3/16" pilot holes into jamb for the lag screws. Secure end bracket and the flagangle to the jamb using (2) 5/16" x 1-5/8" lag screws.

Repeat for left hand side.



23 Counter Installation

Tools Needed:

None

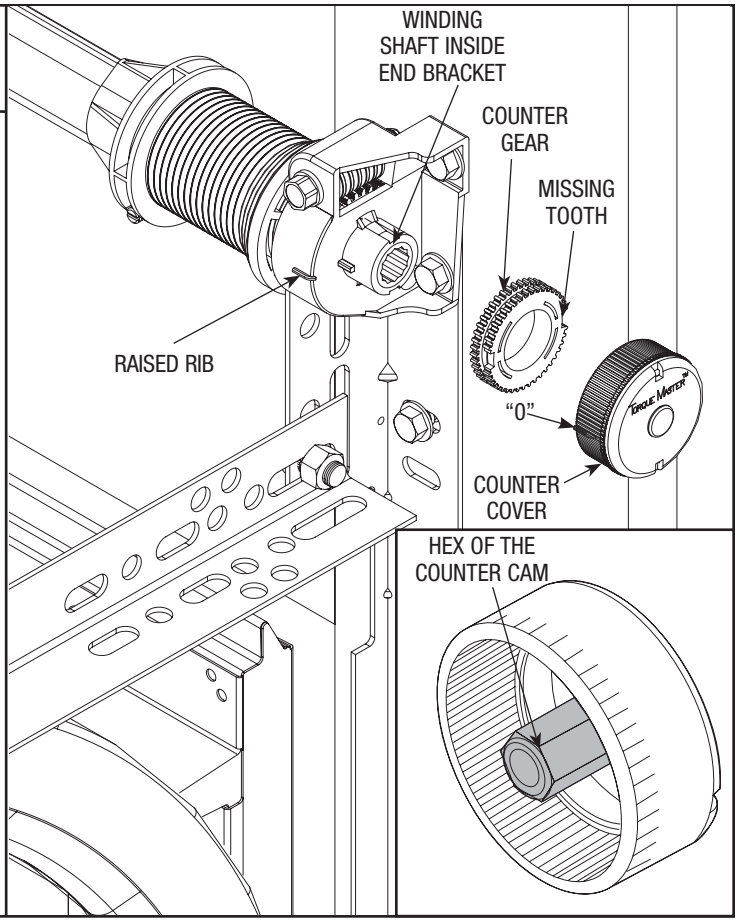
Install the right side counter gear, with the missing tooth toward the outside and away from the end bracket. Press the counter gear onto the end bracket until snaps engage.

Select the right hand counter cover and align the hex of the counter cam with the end of the winding shaft. Also, align the "0" on the counter cover with the raised rib on the end bracket. Press the counter cover against the counter gear until it locks into place.

Repeat for left hand side for double spring applications.

NOTE: No 36 tooth worm gear, counter gear or counter cover is required on left hand side for single spring applications. Only an end bracket is needed.

IMPORTANT: AT THIS TIME DO NOT WIND COUNTERBALANCE SPRINGS!



24 Securing Center Bracket Assembly

Tools Needed:

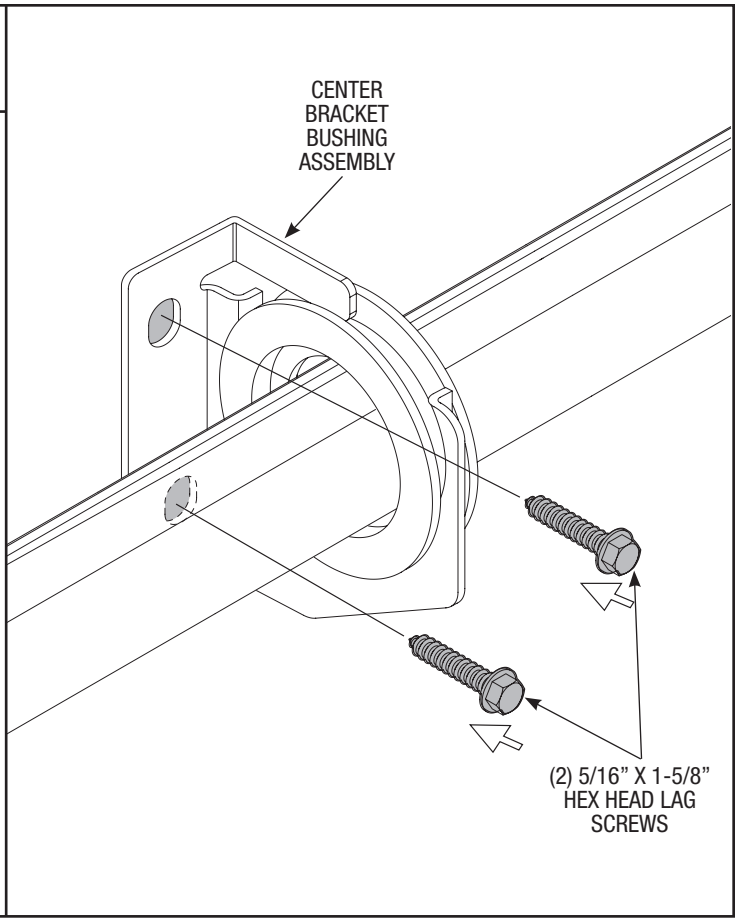
NOTE: If you are installing the *i*drive® opener on your garage door, skip this step and continue with Step 25.

NOTE: If you are not installing the *i*drive® opener on your garage door, you must install the center bracket bushing assembly. Follow these instructions for non-*i*drive® operated garage doors.

NOTE: If you are installing a DoorMaster™ opener, see optional DoorMaster™ Bracket installations on page 32, Figure B.

To locate the center bracket, mark the header halfway between the flagangles and level the TorqueMaster® spring tube. Drill 1/8" pilot holes into header for the lag screws. Fasten the metal bracket to the header using (2) 5/16" X 1-5/8" lag screws.

NOTE: Upon completion of this step, continue with Step 29.



29

Securing Door for Spring Winding

Tools Needed:

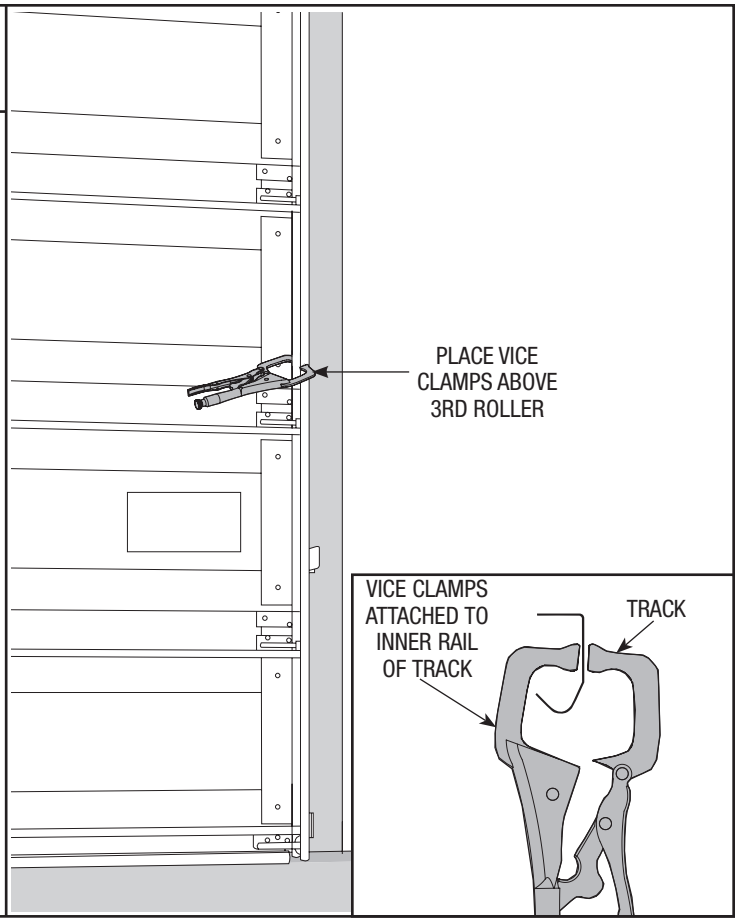
Vice Clamp

⚠ WARNING

FAILURE TO PLACE VICE CLAMPS ONTO VERTICAL TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE OR FATAL INJURY.

Place vice clamps onto both vertical tracks just above the third roller. This is to prevent the garage door from raising while winding counterbalance springs.

IMPORTANT: DO NOT USE IMPACT GUN TO WIND SPRING(S).



30

Cable Adjustments

Tools Needed:

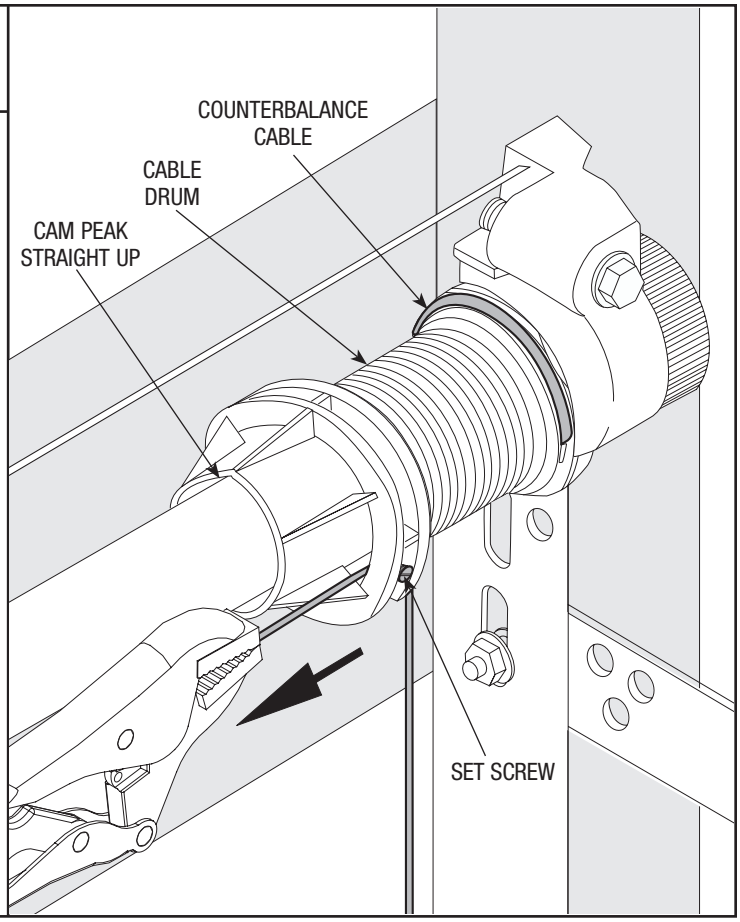
Locking Pliers

Flat Tip Screwdriver

Rotate the cable drum until the set screw faces directly away from the header. TorqueMaster® spring tube cam peak should be pointing straight up.

Beginning with the right side, loosen the set screw enough to adjust cable, approximately 2 turns. Using locking pliers, pull on the end of the cable to remove all cable slack.

Check to ensure the cable is aligned and seated in the first groove of the cable drum. Snug the set screw, then tighten an additional 1-1/2 turns. Cut excess cable.



31

Winding Bolt Rotation

Tools Needed:

Power Drill

7/16" Socket Driver

See chart in Step 32 for proper spring tension setting.

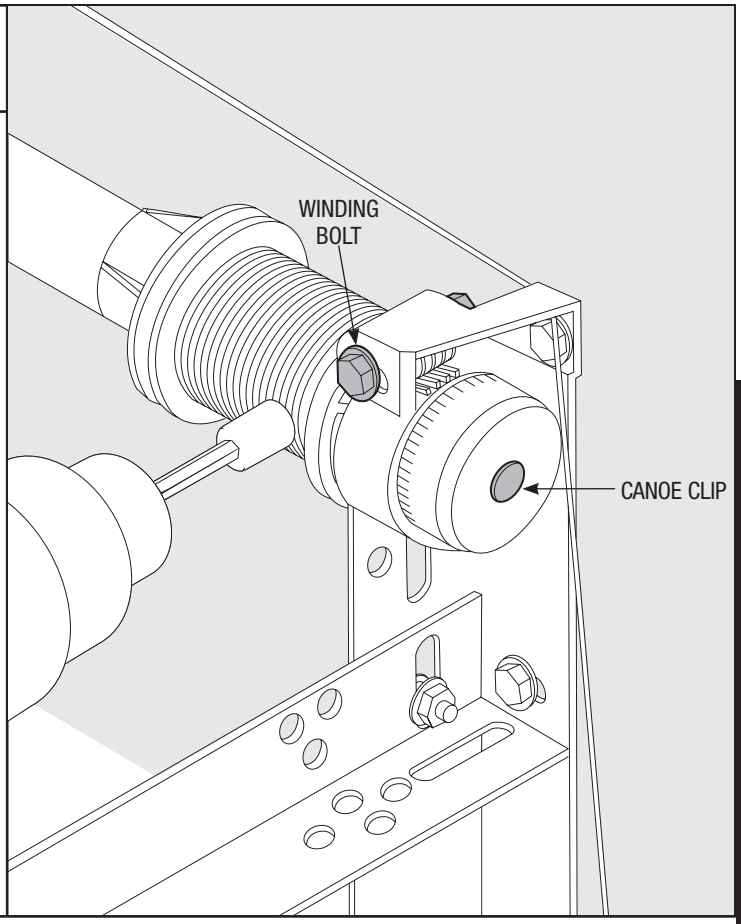
Beginning with the right hand side, ensure the cable is in the first groove of the cable drum. Apply light pressure to the canoe clip on counter cover while winding springs.

Using a power drill (high torque/gear reduced to 1300 RPM preferred) with a 7/16" socket, carefully rotate right hand winding bolt clockwise, until counter shows 2-3 turns.

This will keep the counterbalance cable taut while adjusting the left hand side counterbalance cable. Adjust left hand counterbalance cable tension. (refer to Step 30)

NOTE: Single spring applications require no spring winding on left hand side, but need cable tension adjusted.

NOTE: Ensure counterbalance cable tension is equal for both sides prior to fully winding spring(s) to appropriate number of turns. If cable tension is unequal refer to Step 30.



32

Setting Spring Tension

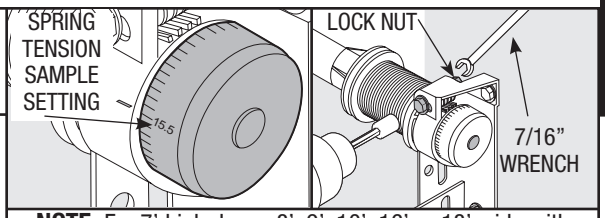
Tools Needed:

Power Drill

7/16" Socket Driver

7/16" Wrench

NOTE: Apply light pressure to the canoe clip on the counter cover while winding spring(s).
See the **Spring Turn** chart.
For **SINGLE SPRING** applications, return to the right hand side and carefully rotate the winding bolt head clockwise until the counter shows the correct number of turns for your door.
For **DOUBLE SPRING** applications, remain on the left hand side and carefully rotate the winding bolt head clockwise until the counter shows the correct number of turns for your door. Then return to the right hand side and wind the right hand spring to the required number of turns.
IMPORTANT: DO NOT OVERWIND.
After spring is wound, hold the lock nut (in back of end bracket) stationary on the right hand side with a 7/16" wrench while rotating the winding bolt clockwise until snug. Tightening of the lock nut prevents spring from unwinding. Repeat for opposite side for double spring TorqueMaster® systems.
IMPORTANT: CAUTIOUSLY REMOVE VICE CLAMPS FROM VERTICAL TRACKS. ADJUSTMENTS TO THE RECOMMENDED NUMBER OF TURNS MAY BE REQUIRED. AFTER REAR SUPPORT ASSEMBLY IS COMPLETE (STEP 34), CHECK DOOR BALANCE. IF DOOR RAISES OFF FLOOR UNDER SPRING TENSION ALONE, REDUCE SPRING TENSION UNTIL DOOR RESTS ON THE FLOOR. IF THE DOOR IS HARD TO RAISE OR DRIFTS DOWN ON ITS OWN, ADD SPRING TENSION. AN UNBALANCED DOOR SUCH AS THIS CAN CAUSE IDRIVE® OPERATION PROBLEMS.



NOTE: For 7' high doors, 8', 9', 10', 16' or 18' wide with windows, the recommended number of spring turns is 15.

RECOMMENDED SPRING TURNS

Door Height	*i*drive® Operated Doors 11'-11" Wide or Less	Manually Operated Door, and *i*drive® Operated Doors 12' Wide or Greater
6'-0"	13-1/2	14
6'-3"	14	14-1/2
6'-5"	14-1/2	15
6'-6"	14-1/2	15
6'-8"	15	15-1/2
6'-9"	15	15-1/2
7'-0"	15-1/2	16
7'-3"	16	16-1/2
7'-6"	16-1/2	17
7'-9"	17	17-1/2
8'-0"	17-1/2	18