



# INSTALLATION INSTRUCTION FOR: TORSION SPRING COUNTERBALANCE ASSEMBLY FOR RESIDENTIAL SECTIONAL DOORS


## ⚠WARNING

Garage doors are large, heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depend on you reading the information in this manual. If you have questions or do not understand the information presented, call your nearest service representative.

In this Section and those that follow, the words **Danger**, **Warning**, and **Caution** are used to emphasize important safety information. The word:

- DANGER** means that severe injury or death will result from failure to follow instructions.
- WARNING** means that severe injury or death can result from failure to follow instructions.
- CAUTION** means that property damage or injury can result from failure to follow instructions.

The word **NOTE** is used to indicate important steps to be followed or important considerations.

POTENTIAL HAZARD	EFFECT	PREVENTION
  <b>HIGH SPRING TENSION</b>	<b>WARNING:</b> Can Cause Serious Injury or Death	<p><b>Do Not</b> try to remove, repair or adjust springs or anything to which door spring parts are fastened, such as, wood blocks, steel brackets, cables or other like items.</p> <p>Installations, repairs and adjustments must be done by a trained technician using proper tools and instructions.</p>

## SAFETY INSTRUCTIONS

1. Read understand, and follow instructions.
2. Wear safety goggles.
3. Use only specified winding bars. **DO NOT SUBSTITUTE** with screwdrivers, pipe, etc.
4. Sound footing is required.
5. **DO NOT** remove winding bar until second bar is in place.

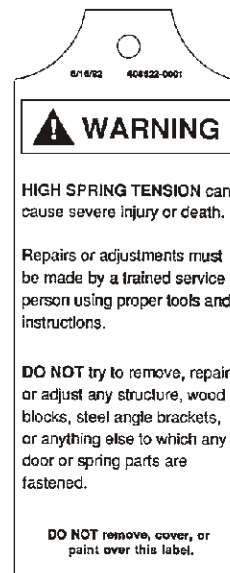
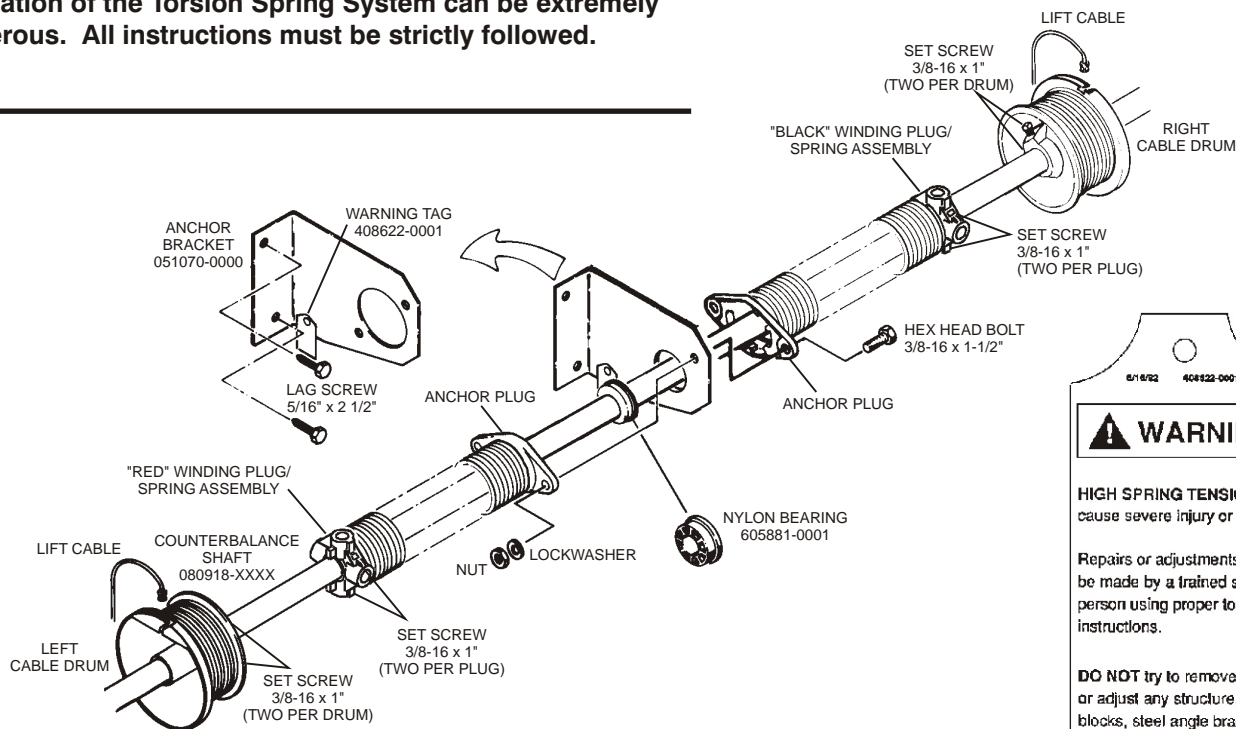
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# TORSION SPRING INSTRUCTIONS

## ⚠ WARNING

Installation of the Torsion Spring System can be extremely dangerous. All instructions must be strictly followed.



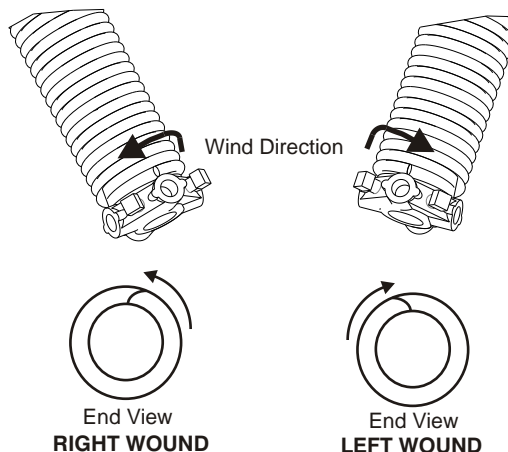
- ✎ The drawing above shows all components required to install single and dual torsion springs. Use only those parts supplied with your door.
- ✎ Follow the step sequence below for assembly, installation and adjustment.

### Step 1. Torsion Spring Pre-assembly

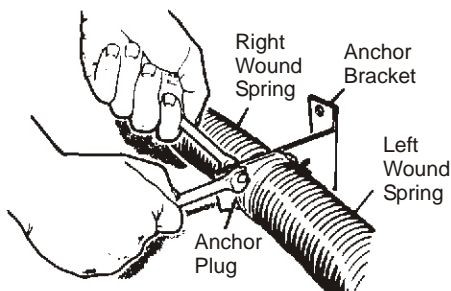
A. Secure anchor plug(s) to anchor bracket.

**NOTE:**

- **SINGLE TORSION SPRING:** If spring is “Left” wound it should be located on the right side of the anchor bracket. If spring is “Right” wound it should be located on the left side of the anchor bracket. See Figure A To determine if you have a right wound or left wound spring.
- **DUAL TORSION SPRING:** “Left” wound spring on right side of bracket and “Right” wound spring on left side.



**Figure A**



# TORSION SPRING INSTRUCTIONS

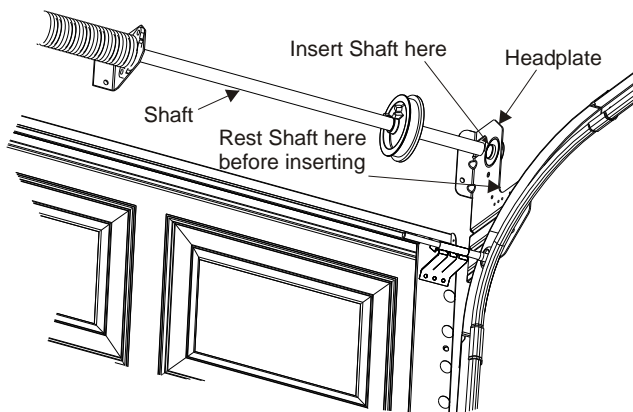
## Step 2. Installing Torsion Shaft

- Slide torsion spring assembly onto counterbalance shaft.
- Install cable drums on shaft. Make sure left and right drums are on correct ends.

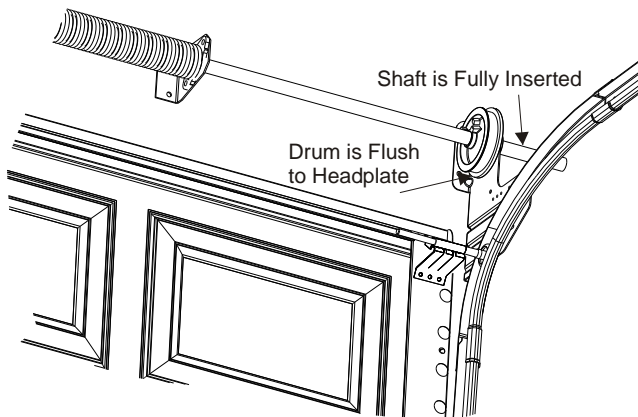
**NOTE:** Drums are marked "R" for right and "L" for left.

- Do not** secure setscrews at this time.
- Lay counterbalance shaft assembly on the top edge of the headplate, then insert one end thru the headplate with largest amount of sideroom.

**CAUTION:** Do not insert shaft far enough to pull opposite end off its horizontal angle. Go to opposite end and insert shaft thru remaining headplate. For double wide doors two people are recommended.



**Figure B-1**



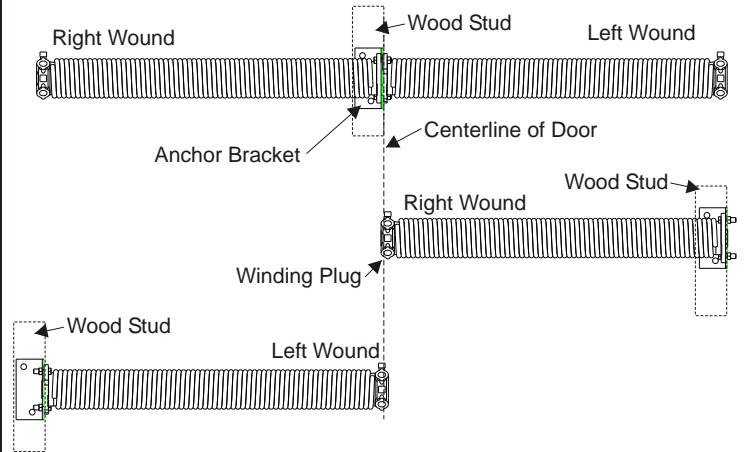
**Figure B-2**

## Step 3. Anchor Bracket Installation

- Raise anchor bracket up to header until counterbalance shaft is level or slightly above.

**NOTE:** Anchor bracket must be mounted so that center of shaft does not sag below level.

- SINGLE SPRINGS** - Locate winding plug near centerline of door.
- DUAL SPRINGS** - Locate anchor bracket near centerline of door.



**Figure C**

- Secure anchor bracket to stud using 5/16 x 2-1/2" screws in 3/16" pilot holes.

## ⚠ WARNING

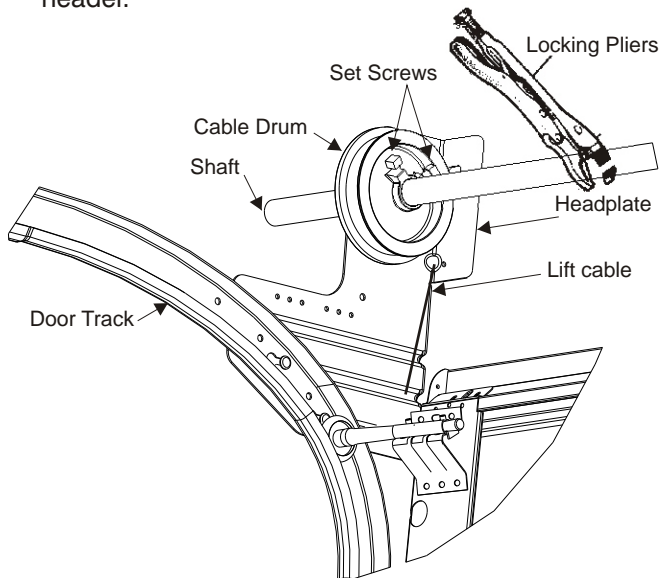
Anchor brackets will be under high spring tension and must be securely fastened to a structurally sound wood member or the bracket can break loose and cause severe personal injury.

Anchor into wood stud or structurally sound member. For wood studs on top of masonry or steel jambs, use 1-3/4" lags.

# TORSION SPRING INSTRUCTIONS

## Step 4. Cable Attachment - Left Side

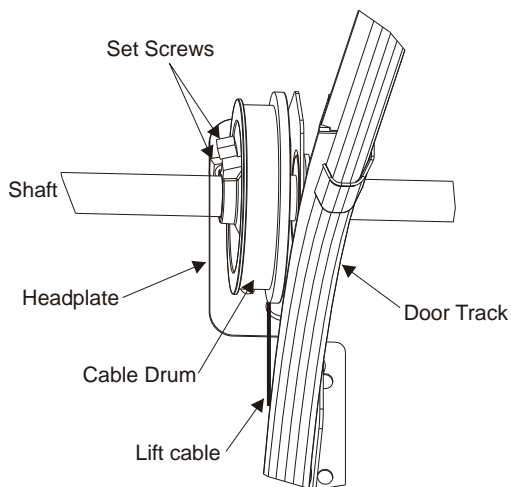
- A. Route left side lift cable up to cable drum and insert into cable slot.
- B. Wind lift cable onto cable drum until all slack is removed.
- C. Position left cable drum against left headplate.
- D. Tighten set screws on drum into shaft and install locking pliers on shaft with handles against ceiling or header to prohibit shaft from rotating toward the header.



**Figure D**

## Step 5. Cable Attachment - Right Side

- A. Route right side lift cable up to cable drum and insert into cable slot.
- B. Wind lift cable onto cable drum until all slack is removed.
- C. Position right cable drum against right headplate.
- D. Tighten set screws on drum into shaft.



**Figure E**

## Step 6.

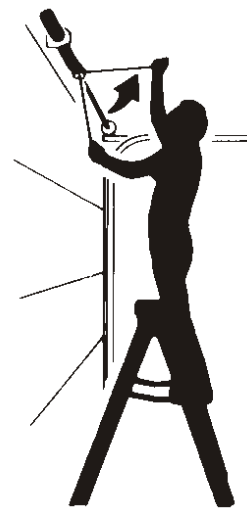
- A. Check the following before attempting to wind torsion springs:
  - Fasteners secure on bottom fixtures.
  - Lift cables secure at bottom fixtures.
  - Lift cables routed unobstructed to cable drums.
  - Lift cables correctly installed and wound onto cable drums.
  - Lift cables are taut.
  - Cable drums are against headplates and setscrews are tight.
  - Torsion spring(s) are installed correctly.

## **WARNING**

Winding torsion springs is an **EXTREMELY DANGEROUS** procedure and should be performed by a trained technician or a mechanically experienced person using proper tools and following these instructions.

Should you elect to perform this procedure:

1. Read winding instructions thoroughly.
2. Make sure you understand the procedure.
3. Follow the instructions carefully.
4. Wear safety glasses.
5. Use only specified winding bars. **DO NOT SUBSTITUTE** with screwdrivers, pipe, etc. Other tools may fail and cause serious personal injury.
6. Door must be closed when winding or making any adjustments to torsion spring(s).
7. Sound footing is required. Before attempting to wind torsion spring(s) make sure stepladder is sturdy and positioned correctly.

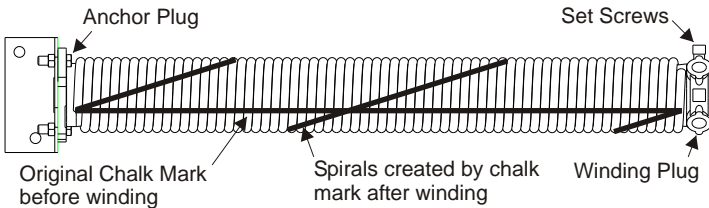


**NOTE:** Clamp locking pliers to flat portion of door track just above door. This will prevent the door from rising quickly once torsion spring winding is complete.

# TORSION SPRING INSTRUCTIONS

## Step 7.

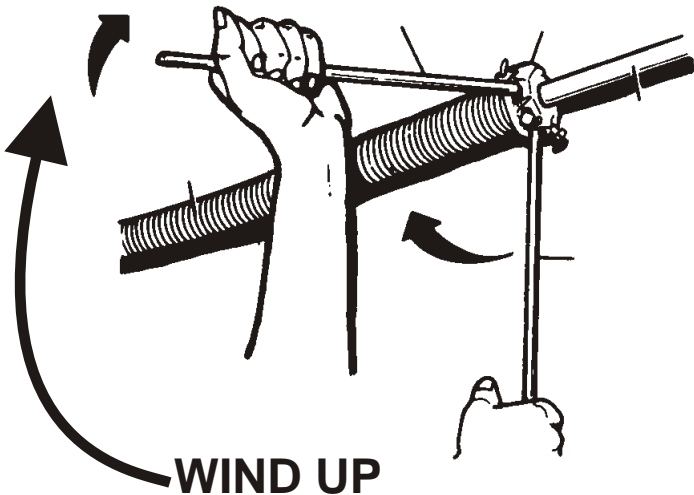
- A. Draw a chalk line horizontally along the center of the spring coil. As spring is wound, chalk mark will create a spiral. These can be counted to determine the number of turns on the spring.



**Figure F**

## Step 8.

- A. Insert winding bar into winding plug and rotate plug 1/4 turn upward.  
B. Insert second winding bar into plug, take up torque load and remove first winding bar.



**Figure G**

## **▲WARNING**

**DO NOT** remove a winding bar from winding plug until a second bar has been fully seated in plug and torque load has been assumed.

- C. Continue winding torsion spring until spring is wound the required number of turns.

6 Foot high doors - 7-1/8 turns  
7 Foot high doors - 8-1/4 turns  
8 Foot high doors - 9-1/8 turns

## Step 9.

- A. After winding spring, keep winding bar fully seated in plug.  
B. Secure winding plug setscrews and remove winding bar.  
C. Remove locking pliers from counterbalance shaft.  
D. If dual torsion springs are used, wind remaining spring the same as first.  
E. Remove locking pliers from door track.