

Torsion Spring Installation Instructions

Amana Doors Wood Garage Doors

These installation instructions are only intended for Amana Doors certified installers.

STEP 1 — Things to Know Before You Begin

- Read the instructions completely before starting the installation of the door. Becoming familiar with the components before assembling the door will reduce the installation time.
- Be sure all hardware components for your new door are included before removing existing door (see pages 8, 9). If your door is missing any parts, call the toll-free Consumer Services number listed on the front of this manual.
- Allow enough time to do the work; removing an existing door will take approximately 1–3 hours.
- An assistant may be required for lifting the unsprung door. It can weigh from 100 to 500 pounds.
- A typical installation takes from 9–12 hours to complete.
- Keep in mind when planning the installation that the garage will be open and unsecured when disassembling the old and assembling the new door.
- If the garage door is the only opening in the structure make sure everything you need is inside. You will have no way of leaving the garage until the track is assembled and installed. This will take approximately 5 hours.
- To avoid damage to the door, you must reinforce the top section of the door in order to provide a strengthened mounting point for the attachment of an automatic opener.
- To avoid installation problems that could result in personal injury or property damage, never reuse old track or hardware.
- Doors installed in high wind load regions may require additional reinforcement beyond what is detailed in these instructions. Please refer to supplemental instructions for these areas.
- **Express warranties** apply only to doors installed using original, factory-supplied sections, parts, and hardware installed in strict accordance with these instructions.
- Track installations must use sway braces on the rear track hangers to prevent sideways movement. If the tracks are not firmly stabilized they might spread, allowing the door to fall and cause severe injury and damage.

NOTICE

Failure to comply with these instructions invalidates the warranty. Before you begin the installation, read all of the instructions thoroughly.

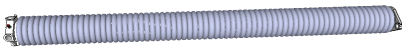
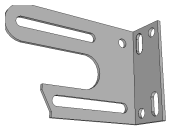
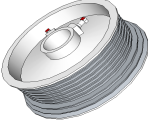

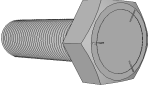
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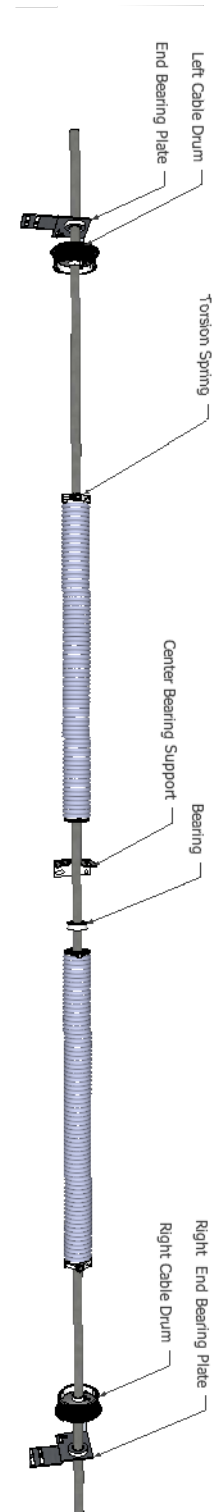
High spring tension can cause serious injury or death. Do not attempt to remove, repair, or adjust any springs, any red-colored fasteners, or the hardware to which the red-colored fasteners are attached.

STEP 2 — READ THIS SAFETY INFORMATION — IMPORTANT!

- Springs, cables, and bottom fixtures are under strong spring tension. **Do not attempt to loosen any fasteners on these components.** You could suddenly release spring forces and risk severe injury.
- If the garage door and/or any of the supporting tracks are damaged, operating the door could be hazardous. Call an authorized representative of the manufacturer or professional door repair service promptly.
- If repairs are ever required to your door, safety and trouble-free operation is best assured by using original replacement parts.
- Once you have completed the installation of your new garage door, please be sure that your garage complies with all applicable ventilation requirements before you enclose any vehicles in the garage. Good ventilation avoids fire and health hazards caused by fumes accumulating within a well-sealed garage.

Table 2: Torsion Components

Description	Single car 2.4m – 3.0mW	Double car 3.6m – 5.4mW
TORSION SPRING 	②	②
END BEARING PLATE 	②	②
TORSION TUBE 	①	①
CENTER BEARING PLATE 	①	①
CABLE DRUMS 	②	②
CENTER BEARING 	①	①
3/8"-16 X 3/4" CARRIAGE BOLT 	④	④
TORSION CABLES 	②	②
3/8" x 1" HEX HEAD BOLT 	②	②
3/8" x 1-5/8" HEX HEAD BOLT 	②	②
3/8" FLANGE NUT 	⑥	⑥



Torsion Spring Assembly

Safety Information

⚠ WARNING

Torsion springs can be very dangerous if they are improperly installed or mishandled. Do not attempt to install them yourself

The black winding cone torsion springs with "LW" are used on the right side of the door and red winding cone torsion springs with "RW" are used on the left side of the door when viewing the door from the inside looking out. Failure to install the torsion springs on the correct side will cause your door to function improperly and could result in serious injury.

NOTE: If you have low headroom, these instructions DO NOT APPLY. Consult supplemental low headroom instructions.)

Step 4-1 Lock the door in the down position securely using door lock or locking pliers. This must be done to prevent the door from prematurely opening which could cause an injury.

NOTE: You need an assistant in Step 4. If your garage has only one entrance, be sure you, the assistant, and the tools you need are inside before you lock the door. Your door will have either one or two torsion springs. Each torsion spring consists of spring coils, a stationary cone, and a winding cone. Some springs will have the wire diameter, spring diameter, spring length, and direction of wind stenciled on the coils and the winding cone is color-coded separately, either red or black. The color on the winding cone is to help identify on which side of the door the spring is to be used.

Step 4-2 Slip the torsion springs onto the spring tube, the **red** winding cone torsion spring marked with "RW" on the **left** end, the nylon center bearing, center bearing plate, and the **black** winding cone torsion spring marked with "LW" on the **right** end (Fig 4-A). Cable drums go on next, the **red** drum on the left, **black** drum on the right. The set screws on the drums face the spring

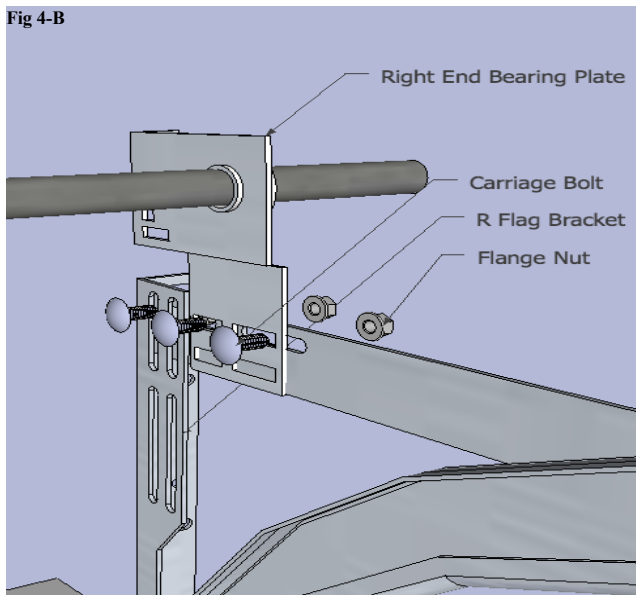
Step 4-3 Bend and break apart end bearing plates by hand at tabs. Fasten the bottom of the end bearing plate to the horizontal angle with (2) 3/8" carriage bolts and flange nuts. The bottom of the end bearing plate is identified by two parallel rows of two slots. Please make sure to use the upper two slots for 15" radius horizontal track. When properly mounted the torsion tube is level and straight (Fig 4-B).

Before installing any lag screws, it is important to drill 3/16" pilot holes where the lag screws are to be attached. Fasten the wall flange on the end bearing plate to the wood jamb with (1) 5/16" x 1-5/8" long lag screw. Drill 3/16" pilot holes where lag screws are to be installed. On 12" radius horizontal track, each end bearing plate should also be attached with 3/8" x 3/4" carriage bolts and 3/8" nuts .

Step 4-4 With an assistant, lift the complete torsion spring tube assembly and slide the ends of the tube into the bearing on the end bearing plates. With the tube level, mount the center bearing plate to the center anchor pad using (2) 5/16" x 1-5/8" long lag, red-coated screws.

NOTE: Red-headed fasteners must be installed for the attachment of center bearing plate to indicate this part will be under extreme tension once spring is wound.

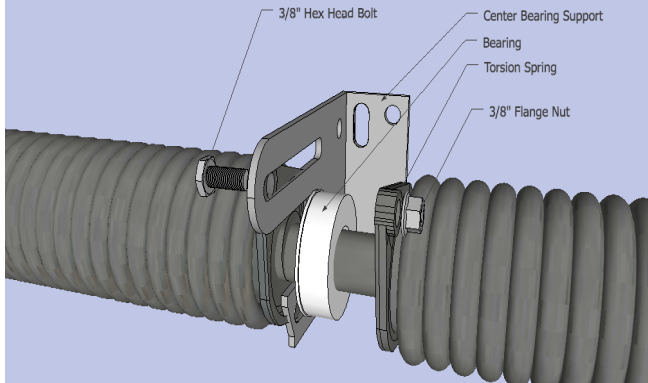
Before mounting the center bearing plate, drill (2) 3/16" pilot holes for the lag screws. These pilot holes must be no closer than 1-1/2" from the sides and ends of the wood anchor pad. The center bearing plate resists the considerable counter torque of the springs. This wood anchor pad must be installed to the frame of the garage as stated in **Step 1**. (Fig 4-C)



⚠ WARNING

It is important that the torsion spring assembly be firmly and securely attached to the frame of the garage.

Fig 4-C



The stenciled description can be used as a straight line to indicate the number of turns on the spring(s). If there is no straight line present, make one with a piece of chalk. After inserting the two winding bars all the way into the winding cone, wind the springs 1/4 turn at a time in an upward direction as shown in Fig 4A. The tail of the torsion spring coil points in the direction that the spring is wound.

⚠ WARNING

NEVER use screwdrivers or other substitutes for winding bars! Stand to the side of bars. Be sure to insert the bars all the way into the hole.

Secure each spring with the set screws on the winding cone. (Caution: Set screws should be turned from 3/4 to one full

turn after they have made contact with the tube.) On doors with two torsion springs, each torsion spring should be wound the same number of turns. Remove the locking pliers.

Step 4 7 Unlock the door, slowly raise the door and prop it about halfway open.

This is the first time the new door is being opened. If the tracks are not correctly aligned or the back hangers are not strong enough, the door may fall. Proceed slowly and carefully.

Check to be sure the horizontal tracks are parallel with each side of the door. Make sure all the lag screws are securely fastened. With the door about halfway open, make sure the rollers do not come out of the top fixtures more than about 1/2 inch. If adjustment of the rear track hanger is necessary, the door must be locked in the closed position because the weight of the door is supported by the rear hangers.

NOTE: If the torsion springs do not increase in tension as the 1/4 turns are added to the springs, then you probably have the torsion springs reversed. (See **Step 2.**)

Step 4-8

To adjust torsion spring tension, the door is locked in the down position. With locking pliers clamped on the torsion tube, winding bars are used to wind the springs tighter to increase tension. Tension is reduced by removing turns. When two springs are used, both sides should be adjusted the same. Adjustments should be made in 1/4 turn increments.

NEVER adjust center bearing plate or red-headed fasteners after springs are wound. Be prepared to handle a strong force when reducing tension on a torsion spring. Use winding bars only, and stand to the side

Fig 4-A

