Extension Spring Cable Set

INSTALLATION PROCEDURES

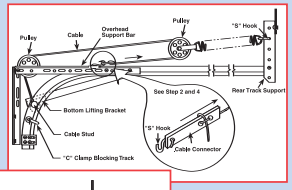
STEP 1: If you have an electric operator, disconnect power supply and moving arm so you can operate manually. **Open door fully and block bottom roller in the track with a "C" clamp or a pair of locking pliers.** Do not replace more than one cable at a time.

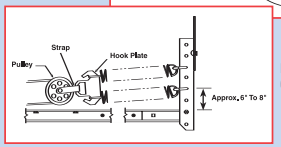
STEP 2: Pry open the "S" hook that is attached to the overhead support bar and pull the cable forward; disconnect the "S" hook; release the tension and let the spring hang down. Remove the loop end of the cable from the cable stud on door bottom and remove old cable.

STEP 3: Install the new cable by hooking loop end over cable stud and thread over pulleys as in drawing. ***(If your door is different, then thread cable according to opposite side).***

STEP 4: Attach "S" hook to cable connector and thread cable through holes in connector. ***(See drawing).*** Cable should have same tension as opposite cable. If necessary re-adjust cable position in connector until tension is identical. Once tension is equal, close end of "S" hook with pliers; remove clamp and check door operation.

Single Spring Configuration





Double Spring Configuration

Safety Cable Kit for Spring Containment

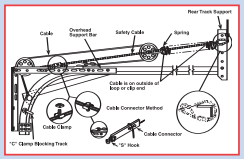
INSTALLATION PROCEDURES

STEP 1: Open door fully and block bottom roller in the track with a "C" clamp or a pair of locking pliers.

STEP 2: Attach the safety cable to the rear track support bar just above the upper spring. Thread the plain end around the support bar; through the looped end; then through the spring ***(see drawing).*** Be sure cable is run on same side as loops.

STEP 3: Run the safety cable along the outside of the pulley ***(away from door)*** and install through the forward most hole on the overhead support bar. Install the cable clamp and alternately tighten nuts until secure. Cable does not have to be tight.

STEP 4: There must be enough room for the spring pulley to ride completely forward when door is closed. Close the door after removing track clamp to be sure the safety cable does not bind. If necessary, loosen the safety cable or reposition in order ot avoid binding. Operate door several times to be sure of proper cable placement.



Note: The safety cable can be installed so that is is either on the inside or outside of the spring pulley. It can also be secured to an "L" bracket on the wood framing above the door track structure. ***("L" bracket not included).***

Pulley with Strap & Bolt

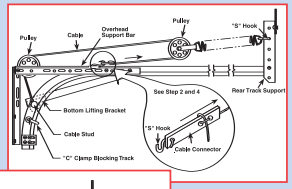
INSTALLATION PROCEDURES

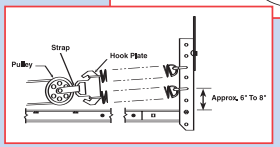
STEP 1: If you have an electric operator, disconnect power supply and moving arm so you can operate it manually. Open door fully and block the bottom roller in the track with a "C" clamp or a pair of locking pliers. Do not replace more than one pulley at a time.

STEP 2: Pry open the "S" hook attached to the overhead support bar and pull the cable forward to create slack in the cable. Disconnect the "S" hook. Release the tension and let the spring hang down.

STEP 3: Remove the nut holding the pulley to the strap or to the upper support bar. Slip the old pulley out and install the new pulley in the same location, be sure the new pulley is the same size as the old. Tighten nut securely. Install the cable as before and attach the "S" hook in the same location. Both cables must have equal tension.

Single Spring Configuration





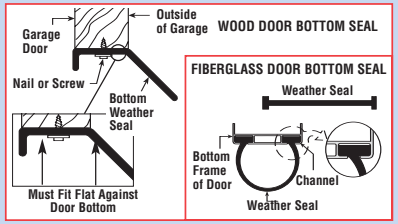
Double Spring Configuration

Door Bottom Seal

INSTALLATION PROCEDURES

STEP 1: Wood Door Bottom Seal. Open door fully and block roller in track with a "C" clamp or a pair of locking pliers. Remove old weather-strip and old nails or screws. Begin installing new rubber at one end; overlap 1/2" to 3/4" from edge of door. Install first nail or screw; align next section on door bottom and install second fastener approximately 6" to 8" over; do not over stretch rubber, pull snugly from last attaching point. Cut off some excess after all fasteners are installed.

STEP 2: Fiberglass Door Bottom Seal. Open door fully and block roller in track with a "C" clamp or a pair of locking pliers. Remove old rubber by pulling out of channel. Begin installing new rubber by feeding rubber into slots (see drawing). Rubber will have to be pulled down in short sections, feeding as you go, until fully installed. **Do not cut excess at this time**. Wait one day for rubber to stop shrinking, then re-adjust position of rubber one more time to insure full coverage. Then cut some excess off each end.



Door Roller

INSTALLATION PROCEDURES

IMPORTANT! If your door is equipped with a torsion spring coiled around a tube or shaft above the door opening; **do not attempt to replace the bottom roller**, as it would require releasing tension on the spring. Call a professional door service firm. Refer to manufacturer's specifications whenever possible. Read directions completely before starting repair job. Replace only one roller at a time.

BOTTOM ROLLER REPLACEMENT ON EXTENSION SPRING DOOR:

STEP 1: If you have an electric operator, disconnect power supply and moving arm so you can operate manually. **Open door fully and block the bottom roller in the track with a "C" clamp or a pair of locking pliers.** Do not block the roller you intend to replace.

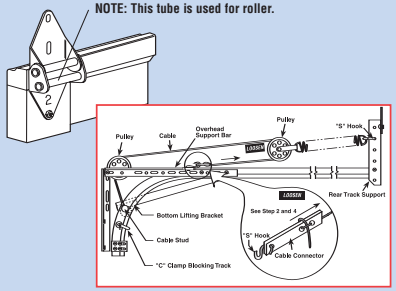
STEP 2: Pry open the "S" hook that is attached to the overhead support bar and pull the cable forward; disconnect the "S" hook; release the tension and let the spring hang down. Remove the loop end of the cable from the cable stud on door bottom. Remove bolts attaching bracket to door and slip roller out of track. Install new roller onto bracket, slip into track and install bolts; tighten securely. Reconnect cable to bottom bracket, pulleys and "S" hook. Cable must have same tension as opposite side.

UPPER ROLLER REPLACEMENT - ALL DOORS

STEP 1: Close and lock the door securely.

STEP 2: Remove the bolts on the hinge containing the faulty roller and slip the roller out of the track. Install new roller into outer hinge tube.

STEP 3: Slip roller into track and position hinge over old hole. Install bolts and tighten securely. Test for proper operation.



Hinges

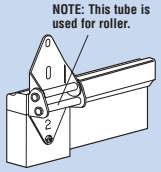
INSTALLATION PROCEDURES

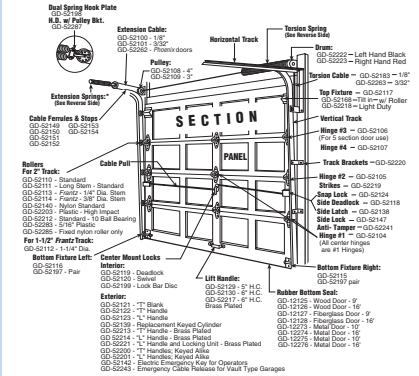
STEP 1: Close and lock door securely in place. Do not replace more than one hinge or roller at a time.

STEP 2: Remove the bolts that attach the hinge to the door frame. Slide the hinge off of the roller and slip roller out of track.

STEP 3: Insert roller into outer tube of new hinge; be sure number on hinge bracket is upright. **(See drawing).**

STEP 4: Slip roller into track and position hinge over old hole. Install carriage bolts and tighten nuts securely. Check to see that door operates properly.





IMPORTANT SAFETY PRECAUCIONS:

1. If door is equipped with electric operator, disconnect power supply and lifting arm connecting door to operator, so you can operate door by hand.
2. Do not replace any of the following parts, **unless door is fully open,** extension spring pulley, extension cables, bottom hangers, and bottom rollers only.
3. Do not replace any of the following parts, **unless door is fully closed and locked,** hinges (one at a time only), rollers, and top hangers.
4. **CAUTION:** *Garage door springs can cause serious injury if not handled and installed properly.* **If your door has a torsion spring (coiled around a tube or shaft above the garage door opening), do not attempt to replace, adjust or relieve tension on spring, cable or drum. Also, do not remove or loosen any bolts attaching bottom brackets, bearing plates or endplates. CALL A PROFESSIONAL DOOR SERVICE FIRM.**
5. Do not remove or replace more than one hinge, top fixture cable, or roller at a time.
6. Do not raise the door unless all the hinges, top fixture cable, and rollers are installed.
7. Never adjust extension springs unless door is fully open and securely locked into position.
8. Lubricate moving parts; including cable with a lightweight oil twice a year; do not use grease. Apply a coat of paraffin wax to the stop molding.

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Sectional Garage Door

Maintenance & Repair Guide


Pulleys


Rollers


Cables


Handles


Hinges

5-STEP PREVENTIVE MAINTENANCE GUIDE

STEP 1: Inspect Components

Close door & disconnect automatic opener arm *(if applicable)*. Inspect each hinge and roller assembly on both sides beginning at bottom and working up. Push and pull on each assembly in order to spot worn-out rollers, hinges or cables. Replace all worn or defective parts. Spray all moving parts with **Garage Door Lubricant, no. GD-12208.** Repeat procedure for all center hinges and cable pulleys. Tighten all nuts and bolts as you go.

Two Most Common Problems

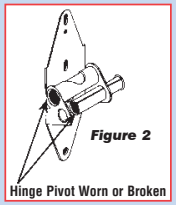


Figure 2

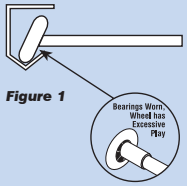


Figure 1

STEP 2: Check Tension And Balance

Door should still be closed and disconnected from door opener. Manually open door from inside. Door should operate freely and should maintain a fixed position, when stopped, at any location in the travel span ***(the exception to this is the first and last 12" of travel)***. Your door is properly balanced if it will stop in this "Free Stop Zone".

Potential Problems & How To Resolve Them

***PROBLEM:* Too Much Spring Tension**
Door tends to lurch upwards or will not stop in the "Free Stop Zone" when being raised.

RESOLUTION:
Open door to it's fully open position. Block track below the bottom roller with a "C" clamp or channel lock pliers.

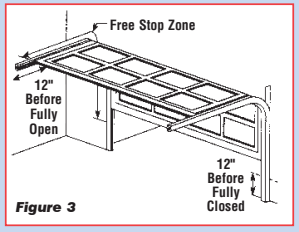


Figure 3

Remove track "S" hook and mark the hole with a felt-tip pen or piece of tape. Loosen cable on cable connector and feed approximately 1" - 2" of cable toward spring to reduce spring tension. Re-tighten connector. Replace cable hook into previously marked hole in track. Measure the "A" dimension *(in illustration below)* and adjust opposite side so that both sides are alike. Test door to see if it performs as indicated in **Step 2.**

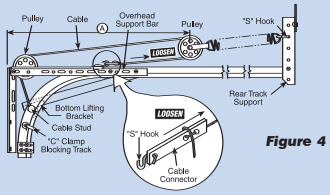


Figure 4

***PROBLEM:* Too Little Spring Tension**
Door tends to fall downward or will not stop in the "Free Stop Zone" on being closed.

RESOLUTION:
Open door and block rollers as previously indicated. Remove track cable hook and mark the hole as noted above. Loosen cable on cable connector, feed cable thru the connector away from the spring *(moving cable connector closer to the spring 1" to 2")*. Re-tighten connector. Replace "S" hook into same hole in track as before. Adjust opposite side in same manner and check dimension "A" *(center of pulley to inside face of door)*. Both sides should be the same.

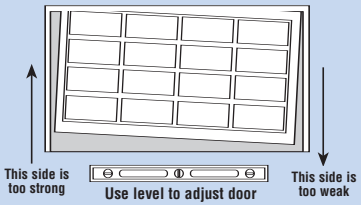
***PROBLEM:* Door Misalignment**

Door becomes cocked or crooked. (Spring tension is not properly balanced).

RESOLUTION:
Adjust spring tension on side where door is lowest. Check measurement "A" on the opposite side and make necessary adjustment to weak side cable as previously noted. Now check door level in a partially open position. If door continues to bind your springs are mismatched. This can be caused by metal fatigue. Replace ALL EXTENSION SPRINGS in order to balance tension and to maintain equal performance characteristics.

NOTE: *Prime-line Garage Door Springs are tested to 10,000 cycles and should have an average life span of about 10 years.*

Figure 5



STEP 3: Check Track Alignment

Door should remain centered between each track during operation. To check for proper centering of door; open door and draw 2 chalk lines on floor of garage using a square.

Figure 6

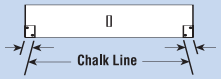
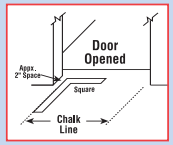


Figure 7



Close door and measure distance between chalk line and door edge. It should be the same on both sides.

STEP 4: To Adjust Closed Door Alignment

Partially loosen the bottom track bracket bolt and gently tap inward *(towards door)* with a hammer until snug. Adjust opposite side in same manner. Check chalk line measurement again for center position. ***NOTE:*** *Track should always slant inward at bottom.*

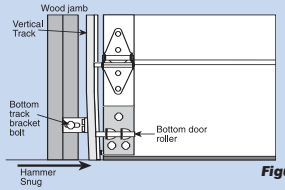


Figure 8

STEP 5: Check Open Position Alignment

Open door and block the track below bottom roller, with "C" clamp or channel lock pliers as in (fig. 4). Stand back and observe spacing between track edge and door all along track. If track is spread out at end; then slightly loosen the related support bracket bolts and hammer into parallel alignment.

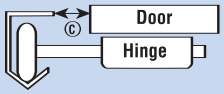


Figure 9

Measurement distance "C" between track and door; is usually between 1-1/2" to 2-1/2." This should be the same on each side and at any point along door track, except bottom (fig. 8). Make all necessary adjustments to obtain consistent spacing along door path.

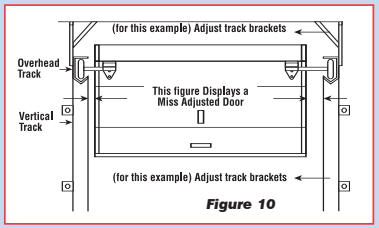


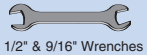
Figure 10

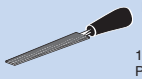
Sectional Garage Door *TORSION SPRING* Installation Instructions

***IMPORTANT:* Please read all of the following instructions thoroughly. This replacement project is difficult. It is necessary to comply with the step by step procedures for safe installation.**

TOOLS REQUIRED:


Vise Grip


3/8", 7/16", 1/2" & 9/16" Wrenches


Flat File


1/2" x 16" Winding Rods
Part Number: GD-52238*

*** This product is specifically designed to unwind & wind torsion springs. It is important that you DO NOT ATTEMPT removal or adjustment of torsion springs with any tool other than the GD-52238. Failure to do so may result in personal injury or property damage. GD-52238 winding rods are 1/2" in diameter by 16" long. Do not use on winding cones larger than 33/64" in diameter.**

SPRING IDENTIFICATION:
Please see the illustrations under **Spring Selection Guide** to assure that the proper replacement spring has been selected and, in the case of dual spring installations, proper use of LEFT WIND & RIGHT WIND SPRINGS is imperative. ***When dual spring installations are involved, it is important to replace both springs.***

REPLACEMENT PROCEDURES:
To remove the defective torsion spring; close door and manually lock. Disconnect automatic opener arm (if applicable). If dual springs are involved, ***always start with the undamaged spring first!*** The first step is to release (unwind) the tension on the good spring. Do not attempt replacement until this step has been completed. Locate a ladder to one side of the winding cone side of the spring. Do not locate ladder directly in front of this winding cone. Place one of the winding rods (GD-52238) firmly in a plug hole located on the winding cone (see figure 1). Loosen one set screw slowly while holding rod until downward pressure is felt, then slowly loosen the second set screw. Resist full downward pressure and ease rod down, resting it against the door. Insert second rod into next plug hole and lift gently, allowing removal of first rod. Ease second rod down and rest it against door. Continue this process until all spring pressure on rod has been released. Cable should be in a relaxed position and shaft should rotate freely.

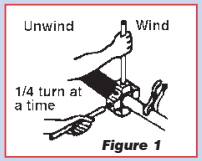


Figure 1

Loosen set screws on drum of broken spring and slide toward the inside, away from bearing plate. Check shaft for burrs left there by the set screws (file down as necessary to allow removal of drum and spring). Remove bolts holding spring to center mount. Slide drum and spring off end of shaft.

INSTALLING REPLACEMENT SPRINGS:
Check carefully to insure that the correctly wound spring (left or right hand) is being used on the appropriate side. Slide replacement spring (anchor cone first) toward the center of door. Slide drum onto shaft with set screws facing center of door. Slide bearing plate onto shaft and bolt into place. Do not set drum at this time. If two springs are being replaced, repeat this procedure. Remember, when replacing a single or double spring installation, the second drum must also be replaced. Bolt springs to center mount (see figure 2). Equal sections of the shaft should protrude from end bearings.

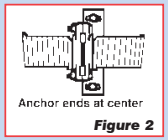


Figure 2

SETTING DRUMS:
Vise grips will be required to hold the shaft. Starting with the left side, be sure the cable stop is securely attached into the drum slot at the left hand side of drum (see figure 3). Then pull drum down until cable is taut. Tighten set screws. Attach vise grip to shaft, pressing firmly against header and clamp. Leave vise in place until springs are wound in order to insure that drum and shaft remain stationary. Repeat procedure for right drum setting. **Important:** *Both drum slots must be in exactly the same position. This will keep the cable from coming loose when door is being lifted.*

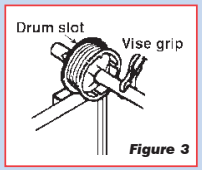


Figure 3

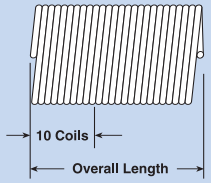
WINDING SPRINGS (APPLYING TENSION):
Once again, place a ladder to one side of the winding cone. Place a winding rod into a plug hole and lift up (figure 1). Place second rod in the hole below, lift gently and remove first rod. ***This process will need to be repeated until 29 (1/4) quarter turns have been facilitated*** (remember that each plug hole equals 1/4 turn). Tighten winding cone set screws in shaft firmly and remove rod. Tension should now be on the cables and the vise grip can be removed. This procedure will need to be repeated for the second spring.

Remove ladder, unlock and open door. Lift door and check balance; door should lift easily and stop midway in the opening. If door fails to hold this position, but continues to close, then add a 1/2 turn on either spring. If door continues to rise, then remove tension 1/2 turn.

When project is completed and all adjustments have been made, then oil springs, cables, pulleys and rollers (grease is not an acceptable lubricant in this case).

SPRING SELECTION GUIDE:
1) Right hand or left hand wind: When spring is at 12:00 and finger is pointing to the left, the spring is a right wind; if finger points to right it is a left wind. *NOTE:* Left hand springs are wound clockwise and right hand springs are wound counter clockwise. When winding springs, the rods must be lifted up. Right hand springs are mounted to left side of center and left hand springs are mounted to the right side of center (as viewed from inside the garage looking out).

2) Measuring spring: Measure 10 coils to determine the wire size (see wire chart below). Then measure total length of spring and the inside diameter. These dimensions will assist you in selecting the proper spring for your replacement project.



Wire Chart

2-1/16"	= .207
2-3/16"	= .218
2-7/16"	= .243
2-1/2"	= .250