

Torsion Springs vs. Extension Springs on your Garage Door

There are two kinds of springs when it comes to what's used on your garage or overhead door: torsion and Extension. Extension springs tend to be used on older installations.



Torsion Spring



Extension Spring

Most garage door contractors will almost always use torsion springs versus extension springs when installing a garage door.

Here are a few reasons why torsion springs are growing in popularity and why they may be a better investment:

- Torsion springs are not fully extended the way extensions springs are when the door operates. Extension springs fully expand and contract when operating an overhead door. Torsion springs turn.
- Torsion springs are sturdier and last longer. Torsion springs do cost more, but generally last between 15,000 and 20,000 cycles, whereas extension springs last up to 10,000 cycles. For example, if you open your garage door 4 times a day, extension springs will last about 7 years. You can do the math on the torsion springs. It only gets better from there.

- Torsion springs allow for a controlled motion. Extension springs can result in a jerking motion. There might be a lot of tension when you first open the door, but then once the tension is gone, the door can fly up at a much faster speed. Torsion springs keep a controlled, steady motion when the garage door opens and closes. A lasting result of the controlled motion is the ability to keep your door in proper balance. The jerking motion from the extension springs can leave your door needing adjustment. When a door is out of alignment or needs adjustment, it has a tendency to wear or even cause damage to other parts of your garage door.
- Extension springs require more parts. When you have more parts involved, more things can go wrong. For example, extension springs have sheaves and require a longer cable. Torsion springs are easy to lubricate and maintain, whereas wear and tear can take place on the additional door parts needed with extension springs.
- Use of torsion springs result in less wear on your operator. Torsion springs allow your overhead door operator to do its job without unnecessary wear or requiring more power to function when compared to extension springs. In other words, your operator doesn't have to work as hard to open and close your door because it's in better balance as a result of the more controlled motion that occurs. This can result in you experiencing fewer problems with your operator and it performing better and lasting longer for you.
- When an extension spring breaks, it can be more dangerous than when a torsion spring breaks. When you hear of an extension spring breaking, it can cause serious damage. We've heard of them flying through garage windows, car windshields, and we know they can cause serious injury and even death. When a torsion spring breaks, it doesn't fly off. You may hear a loud bang, but the spring stays on the shaft. Broken springs are serious; don't hesitate to call your garage door professional if you have questions or need assistance.

CARE & MAINTENANCE

Take a few minutes to inspect and test your complete garage door system. Make monthly inspection and testing a part of your regular routine. Safety is everyone's business. Make garage door and garage door opener safety automatic in your home. Consult owner's manuals for additional recommended maintenance for your models of door and opener.

MONTHLY MAINTENANCE CHECKLIST

Garage Door Opener Tests: Reversal Test, Force Setting Test, Additional Safety Devices

Garage Door Visual Inspection: Springs, Rollers, Pulleys, Cables and Track Lubrication, Door Balance.

GARAGE DOOR OPENER MAINTENANCE TIPS

There are routine safety and maintenance steps that you should follow once a month. Review your owner's manual for the door opener. If you don't have the owner's manual, look for the opener model number on the back of the power unit and request a manual from the manufacturer.

Garage Door Opener Reversal Test

Make sure your opener has a reversing feature. If a reversing feature is not present, it should be replaced. Garage door openers manufactured after January 1, 1993 are required by federal law to have advanced safety features which comply with the latest U.L. 325 standards. Contact your manufacturer or installer for additional information.

Test the reversing feature every month.

First, test the balance of the door (see "Testing and Maintaining The Garage Door"). If the door is properly balanced, then proceed.

With the door fully open, place a 1-1/2" thick piece of wood (a 2"x 4" laid flat) on the floor in the center of the door.

Push the transmitter or wall button to close the door. The door must reverse when it strikes the wood. (Note that the bottom part of "one piece doors" must be rigid so that the door will not close without reversing.)

If the door does not reverse, have it repaired or replaced. Have a qualified individual adjust, repair or replace the opener or door.

Garage Door Opener Force Setting Test

Test the force setting of your garage door opener by holding the bottom of the door as it closes. If the door does not reverse readily, the force may be excessive and need adjusting. See your

owner's manual for details on how to make the adjustment. Test the reversing feature after any adjustment.

Additional Safety Devices for Garage Door Openers

Many garage door openers can be equipped with additional safety devices. Consider adding a photo eye or edge sensor as an extra measure of safety to protect against entrapment. Keep in mind that adding more safety devices will not make an old opener meet the current U.L. standards.

Make sure the additional safety devices, such as photo eyes or edge sensors, are properly installed and adjusted (see owners' manual).

Never remove, adjust or loosen the screws on the bottom brackets of the door. These brackets are connected to the spring by the lift cable and are under extreme tension.

GARAGE DOOR MAINTENANCE TIPS

Perform routine maintenance steps once a month. Review your owner's manual for the garage door. If you don't have a manual, look for the model number on the back of the door, or check the lock handle, hinges, or other hardware for the manufacturer's name and request a manual from the manufacturer.

Visual Inspection

Look at the garage door springs, cables, rollers, pulleys, and other door hardware for signs of wear. If you suspect problems, have a qualified person make repairs.

Lubrication: Regularly lubricate the moving parts of the door. However, do not lubricate plastic parts such as plastic rollers and plastic idler bearings. Consult the door owner's manual for the manufacturer's recommendation.

WARNING - Springs are under high tension. Only qualified persons should adjust them.

Garage door springs, cables, brackets and other hardware attached to the springs, are under very high tension and, if handled improperly, can cause serious injury. Only a qualified professional or a mechanically experienced person carefully following the manufacturer's instructions should adjust them. The torsion springs (the springs above the door) should only be adjusted by a professional. Do not attempt to repair or adjust torsion springs yourself.

A restraining cable or other device should be installed on the extension spring (the spring along the side of the door) to help contain the spring if it breaks.

Door Balance

Periodically test the balance of your door. Start with the door closed. If you have a garage door opener, use the release mechanism so you can operate the door by hand when doing this test. You should be able to lift the door smoothly and with little resistance. It should stay open around three to four feet above the floor. If it does not, it is out of adjustment. Have it adjusted by a qualified service person.

To learn more about garage door safety, visit the [Door and Access System Manufacturers Association \(DASMA\) website.](#)