

DUAL SPRING SYSTEM

Installing the Dual Spring System

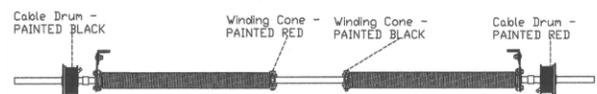
These instructions are recommended for individuals who have had previous experience winding torsion springs. If you have not worked with a torsion spring system before, we would advise you to have your local garage door company install this system. This system uses the same type of springs as a garage door, but its function is totally different.

When mounting the welding angles in the trailer, be sure they are positioned so that when the cable spool, spacers and end bearing plate are slid together, the outside edge of the cable spool is in line with the edge of the doorframe. This is very important. If the cables are allowed to rub the doorframe they could fray and the system will fail.

Standing on the **inside of the trailer looking out**, be sure that the **red coned spring** is mounted to your left. This is very important for proper operation. Dual spring systems have a red-coned and a black-coned spring so pay close attention to the colors. If the system is mounted **upside down**, the spring will grow in **diameter** when the system is wound. If the system is mounted properly, the springs should grow in **length**. You should be able to see the springs go down the tube they are mounted on as each spring is wound.

With the door in the down position, attach the cables to the anchor brackets mounted on the floor of the door by inserting the clevis pin through the anchor bracket and the round thimble of the cable and secure with the cotter pin. Insert the other end of the cable with the small round stop into the notch on the cable spool. Turn the cable spool to take up the excess cable and tighten the set screws in the spool. Attach a pair of vice grips to the tube touching the top of the doorframe to keep the tube from turning and install the other cable on the other cable spool.

You are now ready to wind the spring. Use two ½" diameter bars for this operation. A length of approximately 18" is recommended. Insert the first bar into the winding cone of the spring and pull **DOWN**. This system is designed for 10 full revolutions on the spring. It will be easier to balance the door if the spring is wound in quarter turns. After 38 quarter turns, tighten the set screws on the winding cone of the first spring. Repeat this process for the other spring. After tightening both sets of screws on both springs, remove the vice grips and raise the door to see how it is balanced. Under ideal conditions, it should easily raise with one hand. Operate the door through one complete cycle. If adjustments are needed, adjust one spring at a time by adding quarter turns or releasing quarter turns. It is not necessary to have the same amount of turns on each spring. This is one of the reasons this system will perform better than a single spring system.



Standing on the inside of the trailer looking **OUT** the Cable Drum that is **PAINTED BLACK** should be on the Left Hand side of the trailer.

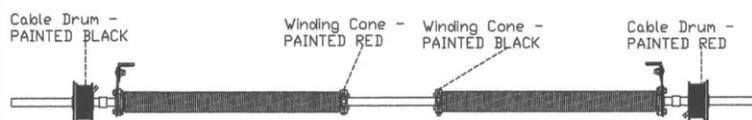
Further technical assistance can be obtained toll free by calling (888) 611-1041 Monday-Friday from 8:00 AM to 5:00 PM EST.

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Installation Notes

When mounting a spring system from M-3 a few basic rules apply to both single and double spring systems.

- 1) The spring with the black cable drum (see should always be mounted to your LEFT, standing on the inside of the trailer looking out. See Figure 1 below.
- 2) Springs should always be wound down--you should be pulling not pushing the winding bars. The door should be in the open or down position when winding the springs.
- 3) Each spring is calculated per springing weight at ten full turns per spring. The springing weight can be determined by lowering a finished door onto a freight or standard bathroom scale. Doors can vary in weight plus or minus 15 lbs from their rated weight. If you are outside these parameters, please call for a spring designed for the door you are trying to lift.
- 4) When you wind your spring it should grow in length not diameter. If the spring gets larger in diameter you are winding it backwards. This will cause permanent damage and voids any warranty.
- 5) The cables on your spring system should be mounted so that they travel down the back of the cable drum and through the door opening to the door attachment point. They should never come across the front of the cable drums. Cables should not come into contact with anything other than the cable drum (door frames, lock sets, mower decks, etc.) Cables should be regularly inspected and replaced at the first sign of fraying.
- 6) Attach a pair of vice grips to the tube to keep the unit from spinning while you attach the cables to the drums and when adjusting the tension of springs. Mount your vice grips so that they will push against the header of the trailer keeping the spring system from spinning during installation.



Standing on the inside of the trailer looking OUT the Cable Drum that is PAINTED BLACK should be on the Left Hand side of the trailer.

FIGURE 1

Further technical assistance can be obtained toll free by calling (574) 294-3988 Monday-Friday from 8:00 AM to 5:00 PM EST.