Model 8700

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DEFINITION OF LIGHT COMMERCIAL:
1. Door heights less than or equal to 8’0” (<= 8’0”) are considered Residential applications.
2. Door heights greater than 8’0” (> 8’0”) are considered Light Commercial applications.

PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE

If you need assistance, please call 1-866-569-3799 (press Option 1) and follow the prompts to contact a customer service representative. They will be happy to handle any questions that you may have.

IMPORTANT NOTICES!

To avoid possible injury, read and fully understand the enclosed instructions carefully before installing and operating the garage door. Pay close attention to all warnings and notes. After installation is complete, fasten this manual near garage door for easy reference.

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Important Safety Instructions

DEFINITION OF KEY WORDS USED IN THIS MANUAL:

**WARNING**
Indicates a potentially hazardous situation which, if not avoided, could result in severe or fatal injury.

**CAUTION**
Property damage or injury can result from failure to follow instructions.

**IMPORTANT:** Required step for safe and proper door operation.

**NOTE:** Information assuring proper installation of the door.

Read these instructions carefully before attempting installation. If in question about any of the procedures, do not perform the work. Instead, have a trained door systems technician do the installation or repairs.

1. **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**
2. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
3. It is always recommended to wear eye protection when using tools, otherwise eye injury could result.
4. Avoid installing your new door on windy days. Door could fail during the installation causing severe or fatal injury.
5. Doors 12'-0" wide and over should be installed by two persons, to avoid possible injury.
6. Operate door only when it is properly adjusted and free from obstructions.
7. If a door becomes hard to operate, inoperative or is damaged, immediately have necessary adjustments and/or repairs made by a trained door system technician using proper tools and instructions.
8. **DO NOT** stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
9. **DO NOT** place fingers or hands into open section joints when closing a door. Use lift handles/gripping points when operating door manually.
10. **DO NOT** permit children to operate garage door or door controls. Severe or fatal injury could result should the child become entrapped between the door and the floor.
11. Due to constant extreme spring tension, do not attempt any adjustment, repair or alteration to any part of the door, especially to springs, spring brackets, bottom corner brackets, fasteners, counterbalance lift cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/or opener manufacturer’s instructions.
14. Visually inspect door and hardware monthly for worn and/or broken parts. Check to ensure door operates freely.
15. Test electric opener’s safety features monthly, following opener manufacturer’s instructions.
16. **NEVER** hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.
17. This door may not meet the building code wind load requirements in your area. For your safety, you will need to check with your local building official for wind load code requirements and building permit information.

After installation is complete, fasten this manual near the garage door.

**IMPORTANT:** Stainless steel lag screws must be used when installing center bearing brackets, end brackets, jamb brackets, drawbar operator mounting/support brackets and disconnect brackets on treated lumber (preservative-treated). Stainless steel lag screws are not necessary when installing products on un-treated lumber.

**NOTE:** It is recommended that 5/16" lag screws are pilot drilled using a 3/16" drill bit, prior to fastening.

**IMPORTANT:** When installing 5/16" lag screws using an electric drill/driver, the drill/driver clutch must be set to deliver no more than 200 in-lbs of torque. Fastener failure could occur at higher settings.

Tools Required

<table>
<thead>
<tr>
<th>Power drill</th>
<th>Flat tip screwdriver</th>
<th>Step ladder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratchet wrench</td>
<td>Needle nose pliers</td>
<td>Pencil</td>
</tr>
<tr>
<td>Socket driver: 7/16&quot;</td>
<td>Locking pliers</td>
<td>Saw horses</td>
</tr>
<tr>
<td>Sockets: 7/16&quot;, 1/2&quot;, 9/16&quot;, 5/8&quot;</td>
<td>(2) Vice clamps</td>
<td>Leather gloves</td>
</tr>
<tr>
<td>Phillips head screwdriver</td>
<td>Hammer</td>
<td></td>
</tr>
<tr>
<td>Approved winding rods</td>
<td>Tape measure</td>
<td></td>
</tr>
</tbody>
</table>

Package Contents

**NOTE:** Depending on the door model, some parts listed will not be supplied if not required. Rear Back Hangs may not be included with your door.

---

**WARNING**
Prior to winding or making adjustments to the springs, ensure you’re winding in the proper direction as stated in the installation instructions. Otherwise, the spring fittings may release from spring if not wound in the proper direction and could result in severe or fatal injury.

**IMPORTANT:** Right and left hand is always determined from inside the building looking out.

**Defining Key Words**

- **WARNING**: Indicates a potentially hazardous situation which, if not avoided, could result in severe or fatal injury.
- **CAUTION**: Property damage or injury can result from failure to follow instructions.
- **IMPORTANT**: Required step for safe and proper door operation.
- **NOTE**: Information assuring proper installation of the door.

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Door Section Identification

<table>
<thead>
<tr>
<th>Door Height</th>
<th>Bottom</th>
<th>Lock</th>
<th>Int I</th>
<th>Int II</th>
<th>Int III</th>
<th>Int IV</th>
<th>Int V</th>
<th>Top</th>
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<tbody>
<tr>
<td>6'-0&quot;</td>
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<td>6'-3&quot;</td>
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<td>21&quot;</td>
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</tbody>
</table>
**Removing an Existing Door**

**IMPORTANT:** COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR.

**WARNING**

A POWERFUL SPRING RELEASING ITS ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY. TO AVOID INJURY, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN, USING PROPER TOOLS AND INSTRUCTIONS, RELEASE THE SPRING TENSION.

For detailed information see supplemental instructions “Removing an Existing Door/Preparing the Opening”. These instructions are not supplied with the door, but are available at no charge from Wayne Dalton, a division of Overhead Door Corporation, P.O. Box 67, Mt. Hope, Oh., 44660, or at www.Wayne-Dalton.com.

**Preparing the Opening**

**IMPORTANT:** IF YOU JUST REMOVED YOUR EXISTING DOOR OR YOU ARE INSTALLING A NEW DOOR, COMPLETE ALL STEPS IN PREPARING THE OPENING.

To ensure secure mounting of track brackets, side and center brackets, or steel angles to new or retro-fit construction, it is recommended to follow the procedures outlined in DASMA technical data sheets #156, #161 and #164 at www.dasma.com.

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 12" (305 mm) above the top of the opening for Torsion counterbalance systems. For low headroom applications, the jambs should extend a minimum of 12" (305 mm) above the top of the opening during installation. Equally space nails approximately 12" to 18" apart.

**WEATHERSTRIPS (MAY NOT BE INCLUDED):** Depending on the size of your door, you may have to cut or trim the weatherstrips (if necessary) to properly fit into the header and jambs.

**NOTE:** If nailing product at 40°F or below, pre-drilling is required.

**NOTE:** Do not permanently attach weatherstrips to the header and jambs at this time.

**Important:** When installing your door you must use sections of the appropriate height in the right stacking order. What sections heights you need to use in what order depends on the height of your door.

**NOTE:** Unless your door is five sections in height, you will not receive an Intermediate II section.

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**NOTE:** Unless your door is five sections in height, you will not receive an Intermediate II section.

*NOTE: For door heights from 10'1" to 14'0", refer to your operator manufacture installation instructions for appropriate depth into room.

**BACKROOM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Door Height</th>
<th>Track Type</th>
<th>Space Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6'0&quot; to 7'0&quot;</td>
<td>6&quot; Low Headroom</td>
<td>6-1/2&quot; (165 mm)</td>
</tr>
<tr>
<td>7'1&quot; to 8'0&quot;</td>
<td>103-1/2&quot; (2629 mm)</td>
<td>125&quot; (3175 mm)</td>
</tr>
<tr>
<td>8'1&quot; to 9'0&quot;</td>
<td>115-1/2&quot; (2934 mm)</td>
<td>137&quot; (3480 mm)</td>
</tr>
<tr>
<td>9'1&quot; to 10'0&quot;</td>
<td>127-1/2&quot; (3239 mm)</td>
<td>168&quot; (4267 mm)</td>
</tr>
<tr>
<td>10'1&quot; to 12'0&quot;</td>
<td>139-1/2&quot; (3543 mm)</td>
<td>168&quot; (4267 mm)</td>
</tr>
<tr>
<td>12'1&quot; to 14'0&quot;</td>
<td>163-1/2&quot; (4153 mm)</td>
<td><em>NOTE</em></td>
</tr>
</tbody>
</table>

**HEADROOM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Track Type</th>
<th>Space Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; LHR</td>
<td>6-1/2&quot; (165 mm)</td>
</tr>
<tr>
<td>6&quot; LHR</td>
<td>9&quot; (229 mm)</td>
</tr>
</tbody>
</table>

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**IMPORTANT:** COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR.

**WEATHERSTRIPS (MAY NOT BE INCLUDED):** Depending on the size of your door, you may have to cut or trim the weatherstrips (if necessary) to properly fit into the header and jambs.

**NOTE:** If nailing product at 40°F or below, pre-drilling is required.

**NOTE:** Do not permanently attach weatherstrips to the header and jambs at this time.

**For Quick Install track:** For the header, align the weatherstrip with the inside edge of the header and temporarily secure it to the header with evenly spaced nails. Starting at either side of the jambs, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and flush with the inside edge of the jambs. Temporarily secure the weatherstrip with evenly spaced nails. Repeat for other side. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

**For Fully Adjustable track:** For the header, align the weatherstrip 1/8" to 1/4" inside the header edge, and temporarily secure it to the header with evenly spaced nails. Starting at either side of the jambs, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and 1/8" to 1/4" inside the jambs edge. Temporarily secure the weatherstrip with evenly spaced nails. Repeat for other side. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

**Headroom requirement:** Headroom is defined as the space needed above the top of the door for tracks, springs, etc. to allow the door to open properly. If the door is to be motor operated, 2-1/2" (64 mm) of additional headroom is required.

**NOTE:** 6" low headroom conversion kit is available for 12" radius only. Contact your local Wayne Dalton dealer.

**Backroom requirement:** Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.

**NOTE:** For door heights from 10'1" to 14'0", refer to your manufacturer installation instructions for appropriate depth into room.
Weatherstrips

Level header

Finished

Door width

Jambs

Backroom

Plumb jambs

Finished Door Height

Nail

Header board 2"x 6" lumber preferred

Min. Side room Clearance is 3 1/2"

Suitable mounting surface 2"x 6" lumber minimum

Weatherstrips

Quick Install track

Other track systems 1/8" to 1/4"

Min. Side room Clearance is 3 1/2"

Plumb jambs

Weatherstrips

Weatherstrips

Min. Side room Clearance is 3 1/2"
NOTE: The illustrations shown on this page are general representations of the door parts. Each specific door model may have unique variations.
INSTALLATION

Before installing your door, be certain that you have read and followed all of the instructions covered in the pre-installation section of this manual. Failure to do so may result in an improperly installed door.


1. Fully Adjustable Flag Angles
   Tools Required: Safety glasses, Leather gloves

   NOTE: If you have Quick Install flag angles, Riveted Track or Angle Mount Track, skip this step.
   NOTE: Flag angles are right and left handed.
   Hand tighten the left hand flag angle to the left hand vertical track using (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts. Repeat for other side. Flange nuts will be secured after flag angle spacing is completed in step, Top Section.

   IMPORTANT: Verify bottom weather seal (bottom seal) is aligned with door section. If there is more than 1/2" excess bottom weather seal on either side, trim bottom weather seal even with

   WARNING
   FAILURE TO ENSURE TIGHT FIT OF CABLE LOOP OVER MILFORD PIN COULD RESULT IN COUNTERBALANCE LIFT CABLE COMING OFF THE PIN, ALLOWING THE DOOR TO FALL, POSSIBLY RESULTING IN SEVERE OR FATAL INJURY.

   Starting on the left hand side, attach the left hand bottom corner bracket to the left corner of the bottom section, making sure it is seated to the edges of the end cap, using (3) 1/4" - 14 x 7/8" RED HEAD self drilling screws and 1/4" - 14 x 7/8" self drilling screws. Repeat for other side.

   IMPORTANT: THE 1/4" - 14 x 7/8" RED HEAD SELF DRILLING SCREWS MUST BE MUST BE INSTALLED THROUGH THE HOLES OF THE BOTTOM CORNER BRACKETS, AS SHOWN.

   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller tracks.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.

   NOTE: Verify bottom weather seal (bottom seal) is aligned with door section. If there is more than 1/2" excess bottom weather seal on either side, trim bottom weather seal even with

2. Horizontal Track Angles
   Tools Required: Hammer, Safety glasses, Leather gloves

   NOTE: For larger doors, a full length horizontal track angle may not already be spot welded to the horizontal track. If the horizontal track angle is not welded, the horizontal track angle will be installed, as shown.

   Position the left hand horizontal track angle, as shown. Place the Quick Install tabs of the horizontal track angle in the key slot of the left hand horizontal track. Using a hammer, tap the horizontal track angle towards the curved end of the track until the alignment hole in the track and angle are aligned. Repeat for other side. Set tracks aside.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.

   NOTE: Refer to Package Contents / Parts Breakdown, to determine which bottom corner brackets you have.

   Uncoil the counterbalance lift cables. Depending on which bottom corner brackets you have (reference illustrations below), slip the loop at the ends of the counterbalance lift cable over the milford pin of the bottom corner bracket or secure the cable loop to the clevis pin and bottom corner bracket using a 5/16" flat washer and a cotter pin. Bend the ends of the cotter pin outwards to secure it in place. Repeat for other side. Repeat for other bottom corner bracket.

3. Fully Adjustable Jamb Brackets
   Tools Required: Tape measure, Safety glasses, Leather gloves

   NOTE: If you have Quick Install jamb brackets, Riveted Track or Angle Mount Track, skip this step.

   NOTE: The bottom jamb bracket is always the shortest bracket, while the center jamb bracket is the tallest. If three jamb brackets per side are included with your door, you will have received a top jamb bracket, which is the tallest.

   To attach the bottom jamb bracket, locate lower hole of the hole/ slot pattern of the 1st hole set on the vertical track. Align the slot in the jamb bracket with the lower hole of the hole/ slot pattern. Secure jamb bracket using (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut. Repeat for other side.

   IMPORTANT: If a top jamb bracket was included, secure it to vertical track using the lower hole of the hole/ slot pattern in the 3rd hole set and (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut. Repeat for other side.

4. Bottom Weather Seal
   Tools Required: Power drill, 7/16" Socket driver, Tape measure, Safety glasses, Leather gloves

   NOTE: Refer to door section identification, located in the pre-installation section of this manual.

   Determine what size section you need to use for the bottom section. Align the ends of the bottom weather seal with the bottom of the section and attach with 1/4" - 20 x 7/8" self drilling screws, one on each end at least 6" from the end of the section and one every 18" in between.

   IMPORTANT: THE 1/4" - 14 x 7/8" RED HEAD self drilling screws MUST BE MUST BE INSTALLED THROUGH THE HOLES OF THE BOTTOM CORNER BRACKETS, AS SHOWN.

   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller track. Repeat for other side.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.

   NOTE: Refer to door section identification, located in the pre-installation section of this manual.

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   IMPORTANT: THE 1/4" - 14 x 7/8" RED HEAD self drilling screws MUST BE MUST BE INSTALLED THROUGH THE HOLES OF THE BOTTOM CORNER BRACKETS, AS SHOWN.

   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller track. Repeat for other side.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.

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   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller track. Repeat for other side.

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   IMPORTANT: THE 1/4" - 14 x 7/8" RED HEAD self drilling screws MUST BE MUST BE INSTALLED THROUGH THE HOLES OF THE BOTTOM CORNER BRACKETS, AS SHOWN.

   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller track. Repeat for other side.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.

   NOTE: Refer to door section identification, located in the pre-installation section of this manual.

   Determine what size section you need to use for the bottom section. Align the ends of the bottom weather seal with the bottom of the section and attach with 1/4" - 20 x 7/8" self drilling screws, one on each end at least 6" from the end of the section and one every 18" in between.

   IMPORTANT: THE 1/4" - 14 x 7/8" RED HEAD self drilling screws MUST BE MUST BE INSTALLED THROUGH THE HOLES OF THE BOTTOM CORNER BRACKETS, AS SHOWN.

   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller track. Repeat for other side.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.

   NOTE: Refer to door section identification, located in the pre-installation section of this manual.

   Determine what size section you need to use for the bottom section. Align the ends of the bottom weather seal with the bottom of the section and attach with 1/4" - 20 x 7/8" self drilling screws, one on each end at least 6" from the end of the section and one every 18" in between.

   IMPORTANT: THE 1/4" - 14 x 7/8" RED HEAD self drilling screws MUST BE MUST BE INSTALLED THROUGH THE HOLES OF THE BOTTOM CORNER BRACKETS, AS SHOWN.

   NOTE: Check to ensure cable loop fits tightly over the milford pins.

   If applicable, insert a short stem track roller with roller spacer (if applicable) into the bottom roller track. Repeat for other side.

   IMPORTANT: The 1/4" - 14 x 7/8" RED HEAD self drilling screws must be used to install the roller sets to the bottom corner brackets, as shown.
**Track Roller Carriers**

Tools Required: Power drill, 7/16" Socket driver, Safety glasses, Leather gloves

**NOTE:** If you don’t have track roller carriers, then skip this step. Refer to Package Contents / Parts Breakdown, to determine if you have track roller carriers.

Starting on left hand side of the bottom section, attach the track roller carrier with the stamp “STD” facing UP to the bottom corner bracket by aligning the four holes of the track roller carrier with the four holes in the bottom corner bracket. Secure the track roller carrier with roller spacer into each of the bottom corner brackets, as shown.

**IMPORTANT:** The TRACK ROLLER CARRIER’S INNER HOLES ARE USED ON DOORS WITH 2" TRACK APPLICATIONS; THE OUTER HOLES ARE USED ON DOORS WITH 3" TRACK APPLICATIONS.

**Counterbalance**

- Lift cable
- Typical left hand bottom corner bracket
- Washer
- Clevis pin
- Cotter pin
- Short stem track roller

**Typical left hand bottom corner bracket**

**Counterbalance**

- Lift cable
- Cotter pin
- Roller (inserted through cotter pin and bent in place)

**Track roller carrier:**

- Short stem track roller
- Roller
- Cotter pin
- Short stem track roller
- Spacers

**Bottom section**

- (4) 1/4"-20 x 7/8" Self drilling screws

**Graduated Hinge Attachment**

Tools Required: Power drill, 7/16" Socket driver, Safety glasses, Leather gloves

**NOTE:** Refer to door section identification, located in the pre-installation section of this manual or refer to Parts Breakdown.

**NOTE:** The graduated end and center hinges can be identified by the number stamped onto their lower hinge leaf.

**NOTE:** The #1, #2, #3, #4, #5, #6, #7 graduated end hinges (Wide body) serves as end hinges on all sections, except for the top section.

**NOTE:** The #1 Center hinge(s) (Narrow body) serves as center hinges on all sections, except for the top section.

Locate the bottom section, (2) #1 graduated end hinges (wide body) for the end stiles and depending on the width of your door, enough #1 center hinge(s) (narrow body) for each of the pre-marked center hinge locations. Starting on the left hand side of the bottom section, align the lower hinge leaf of the #1 graduated end hinge over the holes, located at the top of the end cap. Also, align the lower hinge leaves of the #1 center hinges (narrow body) with the pre-marked locations at the center locations at the top of the section. Attach lower hinge leaves to the section using (2) 1/4" - 14 x 7/8" self drilling screws.

**IMPORTANT:** PLACE THE 1/4" - 14 X 7/8" SELF DRILLING SCREWS SNUG AGAINST THE LOWER HINGE LEAFS, TO TIGHTEN AN ADDITIONAL 1/4 TO 1/2 TURN TO RECEIVE MAXIMUM DESIGN HOLDING POWER.

**IMPORTANT:** PUSH & HOLD THE HINGE LEAF SECURELY AGAINST THE SECTION WHILE SECURING WITH 1/4" - 14 X 7/8" SELF DRILLING SCREWS. THERE SHOULD BE NO GAP BETWEEN THE HINGE LEAF AND THE SECTION.

Place a short stem track roller into each graduated end hinge. Repeat graduated hinge attachment using the appropriate graduated end hinges for all remaining sections except the top section.

**IMPORTANT:** WHEN PLACING SHORT STEM TRACK ROLLERS INTO THE #2 GRADUATED END HINGES AND HIGHER, THE SHORT STEM TRACK ROLLER GOES INTO HINGE TUBE FURTHEST AWAY FROM SECTION.

Use (2) #2 graduated end hinges (wide body) and the required number of #1 center hinge(s) (narrow body) for each of the center hinge pre-marked location(s) along the top edge of the lock section (second section). Use (2) #3 graduated end hinges (wide body) and the required number of #1 center hinge(s) (narrow body) for each of the center hinge(s) pre-marked location(s) along the top edge of the intermediate I section (fourth section). Use (2) #4 graduated end hinges (wide body) and the required number of #1 center hinge(s) (narrow body) for each of the center hinge pre-marked location(s) along the top edge of the intermediate II section (fifth section). Use (2) #5 graduated end hinges (wide body) and the required number of #1 center hinge(s) (narrow body) for each of the center hinge pre-marked location(s) along the top edge of the intermediate III section (sixth section). Use (2) #6 graduated end hinges (wide body) and the required number of #1 center hinge(s) (narrow body) for each of the center hinge pre-marked location(s) along the top edge of the intermediate IV section (seventh section). Use (2) #7 graduated end hinges (wide body) and the required number of #1 center hinge(s) (narrow body) for each of the center hinge pre-marked location(s) along the top edge of the intermediate V section (eighth section).
**Top Fixtures**

Tools Required: Power drill, 7/16” Socket driver, Saw horses, Safety glasses, Leather gloves

NOTE: Refer to door section identification, located in the pre-installation section of this manual to determine what size section you need to use as your top section. Measure your section to make sure it is the correct height as indicated on the chart.

Starting on the left hand side of the top section, align the edge of the top fixture parallel to the top section edge, as shown. Fasten the top fixture to the top section using (2) 1/4” - 14 x 7/8” self drilling screws. Insert a short stem track roller into top fixture slide. Repeat same process for other right hand side.

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**Strutting**

Tools Required: Power drill, 7/16” Socket driver, Tape measure, Safety glasses, Leather gloves

NOTE: Refer to door section identification, located in the pre-installation section of this manual to determine what size sections you need to use as your lock (second) section, intermediate (third) section, intermediate (fourth) section, intermediate (fifth) section, intermediate (sixth) section, intermediate (seventh) section and top section. Measure your sections to make sure they are the correct height as indicated on the chart.

NOTE: Depending on the size of your door, one or more sections may require a strut.

Using sawhorses, lay sections together on a flat smooth surface. Ensure the hinges are on top of their corresponding sections. Referring to the strutting schedule below, to determine how many struts your door needs and on what sections they are needed to be installed.

NOTE: Sections not noted in the strutting schedule, do not require a strut.

---

### Strutting Schedule

<table>
<thead>
<tr>
<th>Section</th>
<th>Quantity</th>
<th>Solid / Windows</th>
<th>Door Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>5</td>
<td>Solid</td>
<td>12’0&quot;</td>
</tr>
<tr>
<td>Intermediate II</td>
<td>5</td>
<td>Solid</td>
<td>13’0&quot; - 18’0&quot;</td>
</tr>
<tr>
<td>Intermediate I</td>
<td>6</td>
<td>Solid</td>
<td>12’0&quot;</td>
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<tr>
<td>Intermediate II</td>
<td>6</td>
<td>Solid</td>
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<tr>
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<td>7</td>
<td>Solid</td>
<td>13’0&quot; - 18’0&quot;</td>
</tr>
<tr>
<td>Intermediate I</td>
<td>8</td>
<td>Solid</td>
<td>13’0&quot; - 18’0&quot;</td>
</tr>
</tbody>
</table>

NOTE: All strut(s) are placed at the top of the section.

**INSTALLATION ON ALL SECTIONS (EXCEPT TOP SECTION):** Place the strut on the section up against the bottom of the hinges. Center the strut side to side on the section as shown. Secure to the section using (2) 1/4” - 14 x 7/8” self drilling screws at each end hinge location and (2) 1/4” - 14 x 7/8” self drilling screw at each center hinge location.

**INSTALLATION ON TOP SECTION:** Place the strut on the top section, center the strut side to side on the top edge of the top section. Secure to the section using (2) 1/4” - 14 x 7/8” self drilling screws at each endstile and (2) 1/4” - 14 x 7/8” self drilling screw at each center hinge location at each pre-marked location.
Step Plate

Tools Required: Power drill, (7/16") Drill bits, Phillips screwdriver, 7/16" Wrench, (2) Saw horses, Pencil, Tape measure, Level, Step ladder, Safety glasses, Leather gloves

**NOTE:** Refer to door section identification, located in the pre-installation section of this manual.

On the inside of the bottom section, locate the vertical center of the door. Center the inside step plate vertically no higher than 8" from the bottom of the door to the top of the step plate.

**IMPORTANT:** DO NOT MOUNT THE STEP PLATE HIGHER THAN 8" FROM THE BOTTOM OF THE SECTION.

Using the inside step plate’s second top most hole and bottom hole as a template, drill 7/16" diameter holes through the entire section.

**NOTE:** Be extremely careful to keep drill straight when drilling through the section.

Now insert the outside step plate into the holes through the front of the door, mounting the two step plates back to back. Secure step plates together with two No. 8 screws through the inside step plate and into the outside step plate.

Lift Handle

Tools Required: Power drill, (9/32", 1/2") Drill bits, 7/16" Wrench, (2) Saw horses, Pencil, Tape measure, Level, Step ladder, Safety glasses, Leather gloves

**NOTE:** Refer to door section identification, located in the pre-installation section of this manual.

Using sawhorses, lay the bottom and lock sections together on a flat smooth surface. Ensure the hinges are on top of their corresponding sections.

Locate the vertical center of the lock (second) section of the door and position the lift handle’s bottom hole 4" from the bottom of the lock section along the vertical center on the outside of the door. Use the holes in the lift handle as a template to mark the hole locations.

**IMPORTANT:** THE LIFT HANDLE AND THE STEP PLATE NEED TO BE VERTICALLY ALIGNED.

Drill (1) 7/16" diameter hole at each marked location. Enlarge the holes from outside the door to 1/2" diameter through the section. Assemble the outside and inside lift handles to the section using (2) 1/4" - 20 x 2-1/2" carriage bolts and (2) 1/4" - 20 hex nuts and spacers.

**WARNING**

**TO AVOID POSSIBLE INJURY, LIFT HANDLES THAT ARE INSTALLED WITHIN 4 INCHES (102MM) OF A SECTION INTERFACE SHALL PROMOTE VERTICAL ORIENTATION OF THE HAND.**

Vertical Tracks

Tools Required: Power drill, 3/16" Drill bit, 7/16" Socket driver, Tape measure, Level, Step ladder, Safety glasses, Leather gloves

**NOTE:** Depending on your door, you may have Quick Install Flag Angles, Fully Adjustable Flag Angles, Pivot Vertical Track Assemblies or you may have Angle Mount Vertical Track Assemblies. Refer to Package Contents / Parts Breakdown, to determine which Flag Angles / Vertical Track Assemblies you have.

**IMPORTANT:** IF YOUR DOOR IS TO BE INSTALLED PRIOR TO A FINISHING CONSTRUCTION OF THE BUILDING’S FLOOR, THE VERTICAL TRACKS AND THE DOOR BOTTOM SECTION ASSEMBLY SHOULD BE INSTALLED SUCH THAT WHEN THE FLOOR IS CONSTRUCTED, NO DOOR OR TRACK PARTS ARE TRAPPED IN THE FLOOR CONSTRUCTION.

**IMPORTANT:** THE TOPS OF THE VERTICAL TRACK ASSEMBLIES MUST BE LEVEL FROM SIDE TO SIDE. IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT, THE VERTICAL TRACK ASSEMBLY ON THE SHIMMED SIDE MUST BE RAISED THE HEIGHT OF THE SHIM.

Position the left hand vertical track assembly over the track rollers of the bottom section. Make sure the counterbalance lift cable is located between the track rollers and the door jamb. Drill 3/16" pilot holes into the door jamb for the lag screws.

**FOR QUICK INSTALL FLAG ANGLES OR FULLY ADJUSTABLE FLAG ANGLES:** Loosely fasten jamb brackets and flag angle to the jamb using 5/16" x 1-5/8" lag screws. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8" to 5/8" spacing, between the bottom section and vertical track. Hang counterbalance lift cable over flag angle. Repeat same process for other side.
**FOR RIVETED VERTICAL TRACK ASSEMBLY:** Loosely fasten jamb brackets and flag angle to the jamb using 5/16” x 1-5/8” lag screws. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8” to 5/8” spacing as shown between the bottom section and vertical track. Hang counterbalance lift cable over angle mount. Repeat same process for other side.

**FOR ANGLE MOUNT VERTICAL TRACK ASSEMBLY:** Loosely fasten the slots in the wall angle to the jamb using 5/16” x 1-5/8” lag screws. Tighten lag screws, securing the bottom slot in the wall angle, maintain 3/8” to 5/8” spacing as shown between the bottom section and vertical track. Hang counterbalance lift cable over angle mount. Repeat same process for other side.

**Stacking Sections**

Tools Required: Power drill, 7/16” Socket driver, Tape measure, Level, Step ladder, Safety glasses, Leather gloves

**NOTE:** Refer to door section identification, located in the pre-installation section of this manual to determine what size sections you need to use as your lock (second) section, intermediate (third) section, intermediate (fourth) section, intermediate (fifth) section, intermediate (sixth) section and intermediate (seventh) section. Measure your sections to make sure they are the correct height as indicated on the chart.

**NOTE:** Make sure end and center hinges are flipped down, when stacking another section on top.

Place track rollers into graduated end hinges of remaining sections.

**NOTE:** Larger doors will use long stem track rollers with doubled graduated end hinges. With assistance, lift second section and guide the track rollers into the vertical tracks. Lower section until it is seated against bottom section. Flip hinges up. Fasten center hinge(s) first; then end hinges last using 1/4” - 14 x 7/8” self-drilling screws.

Repeat same process for other sections, except top section.

**IMPORTANT:** PUSH & HOLD THE HINGE LEAFS SECURELY AGAINST THE SECTIONS WHILE

**IMPORTANT:** TURGER'S INSTRUCTIONS AND FORCE SETTINGS MUST BE ADJUSTED PROPERLY.

FACTURER). THE INSTALLATION OF THE OPERATOR MUST BE ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND FORCE SETTINGS MUST BE ADJUSTED PROPERLY.

**NOTE:** Install lock at this time (sold separately). See optional installation step, Side Lock.

**FOR FULLY ADJUSTABLE TRACK OR RIVETED TRACK:** Complete the vertical track installation by securing the jamb bracket(s) and tightening the other lag screws. Repeat for other side.

**FOR QUICK INSTALL TRACK:** Complete the vertical track installation by securing the jamb bracket(s) and tightening the other lag screws. Repeat for other side.

**FOR ANGLE MOUNT VERTICAL TRACK ASSEMBLY:** Loosely fasten the slots in the wall angle to the jamb using 5/16” x 1-5/8” lag screws. Tighten lag screws, securing the bottom slot in the wall angle, maintain 3/8” to 5/8” spacing as shown between the bottom section and vertical track. Hang counterbalance lift cable over angle mount. Repeat same process for other side.

**FOR RIVETED VERTICAL TRACK ASSEMBLY:** Loosely fasten jamb brackets and flag angle to the jamb using 5/16” x 1-5/8” lag screws. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8” to 5/8” spacing as shown between the bottom section and vertical track. Hang counterbalance lift cable over angle mount. Repeat same process for other side.
NOTE: For retro fit applications, the drawbar operator bracket must be aligned with an existing operator.

NOTE: Refer to illustrations to determine which top fixtures were supplied with your door.

**FOLLOW THE CORRESPONDING STEP BELOW:**

A: Place the bottom half of drawbar operator bracket inside the top half of drawbar operator bracket and flush against the inside surface of the top section. Adjust both the top and bottom halves out as far apart as possible on the section surface. Secure the bottom half drawbar operator bracket and the top half drawbar operator bracket together using (4) 5/16" - 18 x 1/2" carriage bolts and (4) 5/16" - 18 flange hex nuts.

NOTE: Install the 5/16" - 18 x 1/2" carriage bolts and the 5/16" - 18 flange hex nuts as far apart as possible, prior to securing both top and bottom halves together.

Now, locate the center of the top section and align the center of the hole in the drawbar operator bracket assembly with the top section center line. Align the drawbar operator bracket assembly vertically.

Slide the top half of the drawbar operator bracket under the strut, keeping the drawbar operator bracket aligned with the center line. Remove the strut's screws, if necessary and attach to the top section (through strut if necessary) using (3) 1/4" - 20 x 7/8" self drilling screws.

NOTE: If your door lacks a strut on the top section, ignore the previous paragraph.

Attach the bottom halve of the drawbar operator bracket to the section surface using (3) 1/4" - 20 x 7/8" self drilling screws.

NOTE: If your door lacks a strut on the top section, ignore the previous paragraph.

Attach the drawbar operator bracket using (3) 1/4" - 20 x 7/8" self drilling screws (as shown).

**WARNING**

DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP, REAR BACK HANGS, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.

IF YOU HAVE QUICK INSTALL FLAG ANGLES: To install horizontal track, place the top rail end over the top track roller of the top section. Align key slot of the bottom rail end of horizontal track with the Quick Install tab of the flag angle. Push curved portion of horizontal track down to lock in place.

IF YOU HAVE FULLY ADJUSTABLE FLAG ANGLES: To install horizontal track, place the top rail end over the top track roller of the top section. Align the bottom rail end of the horizontal track with the top of the vertical track. Tighten the bottom rail of the horizontal track to the flag angle with (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts.

IF YOU HAVE RIVETED TRACK ASSEMBLIES OR ANGLE MOUNT VERTICAL TRACK ASSEMBLIES: To install horizontal track, place the curved end over the top roller of the top section. Align the bottom of the horizontal track with the top of the vertical track. Tighten the horizontal track to the Flag Angle / Angle Mount with (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts.

Next level the horizontal track assembly and bolt the top rail of the horizontal track to the encountered slot in the flag angle using (1) 1/4" - 20 x 9/16" track bolt, (1) 1/4" - 20 flange hex nut and (1) 5/16" washer. Repeat for other side. Repeat for other side. Next remove the nail that was temporarily holding the top section in place, installed in Step, Top Section.

IMPORTANT: FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.

**End Bearing Brackets**

Tools Required: Step ladder, Power drill, 3/16" Drill bit, Ratchet wrench, 7/16" Socket driver, 9/16" Socket, 9/16" Wrench, Tape measure, Safety glasses, Leather gloves

**NOTE:** Right and left hand is always determined from inside the garage looking out.

**NOTE:** Identify the end bearing brackets supplied with your door. Refer to Illustrations below, Package Contents or Parts Breakdown, to determine which end bearing brackets you have.

End bearing brackets are right and left hand.

Align the bottom edge of left end bearing bracket with the top edge of the flag angle. Maintaining this alignment, also align the right edge of the end bearing bracket with the right edge.
of the flag angle. Secure the end bearing bracket to the jamb using (3) 5/16" x 1-5/8" lag screws, as shown. Repeat same process for the other side.

Position the left hand end bearing bracket up against the jamb and the horizontal track, as shown. Fasten the left hand end bearing bracket to the horizontal track with (1) 3/8"-16 x 3/4" truss head bolt and (1) 3/8"-16 nut. Secure the left hand end bearing bracket to the jamb using (3) 5/16" x 1-5/8" lag screws. Repeat same process for the other side.

NOTE: Refer to Package Contents / Parts Breakdown, to determine which Center Bracket(s) came with your door.

NOTE: Prior to fastening center bracket(s) into the door jamb, pilot drill using a 3/16" drill bit.

NOTE: Refer to Package Contents / Parts Breakdown, to determine if your door came with a coupler assembly. If your door came with a coupler assembly, the mounting surface needs to be a minimum of 12" wide. The two center bearing brackets will need to be spaced 12" to 14" apart at the center of the door, as shown.

NOTE: If your door came with (4) springs, each of the outer springs mounting surface will need to be a minimum of 3" wide.

NOTE: If needed, measure the diameter of your springs. If you have a one piece shaft with 3-3/4" diameter springs, they do not share center brackets and do not have a coupler assembly.

First, locate the center of the door. Mark a vertical pencil line on the mounting surface above the door, at the center. Measure from the center of the bearing, in one of the end bearing brackets, downwards, to the top the top. Using that measurement, measure that distance upwards from the top of the door to the mounting surface and mark a horizontal pencil line which intersects the vertical pencil line.

IF YOUR DOOR DID NOT COME WITH A CENTER COUPLER ASSEMBLY OR USES TORSION SPRINGS LESS THAN 3-3/4" ID: Mark a vertical pencil line on the mounting surface above the door, at the center. Align the edge of the center bracket with the vertical pencil line and the center of the center bracket with the horizontal pencil line; this is to ensure the torsion shaft is level between the center and end bearing brackets.

NOTE: On some single spring doors, the single spring can be longer than half the opening width. If your spring is longer, then the center bracket must be mounted off center for the spring to fit properly. Measure spring length to determine appropriate center bracket location.

IF YOUR DOOR DID NOT COME WITH A CENTER COUPLER ASSEMBLY OR USES TORSION SPRINGS LESS THAN 3-3/4" ID: Mark a vertical pencil line on the mounting surface above the door, at the center. Align the edge of the center bracket with the vertical pencil line and the center of the center bracket with the horizontal pencil line; this is to ensure the torsion shaft is level between the center and end bearing brackets.

NOTE: On some single spring doors, the single spring can be longer than half the opening width. If your spring is longer, then the center bracket must be mounted off center for the spring to fit properly. Measure spring length to determine appropriate center bracket location.

NOTE: Prior to fastening center bracket(s) into the door jamb, pilot drill using a 3/16" drill bit.

NOTE: Refer to Package Contents / Parts Breakdown, to determine which Center Bracket(s) came with your door.

NOTE: Prior to fastening center bracket(s) into the door jamb, pilot drill using a 3/16" drill bit.

NOTE: Refer to Package Contents / Parts Breakdown, to determine if your door came with a coupler assembly. If your door came with a coupler assembly, the mounting surface needs to be a minimum of 12" wide. The two center bearing brackets will need to be spaced 12" to 14" apart at the center of the door, as shown.

NOTE: If your door came with (4) springs, each of the outer springs mounting surface will need to be a minimum of 3" wide.

NOTE: If needed, measure the diameter of your springs. If you have a one piece shaft with 3-3/4" diameter springs, they do not share center brackets and do not have a coupler assembly.

First, locate the center of the door. Mark a vertical pencil line on the mounting surface above the door, at the center. Measure from the center of the bearing, in one of the end bearing brackets, downwards, to the top the top. Using that measurement, measure that distance upwards from the top of the door to the mounting surface and mark a horizontal pencil line which intersects the vertical pencil line.

IF YOUR DOOR DID NOT COME WITH A CENTER COUPLER ASSEMBLY OR USES TORSION SPRINGS LESS THAN 3-3/4" ID: Mark a vertical pencil line on the mounting surface above the door, at the center. Align the edge of the center bracket with the vertical pencil line and the center of the center bracket with the horizontal pencil line; this is to ensure the torsion shaft is level between the center and end bearing brackets.

NOTE: On some single spring doors, the single spring can be longer than half the opening width. If your spring is longer, then the center bracket must be mounted off center for the spring to fit properly. Measure spring length to determine appropriate center bracket location.
With assistance, pick up the torsion spring assembly and slide one end of the torsion shaft / torsion keyed shaft through one end bearing bracket. Lay the middle of the torsion shaft / torsion keyed shaft into the center bracket. Slide the other end of the torsion shaft / torsion keyed shaft into the other end bearing bracket. Position the torsion shaft / torsion keyed shaft so that equal amounts of the shaft extend from each end bearing bracket.

IF YOU HAVE A COUPLER ASSEMBLY:

Disassemble the coupler assembly by removing the (3) 3/8" - 16 x 1-3/4" hex head screws and the (3) 3/8" - 16 nylon hex lock nuts from the coupler halves. Loosen the set screws. Set the components aside. Facing the inside of the door, lay the (2) torsion keyed shafts on the floor. One torsion keyed shaft on the left hand side and the other torsion keyed shaft on the right hand side. Starting on the left hand side, lay one of the coupler halves, the center bearing, torsion spring with the black winding cone and one set collar at the left end of the torsion keyed shaft. Next on the right hand side, lay the other coupler half, center bearing, the torsion spring with the red winding cone and one set collar at the right end of the torsion keyed shaft.

Slide the coupler halves, center bearings onto the torsion keyed shafts followed by the torsion springs and the set collar, as shown.

IMPORTANT: THE COUPLER HALVES, CENTER BEARINGS, TORSION SPRINGS AND THE SET COLLARS MUST BE POSITIONED, AS SHOWN.

Set the components aside. Facing the inside of the door, lay the (2) torsion keyed shafts on the floor. One torsion keyed shaft on the left hand side and the other torsion keyed shaft on the right hand side. Starting on the left hand side, lay one of the coupler halves, the center bearing, torsion spring with the black winding cone and one set collar at the left end of the torsion keyed shaft. Next on the right hand side, lay the other coupler half, center bearing, the torsion spring with the red winding cone and one set collar at the right end of the torsion keyed shaft.

Slide the coupler halves, center bearings onto the torsion keyed shafts followed by the torsion springs and the set collar, as shown.

IMPORTANT: THE COUPLER HALVES, CENTER BEARINGS, TORSION SPRINGS AND THE SET COLLARS MUST BE POSITIONED, AS SHOWN.

Measure the diameter of your springs. If your spring diameter is 3-3/4", the springs will share the same center bracket, unless a coupler assembly is provided.

NOTE: Refer to Package Contents / Parts Breakdown, to determine which Center Bracket(s) came with your door.

NOTE: Refer to Package Contents / Parts Breakdown, to determine if your door came with a coupler assembly.

IMPORTANT: THE SPRING WARNING TAG(S) SUPPLIED MUST BE SECURELY ATTACHED TO THE STATIONARY SPRING CONE(S) IN PLAIN VIEW. SHOULD A REPLACEMENT SPRING BE REQUIRED, CONTACT WAYNE DALTON FOR FREE REPLACEMENTS.

NOTE: Measure the diameter of your springs. If your spring diameter is 3-3/4", the springs do not share center brackets. If your spring diameter is either 2" or 2-5/8", then the two springs will share the same center bracket, unless a coupler assembly is provided.

IF YOU DON’T HAVE A COUPLER ASSEMBLY:

Slide center bracket bushing into the spring. Align the stationary spring cone(s) with the holes in the center bracket bushing assembly. Secure the torsion spring(s) to the center bracket bushing assembly with (2) 3/8" - 16 x 1-1/2" hex head bolts and (2) 3/8" - 16 nuts.

IF YOU HAVE A COUPLER ASSEMBLY:

Slide center bracket bushing into the spring. Align the stationary spring cone(s) with the holes in the center bracket. Secure the torsion spring to the center bracket with (2) 3/8"-16 x 1-1/2" hex head bolts and (2) 3/8" - 16 nuts. Repeat the same process for the other center bearing bracket.

At the middle of the two center bearing brackets, re-assemble the coupler assembly by loosely fastening the coupler halves together using the (3) 3/8" - 16 x 1-3/4" hex head screws and the (3) 3/8" - 16 nylon hex lock nuts, as shown.
NOTE: Ensure both torsion keyed shafts have equal amounts of the shafts extending from each end bearing bracket.

**Typical center bracket bushing**
- Stationary spring cone
- Torsion spring
- Spring warning tags

**Typical center bracket**
- Stationary spring cone
- Torsion spring

**Spring warning tags**

**Typical center bracket assembly**
- Stationary spring cone
- Torsion spring
- (2) 3/8"-16 x 1-1/2" Hex head bolts

**Counterbalance Lift Cables**
- Tools Required: Step ladder, Locking pliers, 3/8" Wrench, Tape measure, Safety glasses, Leather gloves

Starting on the left hand side, thread the counterbalance lift cable up and around the front side of the left hand cable drum.

**IMPORTANT:** VERIFY THAT THERE ARE NO COUNTERBALANCE LIFT CABLE OBSTRUCTIONS.

**NOTE:** Always assemble the left hand cable and cable drum first to help maintain equal cable tension on both sides of the door.

Starting on the left hand side the red cable drum onto the torsion shaft / torsion keyed shaft(s). Hook the counterbalance lift cable into the left hand cable drum. Slide the left hand cable drum up against the left hand end bearing bracket. Counterbalance lift cable should terminate at the 3 o'clock position. Tighten the (2) set screws in the drum to 14-15 ft. lbs. of torque (once set screws contact the shaft, tighten screws one full turn).

**NOTE:** If you have torsion keyed shaft(s), insert (1) key into the slot of both the cable drum and the slot in the torsion keyed shaft, as shown.

Rotate the left hand drum and torsion shaft until counterbalance lift cable is taut. Now attach locking pliers to the torsion shaft and brace locking pliers up against jamb to keep counterbalance lift cable taut. Repeat for right hand side using the right hand side the black cable drum.

**IMPORTANT:** PRIOR TO TIGHTENING THE SET SCREWS IN THE SET COLLARS, AVOID PLACING THE SET SCREWS IN THE KEYWAYS OF TORSION KEYED SHAFT(S).

Set Collars
- Tools Required: Step ladder, Chalk, Safety glasses, Leather gloves

NOTE: If your door did not come with set collars, then skip this step.

Slide each of the set collars up against the inside surface of the end bearing brackets, with the set screw facing directly away from the header. Tighten the set screw in each of the set collars to the torsion shaft to 14-15 ft. lbs. of torque (once set screw contacts the shaft, tighten set screw one full turn).

**IMPORTANT:** PRIOR TO TIGHTENING THE SET SCREWS IN THE SET COLLARS, AVOID PLACING THE SET SCREWS IN THE KEYWAYS OF TORSION KEYED SHAFT(S).

Chalking Torsion Spring(s)
- Tools Required: Step ladder, Chalk, Safety glasses, Leather gloves

Draw a chalk line horizontally along the center of the torsion spring coil(s). As the torsion spring is wound, the chalk line will create a spiral. This spiral can be used to count and determine the number of turns that are applied on the torsion spring.

Securing Door for Spring Winding
- Tools Required: Vice clamps, Safety glasses, Leather gloves

With the door in the fully closed position, place vice clamps / c-clamps onto both vertical tracks just above the third track roller. This is to prevent the garage door from rising while winding springs.

**NOTE:** Check the following before attempting to wind torsion spring(s):
- a. Counterbalance lift cables are secured at bottom corner brackets.
- b. Counterbalance lift cables are routed unobstructed to cable drums.
- c. Counterbalance lift cables are correctly installed and wound onto cable lift drums.
d. Counterbalance lift cables are taut and have equal tension on both sides.
e. Cable lift drums are against end bearing brackets and set screws are tight.
f. Torsion spring or springs are installed correctly.
g. Review the label attached to the spring warning tag, to determine number of spring turns required.

**NOTE:** Door MUST be closed and locked when winding or making any adjustments to the torsion spring(s).

### WARNING

**FAILURE TO ENSURE DOOR IS IN A CLOSED POSITION AND TO PLACE VICE CLAMP ONTO VERTICAL TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE OR FATAL INJURY.**

<table>
<thead>
<tr>
<th>Winding Bars (Steel Rods)</th>
<th>Size Of Winding Bar (Inches)</th>
<th>Spring Diameter Used On</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/2&quot; dia. x 18&quot;</td>
<td>2&quot; and 2-5/8&quot;</td>
</tr>
<tr>
<td></td>
<td>5/8&quot; dia. x 24&quot;</td>
<td>3-3/4&quot;</td>
</tr>
</tbody>
</table>

### WARNING

**WINDING TORSION SPRING(S) IS AN EXTREMELY DANGEROUS PROCEDURE AND SHOULD BE PERFORMED ONLY BY A TRAINED DOOR SYSTEM TECHNICIAN USING PROPER TOOLS AND INSTRUCTIONS.**

### WARNING

**USE ONLY SPECIFIED WINDING BARS, AS STATED IN STEP SECURING DOOR FOR SPRING WINDING. DO NOT SUBSTITUTE WITH SCREWDRIVERS, PIPE, ETC. OTHER TOOLS MAY FAIL OR RELEASE FROM THE SPRING CONE AND CAUSE SERIOUS PERSONAL INJURY.**

### WARNING

**PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.**

Position a ladder slightly to the side of the spring so that the winding cone is easily accessible, and so your body is not directly in line with the winding bars. Check the label attached to the spring warning tag for the required number of complete turns to balance your door.

<table>
<thead>
<tr>
<th>Door Height</th>
<th>Approximate Spring Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’0”</td>
<td>6-7/8</td>
</tr>
<tr>
<td>6’3”</td>
<td>7-1/8</td>
</tr>
<tr>
<td>6’6”</td>
<td>7-1/4</td>
</tr>
<tr>
<td>6’8”</td>
<td>7-3/8</td>
</tr>
<tr>
<td>6’9”</td>
<td>7-1/2</td>
</tr>
<tr>
<td>7’0”</td>
<td>7-5/8</td>
</tr>
<tr>
<td>7’3”</td>
<td>7-7/8</td>
</tr>
</tbody>
</table>

Alternately inserting the winding rods into the holes of the spring winding cone, rotate the winding cone downward toward the floor, 1/4 turn at a time, until the required number of complete turns for your door height is achieved. As the last 1/8 to 1/4 turn is achieved, securely hold the winding rod and carefully stretch the torsion spring 1/8” - 1/4”. Next while still securely holding the winding rod, tighten both set screws in the winding cone to 14-15 ft. lbs. of torque (once set screws contact the torsion shaft, tighten screws one full turn).

Carefully remove winding rod from winding cone. Repeat for the opposite spring. While holding the door down to prevent it from raising unexpectedly in the event the spring(s) were over-wound, carefully remove the locking pliers from the torsion shaft and vertical tracks.

Adjustments to the number of turns stated may be necessary. If door rises off floor under spring tension alone, reduce spring tension until door rests on the floor. If the door is hard to rise or drifts down on its own, add spring tension.

### WARNING

**RAISING DOOR FURTHER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.**

Clamp a pair of vice clamps onto the vertical tracks just above the second track roller on one side, and just below the second track roller on the other side. This will prevent the door from raising or lowering while installing the rear back hangs.

Using the chart (Perforated Angle Gauge Weight Limitations) below, use the appropriate perforated angle (may not be supplied), (2) 5/16” x 1-5/8” hex head lag screws and (3) 5/16” bolts with nuts (may not be supplied), fabricate rear back hangs for the horizontal tracks. Attach the horizontal tracks to the rear back hangs with 5/16” - 18 x 1” hex bolts and nuts (may not be supplied). Horizontal tracks must be level and parallel with door within 3/4” to 7/8” maximum of door edge.

### WARNING

**EXCEEDING THE RECOMMENDED LISTED DOOR WEIGHT LIMITATIONS OF SPECIFIC GAUGE PERFORATED ANGLES MAY RESULT IN DOOR FALLING WHEN RAISED, CAUSING SEVERE OR FATAL INJURY.**

### WARNING

**VERIFY PERFORATED BACK HANG ANGLE LOAD RATINGS WITH BACK HANG ANGLE SUPPLIER.**

### Perforated Angle Gauge Weight Limitations:

- 2” x 2” x 12 Gauge
- Door Weight Less Than 800 lbs.
- 1-1/4” x 1-1/4” x 13 Gauge
- Door Weight Less Than 305 lbs.
- 1-1/4” x 1-1/4” x 15 Gauge
- Door Weight Less Than 220 lbs.
- 1-1/4” x 1-1/4” x 16 Gauge
- Door Weight Less Than 175 lbs.

**NOTE:** If an opener is installed, position horizontal tracks one hole above level when securing...
it to the rear back hangs.

**WARNING**

**KEEP HORIZONTAL TRACKS PARALLEL AND WITHIN 3/4" TO 7/8" MAXIMUM OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SEVERE OR FATAL INJURY.**

**IMPORTANT:** DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE REAR BACK HANGS THAT CANTILEVER 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

**NOTE:** If rear back hangs are to be installed over drywall, use (2) 5/16" x 2" hex head lag screws and make sure lag screws engage into solid structural lumber.

**NOTE:** 26° angle must be attached to sound framing members and nails should not be used.

Now, permanently attach the weatherstrips on both door jambs and header. The weatherstrips were temporarily attached in Preparing the Opening, in the pre-installation section of this manual.

**NOTE:** When permanently attaching the weatherstrips to the jambs, avoid pushing the weatherstrips too tightly against the face of door.

**WARNING**

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU’RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

Now, lift door and check its balance. Adjustments to the required number of spring turns stated may be necessary. If door rises off floor under spring tension alone, reduce spring tension until door rests on the floor. If the door is hard to rise or drifts down on its own, add spring tension. A poorly balanced door can cause garage door operator operation problems.

To adjust spring tension, fully close door. Apply vice grips to track above third track roller. Insert a winding rod into the winding cone. On single spring doors, counterbalance lift cable tension must be maintained by placing vice grips on torsion shaft before loosening set screws in the winding cone. Push upward on the winding rod while carefully loosening the set screws in the winding cone. BE PREPARED TO SUPPORT THE FULL FORCE OF THE TORSION SPRING ONCE THE SET SCREWS ARE LOOSE. Carefully adjust spring tension 1/4 turn. Retighten both set screws in the winding cone and repeat for the other side. Recheck door balance. DO NOT ADJUST MORE THAN 1/2 TURN FROM THE RECOMMENDED NUMBER OF TURNS.

If the door still does not operate easily, lower the door into the closed position, UNWIND THE SPRING(S) FULLY (Reference the insert “Removing The Old Door / Preparing The Opening” section on torsion spring removal) and recheck the following the items:

1.) Check the door for level.
2.) Check the torsion shaft for level.
3.) Check the track spacing.
4.) Check the counterbalance cables for equal tension and proper wrap onto the cable drums.
5.) Check the track for potential obstruction of the track rollers.
6.) Clamp locking pliers onto track and rewind springs.

**IMPORTANT:** IF DOOR STILL DOES NOT OPERATE PROPERLY, THEN CONTACT A TRAINED DOOR SYSTEM TECHNICIAN.
IMPORTANT: USING THE ILLUSTRATION, ATTACH THE APPROPRIATE LABELS TO THE APPROPRIATE LOCATION ON THE SECTION, AS SHOWN.

NOTE: The Spring Warning tag(s) are factory attached (one per spring).

NOTE: Because of different configurations, some labels may require minor relocations.

Factory Attached, Torsion spring tag(s) (one per spring)

Operator bracket label

Residential warning label

Bottom section warning labels

Tools Required: Safety glasses, Leather gloves

Label Placement

3/4" To 7/8" 3/4" To 7/8" Door edges Horizontal tracks

-3/4" To 7/8"
Inside Lock

Install the inside lock on the second section of the door. Secure the lock to the section with (4) 1/4" - 20 x 11/16" self drilling screws. Square the lock assembly with the door section, and align with the square hole in the vertical track. The inside lock should be spaced approximately 1/8" away from the section edge.

IMPORTANT: INSIDE LOCK(S) MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION IF AN OPERATOR IS INSTALLED ON THIS DOOR.

Pull Down Rope

**WARNING**

DO NOT INSTALL PULL DOWN ROPE ON DOORS WITH OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING SEVERE OR FATAL INJURY.

Measure and mark the jamb approximately 48" to 50" (1220 to 1270 mm) from floor on the right or left side of jamb. Drill 1/8" pilot hole for no. 6 screw eye. Tie the pull down rope to the no. 6 screw eye and to the bottom corner bracket, as shown.

Door Arm Hookup

**NOTE:** If overhead door operator/ trolley bracket was installed, follow these directions.

Align hole in the door arm with holes in drawbar operator bracket tabs, as shown. Attach with 5/16" x 1-3/4" cotter pin and cotter ring.
**Maintenance**

**Cleaning Your Garage Door**

Like any other exterior surface, Wayne Dalton garage doors will have dirt exposure from atmospheric conditions. Ordinarily, the cleaning action of rainfall will be adequate to wash the door, or the door can be washed periodically by hosing with a garden hose and clear water (in particular) for the areas not accessible to rain. If you desire to do a more thorough cleaning, or where soil collection conditions occur, follow these simple instructions:

1. Use a soft-bristled, long-handled washing brush. It attaches to your garden hose and makes washing your garage door easier. Do not rub vigorously which may create glossy areas over the vinyl finish.

2. For hard-to-remove dirt, such as soot and grime found in industrial areas, wash the garage door down with a mild solution consisting of the following ingredients:

   - One cup detergent (with less than 0.5% phosphate) dissolved into five gallons of warm water.

   **NOTE:** The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning of garage doors.

   **NOTE:** Be sure to clean behind weather stripping on both sides and top of door.

3. Start at the bottom and work up to the top, as less streaking will result. Immediately following all washing operations, thoroughly rinse the surface area with fresh water from a garden hose.

This cleaning and maintenance information is suggested in an effort to be of assistance; however, manufacturer cannot assume responsibility for results obtained which are dependent on the cleaning solution and method of application.

**CAUTION**

**DO NOT PAINT DOOR. PAINTING DOOR WILL VOID YOUR WARRANTY.**

**Operation And Maintenance**

**OPERATING YOUR GARAGE DOOR...**

Before you begin, read all warning labels affixed to the door and the installation instructions and owner’s manual. When correctly installed, your Wayne Dalton door will operate smoothly. Always operate your door with controlled movements. Do not slam your door or throw your door into the open position, this may cause damage to the door or its components. If your door has an electric opener, refer to the owner’s manual to disconnect the opener before performing manual door operation below.

**Manual door operation:**

For additional information on manual garage door operations go to [www.dasma.com](http://www.dasma.com) and reference TDS 165.

**IMPORTANT:** DO NOT PLACE FINGERS OR HANDS INTO SECTION JOINTS WHEN OPENING AND/OR CLOSING A DOOR. ALWAYS USE LIFT HANDLES / SUITABLE GRIPPING POINTS WHEN OPERATING THE DOOR MANUALLY.

Opening a Door: Make sure the lock(s) are in the unlocked position. Lift the door by using the lift handles / suitable gripping points only. Door should open with little resistance.

Closing a Door: From inside the garage, pull door downward using lift handles / gripping point only or a high friction area only. If you are unable to reach the lift handles/ suitable gripping points only, use pull down rope affixed to the side of door. Door should close completely with little resistance.

**Using an electric operator:**

**IMPORTANT:** PULL DOWN ROPES MUST BE REMOVED AND LOCKS MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION.

When connecting a drawbar (trolley type) garage door operator to this door, an drawbar operator and or drawbar operator bracket must be securely attached to the top section of the door, along with any struts provided with the door. Always use the drawbar operator and or drawbar operator bracket supplied with the door. To avoid possible damage to your door, Wayne Dalton recommends reinforcing the top section on models 8000, 8100, 8200 and 9100 doors with a strut (may or may not be supplied). The installation of the drawbar operator must be according to manufacturer’s instructions and force settings must be adjusted properly. Refer to the owner’s manual supplied with your drawbar operator for complete details on installation, operation, maintenance and testing of the operator.

**MAINTAINING YOUR GARAGE DOOR...**

Before you begin, read all warning labels affixed to the door and the installation instructions and owner’s manual. Perform routine maintenance steps once a month, and have the door professionally inspected once a year. Review your Installation Instructions and Owner’s Manual for the garage door. These instructions are available at no charge from Wayne Dalton, a division of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH, 44660, or at [www.Wayne-Dalton.com](http://www.Wayne-Dalton.com). For additional information on garage door/operator maintenance go to [www.dasma.com](http://www.dasma.com) and reference TDS 151, 167 and 179.

**Monthly Inspections:**

1. **Visual Inspection:** Closely inspect jambs, header and mounting surface. Any wood found not to be structurally sound must be replaced. Inspect the springs, counterbalance lift cables, track rollers, pulleys, rear back hangs and other door hardware for signs of worn or broken parts. Tighten any loose screws and/or bolts. Check exterior surface of the door sections for any minor cracks. Verify door has not shifted right or left in the opening. If you suspect problems, have a trained door system technician make the repairs.

**WARNING**

**GARAGE DOOR SPRINGS, COUNTERBALANCE LIFT CABLES, BRACKETS, AND OTHER HARDWARE ATTACHED TO THE SPRINGS ARE UNDER EXTREME TENSION, AND IF HANDLED IMPROPERLY, CAN CAUSE SEVERE OR FATAL INJURY. ONLY A TRAINED DOOR SYSTEMS TECHNICIAN SHOULD ADJUST THEM, BY CAREFULLY FOLLOWING THE MANUFACTURER’S INSTRUCTIONS.**

**WARNING**

**NEVER REMOVE, ADJUST, OR LOOSEN THE BOLTS, SCREWS AND/OR LAG SCREWS ON THE COUNTERBALANCE (END OR CENTER BEARING BRACKETS) SYSTEM OR BOTTOM CORNER BRACKETS OF THE DOOR. THESE BRACKETS ARE CONNECTED TO THE SPRING(S) AND ARE UNDER EXTREME TENSION. TO AVOID POSSIBLE SEVERE OR FATAL INJURY, HAVE ANY SUCH WORK PERFORMED BY A TRAINED DOOR SYSTEMS TECHNICIAN USING PROPER TOOLS AND INSTRUCTIONS.**

TorqueMaster® Plus Springs: Pawl knob(s) (located on the TorqueMaster® end brackets above the door) should be engaged to prevent the door from rapidly descending in case of spring failure or forceful manual operation.

Torsion Springs: The torsion springs (located above the door) should only be adjusted by a trained door systems technician. DO NOT attempt to repair or adjust torsion springs yourself.

Extension Springs: A restraining cable or other device should be installed on the extension spring (located above the horizontal tracks) to help contain the spring if it breaks.

2. **Door Balance:** Periodically test the balance of your door. If you have a garage door drawbar operator, use the release mechanism so you can operate the door by hand when doing this test. Start with the door in the fully closed position. Lift the door to check its balance. Adjust TorqueMaster® or Extension spring(s), if door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down). DO NOT attempt to repair or adjust Torsion Springs yourself. To adjust TorqueMaster® or Extension spring(s), refer to your installation instructions and owner’s manual. If in question about any of the procedures, do not perform the work. Instead, have it adjusted by a trained door systems technician.

3. **Lubrication:** The door should open and close smoothly. Ensure the door track rollers are rotating freely when opening and closing the door. If track rollers do not rotate freely, clean the door tracks, removing dirt and any foreign substances. Clean and lubricate (use a non-silicon based lubricant) graduated end hinges, steel track rollers and bearings. DO NOT lubricate plastic idler bearings, nylon track rollers, door track. DO NOT oil a cylinder lock, if actuation is difficult use a graphite dust to lubricate.
Limited Warranty

Model 8700

Wayne Dalton, a division of Overhead Door Corporation ("Seller") warrants to the original purchaser of the Model 8700 ("Product"), subject to all of the terms and conditions hereof, that the Product and all components thereof will be free from defects in materials and workmanship for the following period(s) of time, measured from the date of installation:

• **FIFTEEN (15) YEARS** - Against peeling, flaking, chipping or cracking of the vinyl skin.
• **FIVE (5) YEARS** - Against excessive color fading of the vinyl skin, not due to normal weathering, which materially alters the color of the Product and cannot be remedied by cleaning with the recommended solution.
• **ONE (1) YEAR** - All other components of the Product.

Seller's obligation under this warranty is specifically limited to repairing or replacing, at its option, any part which is determined by Seller to be defective during the applicable warranty period. Any labor charges are excluded and will be the responsibility of the purchaser.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty is made to the original purchaser of the Product only, and is not transferable or assignable. This warranty applies only to Product installed in a residential or other non-commercial application. It does not cover any Product installed in commercial or industrial building applications. This warranty does not apply to any unauthorized alteration or repair of the Product, or to any Product or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, improper installation of hardware, puncture, normal wear and tear, or acts of God or any other cause beyond the reasonable control of Seller.

This warranty specifically excludes any damage resulting from scratching, abrasion or impact by any hard object or exposure to toxic or abrasive environments including toxic chemicals or fumes, and any fading or color change which may not be uniform due to unequal exposure of the curtains to sunlight or other elements. The Product is not recommended for use in hot, dry climates. This warranty specifically excludes coverage for any Product used or installed in Utah, Arizona, Nevada, New Mexico, Colorado and the West and Southwest regions of Texas. The Limited Warranty for the sections of the door will be voided if sections are painted.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE APPLICABLE WARRANTY PERIOD REFLECTED ABOVE. NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY PERIOD HAS EXPIRED. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Claims under this warranty must be made promptly after discovery, within the applicable warranty period, and in writing to the authorized distributor or installer whose name and address appear below. The purchaser must allow Seller a reasonable opportunity to inspect any Product claimed to be defective prior to removal or any alteration of its condition. Proof of the purchase and/or installation date, and identification as the original purchaser, may be required. There are no established informal dispute resolution procedures of the type described in the Magnuson-Moss Warranty Act.

**SELLER:**

_________________________________________

**SELLER'S ADDRESS:**

_________________________________________
Thank you for your purchase.

PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE

If you need assistance, please call 1-866-569-3799 (press Option 1) and follow the prompts to contact a customer service representative. They will be happy to handle any questions that you may have.

After installation is complete, fasten this manual near garage door for easy reference.