# START HERE

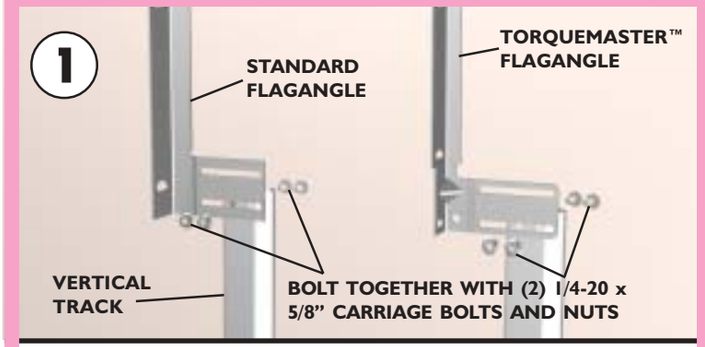
**IMPORTANT!** READ IMPORTANT SAFETY NOTICES AND REFER TO INSERT SHEET INSTRUCTIONS TITLED "REMOVING THE OLD DOOR/ PREPARING THE OPENING". IF THE INSERT SHEET INSTRUCTIONS ARE NOT INCLUDED, CONTACT WAYNE-DALTON CORP. FOR A FREE COPY.

If removing an existing door, carefully follow the directions given on the insert sheet instruction in the portion titled "Removing the Old Door".

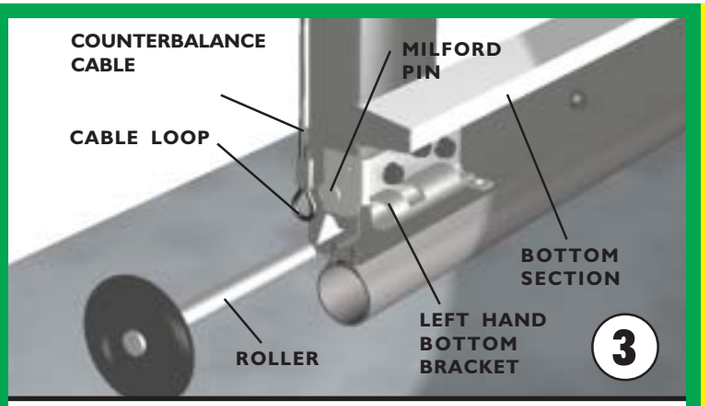
## ⚠ WARNING!

**REMOVAL OF AN EXISTING DOOR CAN BE DANGEROUS. FOLLOW INSERT SHEET INSTRUCTIONS CAREFULLY, OTHERWISE SERIOUS INJURY OR DEATH COULD RESULT.**

Begin the installation of the door by checking the opening. It must be the same size as the door. Vertical jambs must be plumb and the header level. Side clearance, from edge of door to wall, must be minimum of 3-1/2" (89 mm) on each side. For proper opening preparation refer to the portion of the insert sheet instructions titled "Preparing the Opening".




Attach the lower slot of the vertical flag angle to the top of the vertical track with (2) 1/4-20 x 5/8" carriage bolts and flange nuts. Tighten nuts finger tight.



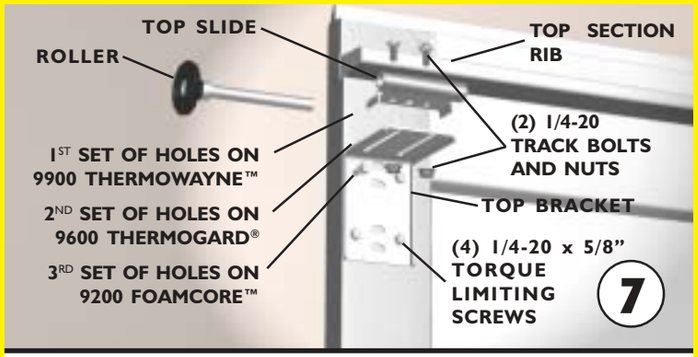

Unpack the TorqueMaster™ cable drums and identify the right and left hand drum by their markings. Uncoil the counterbalance cables and slip the loop at the end of the cable over the milford pin on the bottom bracket of the bottom section. Make sure you place the cable from the right hand drum on the right bottom bracket, and left hand drum on the left bottom bracket. Place a roller in each of the bottom brackets, as well as the end hinges at the top of the bottom section.

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

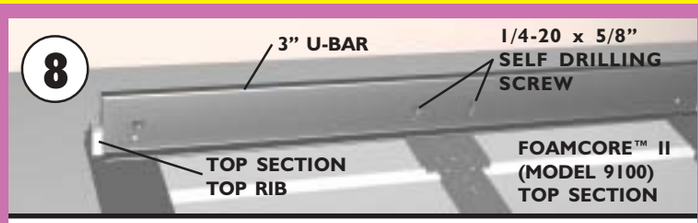

Before installing the bottom section, measure and cut vinyl jamb weather-stripping (not included) for entire garage door opening. Temporarily nail the weather-stripping to the door jambs and header. This will help hold the bottom door section in place. Refer to the insert sheet on preparing the opening.

**Now comes the single most important step in installing the Wayne-Dalton garage door system.** Center the bottom section in the door opening. Level it using wooden shims under the bottom astragal as needed. Once the bottom section is level, all the other components will automatically align. Hold the section in the opening while attaching vertical tracks.

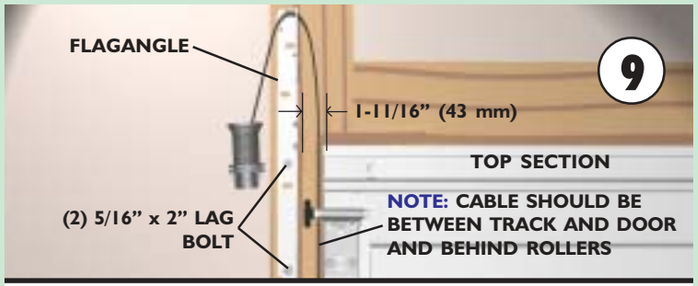
**NOTE:** Align the bottom of the vertical tracks with the bottom of the section. If you leveled the bottom section with shims on one side, then the vertical track on that side must be raised off the floor an amount that's equal to the thickness of the shim(s).




To install the L-shaped top brackets, align the top holes in the top bracket with the first set of holes in the endcap for 9900 Thermowayne™ doors, second set for 9600 Thermogard® doors and third set on all 9200 Foamcore™ doors. Fasten using (4) 1/4-20 x 5/8" torque limiting screws. Secure the top slide to the bracket using (2) 1/4-20 carriage bolts and nuts. Insert rollers into top slide.



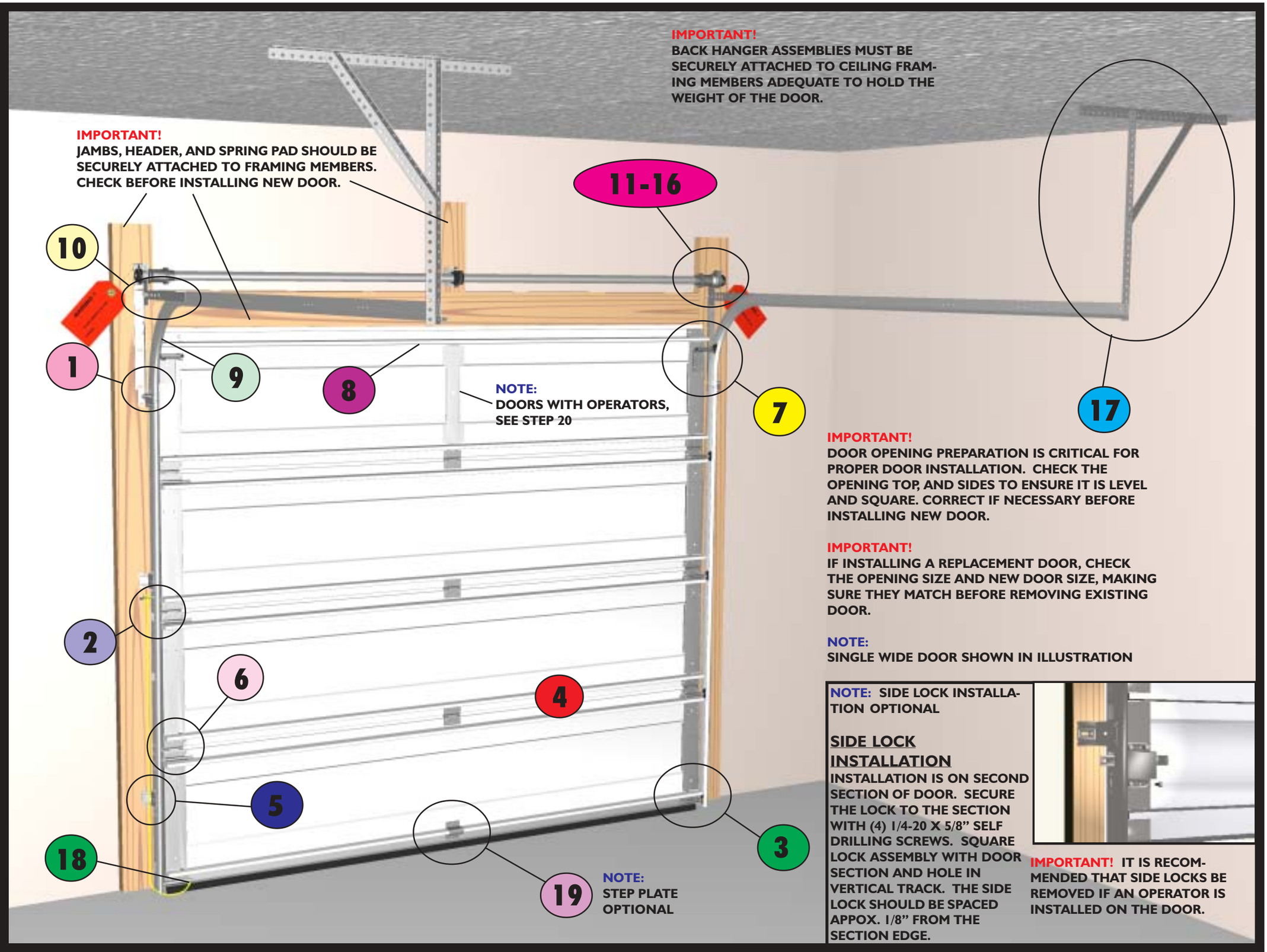

9900 Foamcore™ doors over 13' wide require a 3" U-Bar. Center the U-Bar over the top rib on the top section and secure it to the section using (6) 1/4-20 x 5/8" self drilling screws. Place top section in the door opening and secure it temporarily by driving a nail into the header near the center of the door and bending it over the section. Now flip, hold and fasten the hinges.




Position the flagangle 1-11/16" (43 mm) from the edge of the door. Tighten the first lag bolt then secure flagangle to the jamb with (2) 5/16" x 2" lag bolts.

**IMPORTANT!** Ensure that flagangles are parallel with the door sections.

**IMPORTANT!** The dimension between the flagangles must be exactly door-width plus 3-3/8" (86 mm) +1/4" (6 mm) - 0" for smooth, safe door operation. Now complete the vertical track installation on both sides by securing center jamb bracket and tightening other lag bolts.




**IMPORTANT!**
DOOR OPENING PREPARATION IS CRITICAL FOR PROPER DOOR INSTALLATION. CHECK THE OPENING TOP, AND SIDES TO ENSURE IT IS LEVEL AND SQUARE. CORRECT IF NECESSARY BEFORE INSTALLING NEW DOOR.

**IMPORTANT!**
IF INSTALLING A REPLACEMENT DOOR, CHECK THE OPENING SIZE AND NEW DOOR SIZE, MAKING SURE THEY MATCH BEFORE REMOVING EXISTING DOOR.

**NOTE:**
SINGLE WIDE DOOR SHOWN IN ILLUSTRATION

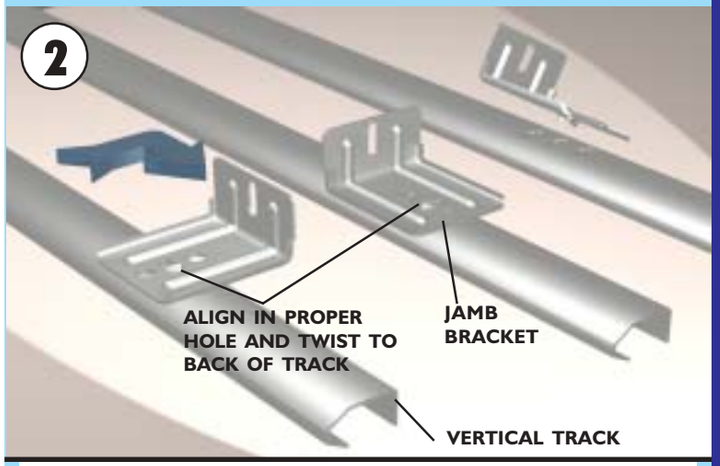
**NOTE:** SIDE LOCK INSTALLATION OPTIONAL

## SIDE LOCK INSTALLATION

INSTALLATION IS ON SECOND SECTION OF DOOR. SECURE THE LOCK TO THE SECTION WITH (4) 1/4-20 X 5/8" SELF DRILLING SCREWS. SQUARE LOCK ASSEMBLY WITH DOOR SECTION AND HOLE IN VERTICAL TRACK. THE SIDE LOCK SHOULD BE SPACED APPOX. 1/8" FROM THE SECTION EDGE.



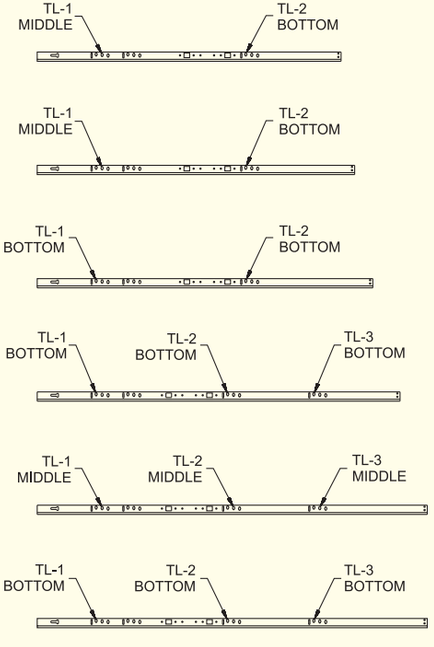
**IMPORTANT!** IT IS RECOMMENDED THAT SIDE LOCKS BE REMOVED IF AN OPERATOR IS INSTALLED ON THE DOOR.



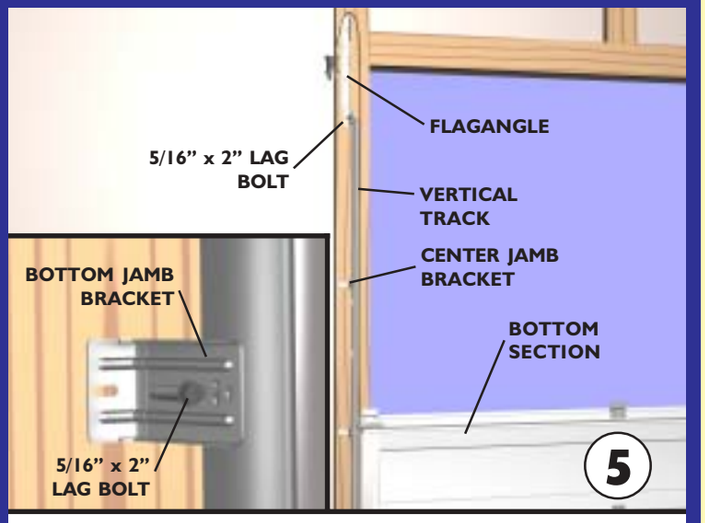

Measure the length of the vertical tracks. Using the table, determine the placement of the jamb brackets for your door height. Align the Twistlock™ wings on each jamb bracket with the correct butterfly holes in the track and turn the jamb bracket perpendicular to the track so the mounting flange is toward the back leg of the track.

**NOTE:** Special ordered doors not in inventory in stores, are not supplied with R.K. Tools. If your door did not provide a R.K. Tool, then position the vertical track according to the note in step 5.

| DOOR HEIGHT | SECTION | TRACK TYPE | LENGTH |
|---|---|---|---|
| 6'5" | 4 -19.1 | R10" | 67 |
| | | R12" | 67 |
| | | R14" | 69 |
| | | LHR | 62 |
| 6'8" | 2-20.8 2-19.1 | R10" | 70 |
| | | R12" | 70 |
| | | R14" | 72 |
| | | LHR | 65 |
| 7'0" | 4-20.8 | R10" | 74 |
| | | R12" | 74 |
| | | R14" | 76 |
| | | LHR | 69 |
| 7'6" | 2-23.8 2-20.8 | R10" | 80 |
| | | R12" | 80 |
| | | R14" | 82 |
| | | LHR | 75 |
| 8'0" | 4-23.8 | R10" | 86 |
| | | R12" | 86 |
| | | R14" | 88 |
| | | LHR | 81 |
| 8'0" | 5-19.1 | R10" | 86 |
| | | R12" | 86 |
| | | R14 | 88 |
| | | LHR | 81 |

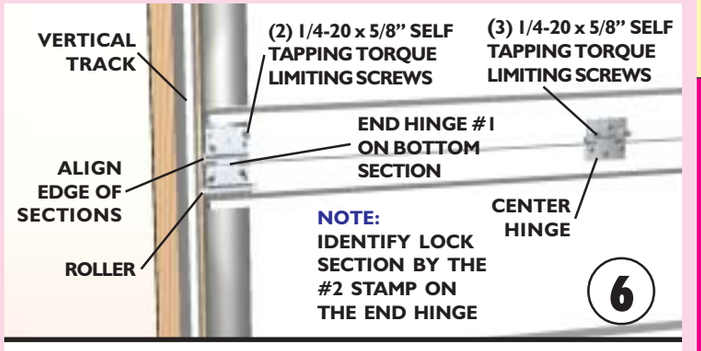



**NOTE:** Jamb brackets are stamped for identification.




Position the vertical track over the rollers of the bottom section. Make sure the counterbalance cable is located between the rollers and the door jamb. Loosely fasten bottom jamb bracket and flagangle with (1) 5/16" x 2" lag bolt each, but do not install a lag bolt into the center jamb bracket yet. Run the counterbalance cable up between vertical track and edge of door section. Hang the cable over the top of the flagangle in radial notch. Repeat for other side.

**IMPORTANT!** The tops of the vertical tracks must be level from side to side.

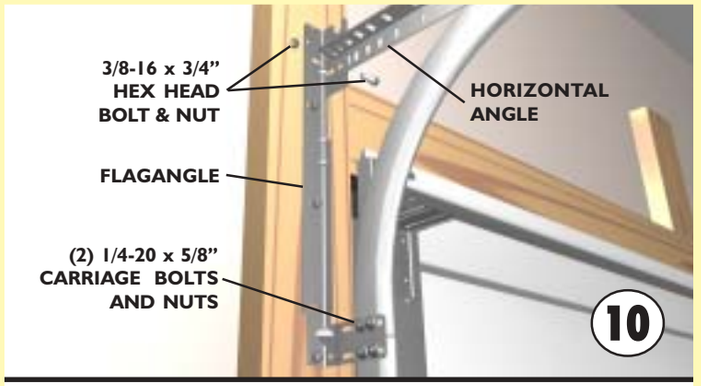



Make sure top leaves of all hinges on the bottom section are folded down. Insert rollers into the end hinges of the second section, also called the lock section. With assistance lift section and place rollers over the tops of the vertical tracks. Install by guiding rollers into the vertical track on both sides and gently lowering this section onto the bottom section. Keeping the ends of the sections aligned, install remaining section(s), except top section, in same manner. Fasten all hinges to connect the sections by flipping up the hinge leaf, holding it firmly against section and driving in the supplied 1/4-20 x 5/8" torque limiting screws.

**NOTE:** Two (2) 1/4-20 x 5/8" self tapping torque limiting screws are used for each end hinge leaf, while three (3) screws are used for each center hinge. The screw placement is staggered in the end hinges, with the screw nearest the edge of the door going into the lower hole and the inside screw going into the upper hole.

**IMPORTANT!** Once fastener is snug against hinge leaf, tighten an additional 1/4 to 1/2 turn to achieve maximum design holding power.

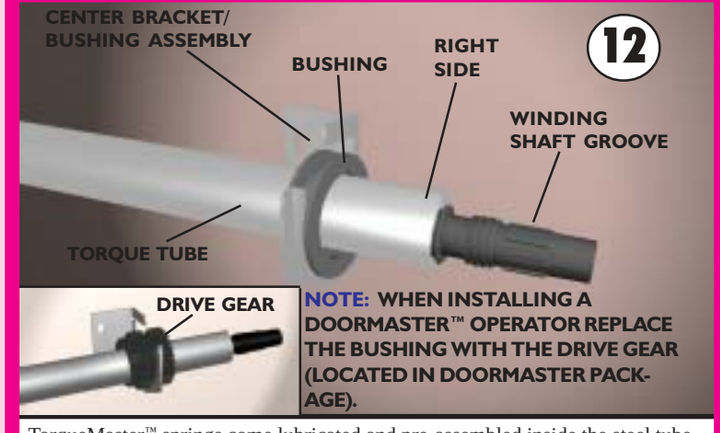
**NOTE:** To install lock, see lock instructions included in the lock assembly bag.




To install horizontal track, place the curved end over the top roller. Align the bottom of the horizontal track with the top of vertical track. Secure the track to the flagangle with (2) 1/4-20 x 5/8" carriage bolts and flanged nuts. Bolt the reinforcing angle to the slot in the flagangle using (1) 3/8-16 x 3/4" hex head bolt and nut. Repeat for other side. With tracks installed you can adjust the top brackets. Vertically align the top section with the lower sections. Once aligned, position top roller in adjustable slide against horizontal track to maintain position and tighten nut(s). Repeat for other side. Remove the nail from above the top section.

**IMPORTANT!** Failure to remove nail before attempting to raise door could cause permanent damage to top section.

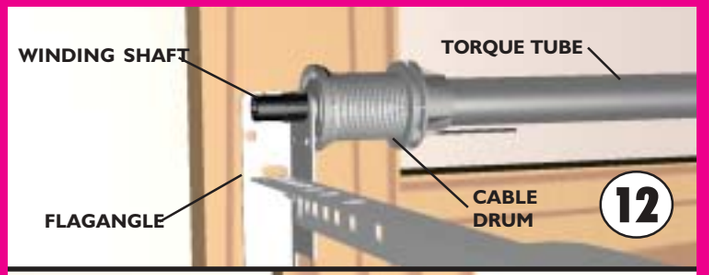
**⚠ WARNING!**
**DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR AS OUTLINED IN STEP #17, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE INJURY OR DEATH.**

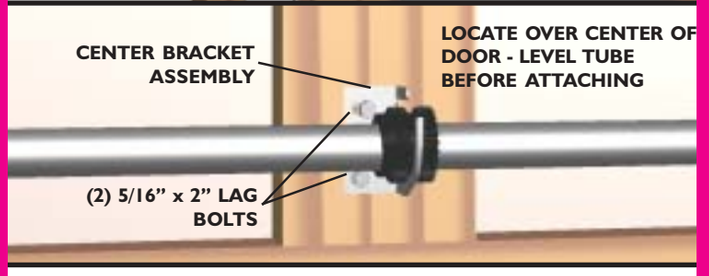



TorqueMaster™ springs come lubricated and pre-assembled inside the steel tube. To install, lay the tube on the floor in front of the door with the labeled end to the left. Identify Right or Left on winding shaft. Slide the center bracket/ bushing assembly (or center bracket/drive gear assembly) onto the tube, from the right hand side, and slide toward the center. Being cam shaped it only fits one way. Shake the tube gently to extend the winding shafts out about 5" on both ends.

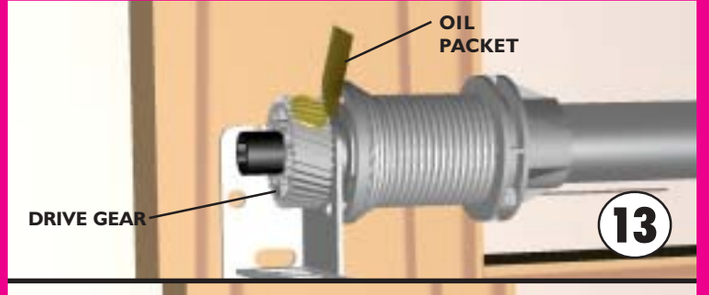
**IMPORTANT!** Right and left hand are always determined from inside the building looking out.

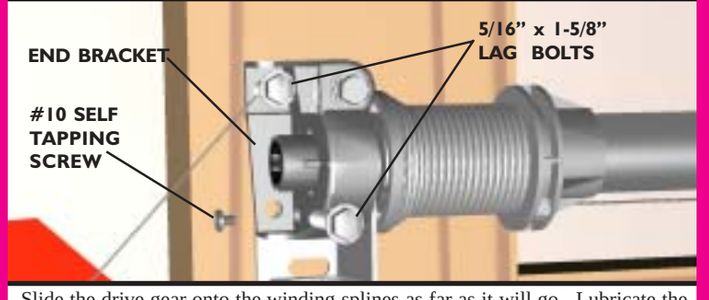
**NOTE:** TorqueMaster™ Counterbalance system - U.S. patent no. 5,419,010.



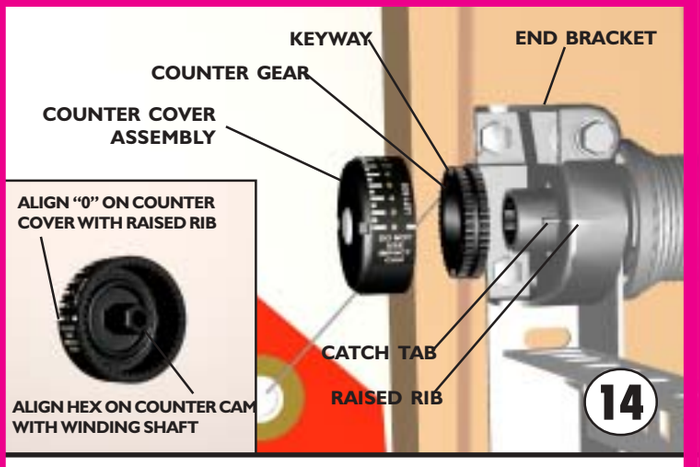

Cable drums and torque tubes are cam shaped to fit together only one way. To install the cable drum, slide it over the winding shaft until the drum seats against the steel tube. The winding shaft must extend past the drum far enough to expose the splines and the groove. Align the winding shaft groove with the radial notch in the flagangle. Repeat for other side. To locate the center bracket, mark the spring pad half way between the flagangles and level the TorqueMaster™ tube. Fasten the metal bracket to the spring pad with (2) 5/16" x 2" lag bolts, keeping the torque tube level.




Slide the drive gear onto the winding splines as far as it will go. Lubricate the entire circumference of the drive gear with the oil provided in packet. Slide the end bracket over the drive gear and fasten to the flagangle using a #10 self tapping screw. Now attach the end bracket and the flagangle to the jamb with (2) 5/16" x 1-5/8" lag bolts.

**IMPORTANT!** Warning tags must be securely attached to both end brackets.

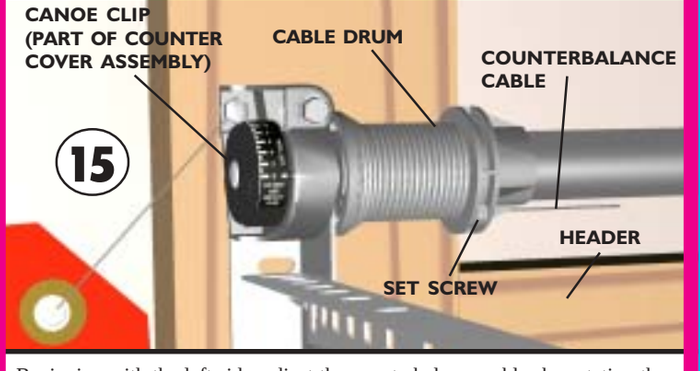



Install the counter gear with the missing tooth toward the outside, away from the end bracket. Press the counter gear onto the cylinder until snaps engage. Select the appropriate counter cover assembly and align the hex of the counter cam with the winding shaft. Also, align the "0" on the counter cover with the raised rib on the end bracket. Press the counter cover assembly against the counter gear until it locks into place. Repeat for other side.

Clamp locking pliers onto both vertical tracks just above the third roller. This is to prevent door from raising while winding the springs.

**⚠ WARNING!**

**FAILURE TO CLAMP TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE INJURY OR DEATH.**

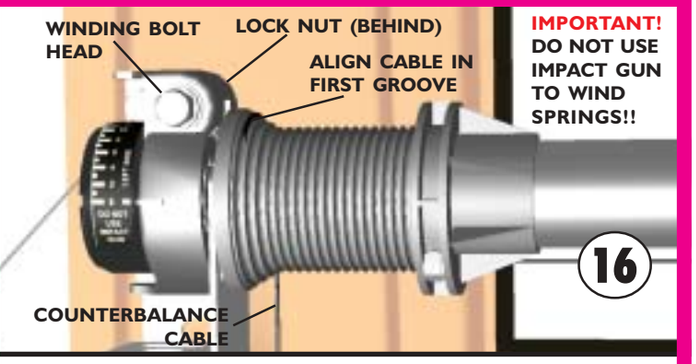



Beginning with the left side, adjust the counterbalance cables by rotating the drum until the set screw faces directly away from the header. Loosen the set screw no more than 1/2 turn. Pull on the end of cable to remove all slack. Check to ensure the cable is aligned and seated in the first groove of the cable drum. Snug the set screw, then tighten an additional 1 to 1-1/2 turns. Cut off excess cable, leaving about 6". Tuck end into cable drum.

## IMPORTANT!

Press in on the canoe clip and make sure counterbalance cable is aligned in first groove of the drum while winding the initial spring turns for both sides.

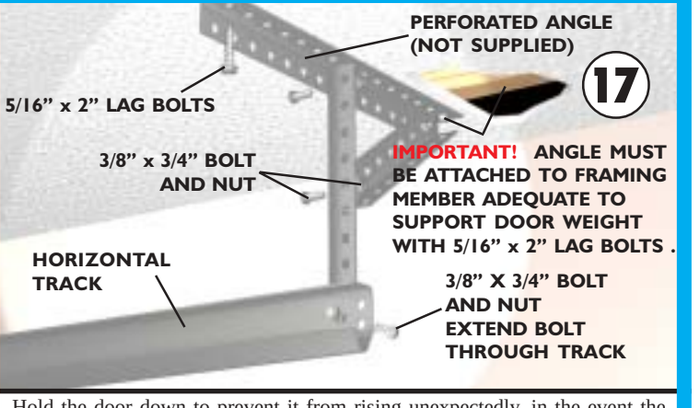
Using an electric drill (High torque / gear reduced to 1300 rpm preferred) with a 7/16" socket, carefully rotate the winding bolt head clockwise, until the counter shows 2-3 turns. This will keep the counterbalance cable taut while winding the other side.




Adjust the counterbalance cables for the right side as described in step 15. Carefully rotate the winding bolt head clockwise until the counter shows the correct number of turns for your door height.

**6'-0" Door Height = 14 1/2 turns**
**6'-5" Door Height = 15 1/2 turns**
**6'-6" Door Height = 15 1/2 turns**
**6'-8" Door Height = 16 turns**
**7'-0" Door Height = 16 1/2 turns**
**7'-3" Door Height = 17 turns**
**7'-6" Door Height = 17 1/2 turns**
**7'-9" Door Height = 18 turns**
**8'-0" Door Height = 18 1/2 turns**

Return to the left hand spring and continue winding it until correct number of turns is reached. After both springs are correctly wound, hold the lock nut stationary with a 7/16" wrench while rotating the winding bolt head clockwise until snug. Tightening of the lock nuts prevent springs from unwinding.




Hold the door down to prevent it from rising unexpectedly, in the event the springs were overwound, and carefully remove the locking pliers from the vertical tracks. Raise the door until the top section and half of the next section are in a horizontal position. Do not raise door any further since rear of horizontal track is not yet supported.

**⚠ WARNING!**

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

Now clamp a pair of locking pliers to the vertical tracks just above the second roller on one side, and just below the second roller on the other side. This will prevent the door from raising or lowering while installing the rear support.

**Step 18 Continues on back of page....**

# IMPORTANT SAFETY NOTICES

Wayne-Dalton Corp.
P.O. Box 67
Mt. Hope, Ohio 44660

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

1. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.

2. It is always recommended to wear eye protection when using tools, otherwise serious eye injury could result.

3. Avoid installing your new door on windy days. Door could fall during the installation and cause damage and personal injury.

4. If the door is to be electrically operated at any time, all pull ropes **MUST** be removed to prevent injury or death to children who may become entangled in the rope. The locking mechanism **MUST** also be disengaged.

5. Operate door **ONLY** when properly adjusted and free of obstructions.

6. Should the door become hard to operate or completely inoperative, a qualified door agency should correct the problem to prevent damage to the door or serious personal injury.

7. **DO NOT PERMIT** children to play with the garage door or the electrical controls. Fatal injury could result, should the child become entrapped between the door and the floor.

8. To prevent serious injury or death, avoid standing in the open doorway or walking through the doorway while the door is moving.

9. Door is constantly under **EXTREME SPRING TENSION**. To prevent possible serious injury or death, adjustments, repairs, removal or installation, **ESPECIALLY of SPRING ASSEMBLIES, CABLES or BOTTOM CORNER BRACKETS**, should be performed **ONLY** by qualified door service people.

10. If your existing garage door opener does not have a reversing mechanism, you should consider purchasing one that has up to date safety features. These features can prevent opener related property damage or personal injury.

11. Check all bolted connections monthly during the lifetime of the door to prevent damage or personal injury caused by loose connections.

12. Definition of key words used in this manual:

**WARNING!** -- Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

**IMPORTANT!** -- Required step for safe and proper door operation.

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



# MAINTENANCE AND PAINTING INSTRUCTION FOR PREPAINTED STEEL DOORS

## MAINTENANCE

While factory-applied finishes for steel garage doors are so durable that they will last many years longer than ordinary paints, it is desirable to clean them thoroughly on a routine basis. Apparent discoloration of the paint may occur when it has been exposed in dirt-laden atmospheres for long periods of time. Slight chalking may also cause some change in appearance in areas of strong sunlight. A good cleaning will generally restore the appearance of these coatings and render repainting unnecessary. An occasional light cleaning will also help maintain an aesthetically pleasing appearance. To maintain the original finish of the garage doors, the only regular maintenance necessary is that of annual washing. Mild solutions of detergents or household ammonia will aid in the removal of most dirt, and the following are recommended levels:

One cup of Tide™, or other common detergents, which contain 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. CAUTION: NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

## SURFACE PREPARATION FOR PAINTING

Wax on the surface must be removed or paint peeling/flaking will result. To remove this wax, it will be necessary to lightly scuff the surface with a gray (not green!) 3M ScotchBrite pad saturated with soapy water. A final wipe and rinse should be done with clean water only, to remove any loose dust or soap film.

Surface scratches, which have not exposed the metal substrate, can be lightly buffed or sanded with 0000 steel wool or No. 400 sand paper to create a smoother surface. Care must be taken to not expose the substrate under the paint (see Note No. 2). Once this exposed condition exists, the likelihood for rusting is greatly increased. See the following paragraph if the metal substrate is observed.

Exposed substrate must be treated to prevent rust from forming (see Note No. 2). Sand the exposed area lightly and paint with high quality metal primer to protect from corrosion. Follow drying time on primer can label before applying topcoat.

The surface to be recoated must not be to smooth or the repaint material will not adhere to it (see Note No. 2). It is advisable to test a representative area to evaluate adhesion. If poor adhesion is observed, the surface must be abraded by sanding or buffing using grades mentioned above. Care must be taken to not expose the substrate under the paint.

## PAINTING

After the surface has been properly prepared it must be allowed to dry thoroughly, then coated immediately with a premium quality latex house paint. Follow the paint label directions explicitly. Oil base paint is not recommended. Please note that if substrate is exposed, painting with latex paint may cause accelerated rusting of steel.

## NOTES:

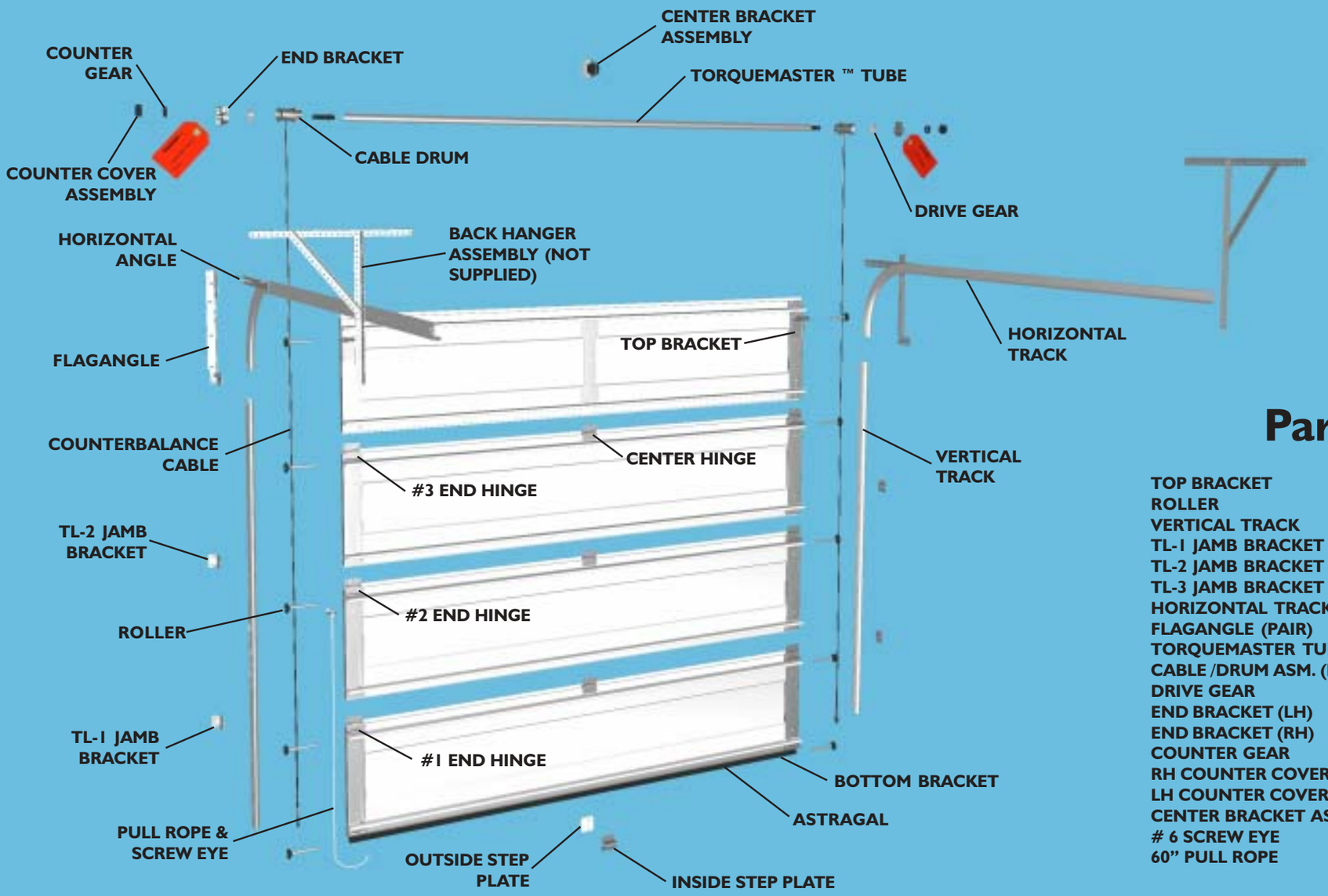
1. Repainting of finish painted steel doors cannot be warranted as this condition is totally beyond door manufacturer's control.
2. If the steel door surface has a finish painted textured surface representing wood grain, stucco, etc., this step should not be attempted as danger of exposing substrate is greatly increased.
3. Consult a professional coatings contractor if in doubt about any of the above directions.
4. Follow directions explicitly on the paint and solvent container labels for proper applications of coatings and disposal of containers. Pay particular attention to those directions involving acceptable conditions in which to paint.

## ACRYLIC GLAZING CLEANING INSTRUCTIONS:

1. To clean acrylic glazing wash with plenty of nonabrasive soap or detergent and water. Use the bare hand to feel and dislodge any caked dirt or mud. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloth that will scratch the acrylic glazing. Dry with a clean damp chamois.
2. Grease and oil may be removed with kerosene or a good grade of naphtha (No aromatic content.). Users of these solvents should become familiar with their properties to handle them safely.
3. **Do not use:** Window cleaning fluids, scouring compounds, gritty cloths, leaded or ethyl gasolines, or solvents such as alcohol, acetone, carbon tetrachloride, etc.

# 9900 Thermowayne™ 9600 Thermogard® 9200 Foamcore™ TorqueMaster™

## Portland Source Plant Installation Instructions and Owners Manual




## Parts List

| | |
|---|---|
| TOP BRACKET | # 158048 |
| ROLLER | #175411 |
| VERTICAL TRACK | 1 PAIR |
| TL-1 JAMB BRACKET | # 261965 |
| TL-2 JAMB BRACKET | # 261966 |
| TL-3 JAMB BRACKET | # 261967 |
| HORIZONTAL TRACK | 1 PAIR |
| FLAGANGLE (PAIR) | # 168068 |
| TORQUEMASTER TUBE | 1 ASSEMBLY |
| CABLE /DRUM ASM. (PAIR) | # 280086 |
| DRIVE GEAR | # 282335 |
| END BRACKET (LH) | # 282339 |
| END BRACKET (RH) | # 282340 |
| COUNTER GEAR | # 126997 |
| RH COUNTER COVER ASM. | # 282338 |
| LH COUNTER COVER ASM. | # 282337 |
| CENTER BRACKET ASM. | # 281596 |
| # 6 SCREW EYE | # 100362 |
| 60” PULL ROPE | # 175401 |



PART NO. 290768

REV. 1 02/02

Wayne-Dalton Corp.
P.O. Box 67, Mt. Hope, Ohio
44660
www.wayne-dalton.com

# 9900 Thermowayne™ 9600 Thermogard® 9200 Foamcore™

## LIFETIME LIMITED WARRANTY

The Manufacturer warrants the **9900 THERMOWAYNE, 9600 THERMOGARD and 9200 FOAMCORE** insulated garage door for as long as you own the door from the time of installation against structural failure (rendering the door inoperable) of the door sections due to separation/ degradation of foam insulation. Other conditions and exceptions as contained herein apply.

The Manufacturer warrants the steel skin of the**9900 THERMOWAYNE, 9600 THERMOGARD and 9200 FOAMCORE** insulated garage door for as long as you own the door from the time of installation against deterioration such as cracking or splitting due to rust-through. Other conditions and exceptions contained herein apply.

The Manufacturer warrants the garage door hardware and track, excluding springs, for as long as you own the door against defects in workmanship or material from time of installation.

After a period of **TWENTY YEARS** from time of installation, replacement of **LIFETIME LIMITED WARRANTY** materials are prorated at 50 percent of Manufacturer's published pricing at time of claim.

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This warranty extends only to the original homeowner, providing the door is installed in his/her place of primary residence. It is not transferable. The warranty applies to residential property only and is not valid on commercial or rental property.

The Manufacturer warrants that any parts of the door not covered by the above limited warranty will be free from defects in workmanship and material for **ONE YEAR** from the time of installation.

The Manufacturer shall, upon notification, correct any nonconformity at its option, by repairing, replacing, or refunding original purchase price of any defective part(s). This warranty covers material only and excludes all other charges incurred.

NO EMPLOYEE, DISTRIBUTOR, OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THE FOREGOING WARRANTIES IN ANY WAY OR GRANT ANY OTHER WARRANTY ON BEHALF OF MANUFACTURER.

The Manufacturer shall not be responsible for any damage resulting to or caused by its products by reason of installation, improper storage, unauthorized service, alteration of products, neglect or abuse, or attempt to use the products for other than the customary usage or for their intended purposes. The **9900 THERMOWAYNE, 9600 THERMOGARD and 9200 FOAMCORE** warranty becomes null and void if the door is punctured with any hole or if a hole is drilled into the door sections other than those specified in the notes of installation. This warranty does not cover the product due to circumstances such as normal wear, damage from corrosive fumes or substances, fire, condensation, vandalism, acts of God, or other causes beyond Manufacturer's control, nor replacement or repair labor.

THIS WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS WARRANTY ACT. NO WARRANTIES, EXPRESSED OR IMPLIED, (INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), SHALL EXTEND BEYOND THE APPLICABLE TIME PERIOD STATED IN BOLD FACE TYPE ABOVE.

Claims for defects in material and workmanship covered by this warranty shall be made in writing to the dealer from whom the product was purchased within the warranty period. Manufacturer may either send a service representative or have the product returned to the Manufacturer at Buyer's expense for inspection. If judged by Manufacturer to be defective in material or workmanship, the product will be replaced or repaired at the option of Manufacturer, free from all charges except authorized transportation and replacement labor.

THE REMEDIES OF BUYER SET FORTH HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER REMEDIES. THE LIABILITY OF MANUFACTURER, WHETHER IN CONTRACT, TORT, UNDER ANY WARRANTY, OR OTHERWISE, SHALL NOT EXTEND BEYOND ITS OBLIGATION TO REPAIR OR REPLACE, AT ITS OPTION, ANY PRODUCT OR PART FOUND BY MANUFACTURER TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP. MANUFACTURER SHALL NOT BE LIABLE FOR COST OF REMOVAL OR INSTALLATION OR SHALL NOT BE RESPONSIBLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE.

This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state. However, some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

## Step 18 Cont....

Using perforated angle, fabricate rear support for horizontal tracks as shown. Using lag bolts, make sure that support is fastened into ceiling joist, or adequate framing members to hold the weight of the door. Keeping the horizontal track parallel to the edge of the door sections, raise the horizontal track to a level position and bolt it to the rear support structure. Track must be secured and braced to prevent movement. The bolt should extend into the track to act as a roller stop. Repeat for other side. Remove locking pliers and close door.

**⚠ WARNING!**

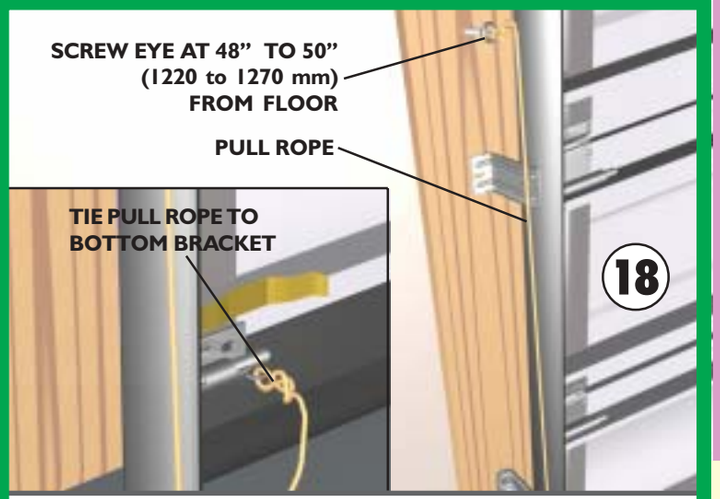
**KEEP HORIZONTAL TRACK PARALLEL AND WITHIN 3/4"(6mm) OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SERIOUS INJURY OR DEATH.**

Permanently attach the vinyl weather stripping to both door jambs and the header. Now, lift the door and check it's balance. Unwind springs if door lifts by itself or if it is hard to pull down. Wind springs if door is difficult to lift or too easy to pull down. Anytime door adjustments are made you must loosen the lock nuts to begin with and retighten both lock nuts afterwards. To adjust springs, only add or remove 1/4 turn on the counter reading at a time. Adjust both sides equally.

If the door still does not operate easily, lower the door into the closed position, **UNWIND BOTH SPRINGS TO ZERO**, and recheck the following items:

1.) Check the door for level.
2.) Check the TorqueMaster™ tube and flagangles for level.
3.) Check the distance between the flagangles - must be door width plus 3-3/8" +1/4" -0".
4.) Check the cables for equal tension - loosen set screws and adjust if necessary.
5.) Rewind both springs.

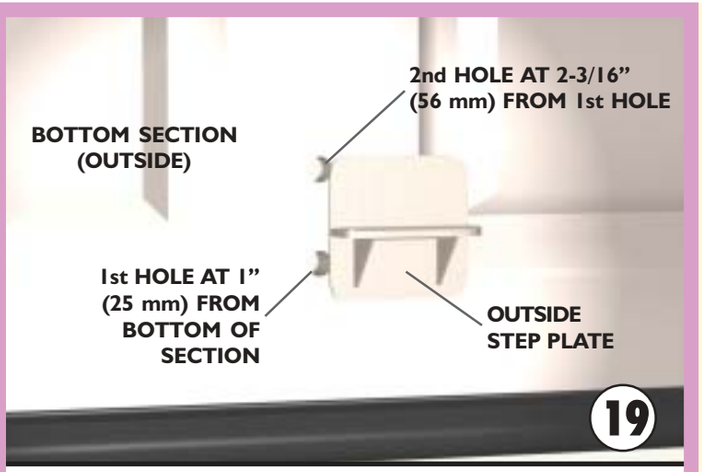
**NOTE:** As a safety feature, end brackets cannot be disassembled for service until the springs are completely unwound and the counter covers read zero.




Twist the No. 6 screw eye into the wood jamb approximately 48" to 50" (1220 to 1270 mm) from the floor. Tie the pull rope to the screw eye and to the bottom bracket as shown.

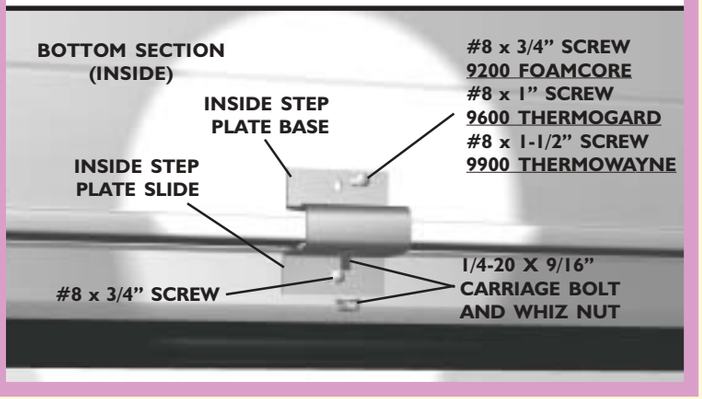
**⚠ WARNING!**

**DO NOT INSTALL PULL ROPES ON DOORS WITH ELECTRIC OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING INJURY OR DEATH.**



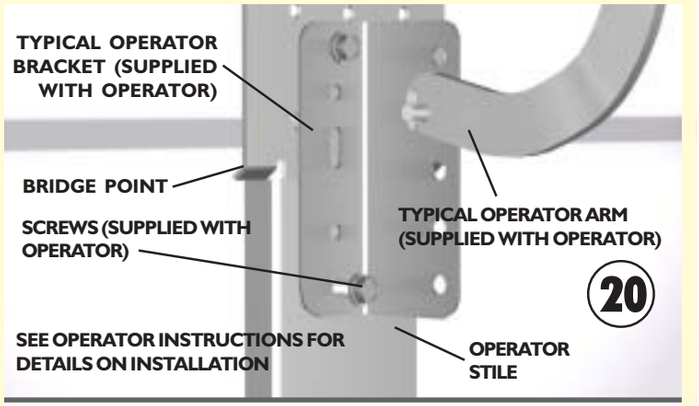

## OPTIONAL STEP PLATE INSTALLATION

To install the step plate raise the door to a comfortable working height and secure with locking pliers to the track. Locate the step plate in the center of any stile on a raised panel door. Make one mark 1" (25 mm) up from the bottom edge and another mark 2- 3/16" (56 mm) up from the first mark, or align the R.K. Tool with the bottom of the section and place a mark at the SP1 and SP2 holes. Drill a 7/16" (11 mm) hole through the section at each mark and insert the step plate. Loosely fasten step plate slide to base with (1) 1/4-20 x 1/2" carriage bolt and nut. Align inside step plate holes and fasten from inside using the #8 screws provided. Install one #8 x 3/4" screw in the bottom step plate hole. In the top hole use the #8 x 3/4" screw when attaching step plates to 9200 Foamcore™, use the #8 x 1" screw when attaching step plates to 9600 Thermogard®, and use the #8 x 1-1/2" screw when attaching step plates to 9900 Thermowayne™. Tighten 1/4-20 carriage bolt and nut.




## TYPICAL OPERATOR INSTALLATION

If you are installing an electric operator on your door, the following information is provided to ensure proper function of your door/operator installation. Figure 21 shows a typical means of connecting the operator arm to the operator stile located in the center of the top section.




### INSTALLATION TIPS:

1. Follow the installation instructions supplied with your operator.
2. Reinforce top section per manufacturer's recommendation prior to attaching operator.
3. Install trolley rail 1" to 1-1/2" (25 - 38 mm) above high arc of top section of the door.
4. Mount operator to ceiling so that 1" to 1-1/2" (25 - 38 mm) clearance is maintained between trolley rail and top section when door is fully open (trolley rail will slope down towards rear).
5. The operator bracket must be mounted to the operator stile on the top section so it bridges the transition point in section thickness.

**⚠ WARNING!**

**OPERATOR MUST BE TESTED AT TIME OF INSTALLATION AND MONTHLY THEREAFTER TO ENSURE THAT DOOR REVERSES ON CONTACT WITH 2 X 4 BOARD LAID FLAT UNDER THE DOOR. FAILURE TO ADJUST OPERATOR, IF NECESSARY, CAN RESULT IN SEVERE INJURY OR DEATH. IF YOUR OPERATOR IS EQUIPPED WITH PHOTOELECTRIC SYSTEM, THEN THIS MUST BE TESTED AT THE SAME TIME TO ENSURE THAT DOOR DOES NOT CLOSE AND A CLOSING DOOR OPENS IF SYSTEM IS OBSTRUCTED. FAILURE TO MAKE ADJUSTMENTS, IF NECESSARY, CAN RESULT IN SEVERE INJURY OR DEATH.**