

9100/9400/9600

TORSION

MH

QUICK START GUIDE

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### IMPORTANT NOTICE!

The Quick Start Guide is only meant to be used as an aid and/or introduction to garage door installation, and does not replace the complete Installation Instructions and Owner's manual available on the Wayne-Dalton website.

Wayne-Dalton highly recommends that you read and fully understand the Installation Instructions and Owner's Manual before you attempt this installation.

To avoid possible injury, read 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.

The Quick Start Guide and Installation Instructions and Owner's Manual are available at no charge from Wayne-Dalton Corp., P.O. box 67, Mt. Hope, OH 44660, or at [www.wayne-dalton.com](http://www.wayne-dalton.com).

## PRE - INSTALLATION

### 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 fall 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, red colored fasteners, 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 OR PT2000 COATED LAG SCREWS MUST BE USED WHEN INSTALLING CENTER BEARING BRACKETS, END BRACKETS, JAMB BRACKETS, OPERATOR MOUNTING/ SUPPORT BRACKETS AND DISCONNECT BRACKETS ON TREATED LUMBER (PRESERVATIVE-TREATED). STAINLESS STEEL OR PT2000 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/ DRIVERS CLUTCH MUST BE SET TO DELIVER NO MORE THAN 200 IN-LBS OF TORQUE. FASTENER FAILURE COULD OCCUR AT HIGHER SETTINGS.

#### 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.

## Removing an Existing Door/ Preparing the Opening

**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 corp., P.O. box 67, Mt. hope, OH 44660, or at [www.wayne-dalton.com](http://www.wayne-dalton.com).

## 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

#### Attaching Q.I. Flag Angles to Vertical Tracks

Tools: None

**NOTE:** If you have F.A. flag angles, skip this step.

**NOTE:** If you have riveted track, skip this step.

**NOTE:** Flag angles are right and left handed.

Place the lower Q.I. tab of the left hand flag angle in the Q.I. feature of the left hand vertical track. Give the flag angle 1/4 turn to lock in place. Repeat for other side.

### 2

#### Attaching F.A. Flag Angles to Vertical Tracks

Tools: None

**NOTE:** If you have Q.I. flag angles, skip this step.

**NOTE:** If you have riveted track, skip this step.

**NOTE:** Flag angles are right and left handed.

If you have Q.I. vertical tracks, hand tighten the left hand flag angle to the left hand vertical track using (1) stud plate and (2) 1/4" - 20 flange hex nuts. Repeat for the other side.

If you have F.A. vertical tracks, 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.

### 3

#### Horizontal Angles

Tools: Hammer

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

Position the left hand horizontal angle as shown. Place the Q.I. tabs of the horizontal angle in the key slot of the left hand horizontal track. Using a hammer, tap the horizontal 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.

### 4

#### Attaching Q.I. Jamb Brackets

Tools: None

**NOTE:** If you have F.A. jamb brackets, skip this step.

**NOTE:** If you have riveted track, skip this step.

Measure the length of the vertical tracks. Using the jamb bracket schedule, determine the placement of the jamb brackets for your door height and track length. To install the jamb brackets, align the Q.I. tab on the Q.I. jamb bracket with the Q.I. feature in the vertical track and turn the bracket perpendicular to the track so the mounting flange is toward the back (flat) leg of the track. Repeat for other side.

JAMB BRACKET SCHEDULE							
DOOR HEIGHT	TRACK LENGTH	1ST SET		2ND SET		3RD SET	
6'0"	64" (1626 mm)	5	M	6	B	NA	
6'5"	69" (1753 mm)	3	B	6	M	NA	
6'8"	72" (1829 mm)	3	B	6	M	NA	
7'0"	76" (1930 mm)	3	B	7	T	NA	
7'3"	79" (2007mm)	3	B	5	B	6	B
7'6"	82" (2083 mm)	3	B	5	B	6	B
7'9"	85" (2159 mm)	3	B	5	B	6	B
8'0" 4-SEC	88" (2235mm)	3	M	6	T	7	M
8'0" 5-SEC	88" (2235 mm)	3	B	7	T	8	T
B= BOTTOM HOLE, M= MIDDLE HOLE, T= TOP HOLE							

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## Attaching F.A. Jamb Brackets

Tools: None

**NOTE:** If you have Q.I. jamb brackets, skip this step.

**NOTE:** If you have riveted track, skip this step.

**NOTE:** The bottom jamb bracket is always the shortest bracket, while the center jamb bracket is the next 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.

Place the center jamb bracket over the lower hole of the hole/ slot pattern that is centered between the bottom jamb bracket and flag angle of the 2nd hole set. 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.

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.

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## Bottom Section

Tools: Level, Wooden shims (if necessary)

Center the bottom section in the door opening. Level the section using wooden shims (if necessary) under the bottom section.

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## Vertical Tracks

Tools: Power Drill, 3/16" Drill bit, 7/16" Socket driver, Tape measure, Level, Step ladder

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

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

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 cable drum over flag angle. Repeat for other side.

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## Stacking Sections

Tools: Power drill, 7/16" Socket driver

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

Place rollers into end hinges of remaining sections.

With assistance, lift second section and guide rollers into the vertical tracks. Lower section until it is seated against bottom section. Flip hinges up. Fasten intermediate hinge(s) first; then end hinges using 1/4"-14 x 5/8" self tapping screws. Repeat for other sections, except top section.

**IMPORTANT:** PUSH & HOLD THE HINGE LEAFS SECURELY AGAINST THE SECTIONS WHILE SECURING WITH 1/4"-14 x 5/8" SELF TAPPING SCREWS. THERE SHOULD BE NO GAP BETWEEN THE HINGE LEAFS AND THE SECTIONS.

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## Top Brackets

Tools: Power drill, 7/16" Socket driver

To install the top brackets, align the top holes in the top bracket base with the second set of holes in the end cap of the top section. Fasten to section using (4) 1/4"-14 x 5/8" self tapping screws. Secure the top bracket slide to the bracket base loosely using (2) 1/4"-20 x 5/8" carriage bolts and (2) 1/4"-20 flange hex nuts. The bracket will be tightened and adjusted later, in step, Adjusting Top Brackets. Insert roller into top bracket slide. Repeat for other side.

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## U-bar

Tools: Power drill, 7/16" Socket driver, Tape measure

**NOTE:** If a u-bar is supplied, complete this step.

Place the 3" u-bar over the top rib of the top door section. Fasten each end of the u-bar to the end cap with (2) 1/4"-20 x 11/16" self drilling screws. Fasten center of the u-bar as shown to the rib using (2) 1/4"-14 x 5/8" self tapping screws, one 6" to the left and one 6" to the right of the center line of the top door section.

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## U-bar Asymmetrical

Tools: Power drill, 7/16" Socket driver, Tape measure

**NOTE:** If an asymmetrical u-bar is supplied, complete this step.

Place the 3" asymmetrical u-bar over the top rib of the top door section. Fasten each end of the u-bar to the end cap with (2) 1/4"-20 x 11/16" self drilling screws. Fasten center of the u-bar as shown to the rib using (2) 1/4"-14 x 5/8" self tapping screws, one 6" to the left and one 6" to the right of the center line of the top door section.

Fasten both walls of the u-bar as shown using (2) 1/4"-14 x 5/8" self tapping screws every 30-36 inches. (Approximately 18 self tapping screws per 18' u-bar)

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## Operator Bracket

Tools: Power drill, 7/16" Socket driver, Phillips head screwdriver, Vice clamps, Tape measure

**NOTE:** If you're installing a trolley operator, the operator bracket must be mounted and secured prior to installing top section.

**IMPORTANT:** WHEN CONNECTING A TROLLEY TYPE GARAGE DOOR OPENER TO THIS DOOR, A WAYNE-DALTON OPERATOR/ TROLLEY BRACKET MUST BE SECURELY ATTACHED TO THE TOP SECTION OF THE DOOR, ALONG WITH ANY U-BARS PROVIDED WITH THE DOOR. THE INSTALLATION OF THE OPERATOR MUST BE ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND FORCE SETTINGS MUST BE ADJUSTED PROPERLY.

Prior to installing top section, locate the center of the top section and seat the operator bracket on top of the top section. For retro fit applications, the operator bracket must be aligned with an existing operator and positioned on top section so it bridges the transition point of the section thickness. Install (2) #12 x 1/2" phillips head screws on the back side of operator bracket. Clamp operator bracket to u-bar (if supplied) with vice clamps. Attach (5) 1/4" - 14 x 5/8" self-tapping screws to the operator bracket. Remove vice clamps.

**NOTE:** If a u-bar was installed, you can use two of the 1/4" - 20 x 11/16" self-drilling screws previously used to attach the u-bar instead of two 1/4"-14 x 5/8" self-tapping screws when attaching operator bracket to u-bar.

**NOTE:** When attaching operator bracket to top section with u-bar, apply additional pressure to thread into the u-bar.

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## Top Section

Tools: Hammer, Step ladder, Tape measure

Place the top section in the opening. Temporarily secure the top section by driving a nail in the header near the center of the door and bending it over the top section. Now, flip up the hinge leaves, hold tight against section, and fasten center hinges first and end hinges last (refer to step, Stacking Sections). Vertical track alignment is critical. Position flag angle between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door; tighten the bottom lag screw. Flag angles must be parallel to the door sections. Repeat for other side.

**IMPORTANT:** THE DIMENSION BETWEEN THE FLAG ANGLES MUST BE DOOR WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.

**For Q.I. track:**

Complete the vertical track installation by securing the jamb bracket(s) and tightening the other lag screws. Repeat for other side.

**For F.A. track:**

Complete the vertical track installation by securing the jamb bracket(s) and tightening the other lag screws. Push the vertical track against the rollers so that the rollers are touching the deepest part of the curved side of the track as shown; tighten all the track bolts and nuts. Repeat for other side.

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**Attaching Hor Tracks to Q.I. Flag Angles**

Tools: Ratchet wrench, 9/16" Socket, 9/16" Wrench, level, Step ladder

**NOTE:** If you have Q.I. flag angles, complete this step.

To install horizontal track, place the curved end over the top roller of the top section. Align key slot of the horizontal track with the Q.I. tab of the flag angle. Push curved portion of horizontal track down to lock in place.

**WARNING**

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

Level the horizontal track assembly and bolt the horizontal angle to the first encountered slot in the flag angle using (1) 3/8"-16 x 3/4" truss head bolt and (1) 3/8"-16 hex nut. Repeat for other side.

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.

**NOTE:** If an idrive® opener will be installed, position horizontal tracks slightly above level.

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**Attaching Hor Tracks to F.A. Flag Angles**

Tools: Ratchet wrench, 7/16" Socket, 9/16" Socket, 9/16" Wrench, level, Step ladder

**NOTE:** If you have F.A. flag angles, complete this step.

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. If you have Q.I. horizontal track, tighten the horizontal track to the flag angle with a stud plate and (2) 1/4"-20 flange hex nuts. If you have UNV horizontal track, tighten 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.

**WARNING**

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

Level the horizontal track assembly and bolt the horizontal angle to the first encountered slot in the flag angle using (1) 3/8"-16 x 3/4" truss head bolt and (1) 3/8"-16 hex nut. Repeat for other side.

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.

**NOTE:** If an idrive® opener will be installed, position horizontal tracks slightly above level.

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**Adjusting Top Brackets**

Tools: 7/16" Wrench, Step ladder

With horizontal tracks installed, you can now adjust the top brackets. Vertically align the top section of the door with the lower sections. Once aligned, position the top bracket slide, out against the horizontal track. Maintaining the slide's position, tighten the (2) 1/4"-20 flange hex nuts to secure the top bracket slide to the top bracket base. Repeat for other side.

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**End Bearing Brackets**

Tools: Step ladder, Power drill, Ratchet wrench, 7/16" Socket driver, 9/16" Socket, 9/16" Wrench

**IMPORTANT:** RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

**NOTE:** End brackets are right and left hand.

Break the end bearing brackets apart. Attach the left hand end bearing bracket through either the end bearing bracket's upper or lower slots to the left hand horizontal angle using (2) 3/8"-16 x 3/4" truss head bolts and (2) 3/8"-16 nuts.

**IMPORTANT:** THE END BEARING BRACKET'S LOWER SLOTS ARE USED ON DOORS WITH 12" RADIUS TRACK; THE UPPER SLOTS ARE USED ON DOORS WITH 15" RADIUS TRACK.

Secure the top of the end bearing bracket to the jamb with (1) 5/16" x 1-5/8" lag screw. Repeat for other side.

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**Center Bearing Bracket**

Tools: Step ladder, Power drill, 7/16" Socket driver, 1/4" Torx bit, Level, Tape measure, Pencil

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 of the door. 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. Align the edge of the center bearing bracket with the vertical pencil line and the center of the bearing in the center bearing bracket with the horizontal pencil line; this is to ensure the torsion tube is level between the center and end bearing brackets.

Attach the center bearing bracket to the mounting surface, using (2) 5/16" x 1-5/8" lag screws and (1) 5/16" x 2" tamper-resistant lag screw.

**IMPORTANT:** USE A 5/16" X 1-5/8" TAMPER-RESISTANT LAG SCREW INSTEAD OF THE 5/16" X 2" TAMPER-RESISTANT LAG SCREW IF MOUNTING SURFACE IS MOUNTED OVER MASONRY. TAMPER-RESISTANT LAG SCREW MUST BE ATTACHED THROUGH THE BOTTOM HOLE OF THE CENTER BEARING BRACKET.

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**Spring Assembly**

Tools: Step Ladder

**IMPORTANT:** RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

**NOTE:** Identify the springs provided as either right hand wound (red winding cone), which goes on the LEFT HAND SIDE or left hand wound (black winding cone), which goes on the RIGHT HAND SIDE.

Facing the inside of the door, lay the torsion tube on the floor. Lay the spring with the black winding cone and the black cable drum at the right end of the tube. Lay the spring with the red winding cone and the red cable drum at the left end of the tube.

**NOTE:** The set screws used on all torsion winding cones and cable drums are now colored red. DO NOT identify right and left hand by the set screw color.

Slide the nylon center bracket bushing onto the torsion tube followed by the springs and cable drums. The nylon center bracket bushing, springs, and cable drums must be positioned as shown. With assistance, pick up the torsion assembly and slide one end of the torsion tube through one end bearing bracket. Lay the middle of the torsion tube into the center bearing bracket and slide the other end of the torsion tube into the other end bearing bracket. Position the torsion tube so that equal amounts of the tube extend from each end bearing bracket.

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**Spring Attachment**

Tools: Step Ladder, Ratchet Wrench, 9/16" Socket, 9/16" Wrench

Slide the nylon center bushing into the center bearing bracket and into the stationary spring cone at the end of the right hand spring. Align the stationary spring cone(s) with the holes in the center bearing bracket. Secure the spring(s) to the center bearing bracket with (2) 3/8"-16 x 1-1/2" hex head bolts and (2) 3/8"-16 nuts.

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

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**Counterbalance Cables**

Tools: Step Ladder, Locking Pliers, 3/8" Wrench

Thread the counterbalance cable around the back side of the left cable drum and verify that there are no cable obstructions. Hook the cable into the drum. Slide the left hand cable drum against the left hand end bearing bracket and tighten the set screws in the drum to 14-15 ft. lbs. of torque (once set screws contact the tube, tighten screws one full turn). Rotate the left hand drum and torsion tube until cable is taut. Attach locking pliers to torsion tube and brace locking pliers against jamb to keep cable taut.

Repeat for right hand side.

**IMPORTANT:** INSPECT EACH CABLE, MAKING SURE THEY ARE SEATED PROPERLY ON THE CABLE DRUMS AND THAT HAVE EQUAL CABLE TENSION.

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**Securing Door for Spring Winding**

Tools: Vice Clamps

Place vice clamps onto both vertical tracks just above the third roller. This is to prevent the garage door from rising while winding counterbalance springs.



## WARNING

**FAILURE TO PLACE VICE CLAMPS ONTO VERTICAL TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE OR FATAL INJURY.**

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### Winding Springs

Tools: Step Ladder, Approved winding bars, 3/8" Wrench

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.

Door Height	Approximate Spring Turns
6'0"	6-7/8 Turns
6'3"	7-1/8 Turns
6'5"	7-1/4
6'6"	7-3/8 Turns
6'8"	7-1/2
6'9"	7-5/8 Turns
7'0"	7-7/8 Turns
7'3"	8 Turns
7'6"	8-1/4 Turns
7'9"	8-1/2 Turns
8'0"	8-3/4 Turns

Alternately inserting the winding bars into the holes of the springs winding cone, rotate the winding cone upward toward the ceiling, 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 bar while tightening both set screws in the winding cone to 14-15 ft. lbs. of torque (once set screws contact the tube, tighten screws one full turn).

Carefully remove winding bar 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 overwound, carefully remove the locking pliers from the torsion tube 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 raise or drifts down on its own, add spring tension.

**NOTE:** An unbalanced door such as this can cause garage door opener operation problems.

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### Rear Support

Tools: Ratchet wrench, Socket: 1/2" 5/8", Wrench: 1/2" 5/8", (2) Vice clamps, Tape measure, Level, Hammer, Step Ladder

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 OR FATAL INJURY.**

Clamp a pair of vice clamps on 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.

Using perforated angle (may not be supplied), (2) 5/16"-1- 5/8" hex head lag screws and (3) 5/16" bolts with nuts (may not be supplied), fabricate rear support for horizontal tracks. Attach horizontal tracks to the rear supports 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.

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

## WARNING

**KEEP HORIZONTAL TRACK 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 HORIZONTAL TRACK HANGER THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

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

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

Now, permanently attach the weather seal on both door jambs and header (temporarily attached

in Preparing the Opening, in the pre-installation section of this manual). Avoid pushing weather seal too tightly against face of door.

## OPTIONAL INSTALLATIONS

### Trolley Arm Configuration

Tools: Tape measure, Level

Measure the curved ends of the horizontal track to determine if you have a 12" or 15" radius horizontal track, as shown in FIG 1; if you have a low headroom door skip this step. Determine center line of the door. Mark vertical line at this point on the header, as shown in FIG 4. Raise the door slightly until the top section reaches the highest point of travel (high arc), as shown in FIG 2 and FIG 3 for low headroom. Using a level, mark this high arc point on the header where it intersects the vertical center line, as shown in FIG 4. Hold the wall bracket's bottom edge 1/2" - 1" (room permitting) above the high arc line and centered on the vertical center line, as shown in FIG 4. Mark the wall bracket's mounting holes on the header wall and then refer to your garage door operator manual for pre-drilling and securing the wall bracket to header.

Using the operator hook-up charts, refer to referenced illustrations for correct arm hook-up from trolley to operator bracket. For low headroom, refer to operator hook-up chart for low headroom.

**NOTE:** Refer to your operator manual for specific details on how to assembly the curved and straight arm, as shown in FIG 5 and FIG 6, and FIG 7 and FIG 8 for low headroom.

**NOTE:** Depending on your setup, you may or may not have to cut straight arm to accomplish trolley settings.

Align hole in the appropriate arm with holes in operator bracket tabs, as shown in step, Trolley Arm Hookup. Insert 5/16" x 1-1/4" clevis pin, making sure hole in clevis pin is outside of second tab of operator bracket. Insert cotter pin into clevis pin hole and spread hairpin cotter to ensure it will secure assembly.

OPERATOR HOOK-UP CHART, STANDARD LIFT FOR 12" AND 15" RADIUS

OPERATOR MODELS	TYPE OF ARM BEING USED	REF. ILLUSTRATIONS
QUANTUM/CLASSIC	CURVED / STRAIGHT	FIG 6
LINEAR	STRAIGHT / CURVED	FIG 5
LIFTMASTER (SEARS)	CURVED / STRAIGHT	FIG 6
GENIE	CURVED / STRAIGHT	FIG 6

OPERATOR HOOK-UP CHART FOR LOW HEADROOM

OPERATOR MODELS	TYPE OF ARM BEING USED			
	PREFERRED HOOKUP	REF. ILLUSTRATIONS	OPTIONAL HOOK-UP	REF. ILLUSTRATIONS
QUANTUM / CLASSIC	CURVED / STRAIGHT	FIG. 8	STRAIGHT	FIG. 7
LINEAR	STRAIGHT	FIG. 7	N/A	N/A
LIFTMASTER (SEARS)	CURVED / STRAIGHT	FIG. 8	STRAIGHT	FIG. 7
GENIE	CURVED / STRAIGHT	FIG. 8	STRAIGHT	FIG. 7

## MAINTENANCE

### Cleaning Your Garage Door

**IMPORTANT:** DO NOT USE A PRESSURE WASHER ON YOUR GARAGE DOOR!

While factory-applied finishes on garage doors are durable, it is desirable to clean them on a routine basis. Some discoloration of the finish may occur when a door has been exposed to dirt-laden atmosphere for a period of time. Slight chalking may also occur as a result of direct

exposure to sunlight.

Cleaning the door will generally restore the appearance of the finish. To maintain an aesthetically pleasing finish of the garage door, a periodic washing of the garage door is recommended.

#### THE FOLLOWING CLEANING SOLUTION IS RECOMMENDED:

A mild detergent solution consisting of one cup detergent (with less than 0.5% phosphate) dissolved into five gallons of warm water will aid in the removal of most dirt.

**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.

**CAUTION:** NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

#### GLASS CLEANING INSTRUCTIONS

Clean with a mild detergent solution (same as above) and a soft cloth. After cleaning, rinse thoroughly.

#### ACRYLIC CLEANING INSTRUCTIONS

Clean acrylic glazing with nonabrasive soap or detergent and plenty of water. Use your bare hands to feel and dislodge any caked on particles. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloths that will scratch the acrylic glazing. Dry glazing with a clean damp chamois.

**NOTE:** Do not use any window cleaning fluids, scouring compounds, gritty cloths or solvent-based cleaners of any kind.

## Painting Your Garage Door

#### 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 fine steel wool pad saturated with soapy water. A final wipe and rinse should be done with clean water only to remove any loose particles and any soapy film residue.

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. Once the substrate is exposed, the likelihood for rusting is greatly increased.

If substrate is exposed, it must be treated to prevent rust from forming. Sand the exposed area lightly and paint with a high quality metal primer specifically intended for galvanized surfaces to protect the area from corrosion. Allow for drying time on primer can label before applying topcoat.

The surface of the factory-applied finish, that is being painted, must not be too smooth, or the paint will not adhere to it. It is advisable to test in an inconspicuous area, to evaluate adhesion. If poor adhesion is observed, surface preparation for painting the factory-applied finish must be repeated until desired results are achieved. Again, care must be taken to not expose the substrate under the paint.

#### PAINTING

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

#### NOTES:

1. Re-painting of finish painted steel doors cannot be warranted, as this condition is totally beyond the door manufacturer's control.
2. Consult a professional coatings contractor if in doubt about any of the above directions.
3. Follow directions explicitly on the paint container labels for proper applications of coatings and disposal of containers. Pay particular attention to acceptable weather and temperature conditions in which to paint.

## 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 rope affixed to the side of door. Door should close completely with little resistance.

#### Using an electric opener:

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

When connecting a trolley type garage door opener to this door, an opener and/or trolley bracket must be securely attached to the top section of the door, along with any u-bars provided with the door. Always use the opener and/or trolley 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 u-bar (may or may not be supplied). The installation of the opener must be according to manufacturer's instructions and force settings must be adjusted properly. Refer to the owner's manual supplied with your electric opener for complete details on installation, operation, maintenance and testing of the opener.

#### 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 Corp., 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/opener 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, cables, rollers, pulleys, 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 and/or left in the opening. If you suspect problems, have a trained door system technician make the repairs.

### WARNING

**GARAGE DOOR SPRINGS, 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 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 opener, 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 rollers are rotating freely when opening and closing the door. If rollers do not rotate freely, clean the door tracks, removing dirt and any foreign substances. Clean and lubricate (use a non-silicon based lubricant) hinges, steel rollers and bearings. DO NOT lubricate plastic idler bearings, nylon rollers, door track. DO NOT oil a cylinder lock, if actuation is difficult use a graphite dust to lubricate.

# WARRANTY

## Lifetime limited warranty

### Models 9100, 9400, 9600

Subject to the terms and conditions contained in this Lifetime Limited Warranty, Wayne-Dalton Corp. ("Manufacturer") warrants the sections of the door, which is described at the top of this page, **for as long as you own the door** against:

- i) The door becoming inoperable due to rust-through of the steel skin from the core of the door section, due to cracking, splitting, or other deterioration of the steel skin, or due to structural failure caused by separation or degradation of the foam insulation.
- ii) Peeling of the original paint on the door as a result of a defect in the original paint or in the application of the original paint coating, in cases where the door sections and the original paint:
  - (a) have not been subjected to adverse atmospheric conditions or contaminants (such as salt water or other marine environment, or to toxic or abrasive substances, including those in the air);
  - (b) have been maintained in compliance with Manufacturer's recommendations; and
  - (c) have not been subject to physical abrasion, impacted by a hard object, or punctured (including without limitation "paint rub" occurring in metal to metal contact and movement).

The Manufacturer warrants the garage door hardware (except springs) and the tracks of the above-described door, **for as long as you own the door**, against defects in material and workmanship, subject to all the terms and conditions below.

The Manufacturer warrants those component parts of the door not covered by the preceding provisions of this Lifetime Limited Warranty against defects in material and workmanship for a period of **ONE (1) YEAR** from the date of installation.

The Manufacturer warrants the factory-applied finish and the factory attached stiles against fading and cosmetic changes from the time of installation for **TWO (2) YEARS**. If the door is re-stained or re-painted, the **TWO (2) YEARS** warranty for the factory-applied finish is void. The Model 9400 factory attached stiles are warranted against peeling, cracking, chalking, or delamination from the time of installation for **TWO (2) YEARS**.

After a period of **TWENTY (20) YEARS**, from time of installation, replacement of Lifetime Limited Warranty materials will be pro-rated at 50 per cent of Manufacturer's published list pricing at time of claim, and you must pay this amount.

This Limited Warranty is extended only to the person who purchased the product and continues to own the premises (where the door is installed) as his/her primary residence ("Buyer"). This Limited Warranty does not apply to residences other than primary, or to commercial or industrial installations, or to installations on rental property (even when used by a tenant as a residence). This Limited Warranty is not transferable to any other person (even when the premises is sold), nor does it extend benefits to any other person. As a result this warranty does NOT apply to any person who purchases this product from someone other than an authorized Wayne-Dalton dealer or distributor.

The Manufacturer will not be responsible for any damage attributable to improper storage, improper installation, or any alteration of the door or its components, abuse, damage from corrosive fumes or substances, salt spray or saltwater air, fire, Acts of God, failure to properly maintain the door, or attempt to use the door, its components or related products for other than its intended purpose and its customary usage. This Limited Warranty does not cover ordinary wear. This Limited Warranty will be voided if the original finish is painted over, unless Manufacturer's preparation and painting instructions are followed explicitly. This Limited Warranty will be voided if any holes are drilled into the door, other than those specified by the Manufacturer.

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

- Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Any claim under this Limited Warranty must be made in writing, within the applicable warranty period, to the dealer from which the product was purchased. Unless the dealer is no longer in business, a written claim to the Manufacturer will be the same as if no claim had been made at all.

At the Manufacturer's option, a service representative may inspect the product on site, or Buyer may be required to return the product to the Manufacturer at Buyer's expense. Buyer agrees to cooperate with any representative of the Manufacturer and to give such representative full access to the product with the claimed defect and full access to the location of its installation.

If the Manufacturer determines that the claim is valid under the terms of this Limited Warranty, the Manufacturer will repair or replace the defective product. The decision about the manner in which the defect will be remedied will be at the discretion of the Manufacturer, subject to applicable law. THE REMEDY WILL COVER ONLY MATERIAL. THIS LIMITED WARRANTY DOES NOT COVER OTHER CHARGES, SUCH AS FIELD SERVICE LABOR FOR REMOVAL, INSTALLATION, PAINTING, SHIPPING, ETC.

Any repairs or replacements arranged by Manufacturer will be covered by (and subject to) the terms, conditions, limitations and exceptions of this Limited Warranty; provided, however, that the installation date for the repaired or replaced product will be deemed to be the date the original product was installed, and this Limited Warranty will expire at the same time as if there had been no defect. If a claim under this Limited Warranty is resolved in a manner other than described in the immediately preceding paragraph, then neither this Limited Warranty nor any other warranty from the Manufacturer will cover the repaired or replaced portion of the product.

THE REMEDIES FOR THE BUYER DESCRIBED IN THIS LIMITED WARRANTY ARE EXCLUSIVE and take the place of any other remedy. The liability of the Manufacturer, whether in contract or tort, under warranty, product liability, or otherwise, will not go beyond the Manufacturer's obligation to repair or replace, at its option, as described above. THE MANUFACTURER WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, including (but not limited to) damage or loss of other property or equipment, personal injury, loss of profits or revenues, business or service interruptions, cost of capital, cost of purchase or replacement of other goods, or claims of third parties for any of the foregoing.

- Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

No employee, distributor, dealer, representative, or other person has the authority to modify any term or condition contained in this Limited Warranty or to grant any other warranty on behalf of or binding on the Manufacturer, and anyone's attempt to do so will be null and void.

Buyer should be prepared to verify the date of installation to the satisfaction of the Manufacturer.

The rights and obligations of the Manufacturer and Buyer under this Limited Warranty will be governed by the laws of the State of Ohio, USA, to the extent permitted by law.

- This limited warranty gives you specific legal rights and you may also have other rights, which may vary from state to state.

Covered by one or more of the following Patents; 5,408,724; 5,409,051; 5,419,010; 5,495,640; 5,522,446; 5,562,141; 5,566,740; 5,568,672; 5,718,533; 6,019,269; 6,089,304; 6,644,378; 6,374,567; 6,561,256; 6,527,037; 6,640,872; 6,672,362; 6,725,898; 6,843,300; 6,915,573; 6,951,237; 7,014,386; 7,036,548; 7,059,380; 7,121,317; 7,128,123; 7,134,471; 7,134,472; 7,219,392; 7,254,868. Canadian: 2,384,936; 2,477,445; 2,495,175; 2,507,590; 2,530,701; 2,530,74; 2, 2,532,824. Other US and Foreign Patents pending.

### **Please Do Not Return This Product To The Store**

Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages business listings or go to the **Find a Dealer** section online at **[www.wayne-dalton.com](http://www.wayne-dalton.com)**

Thank you for your purchase.

AFTER INSTALLATION IS COMPLETE, FASTEN THIS MANUAL NEAR THE GARAGE DOOR.