

Models 9100 / 9405 / 9605

EXTENSION

RESIDENTIAL

STANDARD LIFT

QUICK START GUIDE

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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.

QUICK START GUIDE IMPORTANT NOTICES!

This **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 web at www.Wayne-Dalton.com. 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 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.

The complete Installation Instructions and Owner's Manual are available at no charge from:

- Your local Wayne Dalton Sales Center, or
- Online at www.Wayne-Dalton.com, or
- By mailing to: Wayne Dalton, a division of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH., 44660

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 and edges.
3. It is always recommended to wear eye protection when using tools; injury could result.
4. Avoid installing your new door on windy days. Door could fall during installation causing severe or fatal injury.
5. Doors 12'-0" wide and over should be installed by two persons, to avoid 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, stop operation. Necessary adjustments and/or repairs made by a trained door systems 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 door handles/ gripping points when operating door manually.
10. DO NOT permit children to operate garage door or door controls. 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 or alteration to any part of the door, especially to springs, spring brackets, fasteners, counterbalance lift cables or supports. To avoid a 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 or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching a garage door. Check door and/or opener manufacturer's instructions.
14. Visually inspect door and hardware monthly for worn and or broken parts 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.
18. For windloaded doors, the wind performance is achieved via the entire door system and component substitution is not authorized without express permission by Wayne Dalton.

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

CAUTION

IF ANY PART OF THE DOOR IS TO BE INSTALLED ONTO PRESERVATIVE-TREATED WOOD, PTFE-COATED OR STAINLESS STEEL FASTENERS MUST BE OBTAINED AND USED. REPLACEMENT FASTENERS MUST BE OF AT LEAST EQUAL STRENGTH AND SIZE AS ORIGINAL FASTENERS. IF THE ORIGINAL FASTENER WAS RED-HEAD, THE REPLACEMENT FASTENER MUST BE RED-HEAD ALSO. CONTACT WAYNE DALTON FOR FASTENER STRENGTH VALUES IF NEEDED.

WARNING

IMPACT GUNS ARE NOT RECOMMENDED. 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.

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



Potential Hazard	Effect	Prevention
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WARNING

Do not allow children to play with the Door Opener while it is moving. Do not allow children to play with the Door Opener while it is moving. Do not allow children to play with the Door Opener while it is moving.



Moving door		
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Potential Hazard	Effect	Prevention
	WARNING	
	<p>Could result in Death or Serious</p> 	<p>Installations, repairs and adjustments must be done by a trained door system technician using proper tools and instructions.</p>
High tension spring		

Removing an Existing Door and 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.

To avoid possible injury and to insure proper installation, it's highly recommended that you read and fully understand the complete instructions on removing an Existing Door & Preparing the Opening. These are available for download at www.Wayne-Dalton.com or at your local Wayne Dalton Sales Center.

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.

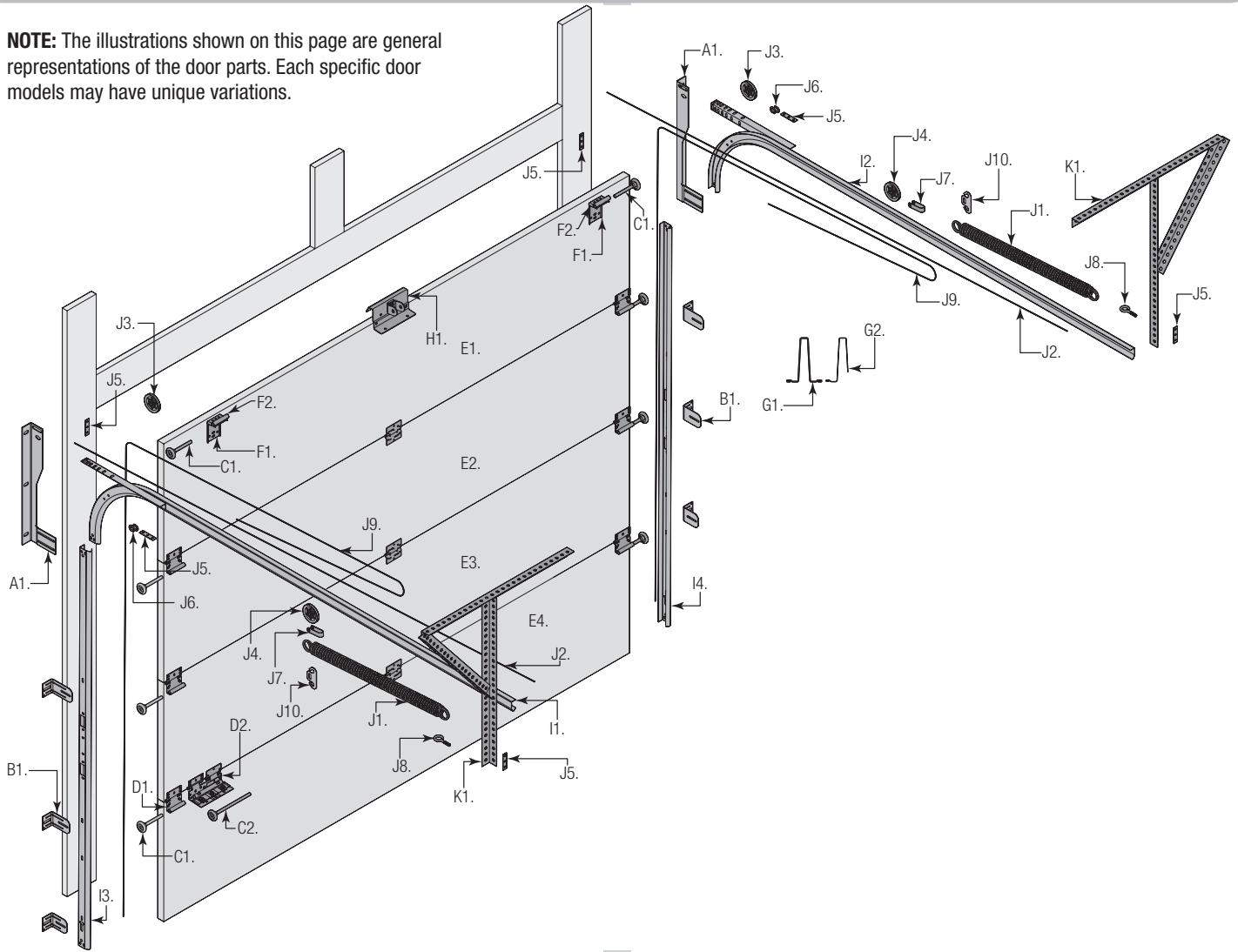
NOTE: If nailing product at 40°F or below, pre-drilling is required.

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

FOR 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 equally spaced nails. Starting at either side of the jamb, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and 1/8" to 1/4" inside the jamb edge. Temporarily secure the weatherstrip with equally 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.

BREAKDOWN OF PARTS

NOTE: The illustrations shown on this page are general representations of the door parts. Each specific door models may have unique variations.



A. FLAG ANGLES (AS REQUIRED):

A1. Fully Adjustable (F.A.) Flag Angles

B. JAMB BRACKETS (AS REQUIRED):

B1. Fully Adjustable (F.A.) Jamb Brackets

C. TRACK ROLLERS:

C1. Short Stem Track Rollers

C2. Long Stem Track Rollers

D. GRADUATED END HINGES:

D1. Single Graduated End Hinges (S.E.H.), Anti-Pinch

D2. Double Graduated End Hinges (D.E.H.), Anti-Pinch

E. STACKED SECTIONS:

E1. Top Section

E2. Intermediate(s) Section

E3. Lock Section

E4. Bottom Section

F. TOP FIXTURES (AS REQUIRED):

F1. Top Fixture Bases - (L - Shaped)

F2. Top Fixture Slides - (L - Shaped)

G. STRUT(S) (AS REQUIRED):

G1. Strut (U - shaped)

G2. Strut (asymmetrical)

H. DRAWBAR OPERATOR BRACKET (FOR TROLLEY OPERATED DOORS):

H1. Drawbar Operator Bracket

I. TRACKS (AS REQUIRED):

I1. Left Hand Horizontal Track Assembly

I2. Right Hand Horizontal Track Assembly

I3. Left Hand Vertical Track

I4. Right Hand Vertical Track

J. EXTENSION SPRING ASSEMBLY (AS REQUIRED):

J1. Extension Springs

J2. Spring Restraint Cables

J3. Front Cable Lift Sheaves

J4. Rear Cable Lift Sheaves

J5. 3 Hole Clips (As Required)

J6. S-Hooks (As Required)

J7. Sheave Forks (As Required)

J8. 5/16" - 18 x 3-3/4" Eye Bolts (As Required)

J9. Counterbalance Lift Cables

J10. Hook Plates (As Required)

K. REAR BACK HANGS:

K1. Left Hand And Right Hand Rear Back Hang Assemblies

DOOR INSTALLATION INSTRUCTIONS

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.

NOTE: Reference TDS 160 for general garage door terminology at www.dasma.com.

IMPORTANT: IF THE DOOR WILL BE EXPOSED TO A SIGNIFICANT AMOUNT OF ROAD SALT, PAINT THE BARE GALVANIZED BOTTOM WEATHER STEEL RETAINER TO INHIBIT RUSTING.

1 Vertical Tracks

NOTE: If you have a wall angle track assembly, skip this step.

NOTE: Refer to Door Section Identification / Parts Breakdown, to determine if you have vertical tracks.

Vertical tracks may or may not have to be cut to the proper length, prior to installing.

IMPORTANT: VERTICAL TRACKS ARE NOT REQUIRED TO BE CUT DOWN IF YOU HAVE DOOR HEIGHTS 7'-0" OR 8'-0".

Determine the radius of your horizontal track.

Refer to the vertical track cutting chart to determine the length needed to be cut off at the top of the vertical tracks. Using this measurement, measure and cut the vertical track off at the top, as shown. Remove any burrs from the cut edge of vertical track.

Vertical Track Cutting Chart	
Horizontal Track Radius	Vertical Track Cut Length
10" Or 12" Radius	Door Height Minus 10"
14" Radius	Door Height Minus 8"

Now, two holes must be drilled into the top of the cut vertical track. Using the illustration shown below, mark and drill the hole locations using a 5/16" drill bit. Once the holes have been drilled, remove any burrs from the drilled holes. Repeat the same process for the other vertical track.

2 Attaching Flag Angles and Jamb Brackets To Vertical Tracks

NOTE: If you have Angle Mount Track, skip this step.

Hand tighten the left hand flag angle to the left hand vertical track using (2) 1/4" - 20 x 5/8" carriage bolts and (2) 1/4" - 20 flange hex nuts.

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. Hand tighten jamb bracket using (1) 1/4" - 20 x 5/8" carriage bolt and (1) 1/4" - 20 flange hex nut.

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. Hand tighten jamb bracket using (1) 1/4" - 20 x 5/8" carriage bolt and (1) 1/4" - 20 flange hex nut.

If a top jamb bracket was included, hand tighten it to vertical track using the lower hole of the hole/ slot pattern in the 3rd hole set and (1) 1/4" - 20 x 5/8" carriage bolt and (1) 1/4" - 20 flange hex nut.

3 Attaching Counterbalance Lift Cables and Track Rollers

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

WARNING

ENSURE TIGHT FIT OF CABLE LOOP OVER MILFORD PIN TO PREVENT COUNTERBALANCE LIFT CABLE FROM COMING OFF THE PIN, WHICH COULD ALLOW THE DOOR TO FALL AND RESULT IN SEVERE OR FATAL INJURY.

Uncoil the counterbalance lift cables. Starting on the left hand side, place the left hand cable loop on the left hand milford pin of the bottom corner bracket. Insert a short stem track roller into the bottom corner brackets and another into the #1 graduated end hinges at the top of the bottom section. Repeat for other side.

NOTE: Larger doors will use long stem track rollers with double graduated end hinges.

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

4 Positioning Bottom Section

Center the bottom section in the door opening. Level the section using wooden shims (if necessary) under the bottom section. When the bottom section is leveled, temporarily hold it in place by driving a nail into the jamb and bending it over the edge of the bottom section on both sides.

5 Attaching Vertical Tracks To Jamb

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 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.

NOTE: Make sure the counterbalance lift cable is located between the track rollers and the door jamb.

Starting on the left hand side of the bottom section, remove the nail. Position the left hand vertical track assembly over the track rollers of the bottom section and install, as shown. 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 2" 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.

6 Attaching Strut(s) To Section

NOTE: Refer to Package Contents or Breakdown Of Parts, to determine which type of strut you received.

IF YOUR DOOR CAME WITH A STRUT (U - SHAPED): Place the strut (U-shaped) over the top rib of the top door section, as shown. Fasten each end of the strut to the end cap with (2) 1/4" - 20 x 11/16" self drilling screws. Fasten center of the strut 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.

IF YOUR DOOR CAME WITH A STRUT (ASYMMETRICAL): Place the asymmetrical strut over the top rib of the top door section, as shown. Fasten each end of the asymmetrical strut to the end cap with (2) 1/4" - 20 x 11/16" self drilling screws. Fasten center of the asymmetrical strut 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 wall and the long leg of the asymmetrical strut, as shown using (2) 1/4" - 14 x 5/8" self tapping screws every 30 - 36 inches. (Approximately 18 self tapping screws per 18' asymmetrical strut)

IMPORTANT: WHEN SECURING THE ASYMMETRICAL STRUT TO THE TOP SECTION, IT IS RECOMMENDED NOT TO INSTALL ANY FASTENERS INTO THE SHORT LEG OF THE ASYMMETRICAL STRUT.

7 Attaching Drawbar Operator Bracket

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

IMPORTANT: TO AVOID POSSIBLE DAMAGE TO YOUR DOOR, WAYNE DALTON RECOMMENDS REINFORCING THE TOP SECTION WITH A STRUT.

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

Prior to installing the top section, locate the center of the top section and seat the drawbar operator bracket on top of the top section. For retro fit applications, the drawbar operator bracket must be aligned with an existing drawbar 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 drawbar operator bracket. Clamp drawbar operator bracket to strut (if supplied) with vise clamps. Attach (6) 1/4" - 14 x 5/8" self-tapping screws to the drawbar operator bracket. Remove vise clamps.

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

NOTE: When attaching drawbar operator bracket to top section with strut, apply additional pressure to thread into the strut.

8

Attaching Top Fixtures To Top Section

To install the top fixtures, align the top holes in the top fixture 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 fixture slide to the fixture base loosely using (2) 1/4" - 20 x 5/8" carriage bolts and (2) 1/4" - 20 flange hex nuts. Insert short stem track roller into top fixture slide. Repeat the same process for the right hand side.

NOTE: The top fixture slide will be tightened and adjusted later, in step, Adjusting Top Fixture.

NOTE: Ensure the top fixture slide is able to slide along the top fixture base. If needed, loosen the 1/4" - 20 flange hex nuts.

9

Stacking Sections

NOTE: The sections can be identified by the graduation of the factory installed graduated end hinges. The smallest graduated end hinge on section should be stacked on top of the bottom section, with each graduated end hinge increasing as the sections are stacked.

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

NOTE: Larger doors will use long stem track rollers with double graduated end hinges.

Place track rollers into graduated end hinges of remaining sections.

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 5/8" self tapping screws.

NOTE: To prevent center hinge leaf from rotating, first secure the top middle hole of the center hinge leaf with one 1/4" - 14 x 5/8" self-tapping screw then secure the other two holes.

NOTE: Larger doors with double graduated end hinges, fasten both hinges to connect the sections using 1/4" - 14 x 5/8" self-tapping screws.

Repeat same process for other sections, except top section.

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

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

10

Stacking Top Section

Place the top section in the opening. Install a nail to prevent the top section from falling backwards. 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 or wall 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 OR WALL ANGLES MUST BE DOOR WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.

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

11

Attaching Horizontal Tracks

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.

FOR FLAG ANGLES: To install horizontal track, place the curved end over the top track 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 with (2) 1/4" - 20 x 5/8" carriage bolts and (2) 1/4" - 20 flange hex nuts.

Next level the horizontal track assembly and bolt the horizontal track angle to the first encountered slot in the flag angle using (1) 3/8" - 16 x 3/4" hex head bolt and (1) 3/8" - 16 hex nut. Repeat for other side. Remove nail that was temporarily holding the top section in position.

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

12

Adjusting Top Fixtures

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

COUNTERBALANCE INSTALLATION INSTRUCTIONS

13

Attaching Rear Back Hangs

Raise the door until the top section and half of the next section are in the horizontal track radius. Do not raise door any further since rear of horizontal tracks are not yet supported.

WARNING

RAISING DOOR INTO THE LOOSE HORIZONTAL TRACKS CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.

Clamp a pair of locking pliers 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 below, select the appropriate perforated angle (may not be supplied). Fabricate and install rear back hangs, as shown.

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

Perforated Angle Gauge Weight Limitations:	
Perforated Angle Gauge	Door Balance Weight
2" x 2" x 12 Gauge	800 lbs. to 1600 lbs.
1-1/4" x 1-1/4" x 13 Gauge	305 lbs. to 610 lbs.
1-1/4" x 1-1/4" x 15 Gauge	220 lbs. to 440 lbs.
1-1/4" x 1-1/4" x 16 Gauge	175 lbs. to 350 lbs.

WARNING

MAKE SURE BACK HANGS ARE BRACED SUFFICIENTLY TO RESIST ANY MOTION DURING SPRING APPLICATION AND DOOR TRAVEL. IF BACK HANGS PIVOT OR DEFLECT, ADD REINFORCEMENT UNTIL THEY REMAIN FIRM AND STATIONARY. ANY BACK HANG THAT HAS BENT MUST BE REPLACED.

WARNING

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

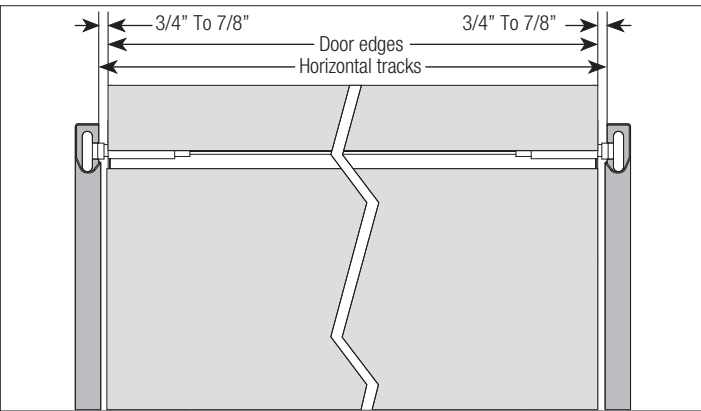
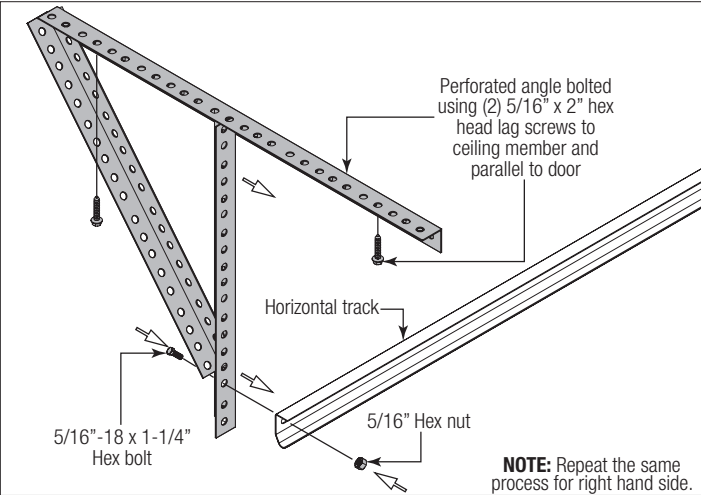
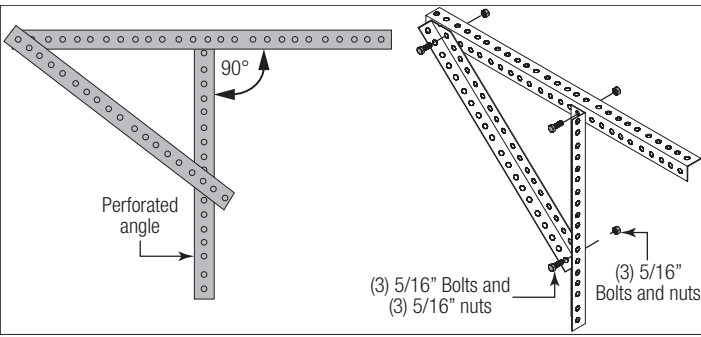
IMPORTANT: DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE REAR BACK HANGS THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

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.

WARNING

FAILURE TO ASSEMBLE AND ATTACH REAR BACK HANGS PROPERLY ACCORDING TO THE ABOVE INSTRUCTIONS MAY RESULT IN DOOR FALLING WHEN RAISED, CAUSING SEVERE OR FATAL INJURY.

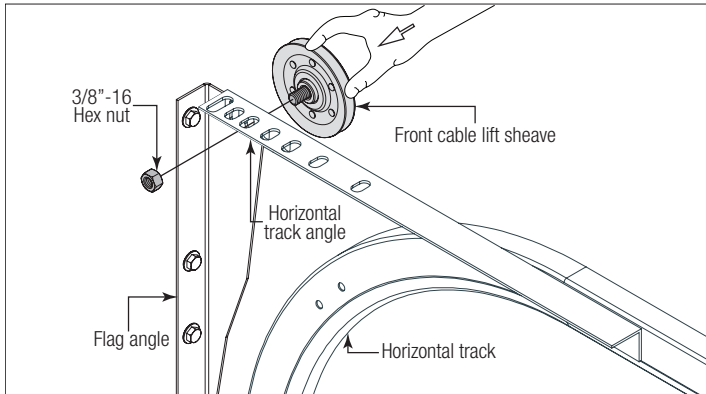
NOTE: Perforated angle must be attached to sound framing members and **nails should not be used.**



14 Attaching Front Cable Lift Sheaves

Starting on the left hand side and using (1) 3/8" - 16 hex nut, secure the front cable lift sheave to the second 13/32" hole in the horizontal track angle, as shown.

Repeat the same process for the right hand side.



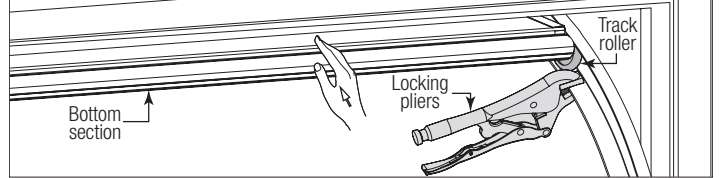
15 Attaching Extension Springs

Remove the locking pliers from the vertical tracks.

WARNING

WITH ASSISTANCE, RAISE THE DOOR SLOWLY INTO THE OPEN POSITION MAKING SURE THE DOOR TRAVELS SMOOTHLY THROUGH THE TRACKS. CLAMP LOCKING PLIERS TO THE BACK LEG OF BOTH HORIZONTAL TRACKS, BELOW THE BOTTOM TRACK ROLLERS TO KEEP THE DOOR FROM LOWERING.

NOTE: This illustration shows the outside of the door in the open position.

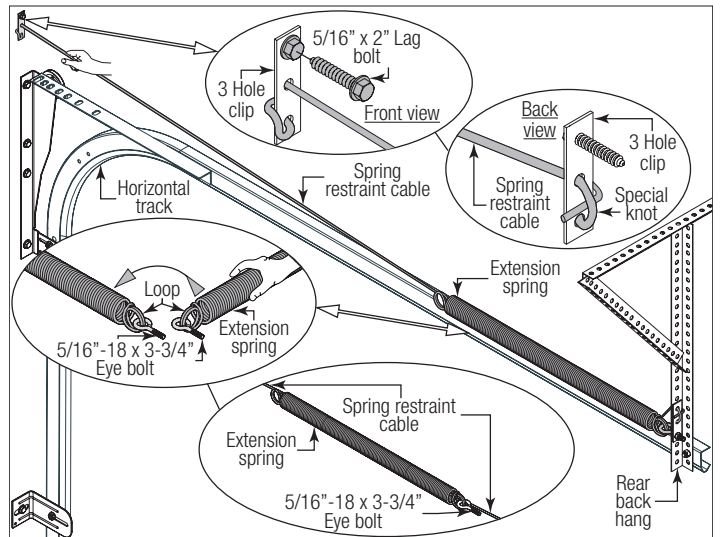


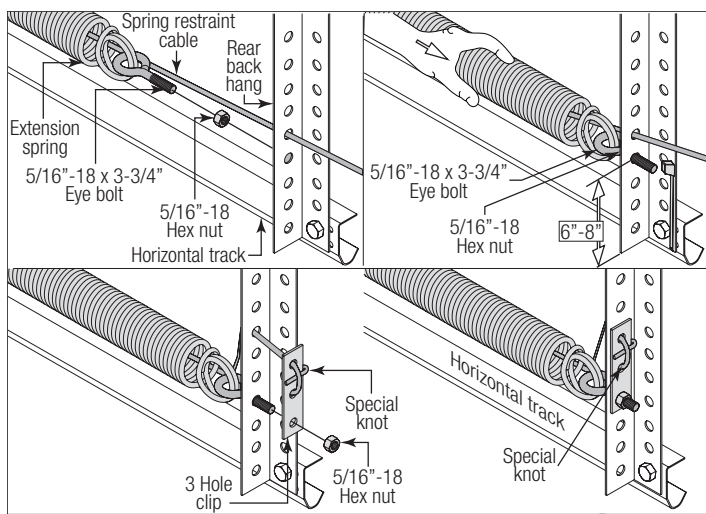
WARNING

FAILURE TO INSTALL SPRING RESTRAINT CABLES CAN RESULT IN SEVERE OR FATAL INJURY IN CASE OF SPRING BREAKAGE.

Position (1) 5/16" - 18 x 3-3/4" eye bolt and (1) 5/16" - 18 hex nut into the rear back hang, 6" to 8" above the horizontal track, as shown. Feed the spring restraint cable through the rear back hang and tie the special knot around the "room side" of the 3 hole clip, as shown. Secure the eye bolt and 3 hole clip to the rear back hang using (1) 5/16" - 18 hex nut. Hook one end of the extension spring onto the eye bolt. Feed the spring restraint cable through the rear extension spring loop and center of the extension spring then front spring loop, pull the spring restraint cable taut and tie the special knot around the "jamb side" of the 3 hole clip. Attach the "jamb side" 3 hole clip to the jamb near the flag angle using (1) 5/16" x 2" lag bolt. Repeat the same process for the other side.

IMPORTANT: SPRING RESTRAINT CABLES MUST BE TAUT AND EQUALIZED.





16 Attaching Spring Sheaves

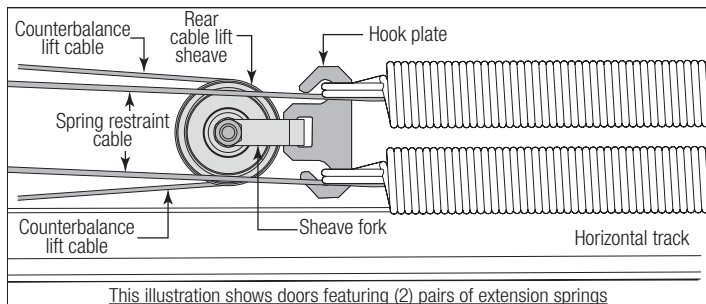
Hook the sheave fork through the front loop of the extension spring and attach the sheave fork to the rear cable lift sheave using (1) 3/8" - 16 x 1-1/4" hex head bolt and (1) 3/8" - 16 hex nut. Thread the counterbalance lift cable over the front cable lift sheave and around the rear cable lift sheave and tie the special knot around the "horizontal angle" using a 3 hole clip, as shown.

Insert one end of the large "S" hook into the "horizontal angle" with the 3 hole clip and the other end into the second slot of the horizontal angle, as shown. Repeat for the other side.

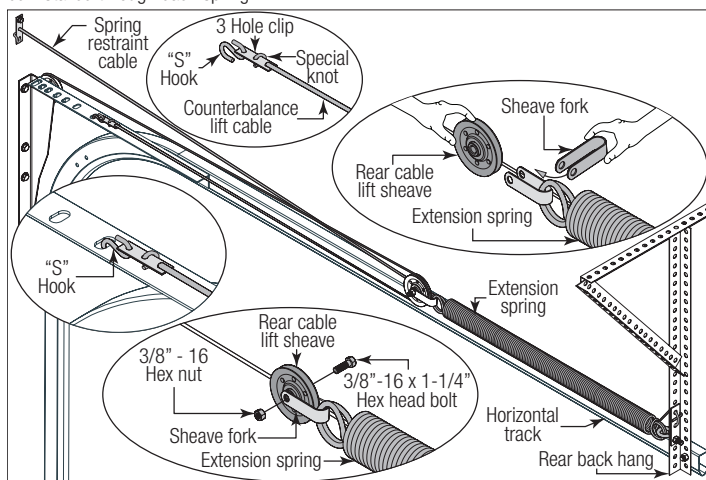
IMPORTANT: CLOSE "S" HOOKS AND EYE BOLTS WITH LOCKING PLIERS, TO PREVENT SPRINGS FROM COMING LOOSE.



FAILURE TO CLOSE "S" HOOKS AND EYE BOLTS CAN RESULT IN SEVER OR FATAL INJURY IF SPRINGS COME LOOSE.



NOTE: Some larger doors feature 2 pairs of extension springs. A spring restraint cable must be installed through each spring.



17 Counterbalance Lift Cable Adjustments

Adjust counterbalance lift cables to create about 1" to 2" (25 mm to 50 mm) of initial extension spring stretch, with the door in the fully opened position. Measure relaxed extension spring length for your door height and verify with the chart below. Spring length must be the same for both extension springs to allow even door balance. Carefully remove the locking pliers from the horizontal track and lower the door into the closed position. Once the door is closed, measure the extension spring length in tension for both sides. Using the chart, verify the spring length in tension is correct with your door height.

NOTE: It may be necessary to adjust spring length for proper door balance.

Door Height	Spring Length Relaxed (Door Open)	Spring Length Extended (Door Closed)
6' 0"	25" (635 mm)	61" (1549 mm)
6' 3"	25" (635 mm)	62-1/2" (1588 mm)
6' 6"	25" (635 mm)	64" (1626 mm)
7' 0"	25" (635 mm)	67" (1702 mm)
7' 6"	27" (686 mm)	72" (1829 mm)
7' 9"	27" (686 mm)	73-1/2" (1867 mm)
8' 0"	27" (686 mm)	75" (1905 mm)

18 Balancing Door

Lift door and check its balance. If door rises off floor more than 2 ft. under spring tension alone, reduce spring tension by adjusting extension spring length, moving the "S" hook backward (towards the rear back hangs) to a different hole in the horizontal track. If the door is hard to rise or drifts down on its own, adjust extension spring length by moving the "S" hook forward (towards the header) to a different hole in the horizontal track. A poorly balanced door can cause garage door operator problems.

IMPORTANT: WHENEVER ADJUSTING EXTENSION SPRING LENGTH FOR DOOR BALANCE, ALWAYS OPEN THE DOOR TO THE FULLY OPEN POSITION AND RETURN THE LOCKING PLIERS, AS SHOWN IN F3 TO THE HORIZONTAL TRACKS BELOW THE BOTTOM TRACK ROLLERS.

If the door still does not operate easily, raise the door into the open position, return the locking pliers, and recheck the following items:

- 1.) Is the door level?
- 2.) Are the flag angles level and plumb?
- 3.) Does the distance between the flag angles equal door width plus 3-3/8" to 3-1/2"?
- 4.) Do the counterbalance lift cables have equal tension? Adjust by re-tying the special knot, if necessary.
- 5.) Make sure door is not rubbing on jambs.

IMPORTANT: IF DOOR STILL DOES NOT BALANCE PROPERLY, THEN CONTACT A TRAINED DOOR SYSTEM TECHNICIAN.

19 Attaching Weather Seal

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.

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 weatherstrips on both sides and top of door.

CAUTION

NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

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

To clean polycarbonate windows, see www.Wayne-Dalton.com.

Painting Your Garage Door

Refer to Instruction Insert "**Field Painting and Finishing Fiberglass or Steel Door Sections**".

Maintaining The Finish On Your Garage Door

If the factory finish is beginning to fade, the door may require a field applied top clear coat. Depending on environment and usage, this may be necessary after 1 to 3 years of use. Refer to Instruction Insert "**Field Painting and Finishing Fiberglass or Steel Door Sections**".

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 and reference TDS 165.

WARNING

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. 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, a 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 bracket supplied with the door. To avoid possible damage to your door, Wayne Dalton recommends reinforcing the top section 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. For additional information on garage door/operator maintenance go to www.dasma.com and reference TDS 151, 167 and 179.

Monthly Inspections:

1. Visual Inspection: Closely inspect jambs, header and mounting surface. Any material found not to be structurally sound must be replaced. It may be necessary to uninstall part or all of the door assembly in order to replace defective material. Refer to the supplemental instructions "Removing an Existing Door / Preparing the Opening" at www.Wayne-Dalton.com. Inspect the spring(s), 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, except on bottom corner brackets or on the counterbalance assembly. 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, contact a trained door system technician.

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 BEARING BRACKETS, DRUMS OR SPRING 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.

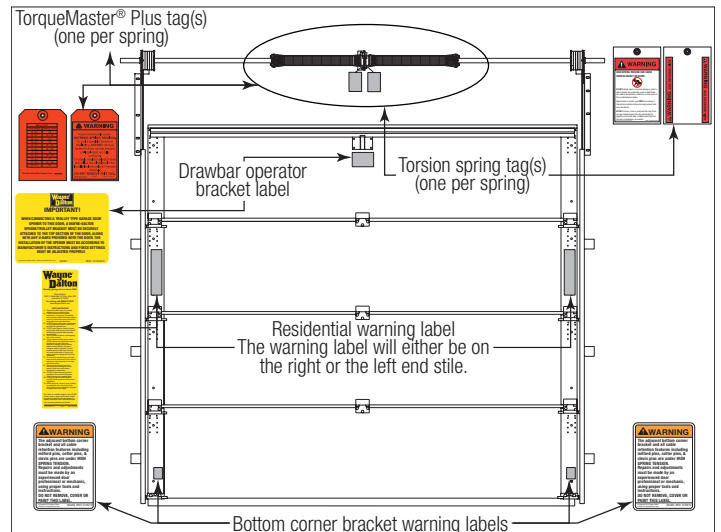
TORQUEMASTER® PLUS SPRINGS: Pawl knob(s) (located on the TorqueMaster® end brackets above the door) should be engaged to prevent the door from rapidly descending in case of spring failure or forceful manual operation.

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. Using handles or suitable gripping points, 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, center hinges, steel track rollers, bearings and torsion springs (torsion spring coil surfaces). 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.

CHECK FOR PRESENCE OF SAFETY LABELS:



WARRANTY

Limited Warranty

Models 9100, 9405 and 9605

Wayne Dalton, a division of Overhead Door Corporation ("Seller") warrants to the original purchaser of the Models 9100, 9405 and 9605 ("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:

LIMITED LIFETIME WARRANTY* on the Product sections against:

- Peeling, cracking, or chalking of the original factory-applied coating on the steel sections of the Product.
- The Product becoming inoperable due to rust-through of the steel skin from the core of the Product section, caused by cracking, splitting, or other deterioration of the steel skin, or due to structural failure caused by separation or degradation of the foam insulation.
- The Product hardware (except springs) and the tracks.

ONE (1) YEAR on those component parts of the Product not covered by the preceding provisions of this Warranty

*Limited Lifetime shall mean as long as the original purchaser owns the house in which the Product is originally installed.

- **TWO (2) YEARS** on the Model 9405 factory attached overlay material against peeling, cracking, chalking, fading or delamination.

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, normal wear and tear, acts of God, or any other cause beyond the reasonable control of Seller or as a result of having been exposed to toxic or abrasive environments, including blowing sand, salt water, salt spray and toxic chemicals and fumes.

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.

IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Seller has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, loss of use, cost of any substitute product, or other similar indirect financial loss. 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.

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, leave this Installation Instructions And Owner's Manual with the homeowner, or fasten it near garage door for easy reference.