

# Models 9100 / 9405 / 9605

EXTENSION

RESIDENTIAL  
STANDARD LIFT  
WINDLOAD

INSTALLATION INSTRUCTIONS AND OWNER'S  
MANUAL

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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.

### **IMPORTANT NOTICES!**

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

This Installation document is available at no charge from:

- Your local Wayne Dalton Sales Center, or
- Online at [www.Wayne-Dalton.com](http://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 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, fasteners, counterbalance lift cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/ or opener manufacturer's instructions.
14. Visually inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely.
15. Test electric opener's safety features monthly, following opener manufacturer's instructions.
16. NEVER hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.
17. This door may not meet the building code wind load requirements in your area. For your safety, you will need to check with your local building official for wind load code requirements and building permit information.
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
 <p>Moving door</p>	 <b>WARNING</b> Could result in Death or Serious Injury	Keep people clear of opening while Door is moving.  Do <b>NOT</b> allow children to play with the Door Opener.  Do <b>NOT</b> operate a Door that jams or one that has a broken spring.
 <p>High tension spring</p>	 <b>WARNING</b> Could result in Death or Serious Injury	Do <b>NOT</b> try to remove, install, repair or adjust springs or anything to which door spring parts are fastened, such as, wood blocks, steel brackets, cables or other like items.  Installations, repairs and adjustments must be done by a trained door system technician using proper tools and instructions.

## 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](http://www.Wayne-Dalton.com) or at your local Wayne Dalton Sales Center.

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

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

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 12" (305 mm) above the top of the opening for TorqueMaster® counterbalance systems. For low headroom applications, the jambs should extend to the ceiling height. Minimum side clearance required, from the opening to the wall, is 3-1/2" (89 mm).

**IMPORTANT:** CLOSELY INSPECT JAMBS, HEADER AND MOUNTING SURFACE. ANY WOOD FOUND NOT TO BE SOUND, MUST BE REPLACED.

For TorqueMaster® counterbalance systems, a suitable mounting surface (2" x 6") must be firmly attached to the wall, above the header at the center of the opening.

**NOTE:** Drill a 3/16" pilot hole in the mounting surface to avoid splitting the lumber. Do not attach the mounting surface with nails.

**WEATHERSTRIPS (MAY NOT BE INCLUDED):**

Depending on the size of your door, you may have to cut or trim the weatherstrips (if necessary) to properly fit into the header and jambs.

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

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

**FOR QUICK INSTALL TRACK:** For the header, align the weatherstrip with the inside edge of the header and temporarily secure it to the header with equally spaced nails. Starting at either side of the jamb, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and flush with the inside edge of the jamb. 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.

**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.

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

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

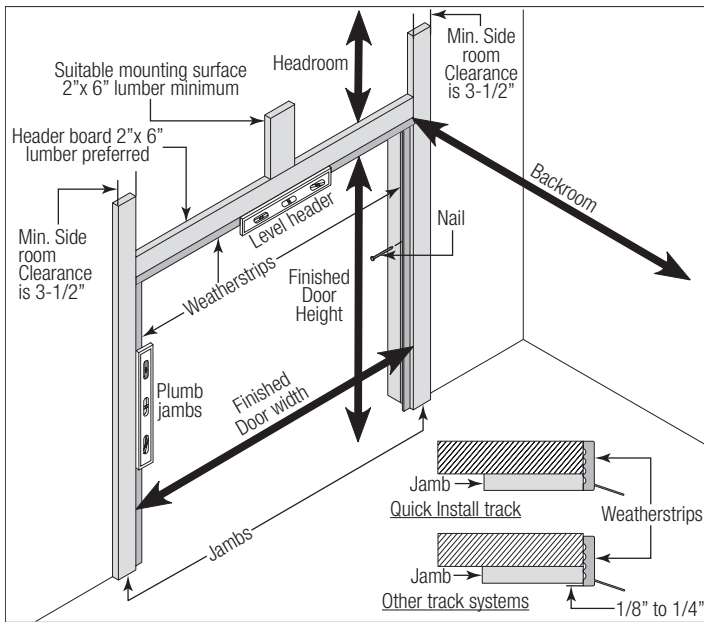
**BACKROOM REQUIREMENT:** Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.

**BACKROOM REQUIREMENTS**

DOOR HEIGHT	TRACK	MANUAL LIFT	MOTOR OPERATED
6'0" to 7'0"	12", 15" Radius	102" (2591 mm)	125" (3175 mm)
7'1" to 8'0"	12", 15" Radius	114" (2896 mm)	137" (3480 mm)

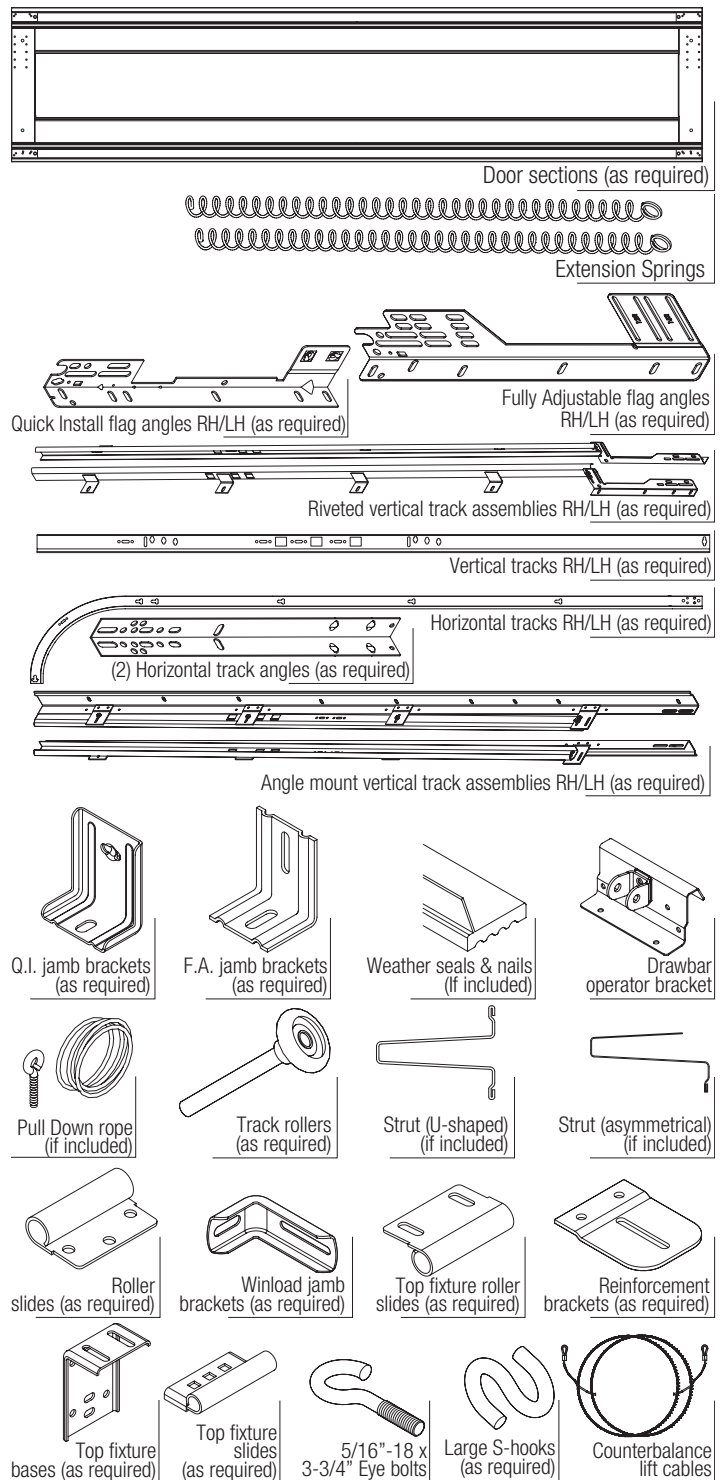
**HEADROOM REQUIREMENTS**

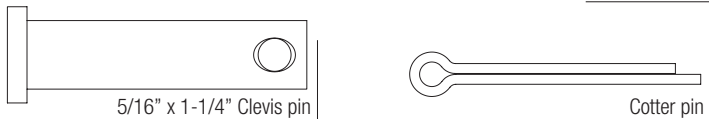
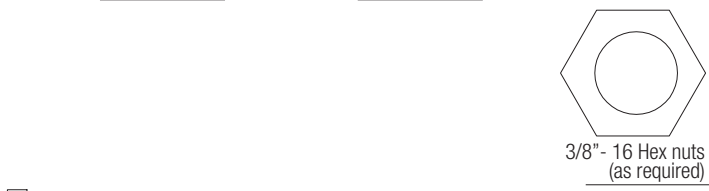
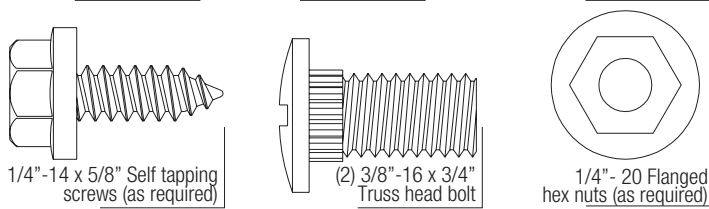
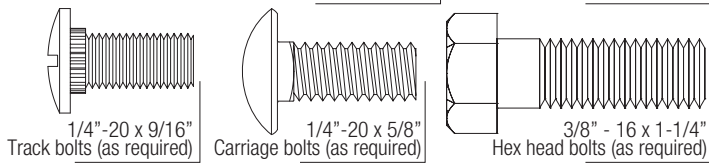
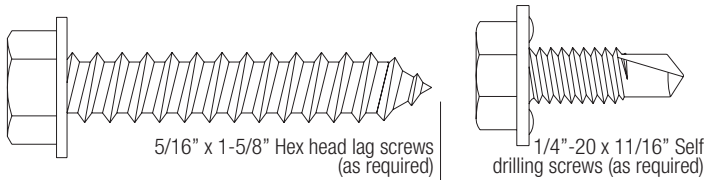
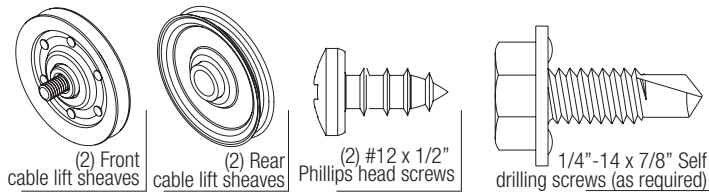
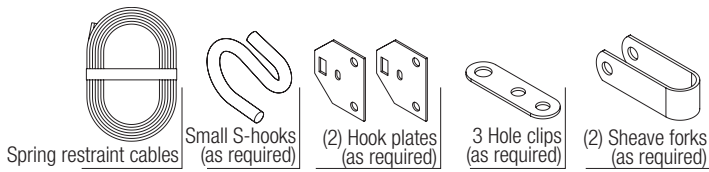
TRACK TYPE	SPACE NEEDED
15" Radius track	13-1/2" (343 mm)
12" Radius track	11" (279 mm)



**Package Contents**

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





## Door Section Identification

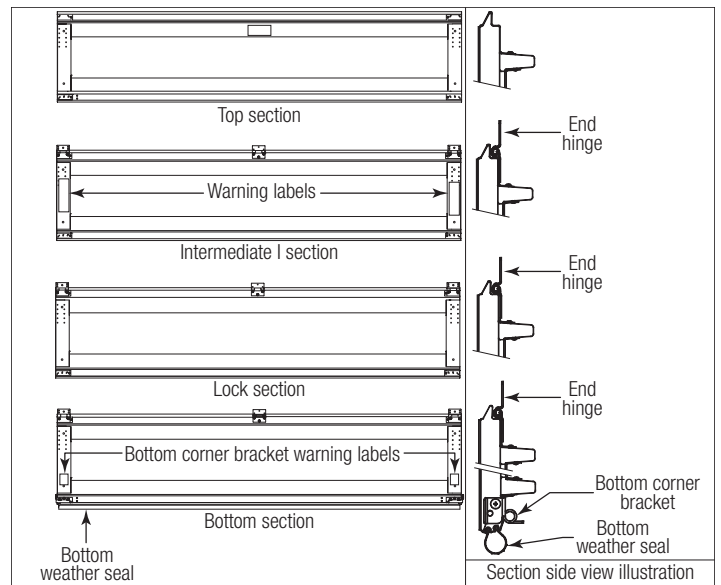
End and center hinges are always pre-attached at the top of each section (except top section).

The **BOTTOM SECTION** can be identified by the factory attached bottom weather seal, the factory attached bottom corner brackets and by the bottom corner bracket warning labels on each end stile.

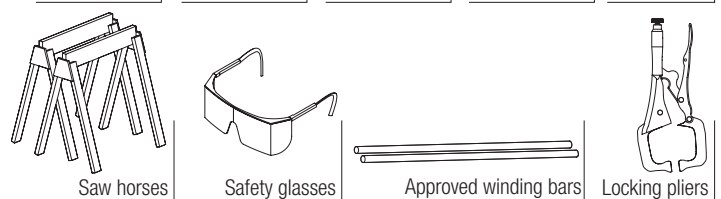
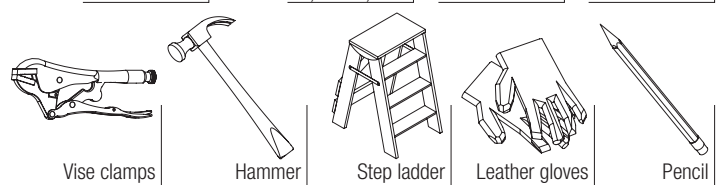
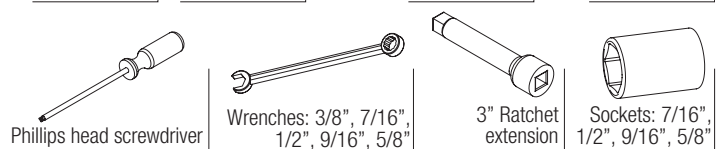
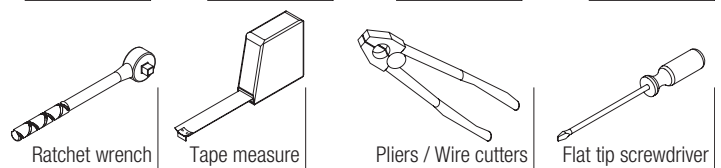
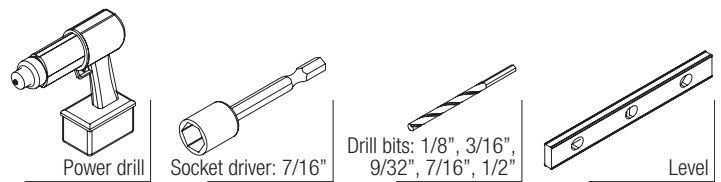
The **LOCK SECTION** can be identified having no labels attached to the section.

The **INTERMEDIATE SECTION I** can be identified by the warning label attached to either the right or left hand end stile.

The **TOP SECTION** can be identified with no pre-installed graduated end or center hinges.

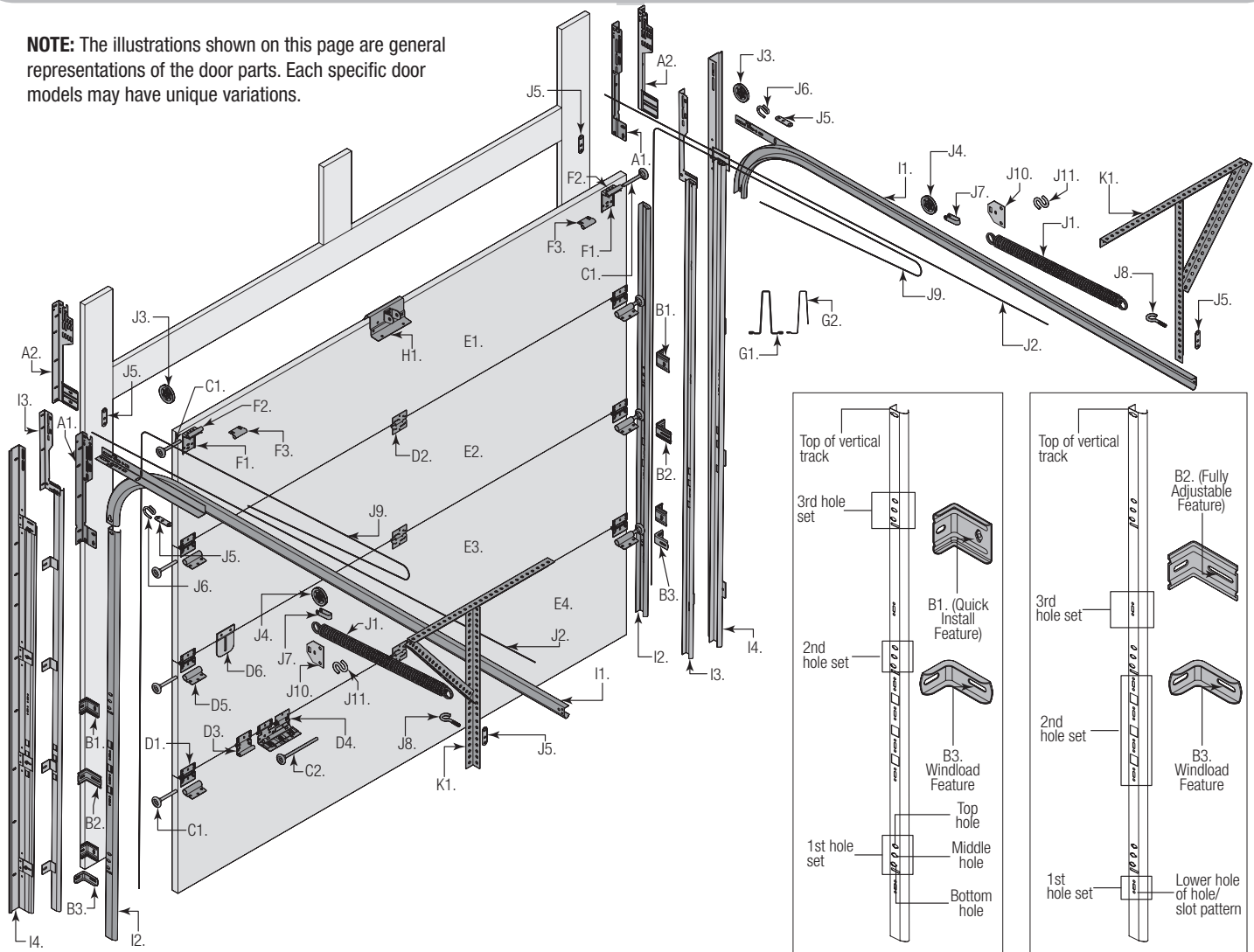


## Tools Required



# 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. Quick Install (Q.I.) Flag Angles
- A2. Fully Adjustable (F.A.) Flag Angles

**B. JAMB BRACKETS (AS REQUIRED):**

- B1. Quick Install (Q.I.) Jamb Brackets
- B2. Fully Adjustable (F.A.) Jamb Brackets
- B3. Windload Jamb Brackets

**C. TRACK ROLLERS (AS REQUIRED):**

- C1. Short Stem Track Rollers / C2. Long Stem Track Rollers

**D. GRADUATED END HINGES (AS REQUIRED):**

- D1. End Hinges / D2. Center Hinges
- D3. Single Graduated End Hinges (S.E.H.), Anti-Pinch
- D4. Double Graduated End Hinges (D.E.H.), Anti-Pinch
- D5. Roller slides / D6. Reinforcement brackets

**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)
- F3. Top Fixture Roller Slides

**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
- I5. Left Hand Riveted Vertical Track Assembly
- I6. Right Hand Riveted Vertical Track Assembly

**J. EXTENSION SPRING ASSEMBLY (AS REQUIRED):**

- J1. Extension Springs
- J2. Safety Cables
- J3. Front Cable Lift Sheaves
- J4. Rear Cable Lift Sheaves
- J5. 3 Hole Clips (As Required)
- J6. Small 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. 5/16" - 18 Hex Nuts (As Required)
- J11. Large S-Hooks (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](http://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 Attaching Flag Angles and Jamb Brackets To Vertical Tracks

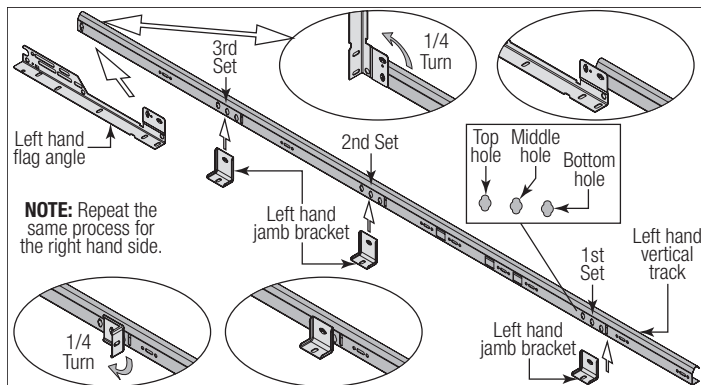
**NOTE:** If you have Riveted Track or Angle Mount Track, skip this step.

**FOR DOORS WITH QUICK INSTALL TRACK:** Place the lower Quick Install tab of the left hand flag angle in the Quick Install feature of the left hand vertical track. Give the flag angle 1/4 turn to lock in place. 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 Quick Install tab on the Quick Install jamb bracket with the Quick Install 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 the same process for right hand 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"	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"	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



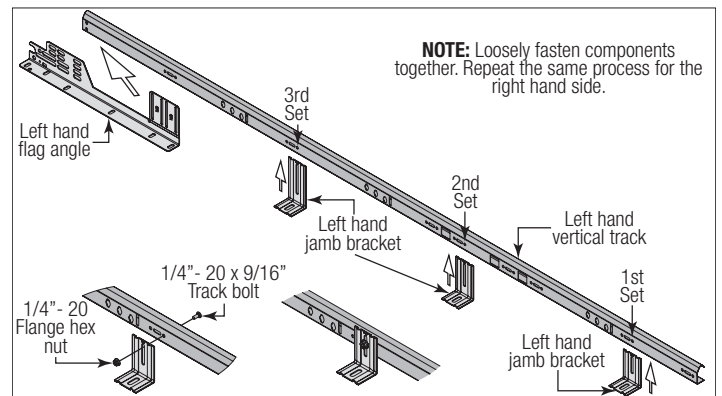
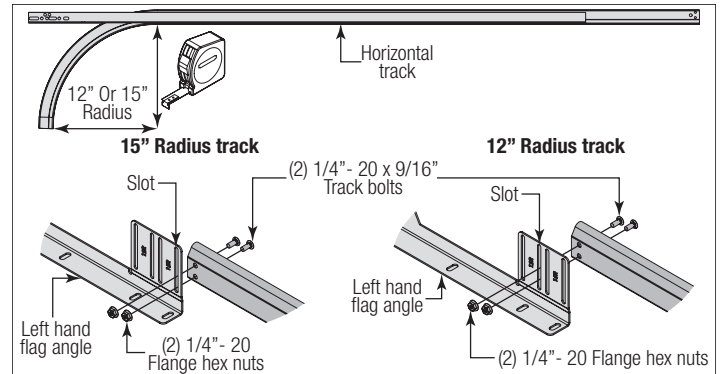
**FOR DOORS WITH FULLY ADJUSTABLE TRACK:** Hand tighten the left hand flag angle to the left hand vertical track using (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts.

**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 9/16" track 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 9/16" track bolt and (1) 1/4" - 20 flange hex nut.

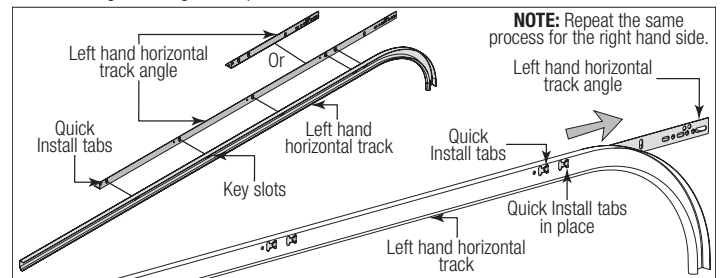
If a top jamb bracket was included, hand tighten it to vertical track using the lower hole of the hole/ slot pattern in the 3rd hole set and (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut.



## 2 Attaching Horizontal Track Angles

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

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

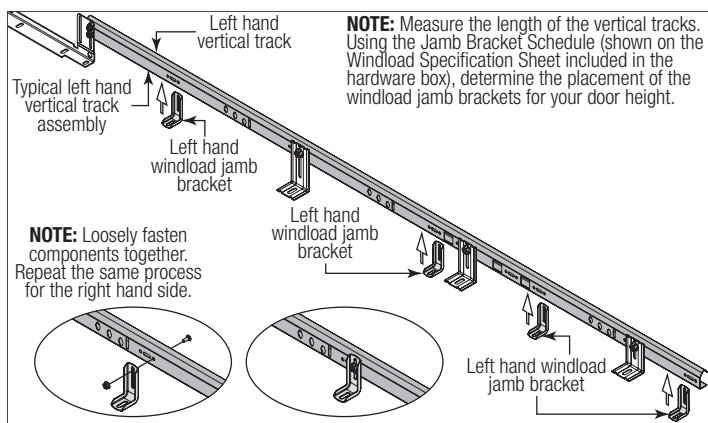


## 3 Attaching (WL) Jamb Brackets To Vertical Tracks

**NOTE:** Windload specification 0356 only uses the Quick Install (Q.I.) jamb bracket schedule.

**NOTE:** Reference Step Quick Install Flag Angles (Q.I.) or Step Fully Adjustable Flag Angles (F.A.T.), to determine which type of track you have.

Measure the length of the vertical tracks. Using the Jamb Bracket Schedule (shown on the Windload Specification Sheet), determine the placement of the windload jamb brackets for your door height. Loosely fasten the jamb bracket to the vertical track with (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 flange hex nut. Repeat for other side.



1. Place the strut over the top rib of each of the remaining sections with the (8) pre-punched holes at the ends, facing up. Center the strut left to right on the section surface.
2. Fasten the strut(s) at each end through the top and bottom flange with (2) 1/4" - 14 x 7/8" self drilling screws.
3. Place (2) 1/4" - 14 x 5/8" self tapping screws through each center hinge(s) locations.
4. Finish securing the strut(s) to the section by placing (2) 1/4" - 14 x 5/8" self tapping screws midway between the end of the door and the center hinge(s) locations and (1) 1/4" - 14 x 5/8" self tapping screw approximately eight inches from each end.

**FOR THE WINDLOAD OPTION CODE 0356:**

1. Place the strut over the top rib of the bottom section. Center the strut left to right on the section surface. Fasten the strut at each end with (2) 1/4" - 14 x 5/8" self tapping screws, through the top and bottom flanges of the strut as well as (2) 1/4" - 14 x 5/8" self tapping screws at all center hinge locations and midway between center hinge locations and the end of the strut.
2. Attach the strut to the top rib of the intermediate section for a four section high door and the top rib of the intermediate and intermediate II sections for a five section high door, in the same manner the strut was attached to the bottom section.

## 4 Attaching Strut(s) To Section

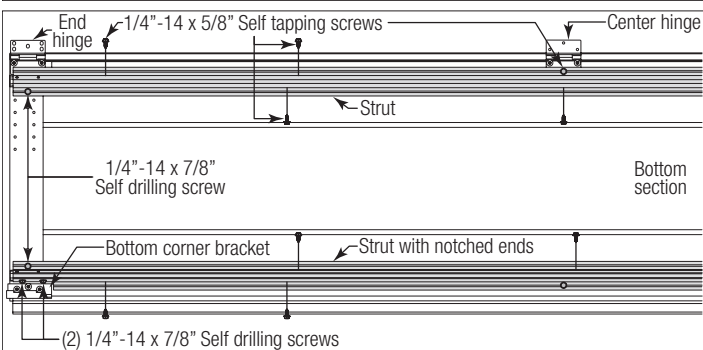
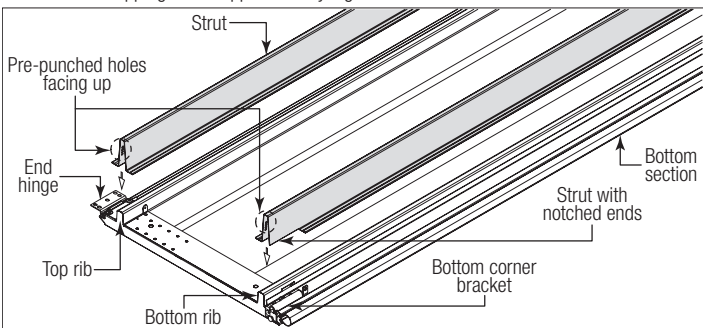
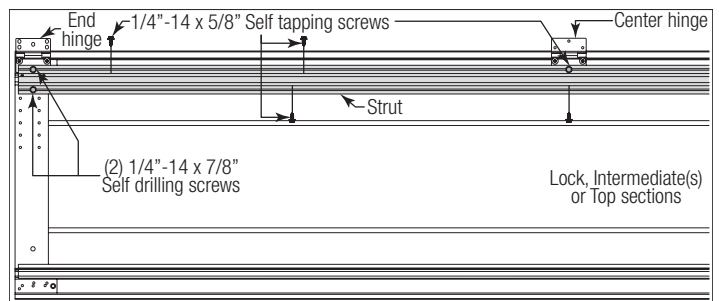
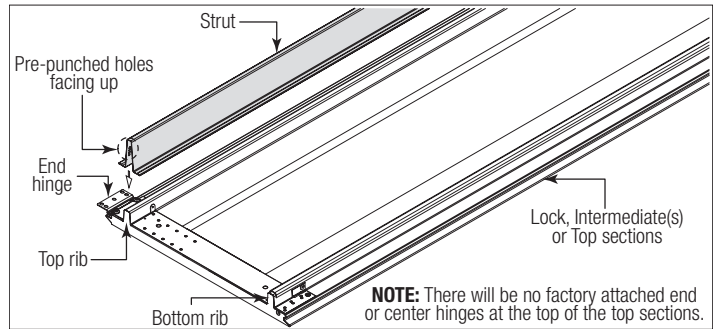
**NOTE:** Refer to Door Section Identification, located in the pre-installation section of this manual or refer to Package Contents. Refer to the Package Contents and or Breakdown of Parts to determine if your door came with struts.

**NOTE:** Larger doors will have color coded struts. An 18 gauge (.046) strut will have red ends or a 20 gauge (.034) strut will have blue ends.

Referencing the Strutting Schedule (shown on the Windload Specification Sheet), determine the placement of the struts for your door height. Next, using sawhorses, lay the appropriate section on a flat smooth surface.

**FOR THE BOTTOM SECTION:**

1. **If your doors windload option code begins with 06**, place the strut with the notched ends over the bottom rib of the bottom section with the notches facing down. Center the strut left to right on the section surface. **If your doors windload option code begins with 02**, place the strut with the notched ends over the bottom rib of the bottom section with the notches facing down. The ends of the strut will fit in between the bottom corner bracket flanges and the bottom section rib. Center the strut left to right on the section surface.
2. Fasten the strut at each ends through the top flange with (1) 1/4" - 14 x 7/8" self drilling screw. **If your doors windload option code begins with 02**, then also fasten the strut at each ends to the bottom section rib with (2) 1/4" - 14 x 5/8" self tapping screws, through the two holes in the bottom corner bracket flanges.
3. Place (2) 1/4" - 14 x 5/8" self tapping screws through each pre-punched hole at each center hinge(s) location.
4. Place the strut over the top rib of the bottom section with the eight pre-punched holes, facing up. Center strut left to right on the section surface. Attach the strut at each ends through the struts bottom flange with (1) 1/4" - 14 x 7/8" self drilling screw.
5. Finish securing the struts to the section, by placing (2) 1/4" - 14 x 5/8" self tapping screws midway between the end of the door and the center hinge(s) locations and (1) 1/4" - 14 x 5/8" self tapping screw approximately eight inches from each end.

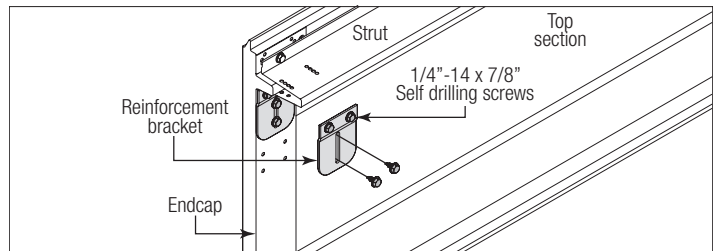


**FOR THE LOCK, INTERMEDIATE(S) AND TOP SECTIONS:**

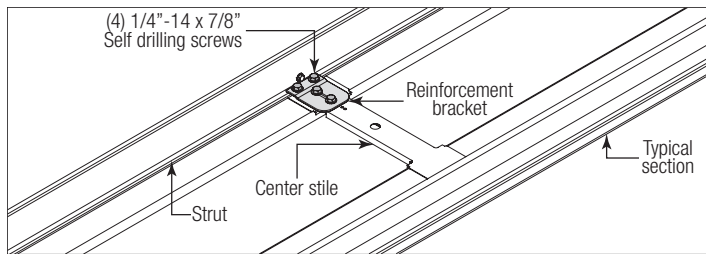
## 5 Attaching Reinforcement Brackets

**NOTE:** Refer to your Windload Specification Sheet and install the reinforcement brackets onto your sections accordingly.

Starting on the left hand side of top section, position the top holes in the reinforcement bracket over the strut and the slot in the reinforcement bracket over the endcap of the top section, as shown. Fasten the reinforcement bracket to the strut and the end cap of the section using (4) 1/4" - 14 x 7/8" self drilling screws. Repeat same process for other side.



**IF YOU HAVE MORE THAN TWO REINFORCEMENT BRACKETS:** At the center of the top section position the top holes in the reinforcement bracket over the strut and the slot in the reinforcement bracket over the center stile of the top section, as shown. Fasten the reinforcement bracket to the strut and the center stile of the top section using (4) 1/4" - 14 x 7/8" self drilling screws. Repeat same process for other sections.



## 6 Attaching Roller Slides

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

**NOTE:** Each roller slide has a viewing hole. This will allow for correct positioning of the roller slide on the strut.

Starting with the bottom section, place a roller slide on the top left side of the strut and align with the first set of holes closest to the section, as shown. Attach the roller slide to the strut using (2) 1/4" - 14 x 5/8" self tapping screws. Repeat for opposite side.

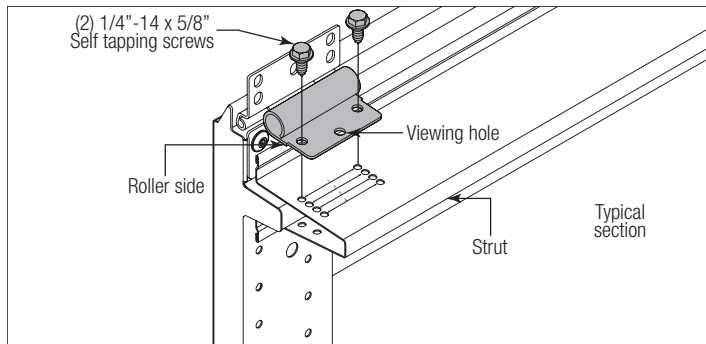
Next, position and install roller slides onto the sections, as shown:

For the Lock Section (Second Section), use the second set of holes.

For the Intermediate Section I (Third Section), use the third set of holes.

For the Intermediate Section II (Fourth Section (Only a five section high door will have a second intermediate section)), use the fourth set of holes.

**NOTE:** DO NOT install roller slides onto the top section.



## 7 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.

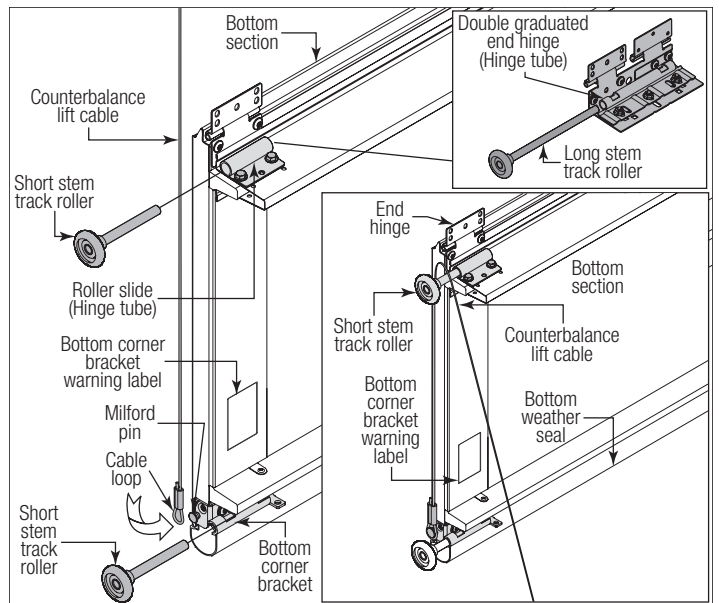
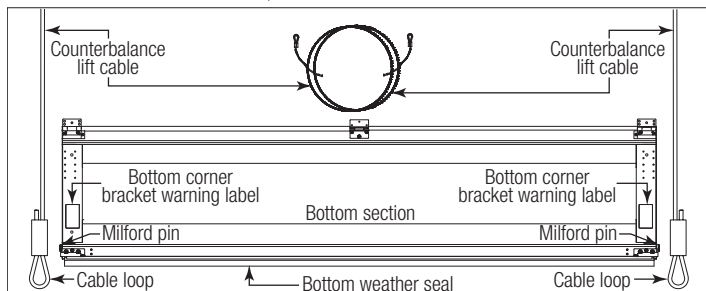
### WARNING

**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 roller slides at the top of the bottom section.

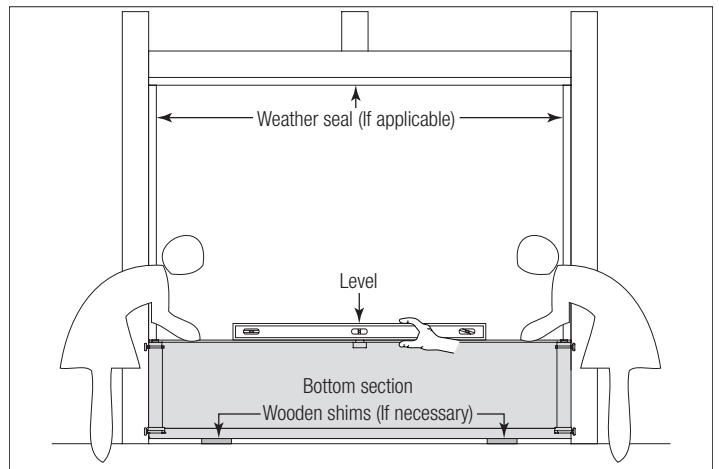
**NOTE:** Larger doors will use long stem track rollers with double graduated end hinges.

**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.



## 8 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.



## 9 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.

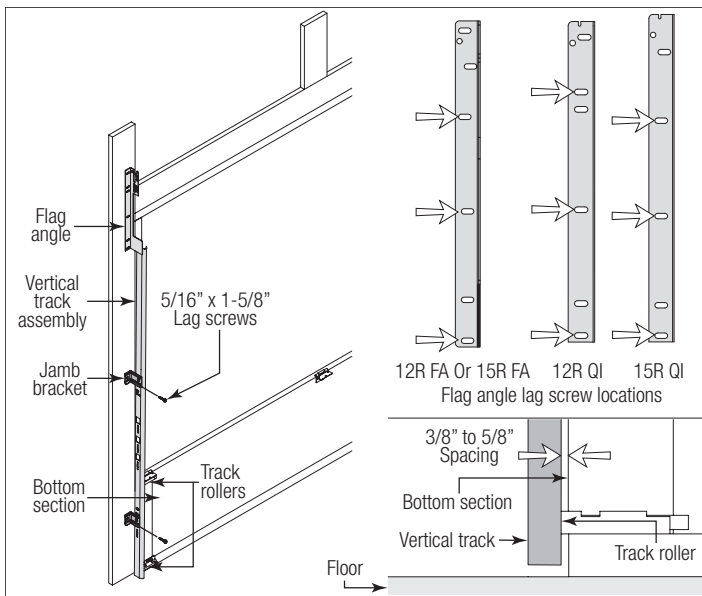
**IMPORTANT:** THE TOPS OF THE VERTICAL TRACKS MUST BE LEVEL FROM SIDE TO SIDE. IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT, THE VERTICAL TRACK ON THE SHIMMED SIDE MUST BE RAISED THE HEIGHT OF THE SHIM.

**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 1-5/8" lag screws. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8" to 5/8" spacing, between the bottom section and vertical track. Hang counterbalance lift cable over flag angle. Repeat same process for other side.





## 10 Stacking Sections

**NOTE:** The sections can also be identified by the roller slides that were previously installed, reference Step Roller Slide. The smallest roller slide attached to the strut of the section should be stacked on top of the bottom section, with each roller slide increasing as the sections are stacked. Reference Step Attaching Roller Slides, Door Section Identification or Breakdown of Parts.

**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 roller slides 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.

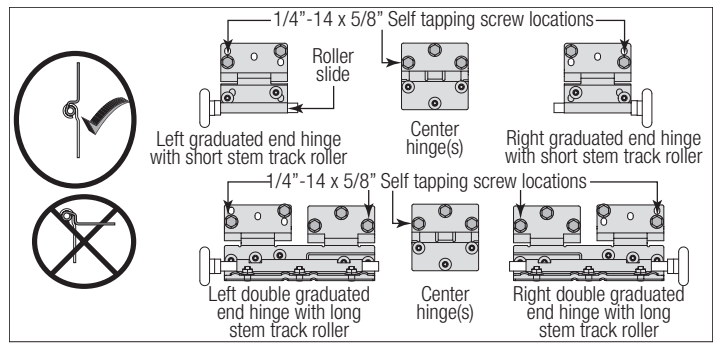
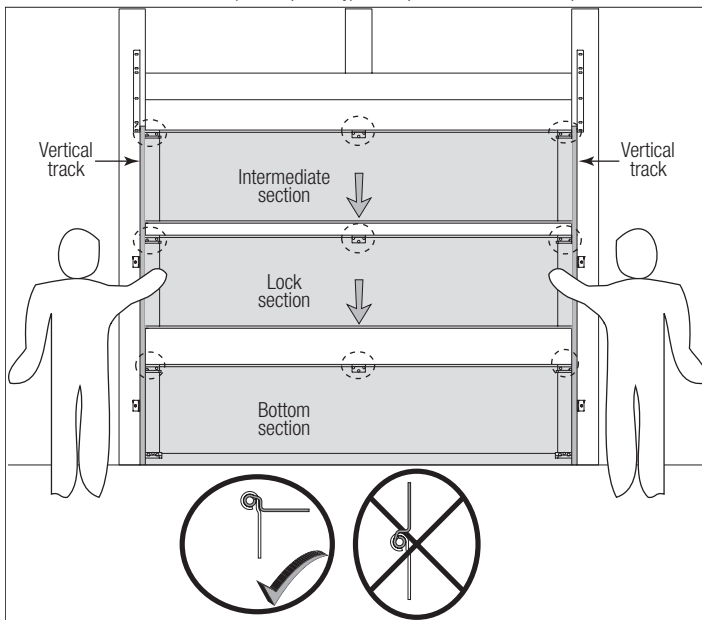
**NOTE:** To prevent center hinge leaf from rotating, first secure the top middle hole of the center hinge leaf with one 1/4" - 14 x 5/8" self-tapping screw then secure the other two holes.

**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.



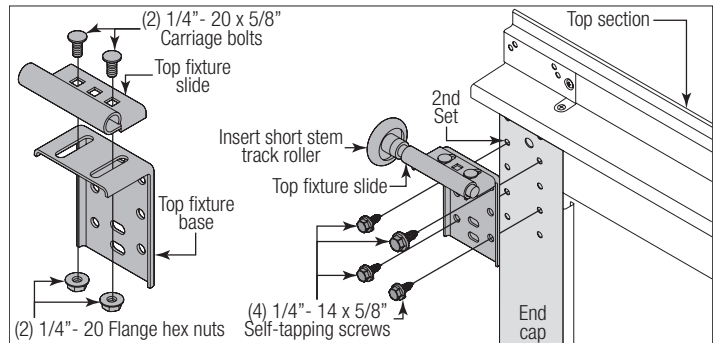
## 11 Attaching Top Fixtures To Top Section

**NOTE:** Depending on your door, you may have Top Fixture Bases and Top Fixture Slides or you may have Top Fixture Roller Slides. Refer to Package Contents / Breakdown of Parts, to determine which Top Fixtures you have.

**IF YOU HAVE TOP FIXTURE BASES AND TOP FIXTURE SLIDES:** 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.

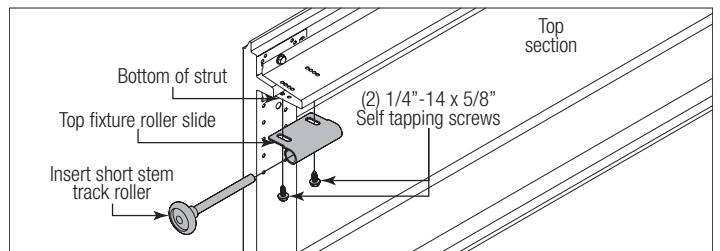
**NOTE:** The top fixture slide will be tightened and adjusted later, in step, Adjusting Top Fixture.

**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.



**IF YOU HAVE TOP FIXTURE ROLLER SLIDES:** Starting on the left hand side of the top section, align the slots in the top fixture roller slide with the set of holes on the bottom of the strut. Loosely fasten top fixture roller slide to the strut using (2) 1/4" - 14 x 5/8" self tapping screws. Insert short stem track roller into top fixture slide. Repeat the same process for the right hand side.

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



## 12 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.

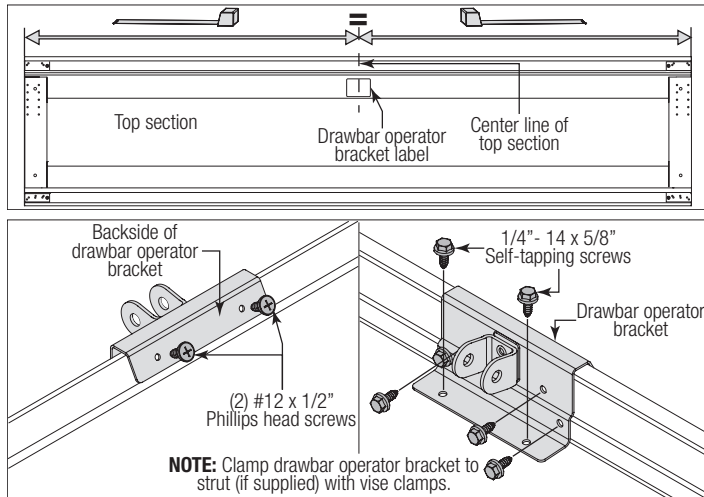
**IMPORTANT:** WHEN CONNECTING A DRAWBAR OPERATOR TYPE GARAGE DOOR OPENER TO THIS DOOR, A WAYNE DALTON OPERATOR/ DRAWBAR OPERATOR BRACKET MUST BE SECURELY ATTACHED TO THE TOP SECTION OF THE DOOR, ALONG WITH ANY STRUT PROVIDED WITH THE DOOR. THE INSTALLATION OF THE DRAWBAR OPERATOR MUST BE ACCORDING TO 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.



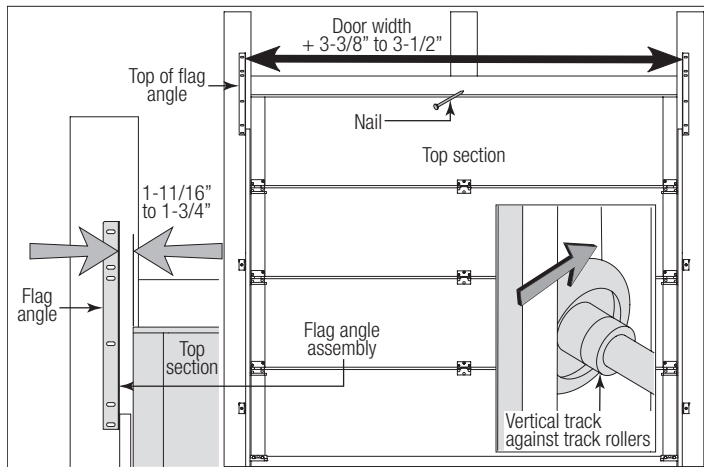
## 13 Stacking Top Section

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.

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

**FOR FULLY ADJUSTABLE TRACK OR RIVETED TRACK:** 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.



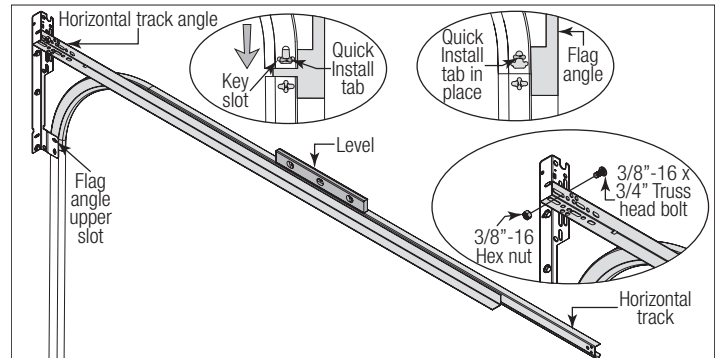
## 14 Attaching Horizontal Tracks

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

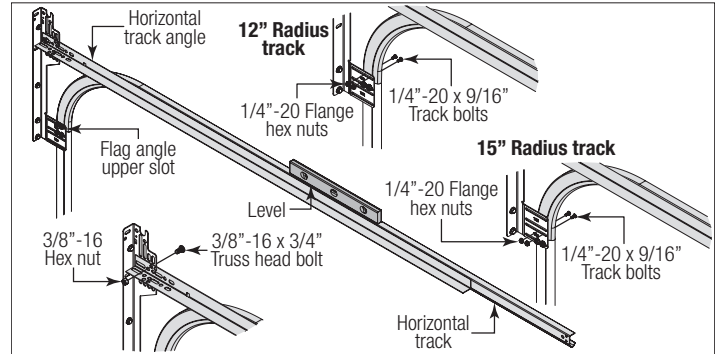
## WARNING

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

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

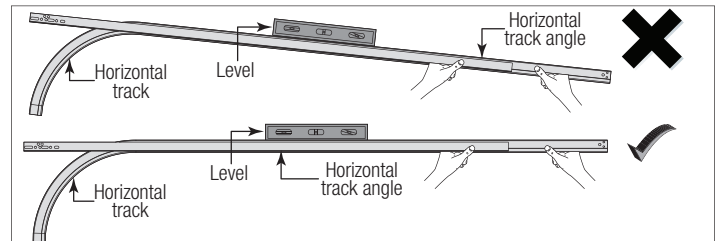


**FOR OTHER FLAG ANGLES:** To install horizontal track, place the curved end over the top track roller of the top section. Align the bottom of the horizontal track with the top of the vertical track. Tighten the horizontal track to the flag angle with (2) 1/4" - 20 x 9/16" track bolts and (2) 1/4" - 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 / angle mount using (1) 3/8" - 16 x 3/4" truss head bolt and (1) 3/8" - 16 hex nut. Repeat for other side. Remove nail that was temporarily holding the top section in position.

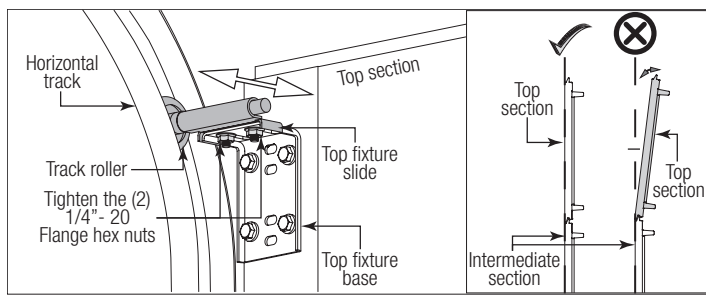
**IMPORTANT:** FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.



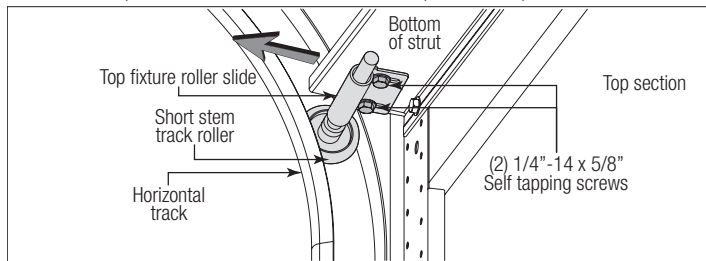
## 15 Adjusting Top Fixtures

**NOTE:** Depending on your door, you may have Top Fixture Bases and Top Fixture Slides or you may have Top fixture roller slides. Refer to Package Contents / Breakdown of Parts, to determine which Top Fixtures you have.

**IF YOU HAVE TOP FIXTURE BASES AND TOP FIXTURE SLIDES:** 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.



**IF YOU HAVE TOP FIXTURE ROLLER SLIDES:** With horizontal tracks installed, you can now adjust the top fixture roller slides. 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 top fixture slide position, tighten the (2) 1/4" - 14 x 5/8" self tapping screws to secure the top fixture roller slide to the strut of the top section. Repeat for other side.



## COUNTERBALANCE INSTALLATION INSTRUCTIONS

### 16 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.

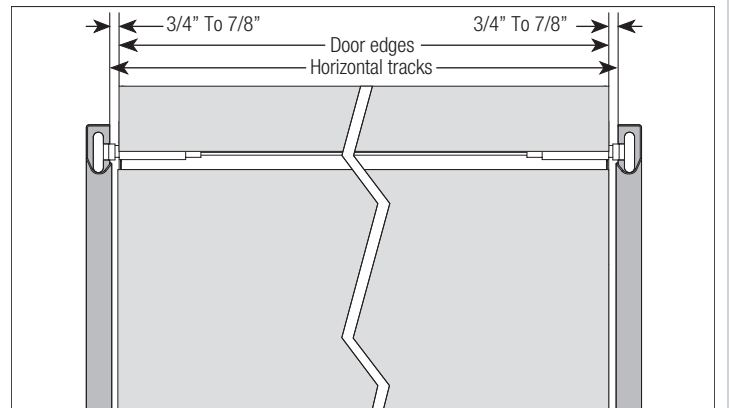
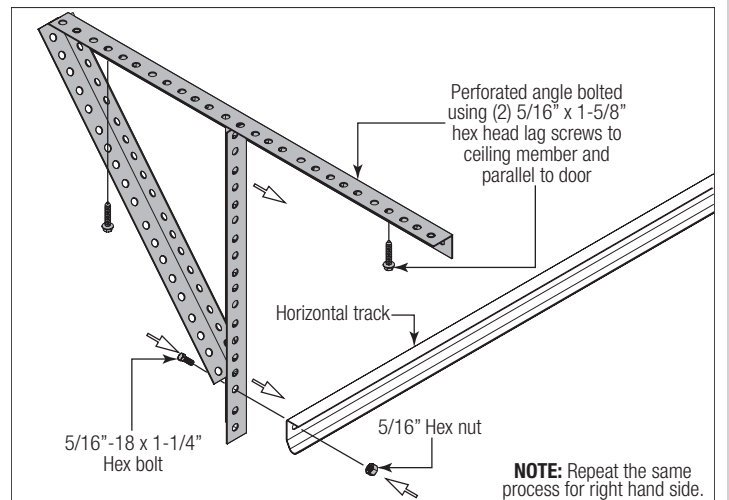
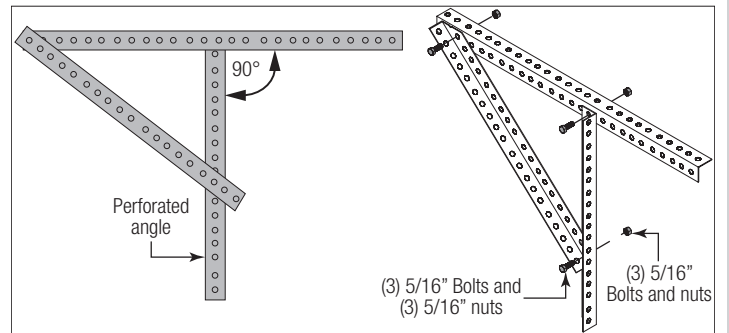
**IMPORTANT:** DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE REAR BACK HANGS THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

**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.**

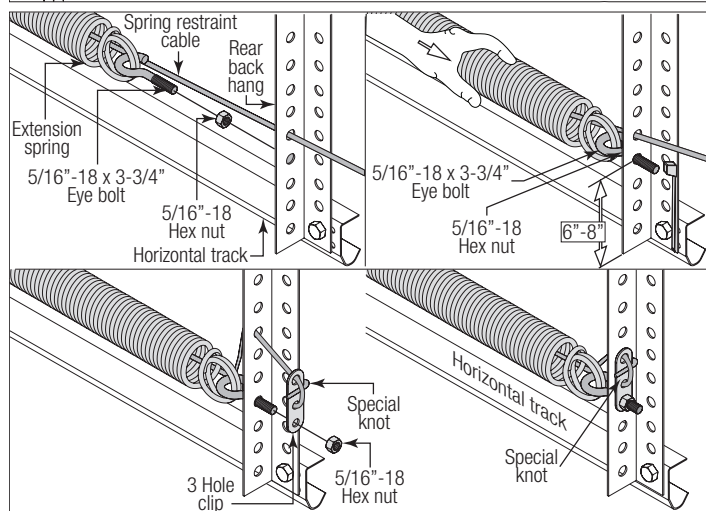
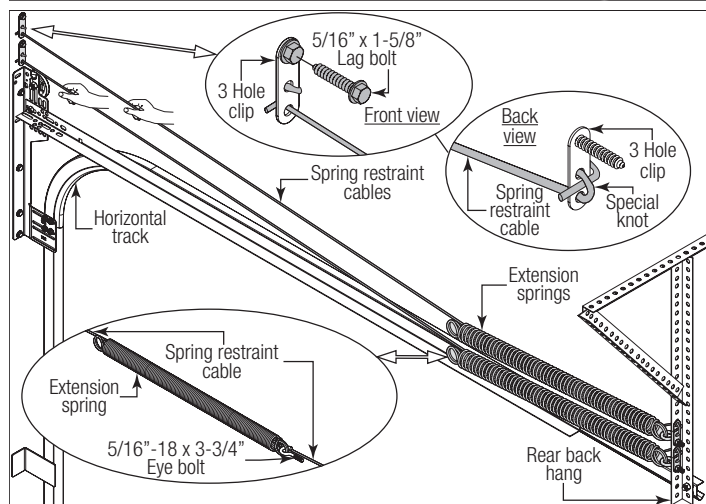
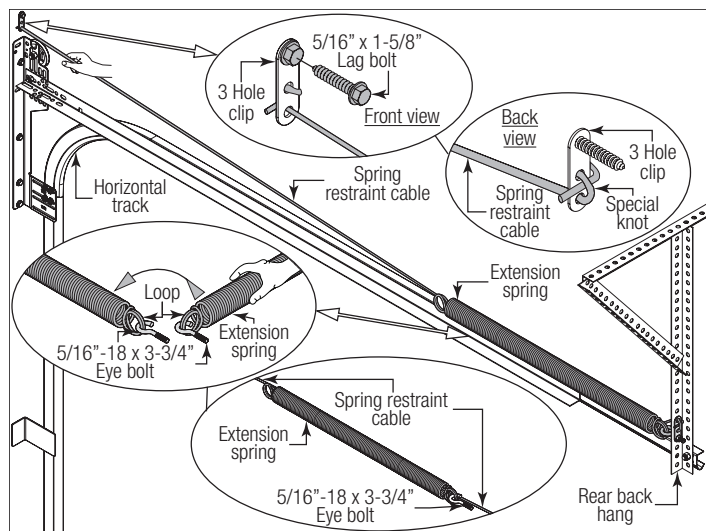
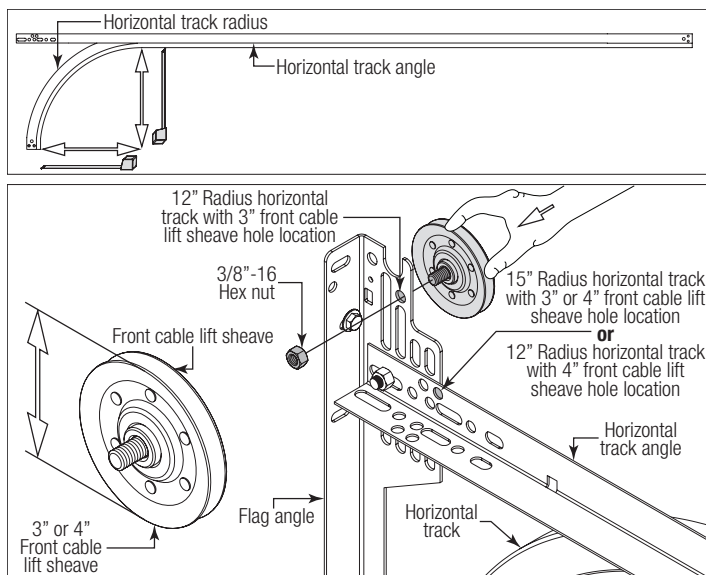


### 17 Attaching Front Cable Lift Sheaves

**IF YOU HAVE 3" FRONT CABLE LIFT SHEAVE AND A 12" RADIUS HORIZONTAL TRACK:** Starting on the left hand side and using (1) 3/8" - 16 hex nut, secure the front cable lift sheave to the 13/32" hole near the top of the flag angle, as shown.

**IF YOU HAVE 3" OR 4" FRONT CABLE LIFT SHEAVE AND A 15" RADIUS HORIZONTAL TRACK:** Starting on the left hand side and using (1) 3/8" - 16 hex nut, secure the front cable lift sheave to the first 13/32" hole in the horizontal angle, as shown.

Repeat the same process for the right hand side.



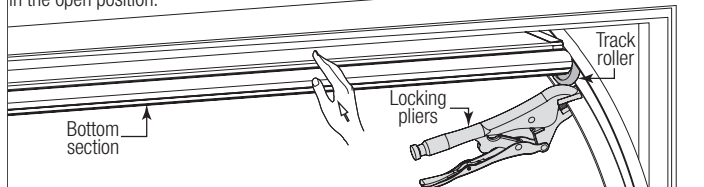
## 18 Attaching Extension Springs

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.**

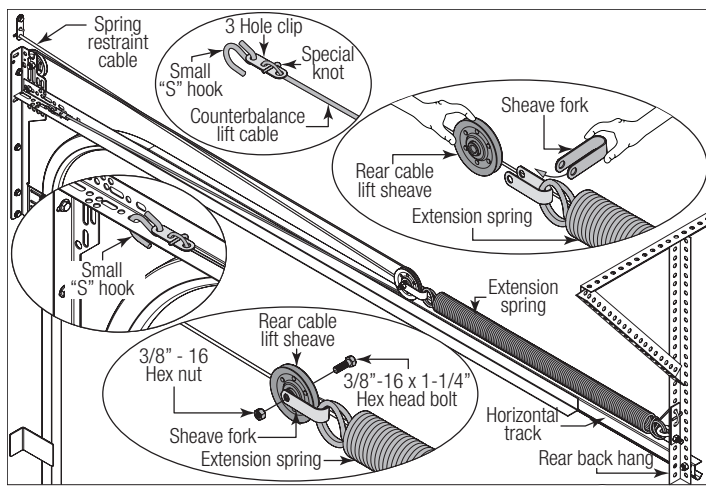
Position (1) 5/16" - 18 x 3-3/4" eye bolt and (1) 5/16" - 18 hex nut into the rear back hang, 6" to 8" above the horizontal track, as shown. Feed the spring safety cable through the rear back hang and tie the special knot around the "room side" of the 3 hole clip, as shown. Secure the eye bolt and 3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

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

**IMPORTANT:** SPRING RESTRAINT CABLES MUST BE TAUT AND EQUALIZED.

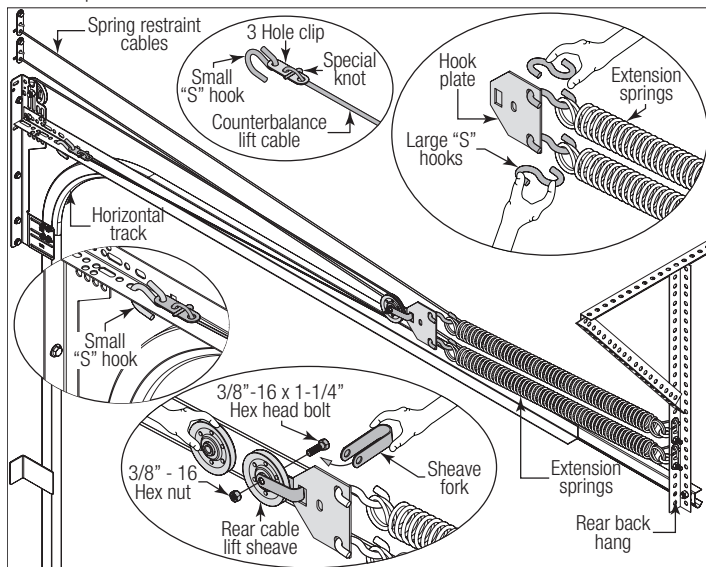
## 19 Attaching Spring Sheaves

**IF YOU HAVE ONE PAIR OF EXTENSION SPRINGS:** 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 small "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.



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

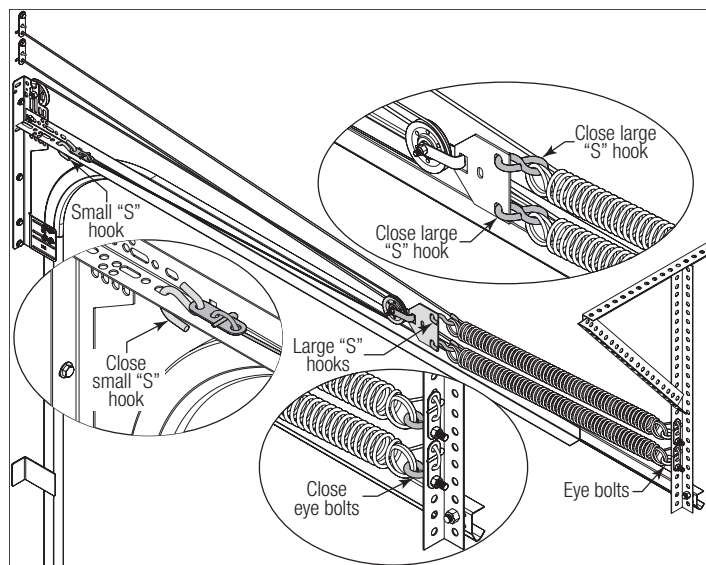
**IF YOU HAVE TWO PAIR OF EXTENSION SPRINGS:** Insert two large "S" hooks and the sheave fork into the hook plate. Attach the sheave fork to the rear cable lift sheave using (1) 3/8" - 16 x 1-1/4" hex head bolt and (1) 3/8" - 16 hex nut. Thread the counterbalance lift cable over the front cable lift 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 small "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.

## ⚠ WARNING

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



## 20

### 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)

## 21

### 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.

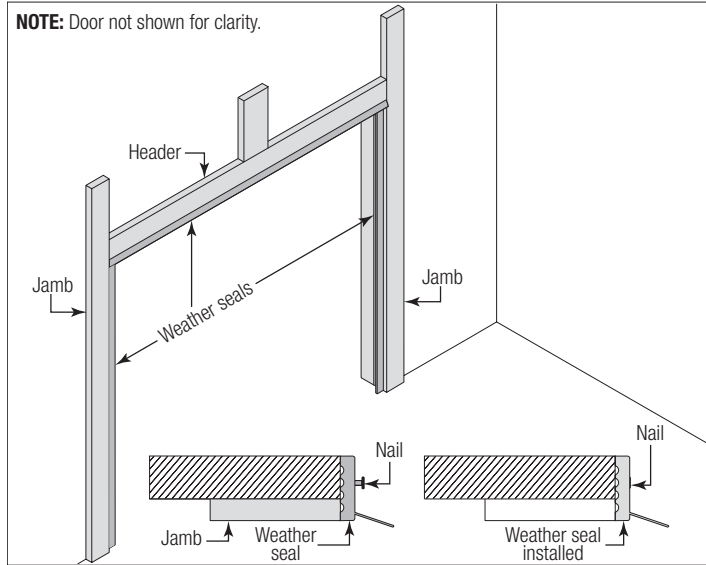
## 22

### 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.

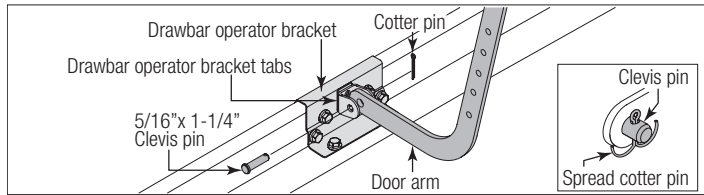
**NOTE:** When permanently attaching the weatherstrips to the jambs, avoid pushing the weatherstrips too tightly against the face of door.

**NOTE:** Door not shown for clarity.



## Door Arm Hookup

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



## Trolley Arm Configuration

Measure the horizontal radius 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 onto 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.

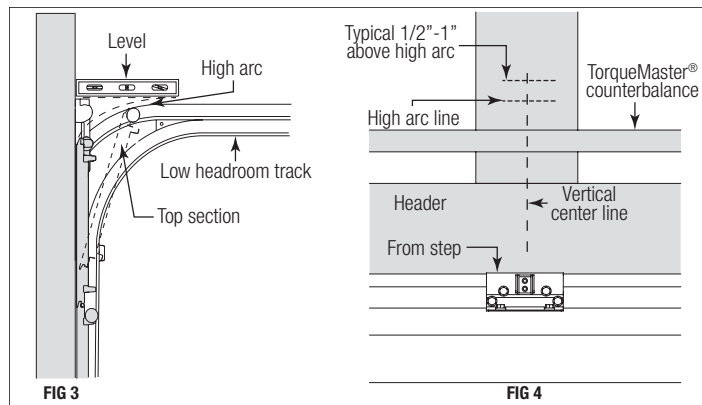
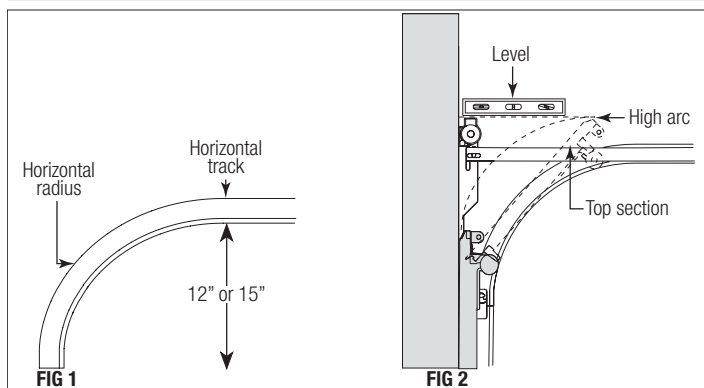
**NOTE:** Refer to your operator manual for specific details on how to assembly the curved and straight arm.

Align hole in the appropriate arm with holes in drawbar 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 drawbar operator bracket. Insert cotter pin into clevis pin hole and spread hairpin cotter to ensure it will secure assembly.

**NOTE:** Depending on your door, configuration, you could have an alternative drawbar operator brackets. Refer to your alternative drawbar operator bracket insert.

### **WARNING**

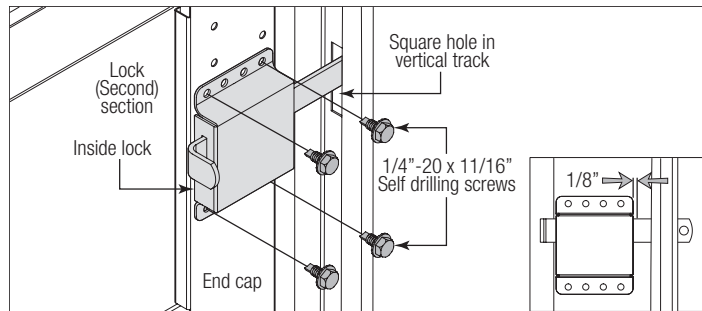
**PRIOR TO INSTALLING THE OPERATOR TROLLEY ARM TO THE DOOR, UNPLUG THE GARAGE DOOR OPERATOR. WITH THE DOOR IN THE FULLY CLOSED POSITION, PLACE LOCKING PLIERS ONTO BOTH VERTICAL TRACKS JUST ABOVE THE THIRD TRACK ROLLER. THIS IS TO PREVENT THE GARAGE DOOR FROM RISING UNEXPECTEDLY WHILE INSTALLING THE OPERATOR TROLLEY ARM TO THE DOOR. AFTER INSTALLING THE OPERATOR TROLLEY ARM TO THE DOOR REMOVE THE LOCKING PLIERS AND PLUG THE GARAGE DOOR OPERATOR BACK INTO THE OUTLET.**



## Inside Lock

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

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

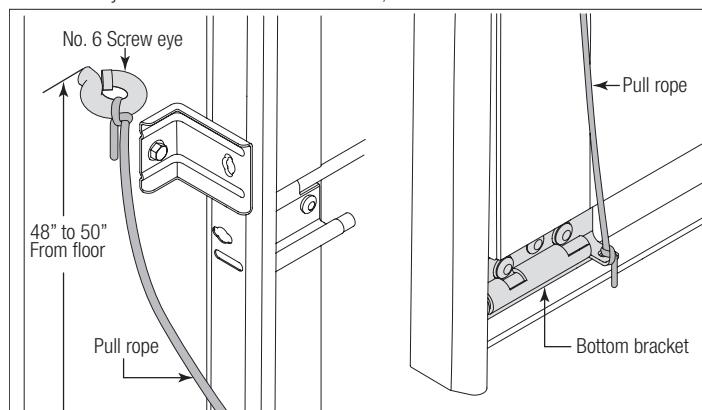


## Pull Down Rope

### **WARNING**

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

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



## Step Plate

Make one mark 1" (25 mm) up from the center of bottom edge of the bottom section and another mark 2-3/16" (56 mm) up from the first mark.

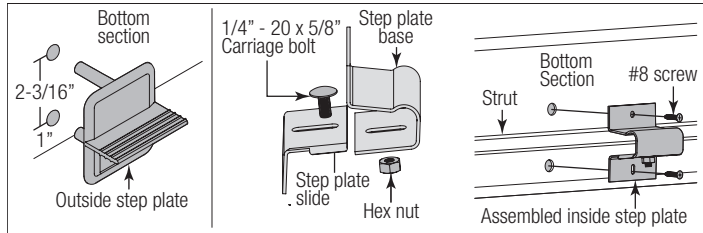
**NOTE:** Top of step plate can be no higher than 8" from the bottom of the door.

Drill a 7/16" (11 mm) hole through the section at each mark and insert the outside step plate. Loosely fasten step plate slide to base with (1) 1/4" - 20 x 5/8" carriage bolt and nut. Align inside step plate holes and fasten from inside using the #8 screws provided. Install one #8 x 3/4" screw in the bottom step plate hole. The screw in the top hole varies with door models. Use the screw size shown below for your model door.

a) #8 x 3/4" screw for model 9100

b) #8 x 1" screw models 9405/9605

Tighten 1/4" - 20 carriage bolt and nut.





## 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](http://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](http://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](http://www.Wayne-Dalton.com). For additional information on garage door/operator maintenance go to [www.dasma.com](http://www.dasma.com) and reference TDS 151, 167 and 179.

**Monthly Inspections:**

**1. Visual Inspection:** Closely inspect jambs, header and mounting surface. Any 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](http://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.**

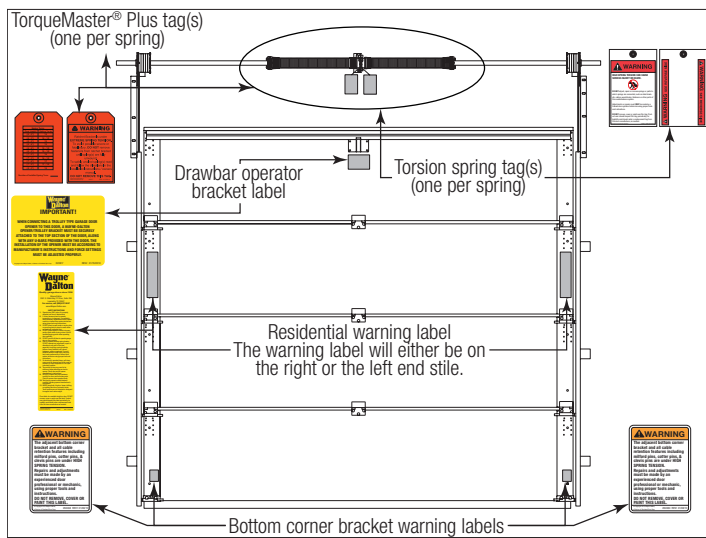
**TORQUEMASTER® PLUS SPRINGS:** Pawl knob(s) (located on the TorqueMaster® end brackets above the door) should be engaged to prevent the door from rapidly descending in case of spring failure or forceful manual operation.

**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:**



**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: \_\_\_\_\_  
\_\_\_\_\_

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Thank you for your purchase.

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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.

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