The Genuine. The Original.

OVERHEAD DOOR®

INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

Thermacore® Collection: Models 5760, 5740 and 5720

RESIDENTIAL
STANDARD LIFT

TORSION AND EXTENSION SPRINGS

PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE

If you need assistance, please contact your local Overhead Door Ribbon Distributor. To find your local Overhead Door Ribbon Distributor, go to the Find a Ribbon Distributor section online at **www.OverheadDoor.com**.

IMPORTANT NOTICES!

Carefully read and fully understand the enclosed instructions 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 on our Ribbon Distributor web site at:

- Online at **www.odcexchange.com**
- By mailing a request to: Overhead Door Corporation, 2501 South State Highway 121, Suite 200, Lewisville, TX., 75067

Part Number 407555-0001 REV J_08/26/2025

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Important Safety Instructions

DEFINITION OF KEY WORDS USED IN THIS MANUAL:

DANGER

INDICATES A HAZARDOUS SITUATION THAT, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

WARNING

INDICATES A HAZARDOUS SITUATION THAT, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

CAUTION

INDICATES A HAZARDOUS SITUATION THAT, IF NOT AVOIDED, COULD RESULT IN MINOR OR MODERATE INJURY.

NOTICE

INDICATES INFORMATION CONSIDERED IMPORTANT, THAT IT IS NOT RELATED TO INJURY, BUT MAY RESULT IN PROPERTY DAMAGE.

IMPORTANT: Required key step for proper door operation.

NOTE: Information only.

Installation:

WARNING

INSTALLING THIS DOOR PROPERLY REQUIRES THE USE OF SPECIAL TOOLS AND TECHNIQUES. ALWAYS USE THE CORRECT TOOLS OR TECHNIQUES WHEN PERFORMING INSTALLATION. FAILURE TO USE PROPER TOOLS OR TECHNIQUES OR ADHERE TO SAFETY MESSAGES, COULD RESULT IN SEVERE OR FATAL INJURY.

DANGER

EXTREME CAUTION SHOULD BE USED WHEN WINDING SPRINGS AS FAILURE TO FOLLOW THE INSTRUCTIONS OR USE THE PROPER TOOLS CAN LEAD TO SERIOUS INJURY TO PERSONS AND PROPERTY. BEFORE ATTEMPTING TO WIND THE SPRING, MAKE SURE YOU HAVE READ AND UNDERSTAND THE INSTRUCTIONS. IF YOU ARE UNCLEAR ON ANY ASPECT OF THE INSTALLATION PROCEDURES, YOU SHOULD CONSULT A TRAINED DOOR SYSTEMS TECHNICIAN.

- **READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION. IF YOU ARE IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN DO THE INSTALLATION OR REPAIRS.**
- Wear protective gloves and eye protection during installation, to avoid possible injury.
- **DO NOT** install door in windy conditions. Door could fall during the installation, causing severe or fatal injury.
- Doors 12'-0" wide and larger should be installed by two persons, to avoid possible injury.
- On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position, unless electrical interlocks are installed.
- 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.
- Check with your local building official for wind load code requirements and building permit information.
- For windloaded doors, the wind performance is achieved via the entire door system and component substitution is not authorized without express permission by the manufacturer.

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 OVERHEAD DOOR CORPORATION FOR FASTENER STRENGTH VALUES IF NEEDED.

Operation:

⚠ WARNING

TO PREVENT DEATH OR SERIOUS INJURY WHILE OPERATING THE DOOR, ENSURE THE PATH OF THE DOOR IS NOT OBSTRUCTED BY ANY PERSON OR OBJECT AND ADHERE TO THE FOLLOWING SAFETY MEASURES.

- Operate door only when it is properly adjusted and free from obstructions.
- 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.
- **DO NOT** stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
- **DO NOT** place fingers or hands into open section joints when closing a door. Use lift handles/ gripping points when operating door manually.
- **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.
- Visually inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely. Test electric opener's safety features monthly, following opener manufacturer's instructions.
- **NEVER** hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.

Potential Hazard	Effect	Prevention
 Moving door	**⚠ WARNING** Could result in Death or Serious Injury	Keep people clear of opening while Door is moving. Do **NOT** allow children to play with the Door Opener. Do **NOT** operate a Door that jams or one that has a broken spring.
 High tension spring	**⚠ DANGER** Will result in Death or Serious Injury	Do **NOT** 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.

IMPORTANT: RIGHT and LEFT hand is determined inside the building looking out.

REMOVING AN EXISTING DOOR AND PREPARING THE OPENING

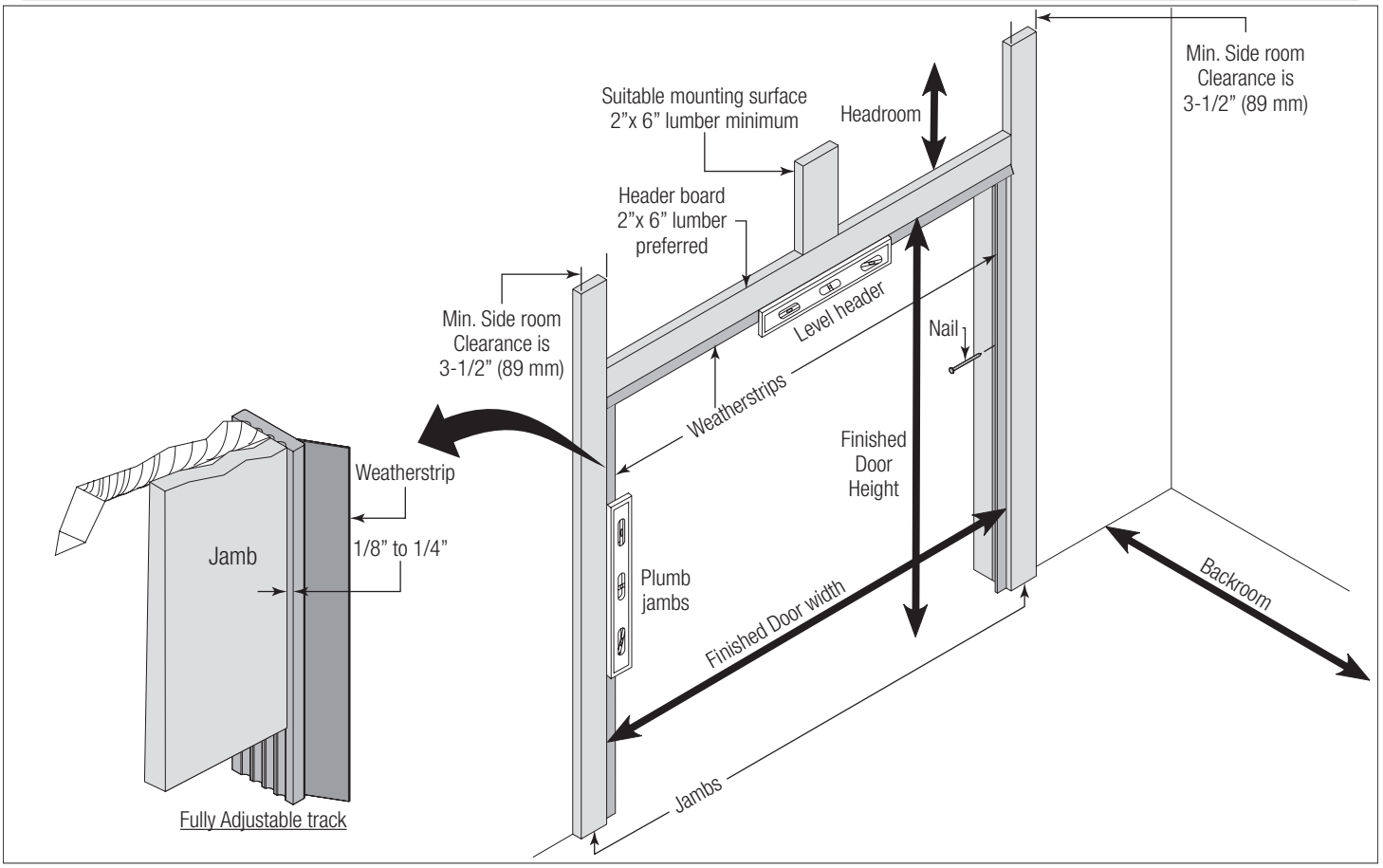


Figure 1

DANGER

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

DANGER

COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR. EXTREME CAUTION SHOULD BE USED WHEN UNWINDING SPRINGS AS FAILURE TO FOLLOW THE INSTRUCTIONS OR USE PROPER TOOLS CAN LEAD TO SERIOUS INJURY.

See Figure 1 for the following steps.

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

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

NOTICE

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

For Torsion 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.

NOTICE

DRILL A SUITABLE PILOT HOLE IN THE MOUNTING SURFACE TO AVOID SPLITTING THE LUMBER. DO NOT ATTACH THE MOUNTING SURFACE WITH NAILS.

Weatherstrips (Not Included):

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

NOTICE

IF NAILING PRODUCT AT 40°F, (4.4°C) OR BELOW, PRE-DRILLING IS REQUIRED.

1. For the header, align the weatherstrip with the inside edge of the header and temporarily secure it to the header with equally spaced nails, approximately 12" to 18" (305 mm - 457 mm) apart.

2. 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.

3. Temporarily secure the weatherstrip with equally spaced nails. Repeat for other side. This will keep the bottom door section from falling out of the opening during installation.

Headroom requirement:

Headroom required 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.

TRACK TYPE	SPACE NEEDED
12" Radius track	13" (330 mm)
10" Radius track	10" (254 mm)

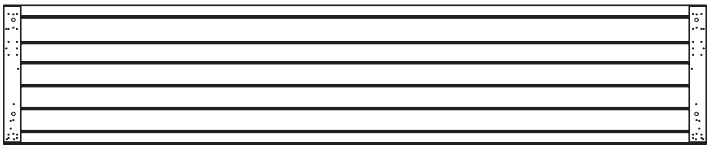
Backroom requirement:

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

DOOR HEIGHT	TRACK	MANUAL LIFT	MOTOR OPERATED
6'0" to 7'0"	12",10" Radius	98" (2489 mm)	125" (3175 mm)
7'1" to 8'0"	12",10" Radius	110" (2794 mm)	137" (3480 mm)

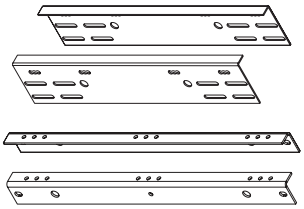
Package Contents

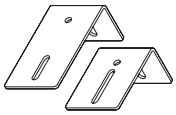
NOTE: Depending on the door model, some parts listed may not be required, and will not be supplied.



(E1. - E4.) Door sections

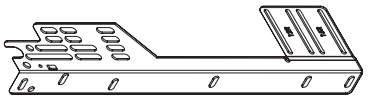
Track Components



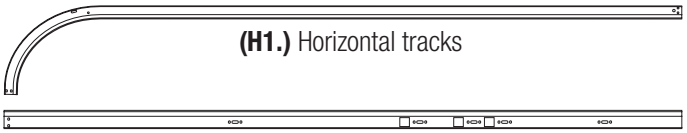


(B1.) F.A. jamb brackets (as required)

(H2.) Head plate angles (as required)



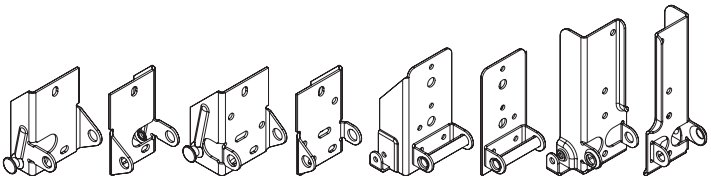
(A1.) Fully Adjustable flag angles RH/LH (as required)



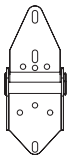
(H1.) Horizontal tracks

(H3.) Vertical tracks RH/LH (as required)

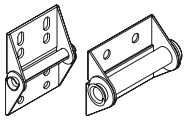
Door Components and Hardware



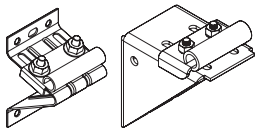
(I1.) Bottom corner brackets (as required)



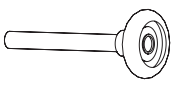
(D1.)(D2.)(D3.)(D4.) Graduated End hinges (as required)



(D5.) Center hinges (as required)

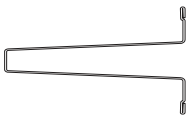


(F1.) Top fixture assemblies (as required)

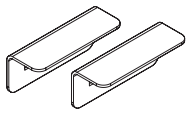


(C1.) Track rollers (as required)

(G1.) 2" Strut (if included)

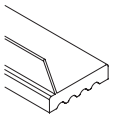


(G2.) 3" Strut (if included)

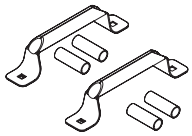


(2) Step Plates

Pull Down rope (if included)



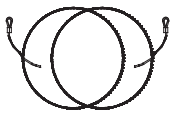
Weather seals & nails (If included)



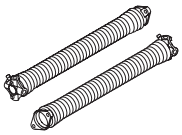
(2) Lift handles & Spacers

Figure 2

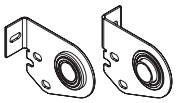
Torsion Spring Components



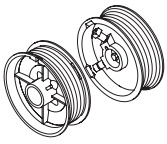
(J2.) Counterbalance lift cables



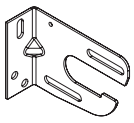
(J1.) Torsion springs RH/LH



(J3.) (J4.) Head plate brackets RH/LH (as required)



(J5.) (J6.) Cable drums RH/LH



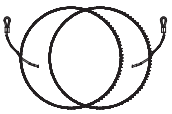
(J7.) Spring anchor bracket

(J8.) Spring anchor bearing

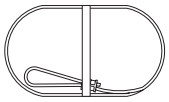
Extension Spring Components

(J3.) Front cable lift sheaves

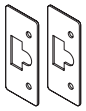
(J4.) Rear cable lift sheaves



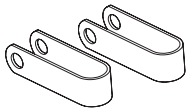
(J6.) Counterbalance lift cables



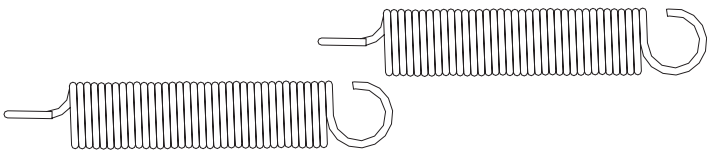
(J2.) Restraint cables



(J7.) Hook plates (as required)

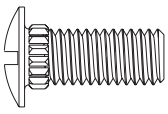


(J5.) Sheave forks (as required)

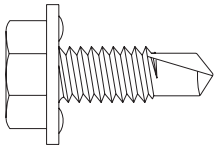


(J1.) Extension Springs (as required)

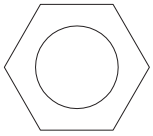
Fasteners



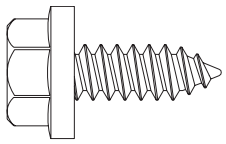
1/4"-20 x 5/8" Track bolts (as required)



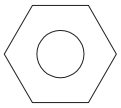
1/4"-14 x 7/8" Self drilling screws (as required)



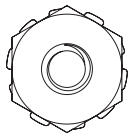
3/8"- 16 Hex nuts (as required)



1/4"-14 x 5/8" Self tapping screws (as required)

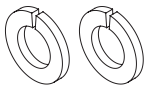


1/4"-20 Hex nuts (as required)

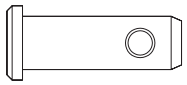


1/4"- 20 Hex nut with lock washers (as required)

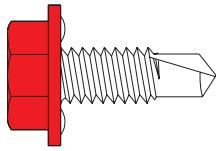
Cotter pin (as required)



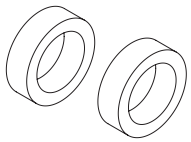
(2) 3/8" Lock Washers



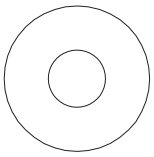
Clevis pin (as required)



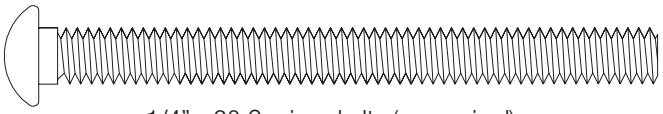
1/4"-20 x 11/16" Self drilling screws (RED) (as required)



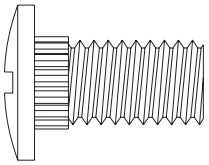
(2) Roller spacers (as required)



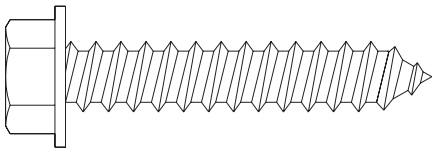
5/16" Washers (as required)



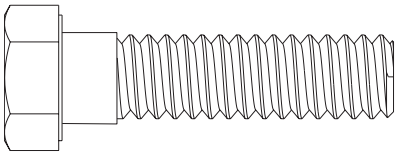
1/4" - 20 Carriage bolts (as required)



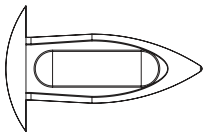
(2) 3/8"-16 x 3/4" Truss head bolts



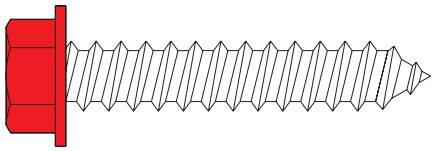
5/16" x 1-5/8" Hex head lag screws (as required)



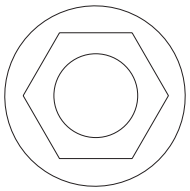
3/8"-16 x 1" Hex head bolts (as required)



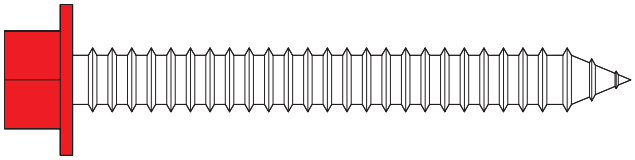
Attachment clip



5/16" x 1-5/8" Hex head lag screws (RED HEAD) (as required)



3/8"- 18 Flanged hex nuts (as required)



5/16" x 2-1/2" Hex head lag screws (RED HEAD) (as required)

Figure 3

Door Section Identification

See Figure 4 and Figure 7 for the following steps.

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

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

- The **BOTTOM SECTION** can be identified by the factory attached bottom weather seal.

Door Height	Section Type				
	Bottom	Lock (second)			Top
6'0"	18"	18"	18"	N/A	18"
6'3"	21"	18"	18"		18"
6'6"	21"	18"	18"		21"
6'8"	21"	21"	18"		21"
7'0"	21"	21"	21"		21"
7'6"	18"	18"	18"	18"	18"
7'9"	21"	18"	18"	18"	18"
8'0"	21"	18"	18"	18"	21"

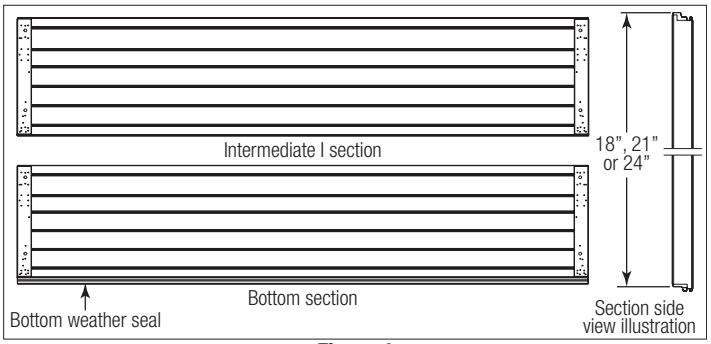


Figure 4

Tools Required

Personal Protection Equipment (PPE)

Figure 5

Hand Tools

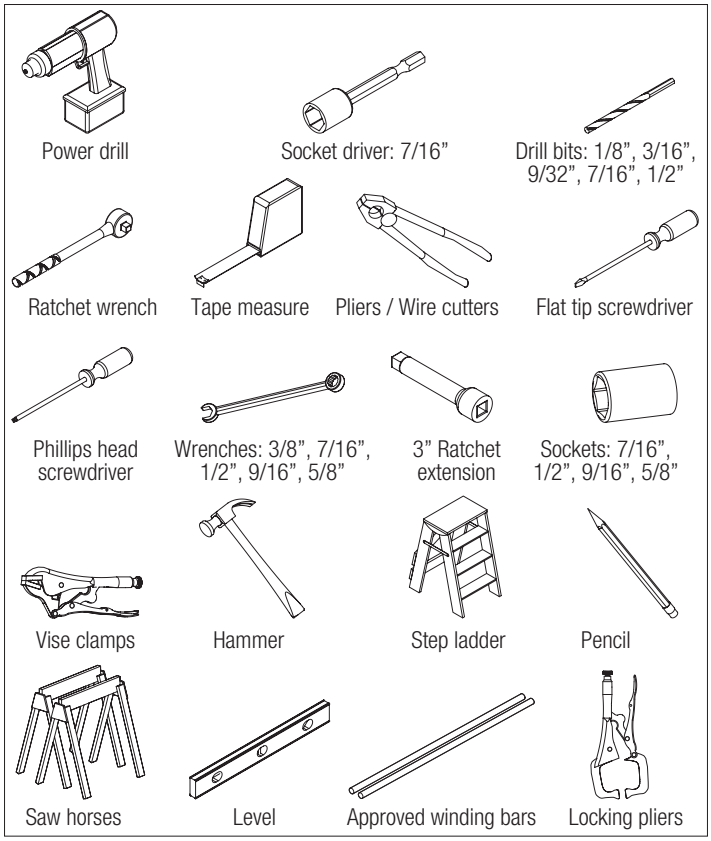


Figure 6

BREAKDOWN OF DOOR COMPONENTS

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

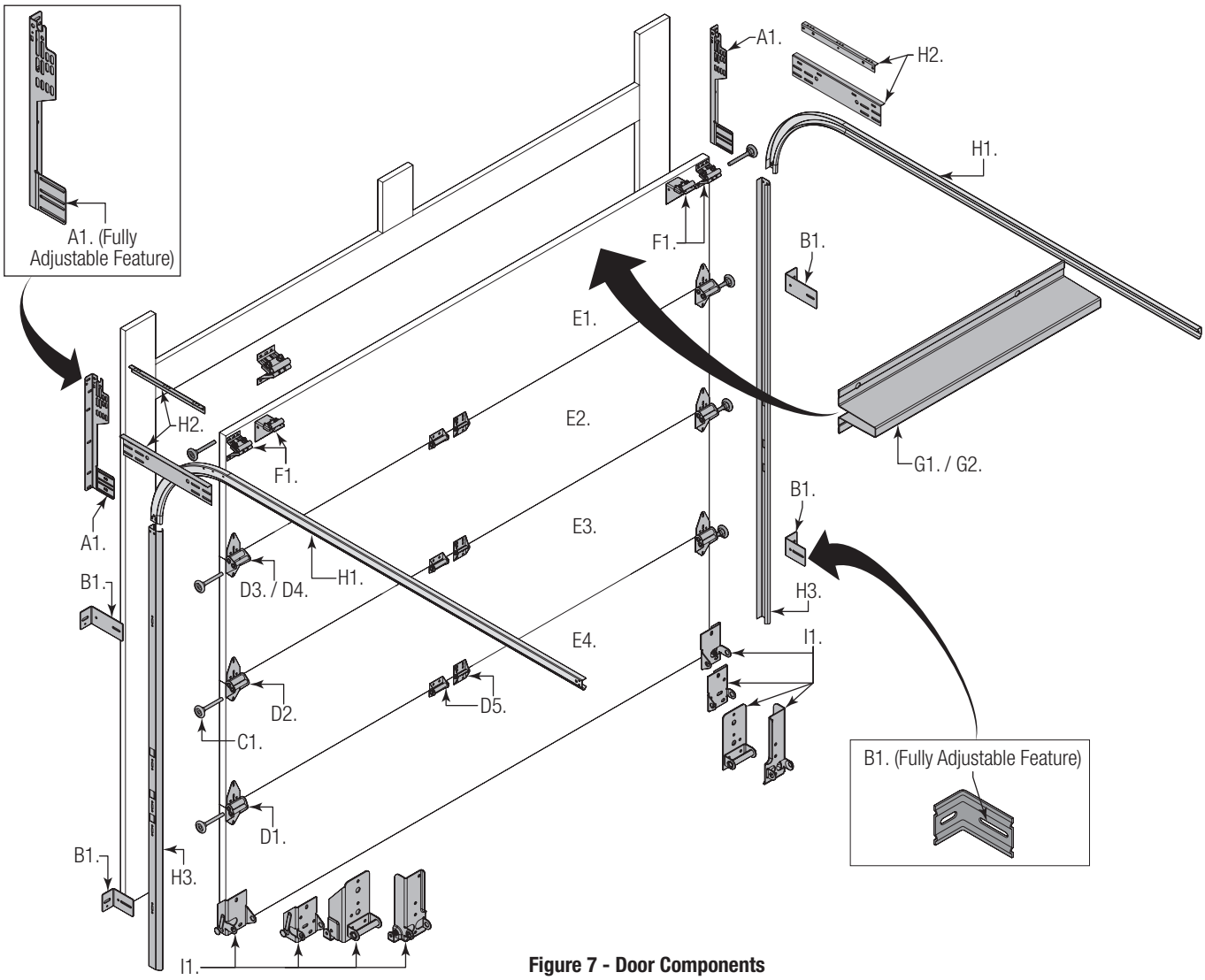


Figure 7 - Door Components

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 (AS REQUIRED):

- C1. Short Stem Track Rollers

D. GRADUATED END HINGES (AS REQUIRED):

- D1. #1 Graduated End Hinges (S.E.H.)
- D2. #2 Graduated End Hinges (S.E.H.)
- D3. #3 Graduated End Hinges (S.E.H.)
- D4. #4 Graduated End Hinges (S.E.H.)
- D5. Center Hinges (As Required)

E. STACKED SECTIONS (AS REQUIRED):

- E1. Top Section
- E2. Intermediate(s) Section
- E3. Lock Section
- E4. Bottom Section

F. TOP FIXTURES:

- F1. Top Fixture Assemblies

G. STRUT(S) (AS REQUIRED):

- G1. 2” Strut (U - shaped)
- G2. 3” Strut (U - shaped)

H. TRACKS:

- H1. Left and Right Hand Horizontal Tracks
- H2. Left and Right Hand Headplate Angles
- H3. Left and Right Hand Vertical Tracks

I. BOTTOM CORNER BRACKETS (AS REQUIRED):

- I1. Left and Right Hand Bottom Corner Brackets

BREAKDOWN OF COUNTERBALANCE COMPONENTS

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

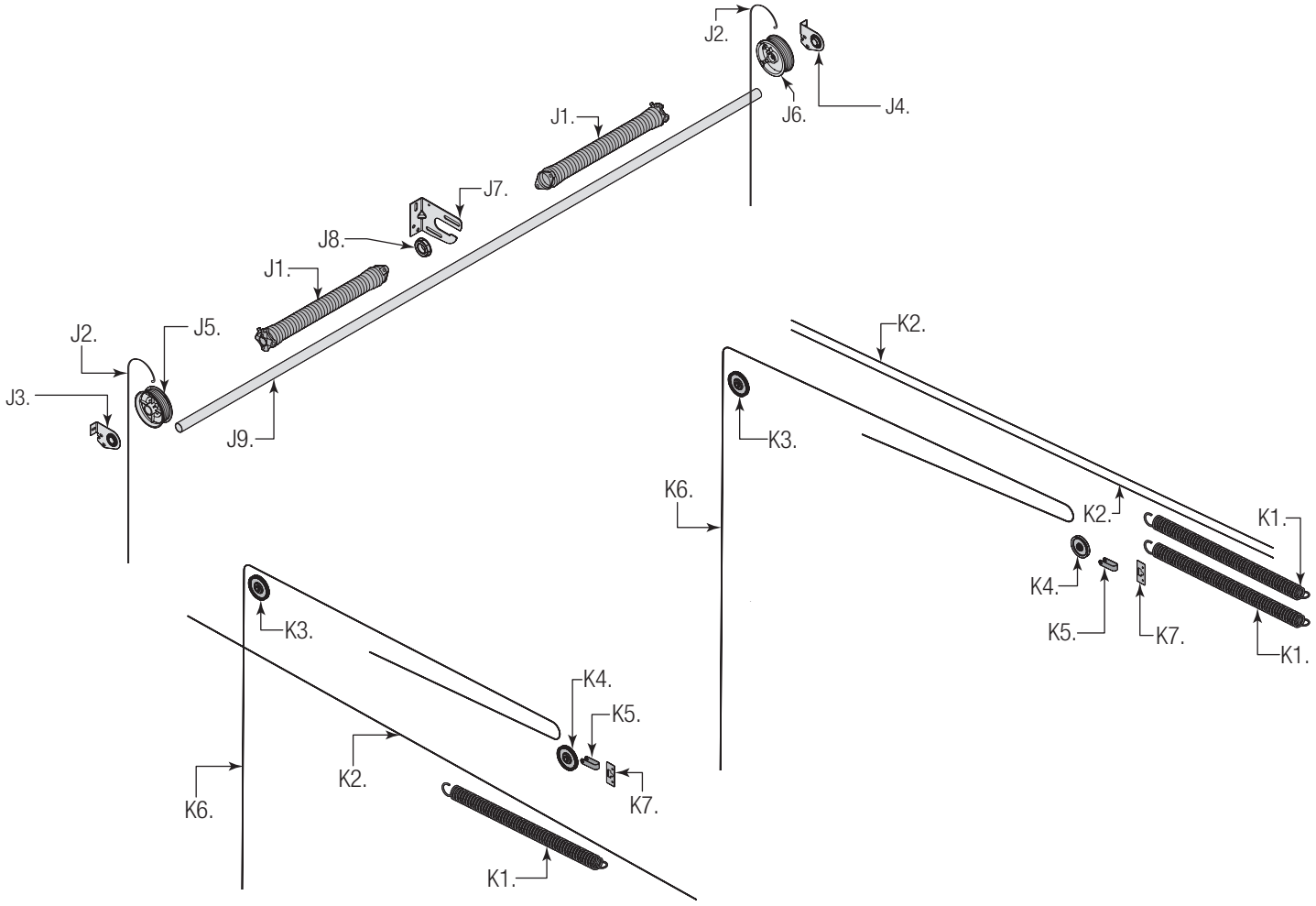


Figure 7 - Counterbalance Components

J. TORSION SPRING ASSEMBLY:

- J1. Left Hand and Right Hand Torsion Springs (As Required)
- J2. Counterbalance Lift Cables
- J3. Left Hand Head Plate Bracket
- J4. Right Hand Head Plate Bracket
- J5. Left Hand Cable Drum
- J6. Right Hand Cable Drum
- J7. Spring Anchor Bracket
- J8. Spring Anchor Bearing
- J9. Torsion Shaft

K. EXTENSION SPRING ASSEMBLY (AS REQUIRED):

- K1. Extension Springs
- K2. Restraint Cables
- K3. Front Cable Lift Sheaves
- K4. Rear Cable Lift Sheaves
- K5. Sheave Forks (As Required)
- K6. Counterbalance Lift Cables
- K7. Hook Plates (As Required)

INSTALLATION INSTRUCTIONS

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.

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

NOTICE

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

1 VERTICAL TRACK ASSEMBLY

NOTE: For clarity, all graphics shown are of the left side, right side will be the same.

IMPORTANT: The bottom jamb bracket is always the shortest bracket, while the center jamb bracket is the next tallest. If three jamb brackets 7 per side are included with your door, you will have received a top jamb bracket, which is the tallest.

See Figure 8 and Figure 9 for the following steps.

1a. Hand tighten the flag angle 1 to the vertical track 2 using two 1/4" - 20 x 5/8" track bolts 3 and two 1/4" - 20 hex nut with lock washers 4.

1b. Attach the shortest jamb bracket 5 by aligning the slot in the shortest jamb bracket with the lower hole of the hole/ slot pattern of the vertical track. Hand tighten the jamb bracket using (1) 1/4" - 20 x 5/8" track bolt and (1) 1/4" - 20 hex nut with lock washer.

1c. Place the tallest jamb bracket 6 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 the jamb bracket using (1) 1/4" - 20 x 5/8" track bolt and (1) 1/4" - 20 hex nut with lock washer.

1d. Repeat this process for the right hand side.

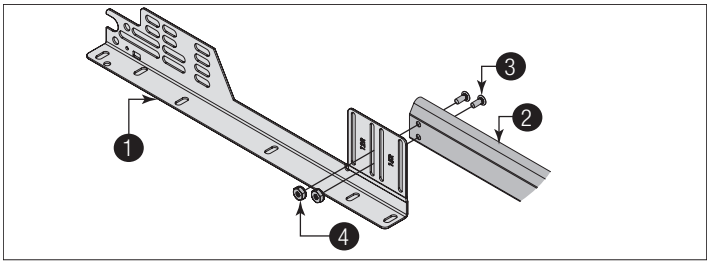


Figure 8, Left Side Shown

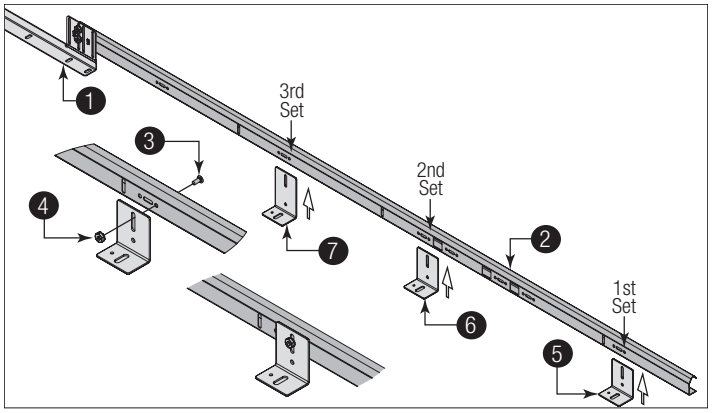


Figure 9, Left Side Shown

1	Flag Angle	5	Shortest Jamb Bracket
2	Vertical Track	6	Tallest Jamb Bracket
3	1/4" - 20 x 5/8" Track Bolt	7	3rd Jamb Bracket
4	1/4" - 20 Hex Nut With Lock Washers		

2 ATTACHING HEAD PLATE ANGLES

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

NOTE: For clarity, all graphics shown are of the left side, right side will be the same.

See Figure 10 for the following steps.

2a. Hand tighten the head plate angle 1 to the horizontal track 2 using two 1/4" - 20 x 5/8" track bolts 3 and two 1/4" - 20 hex nut with lock washers 4.

2b. Repeat this process for the right hand side.

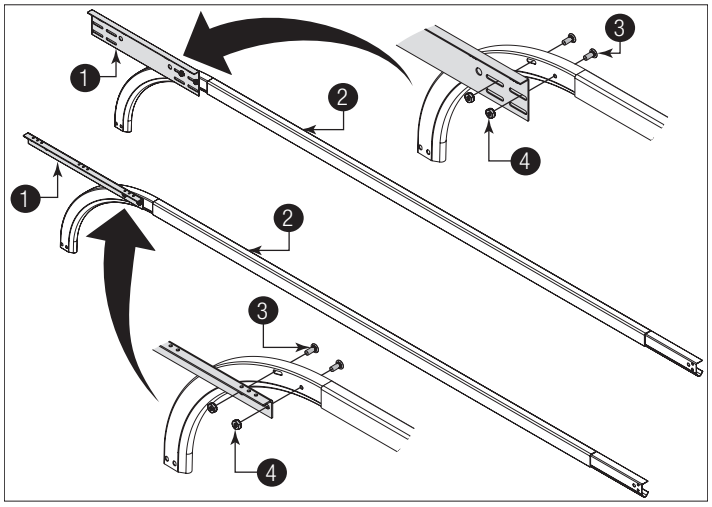


Figure 10, Left Side Shown

1	Head Plate Angle	3	1/4" - 20 x 5/8" Track Bolt
2	Horizontal Track	4	1/4" - 20 Hex Nut With Lock Washer

3 ATTACHING BOTTOM CORNER BRACKETS

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

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

⚠ WARNING

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

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

IMPORTANT: The 1/4" - 14 x 7/8" red head self drilling screws must be installed through the holes of the bottom corner brackets, as shown.

See Figure 11 for the following steps.

3a. Uncoil the counterbalance lift cables 3.

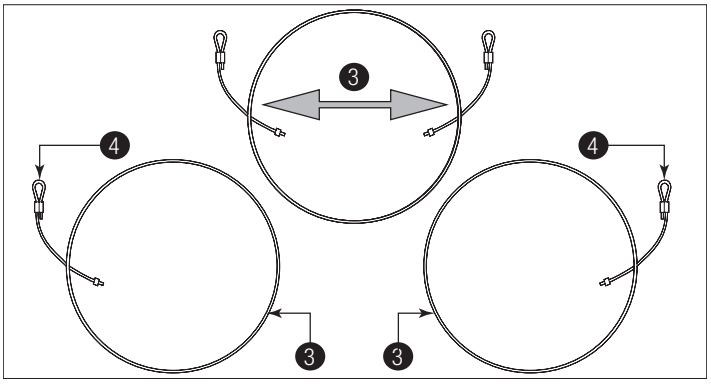


Figure 11, Left and Right Hand Shown

3	Counterbalance Lift Cable	4	Cable Loop

See Figure 12 and Figure 13 for the following steps.

3b. Place the cable loop 4 on the milford pin 5 of the bottom corner bracket 6.

3v. Position the left hand bottom corner bracket onto the bottom section. Attach the bottom corner bracket to the bottom section with (3) 1/4" - 14 x 7/8" RED HEAD self drilling screws 7. Repeat this process for the opposite side.

3d. Insert a short stem track roller 8 with roller spacer 9 into the bottom corner brackets.

3e. Repeat same process for the right hand side.

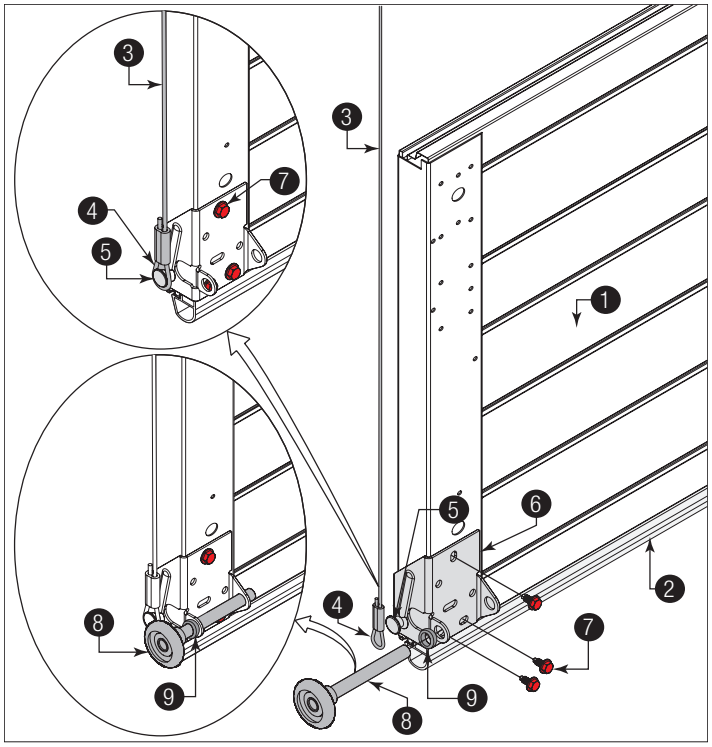


Figure 12, Left Side Shown

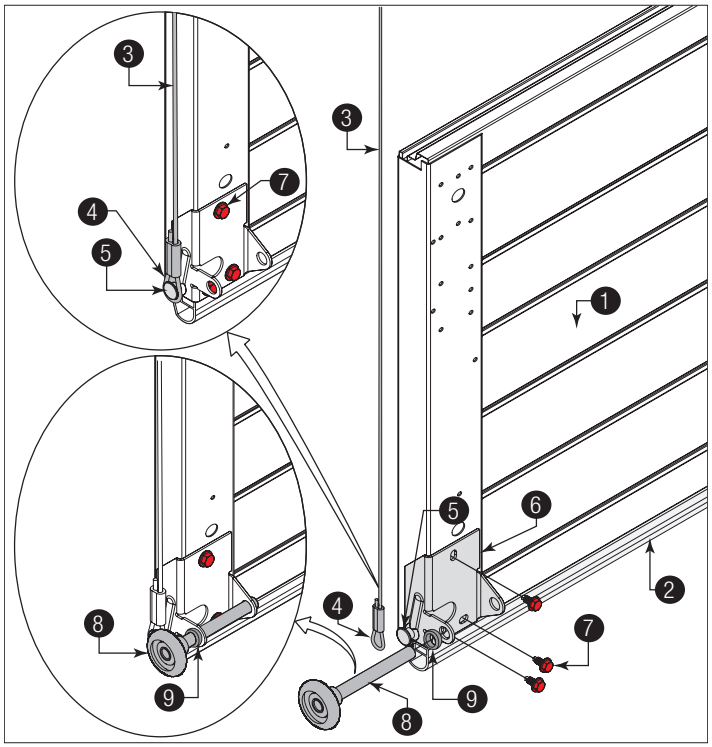


Figure 13, Left Side Shown

2	Bottom Weather Seal	6	Bottom Corner Bracket
1	Bottom Section	7	1/4" - 14 x 7/8" RED HEAD Self drilling screws
3	Counterbalance Lift Cable	8	Short Stem Track Roller
4	Cable Loop	9	Roller Spacer
5	Milford Pin		

See Figure 14 and Figure 15 for the following steps.

3b. Secure the cable loop 4 to the clevis pin 5 and bottom corner bracket 6 using a 5/16" flat washer 10 and a cotter pin 11.

3c. Position the left hand bottom corner bracket onto the bottom section. Attach the bottom corner bracket to the bottom section with (3) 1/4" - 14 x 7/8" RED HEAD self drilling screws 7 and if applicable (1) 1/4" - 20 x 7/8" self drilling screw 12.

3d. Insert a short stem track roller 8 into the bottom corner brackets.

3e. Repeat same process for the right hand side.

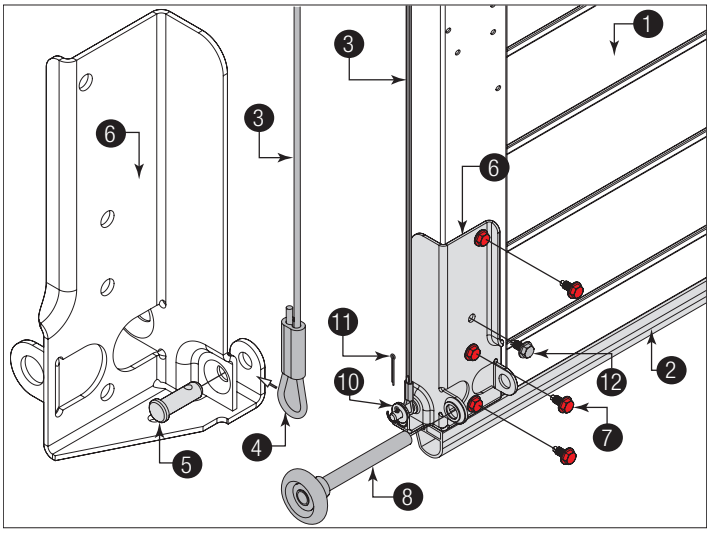


Figure 14, Left Side Shown

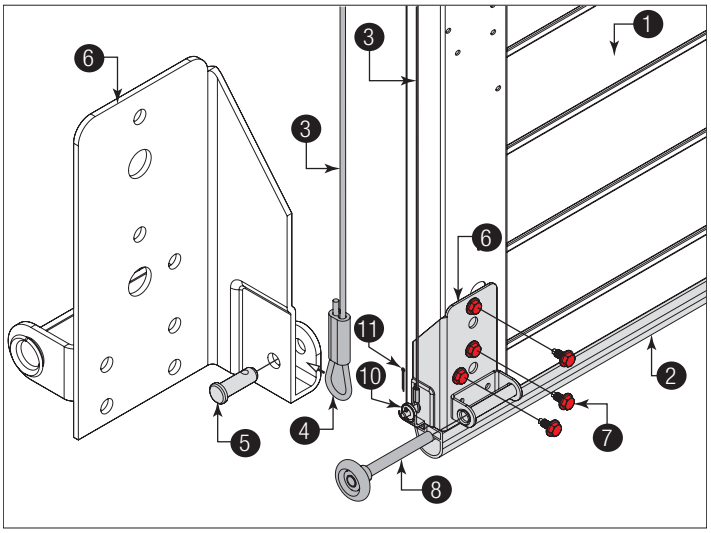


Figure 15, Left Side Shown

2	Bottom Weather Seal	10	5/16" Flat Washer
1	Bottom Section	11	Cotter Pin
3	Counterbalance Lift Cable	7	1/4" - 14 x 7/8" RED HEAD Self drilling screws
4	Cable Loop	12	1/4" - 14 x 7/8" Self drilling screw
5	Clevis Pin	8	Short Stem Track Roller
6	Bottom Corner Bracket		

4 ATTACHING HINGES TO SECTIONS

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

NOTE: The graduated hinges can be identified by the number stamped on the lower hinge leaf 1.

- The #1 graduated hinges 2 serves as end hinges on the bottom section 6.
- The #2 graduated hinges 3 serves as end hinges on the Second section 13.
- The #3 graduated hinges 4 serves as end hinges on the Intermediate section I 14.
- The #4 graduated hinges 5 serves as end hinges on the Intermediate section II 15.

See Figure 16 through Figure 19 for the following steps.

4a. Starting on the left hand side of the bottom section, align the lower hinge leaf of the #1 graduated hinge over the holes, located at the top of the end stile 7. Attach lower leaf to the end stile with (2) 1/4" - 14 x 5/8" self tapping screws 8.

4b. Repeat same process for the right hand side.

4c. Next, align the lower hinge leaf of the center hinges 9 with the dimples, 10 , located at the top of the bottom section. Attach lower hinge leaf to the center stile with (2) 1/4" - 14 x 5/8" self tapping screws.

IMPORTANT: Once the 1/4" - 14 x 5/8" self tapping screws are snug against the lower hinge leaves, tighten an additional 1/4 to 1/2 turn to receive maximum design holding power.

4d. Insert a short stem track roller 11 into the hinge tube of the #1 graduated end hinges.

4e. Repeat graduated hinge attachment using the appropriate graduated hinges for all remaining sections except the top section.

IMPORTANT: When placing short stem track rollers into the #2 graduated end hinges and higher, the short stem track roller goes into hinge tube 12 furthest away from section.

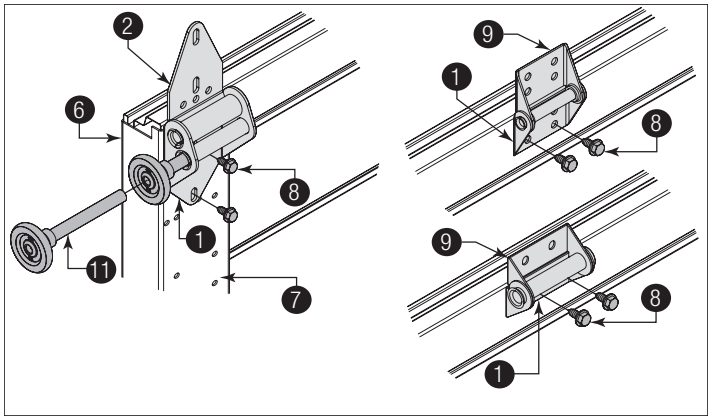


Figure 16

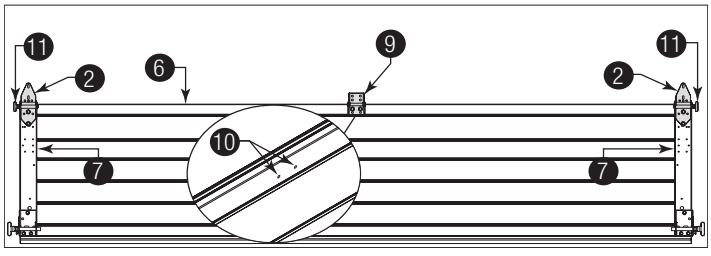


Figure 17

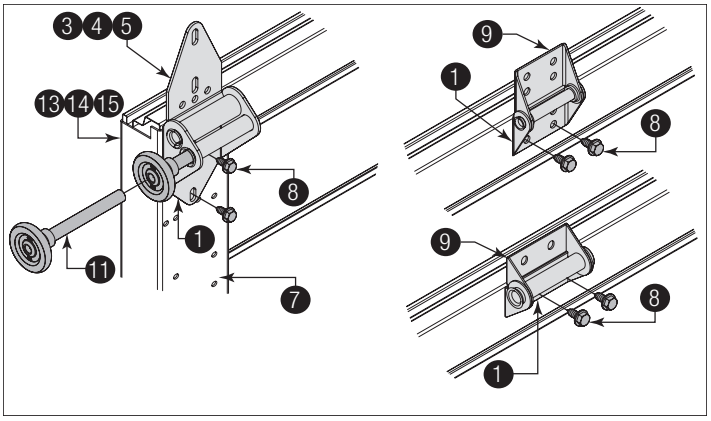


Figure 18

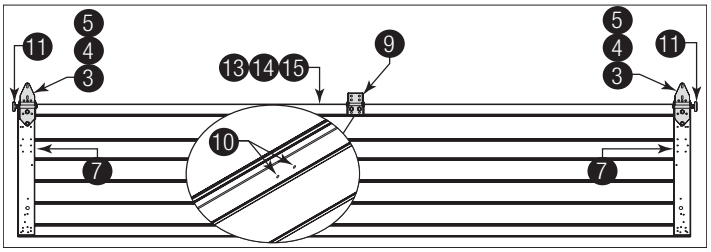


Figure 19

1	Lower Hinge Leaf	9	Center Hinge(s)
2	#1 Graduated Hinges	10	Dimples
3	#2 Graduated Hinges	11	Short Stem Track Roller
4	#3 Graduated Hinges	12	Hinge Tube
5	#4 Graduated Hinges	13	Second Section
6	Bottom Section	14	Third (Int I) Section
7	End Stile	15	Fourth (Int II) Section
8	1/4" - 14 x 5/8" Self Tapping Screws		

5 ATTACHING STRUT TO SECTIONS

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

IMPORTANT: All struts 1 are placed at the top of the sections and up against the bottom of hinges 2, for the Bottom Section 3, Lock (Second) Section 4, and Intermediate Section(s) 5 6.

IMPORTANT: For doors widths 16'1" to 18'0" that have a glazed intermediate section, the strut needs to be placed on the glazed intermediate section.

IMPORTANT: Measure the height of your strut(s) to determine if you have 2" Struts 7 and or 3" Struts 8. See Figure 20.

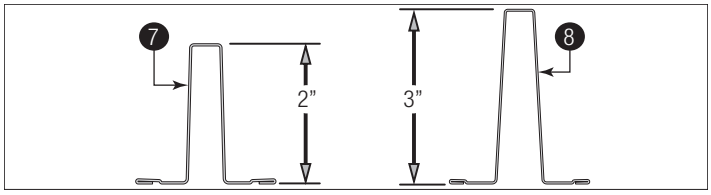


Figure 20

IMPORTANT: Referencing the strutting schedules below, determine the placement of the struts for your door width and door height.

Strutting Schedule Key:	
TS = Top Section	LS = Lock (Second) Section
I2 = Intermediate Section #2	BS = Bottom Section
I1 = Intermediate Section #1	ES = Every Section gets a strut.

Strutting Schedule for NON-Insulated Doors

Door Height	# Of Sections	Solid / Glazed	Door Width			
			Up to 14'0"	14'1" thru 16'0"	16'1" thru 19'11"	20'0"
6' 0" – 7' 0"	4	Solid	None	(1) 2" Strut - Top Section	(3) 2" Strut - Top,	(4) 3" Strut – All Sections
		Glazed	None	(1) 3" Strut - Top Section	(1) 3" Strut - Top & (2) 2" Strut - Bottom &	(4) 3" Strut – All Sections
7' 6" – 8' 0"	5	Solid	None	(2) 2" Strut - Top Bottom Sections	(3) 2" Strut - Top,	(5) 3" Strut – All Sections
		Glazed	None	(1) 3" Strut - Top & (1) 2" Strut - Bottom Sections	(1) 3" Strut - Top & (2) 2" Strut - Bottom &	(5) 3" Strut – All Sections

Strutting Schedule for Insulated Doors

Door Height	# Of Sections	Solid / Glazed	Door Width			
			Up to 14'0"	14'1" thru 16'0"	16'1" thru 19'11"	20'0"
6' 0" – 7' 0"	4	Solid	None	(2) 2" Strut - Top and Bottom Sections	(3) 2" Strut - Top,	(4) 3" Strut – All Sections
		Glazed	None	(1) 3" Strut - Top & (2) 2" Strut - Bottom &	(1) 3" Strut - Top & (2) 2" Strut - Bottom &	(4) 3" Strut – All Sections

Strutting Schedule for Insulated Doors						
7' 6" – 8' 0"	5	Solid	None	(2) 2" Strut - Top and Bottom Sections	(3) 2" Strut - Top,	(5) 3" Strut – All Sections
		Glazed	None	(1) 3" Strut - Top & (1) 2" Strut - Bottom Sections	(1) 3" Strut - Top & (2) 2" Strut - Bottom &	(5) 3" Strut – All Sections

Attaching Strut To Bottom Section, Lock (Second) Section, and Intermediate Sections:

See Figure 21 for the following steps.

5a. Locate and center the strut onto the bottom section 3 surface and up against the bottom of hinges, as shown. Center the strut from side to side.

5b. Secure strut to the section surface using (2) 1/4" - 14 x 7/8" self drilling screws 9 at each end stiles 10 and at each center hinge location 11.

5c. Repeat the same process all remaining sections, except the top section.

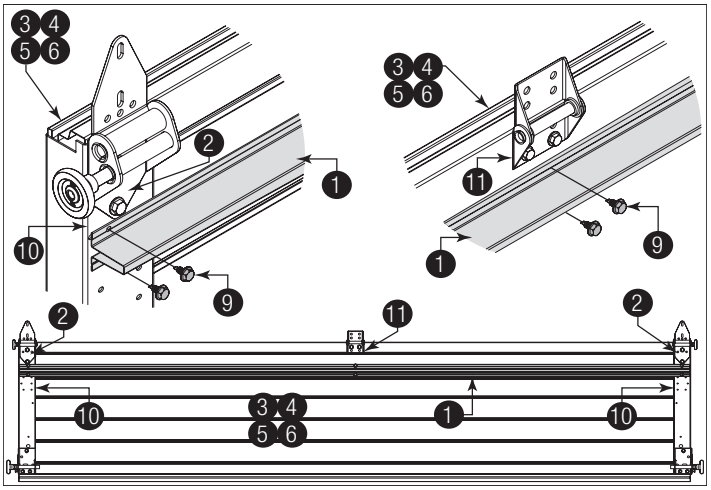


Figure 21

Attaching Strut To Top Section:

See Figure 22 for the following steps.

5a. Locate and center the strut onto the top of the top section surface 12, as shown.

5b. Secure strut to the top section using (2) 1/4" - 14 x 7/8" self drilling screws 9 at each end stiles 10 and at each center hinge location 11.

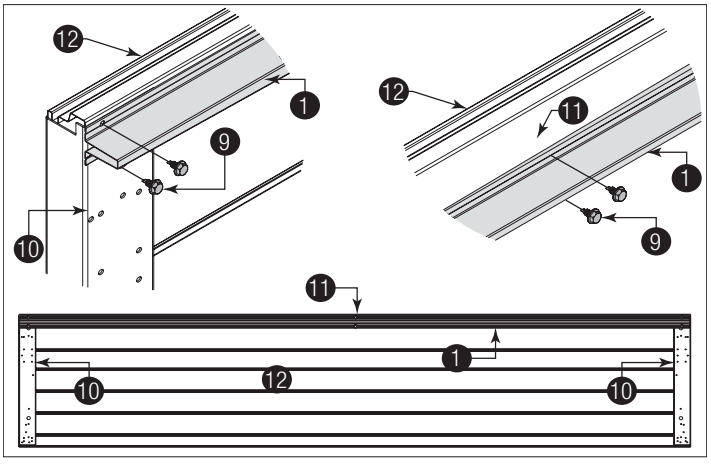


Figure 22

1	Strut	7	2" Strut
2	Bottom Of Hinges	8	3" Strut
3	Bottom Section	9	1/4" - 14 x 7/8" Self Drilling Screws
4	Second Section	10	End Stiles
5	Third (Int I) Section	11	Center Hinge Location
6	Fourth (Int II) Section	12	Top Section

6 POSITIONING BOTTOM SECTION

See Figure 23 for the following steps.

6a. Center the bottom section 1 in the door opening.

6b. Use a level 2 and wood shims 3 (if necessary) to level 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.

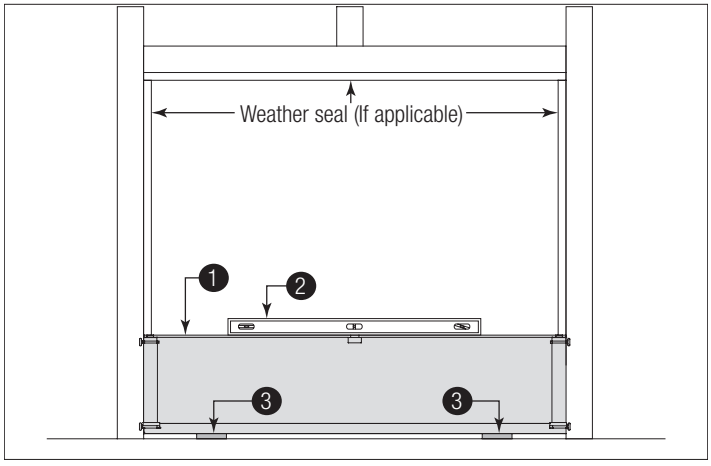


Figure 23

1	Bottom Section	3	Wood Shims
2	Level		

7 ATTACHING TOP FIXTURES TO TOP SECTION

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

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

IMPORTANT: Ensure the top fixture slide 1 is able to slide along the top fixture base. If needed, loosen the 1/4" - 20 flange hex nuts or the 1/4" - 20 hex nut with lock washers 2.

See Figure 24 and Figure 25 for the following steps.

7a. Starting on the left hand side, align the upper edge 3 of top fixture base below the strut 4 of the top section and even with the edge 5 of the top section 6.

7b. Fasten to section using (4) 1/4" - 14 x 7/8" self drilling screws 7.

7c. Insert short stem track roller 8 into top fixture slide.

7d. Repeat same process for the right hand side.

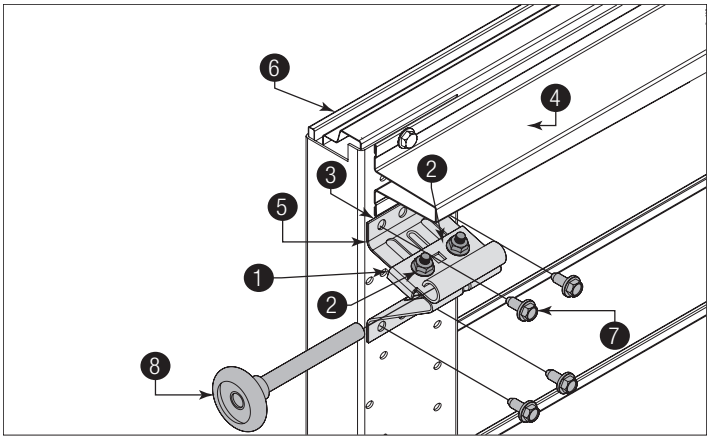


Figure 24, Left Side Shown

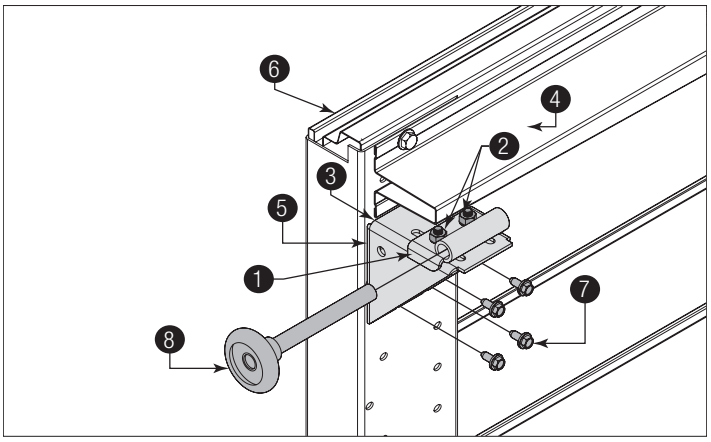


Figure 25, Left Side Shown

1	Top Fixture Slide	5	Edge
2	1/4" - 20 Flange Hex Nuts / 1/4" - 20 Hex Nut With Lock Washers	6	Top Section
3	Upper Edge	7	1/4" - 14 x 7/8" self drilling screws
4	Strut	8	Short Stem Track Roller

8 ATTACHING STEP PLATES TO SECTION

IMPORTANT: Do not mount the step plate higher than 6" (1) from the bottom of the bottom section (2).

See Figure 26 for the following steps.

8a. Locate the center or the desired step plate location (3) of bottom section of the door.

8b. On the inside of the door (4), center the step plate (5) on the center most stile no higher than 6" from the bottom of the door.

8c. Using the step plate holes as a template, drill a 5/16" dia. hole (6), through the face of the door (7).

IMPORTANT: Be extremely careful to keep drill straight.

8d. Mount the inside step plate and the outside step plate back to back. Secure with (2) 1/4" - 20 carriage bolts (8) and (2) 1/4" - 20 hex nuts (9). Use the carriage length size shown below for your Model door.

(a) 1/4" - 20 x 1-3/4" carriage bolts for Model 5720

(b) 1/4" - 20 x 2-1/4" carriage bolts for Model 5740

(c) 1/4" - 20 x 2-3/4" carriage bolts for Model 5760

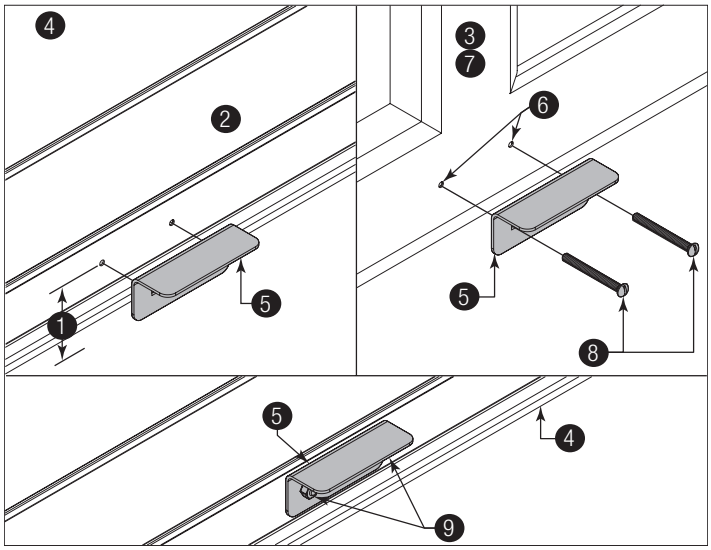


Figure 26

1	6"	6	5/16" Dia. Holes
2	Bottom Section	7	Face Of The Door
3	Inside Center Or Desired Step Plate Location	8	1/4" - 20 Carriage Bolts
4	Inside Of The Door	9	1/4" - 20 Hex Nuts
5	Step Plate		

9 ATTACHING LIFT HANDLES TO SECTION

NOTE: Doors with a Keyed lock do not require this lift handle.

See Figure 27 through Figure 29 for the following steps.

9a. Locate the center or the desired lift handle location (1) on the second section (2) of the door. Position the lower hole in the lift handle (3) 4" (4) from the bottom of the second section.

IMPORTANT: The distance between the step plate (5) and the middle of the lift handle must be 20" minimum to 30" maximum (6). If necessary, reposition the upper lift handle to stay within the required dimension.

9b. Using the lift handle holes as a template, drill (2) 9/32" dia. holes (7) through the second section. Enlarge the holes from the outside the door to 1/2" dia (8).

IMPORTANT: Be extremely careful to keep drill straight.

IMPORTANT: Do not drill through or enlarge holes on the inside of the door.

9c. Assemble the lift handles to the second section using (2) spacers (9), (2) 1/4" - 20 carriage bolts (10), and (2) 1/4" - 20 hex nuts (11). Use the carriage length size shown below for your Model door.

(a) 1/4" - 20 x 1-3/4" carriage bolts for Model 5720

(b) 1/4" - 20 x 2-1/4" carriage bolts for Model 5740

(c) 1/4" - 20 x 2-3/4" carriage bolts for Model 5760

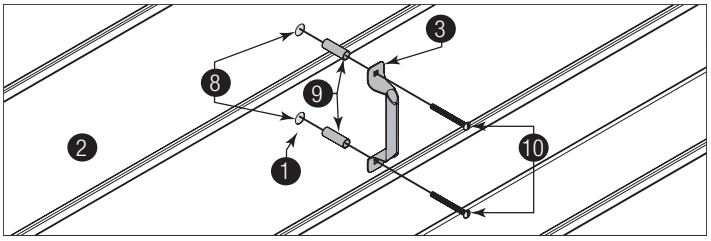


Figure 27

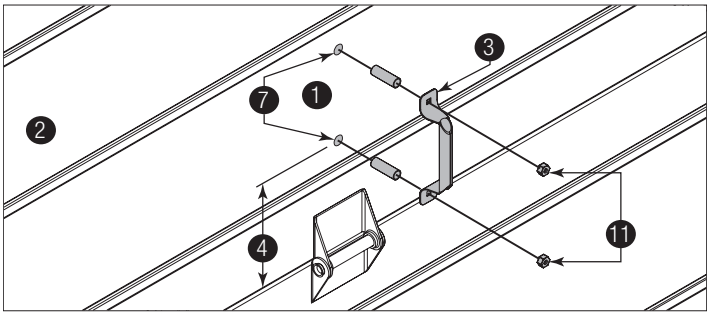


Figure 28

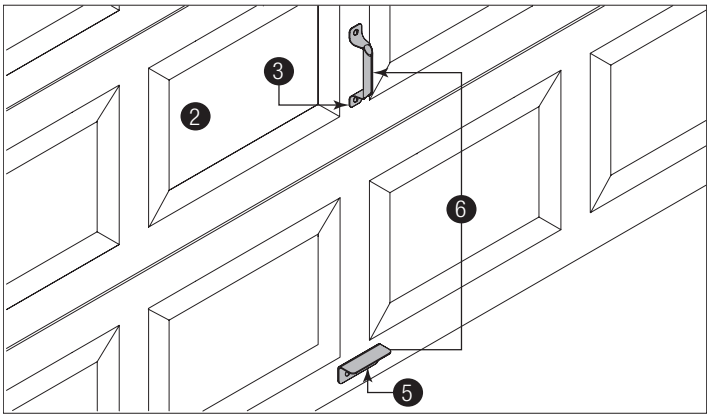


Figure 29

1	Inside Center Stile Or Desired Lift Handle Location	7	9/32" Dia. Holes
2	Second Section	8	1/2" Dia
3	Lift Handle	9	Spacers
4	4"	10	1/4" - 20 Carriage Bolts
5	Step Plate	11	1/4" - 20 Hex Nuts
6	20" Minimum To 30" Maximum		

10 POSITIONING BOTTOM SECTION

See Figure 30 for the following steps.

10a. Center the bottom section 1 in the door opening.

10b. Use a level 2 and wood shims 3 (if necessary) to level 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.

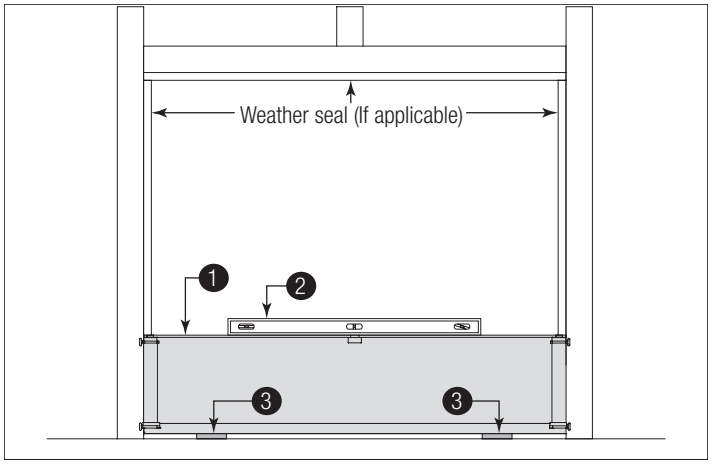


Figure 30

1	Bottom Section	3	Wood Shims
2	Level		

11 ATTACHING VERTICAL TRACKS TO JAMBS

IMPORTANT: If this 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: If the bottom section was leveled with shims, the vertical track on the shimmed side must be raised the same height as the shim. Recheck the top of the vertical tracks to be level from side to side.

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

See Figure 31 for the following steps.

11a. Starting on the left hand side of the bottom section 1, remove the nail. Position the left hand vertical track assembly 2 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.

IMPORTANT: For proper flag angle lag screw location, note the flag angle style 3.

11b. Loosely fasten jamb brackets 4 and flag angle 5 to the jamb using 5/16" x 1-5/8" lag screws 6.

11c. Tighten lag screws, securing the bottom jamb bracket to jamb, maintain 3/8" to 5/8" spacing 7, between the bottom section and vertical track.

11d. Hang counterbalance lift cable over flag angle. Repeat same process for other side.

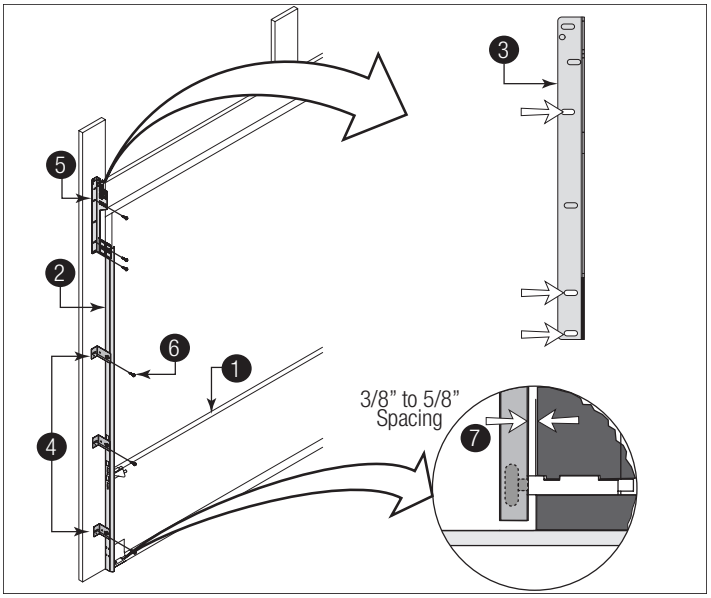


Figure 31, Left Side Shown

1	Bottom Section	5	Flag Angle
2	Vertical Track Assembly	6	5/16" x 1-5/8" Lag Screws
3	Flag Angle Style	7	3/8" to 5/8" Spacing
4	Jamb Brackets		

12 STACKING SECTIONS

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

NOTICE

BEFORE STACKING SECTIONS, MAKE SURE GRADUATED END AND CENTER HINGES ARE FLIPPED DOWN 1 TO AVOID POSSIBLE DAMAGE TO YOUR DOOR, WHEN STACKING ANOTHER SECTION ON TOP.

See Figure 32 and Figure 33 for the following steps.

12a. Install track rollers into graduated end hinges of remaining sections.

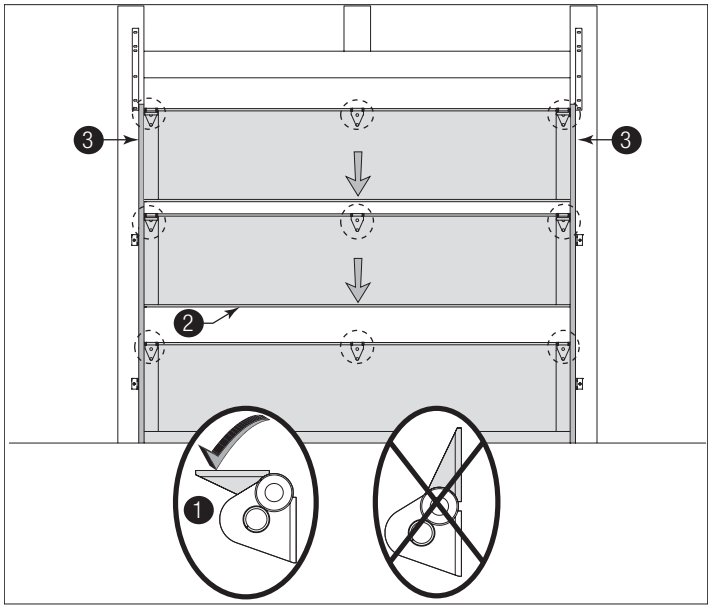
12b. With a helper, lift second section 2 and guide the track rollers into the vertical tracks 3. Lower section until it is seated against bottom section.

12c. Flip hinges up 4. Fasten center hinge(s) 6 first; then end hinges 5 7 last using 1/4" - 14 x 5/8" self-tapping screws 8.

12d. Repeat same process for other sections, except top section.

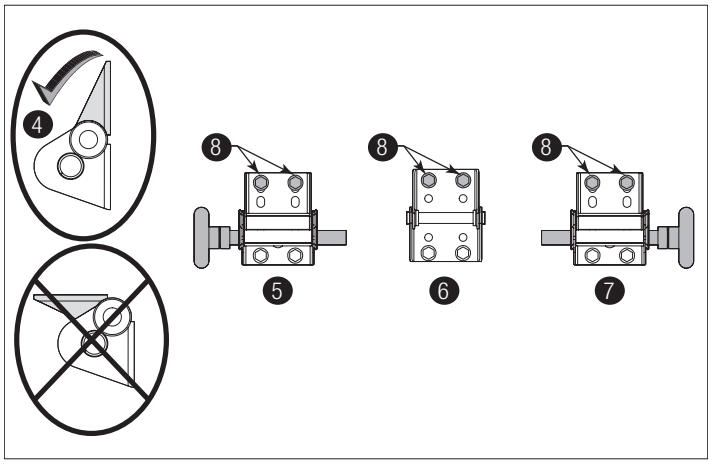
IMPORTANT: Push & hold the hinge leafs securely against the sections while securing with fasteners to it. There should be no gap between the hinge leaves and the sections.

IMPORTANT: When placing the track rollers into the #2 graduated end hinges and higher, the track roller goes into the hinge tube furthest away from the section.



See Figure 32, Stacking Sections

1	Hinge Flipped Down Position	3	Vertical Tracks
2	Second Section		



See Figure 33, Hinges after Stacking Sections

4	Hinge Flipped Up Position	7	Right Graduated End Hinge with Short Stem Track Roller
5	Left Graduated End Hinge with Short Stem Track Roller	8	1/4" - 14 x 5/8" Self Tapping Screw Locations
6	Center Hinge(s)		

13 STACKING TOP SECTION

IMPORTANT: The dimension between the flag angles 1 must be door width plus 3-3/8" - 3-1/2" (86 mm- 89 mm).

See Figure 34 for the following steps.

13a. Place the top section 2 in the opening, on top of the section stacked.

13b. Install a nail 3 to temporarily hold the top section.

13c. Flip up the hinge leaves, hold tight against section, and fasten center hinges first and end hinges last (see Stacking Sections).

13d. Position flag angle 4 between 1-11/16" to 1-3/4" (43 mm - 44 mm) from the edge of the door 5, then tighten the bottom lag screw. Flag angles must be parallel to the door sections. Repeat for other side.

13e. Complete the vertical track 6 installation. Secure the jamb bracket(s) and tightening the other lag screws. Push the vertical track against the track rollers 7 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.

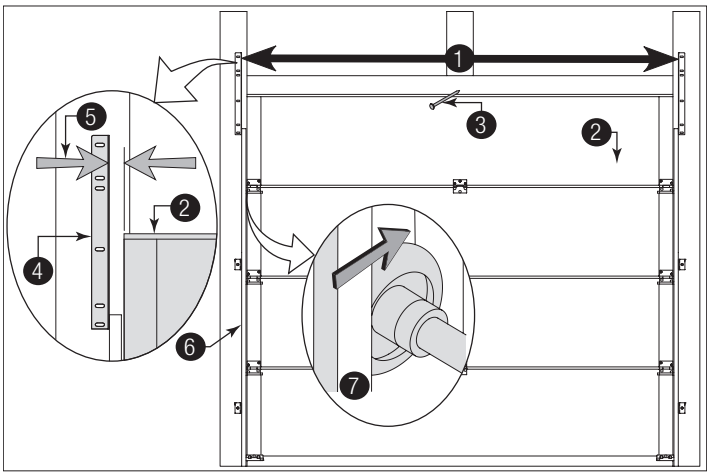


Figure 34

1	Clearance Measurement Between Both Flag Angles	5	Clearance Measurement Between Flag Angle and Door Edge
2	Top Section	6	Vertical Track
3	Nail	7	Vertical Track Against Track Rollers
4	Flag Angle		

14 ATTACHING HORIZONTAL TRACKS

WARNING

DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP A9, ATTACHING REAR BACK HANGS. THE REAR BACK HANGS OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING DEATH OR SERIOUS INJURY.

See Figure 35 and Figure 36 for the following steps.

14a. Place the curved end of the horizontal track 1 over the top track roller of the top section.

14b. Attach the horizontal track to the flag angle 2 with two 1/4" - 20 x 5/8" track bolts 3 and two 1/4" - 20 hex nut with lock washers 4 .

14c. Level 5 the horizontal track assembly and bolt the head plate 6 to the first encountered slot in the flag angle using one 1/4" - 20 x 5/8" track bolt, one 5/16" washer 7 and one 1/4" - 20 hex nut with lock washer.

14d. Repeat for right side.

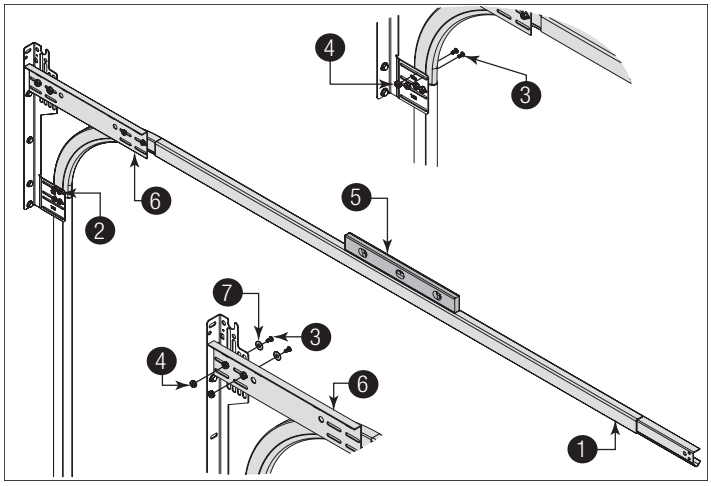


Figure 35, Left Side Shown

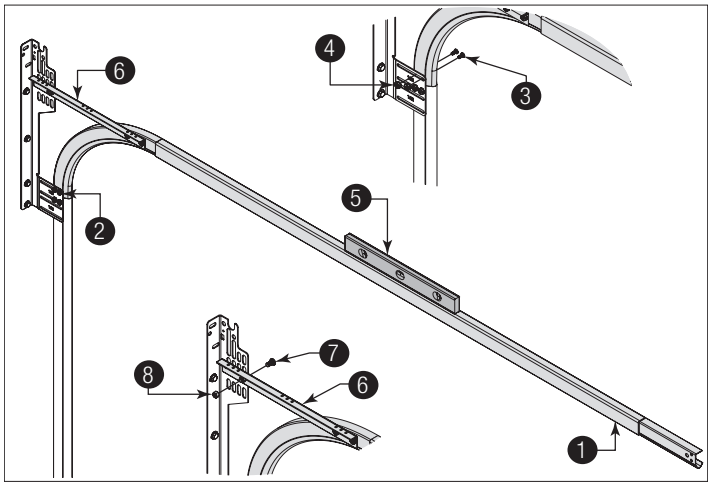


Figure 36, Left Side Shown

1	Horizontal Track	5	Level
2	Flag Angle Upper Slot	6	Head Plate
3	1/4" - 20 x 5/8" Track Bolt	7	5/16" Washer
4	1/4" - 20 Hex Nut With Lock Washer		

14e. When complete, remove the nail that was holding the top section in position.

NOTICE

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

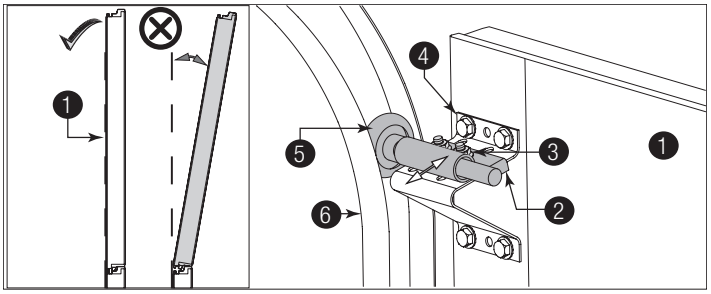
15 ADJUSTING TOP FIXTURES

See Figure 37 for the following steps.

15a. Vertically align the top section 1 of the door with the lower sections. Position the top fixture slide 2 with a track roller 5 out against the horizontal track 6.

15b. Maintaining the slide's position, tighten the (2) 1/4" - 20 flange hex nuts or the (2) 1/4" - 20 hex nut with lock washers 3 to secure the top fixture slide to the top fixture base 4.

15c. Repeat for right side.



See Figure 37, Left Side Shown

1	Door Top Section	4	Top Fixture Base
2	Top Fixture Slide	5	Track Roller
3	(2) 1/4" - 20 Flange Hex Nuts / (2) 1/4" - 20 Hex Nut With Lock Washers	6	Horizontal Track

COUNTERBALANCE INSTALLATION INSTRUCTIONS

NOTE: Refer to Breakdown of Counterbalance Parts, to determine what type of counterbalance you have.

NOTE: If your door has Torsion Springs, proceed to Step A1.

NOTE: If your door has Extension Springs, proceed to Step B1.

Torsion Springs

A1 ATTACHING HEADPLATE BRACKETS

IMPORTANT: Drill 3/16" pilot holes into the door jamb for the lag screws.

NOTE: Headplate brackets are right and left hand.

See Figure 38 and Figure 39 for the following steps.

A1a. Attach the left hand headplate bracket 1 to the left hand flag angle 2 using two 3/8" - 16 x 3/4" truss head bolts 3 and two 3/8" - 16 hex nuts 4.

A1b. Secure the top of the headplate bracket to the jamb 5 using 5/16" x 1-5/8" lag screw 6.

A1c. Repeat the same process for right hand side.

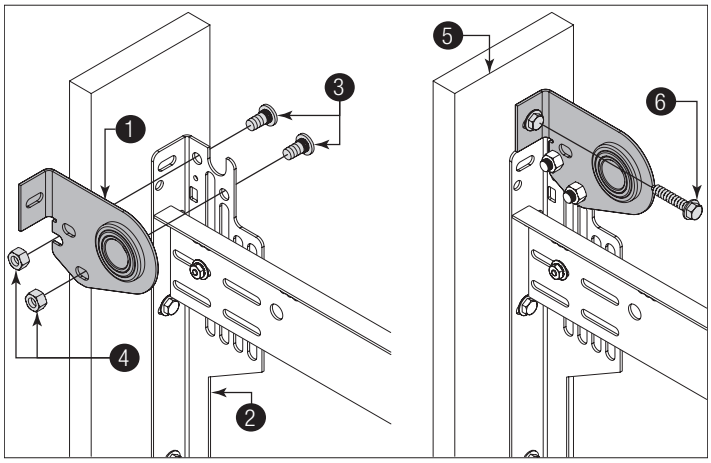


Figure 38, 12" Radius track, Left Side Shown

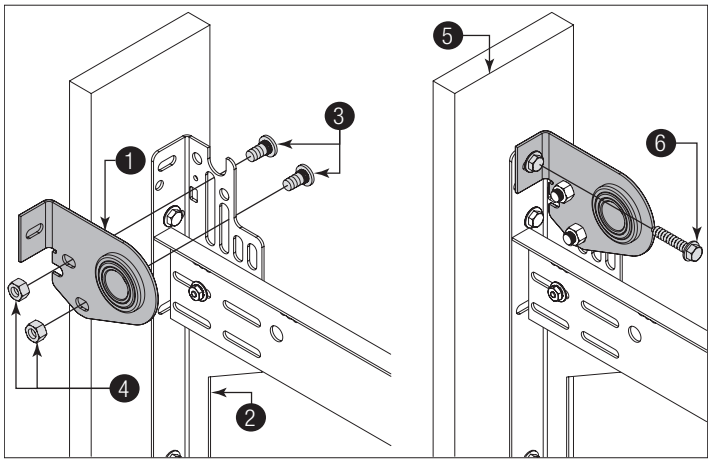


Figure 39, 10" Radius track, Left Side Shown

1	Headplate Bracket	4	3/8" - 16 Hex Nuts
2	Flag Angle	5	Jamb
3	3/8" - 16 x 3/4" Truss Head Bolts	6	5/16" x 1-5/8" Lag Screw

A2 ATTACHING SPRING ANCHOR BRACKET TO WALL

⚠ WARNING

MAKE SURE THE SPRING ANCHOR BRACKET IS SECURELY INSTALLED ONTO THE HEADER. FAILURE TO DO SO, COULD RESULT IN DEATH OR SERIOUS INJURY.

IMPORTANT: Drill 3/16" pilot holes into header for the lag screws.

See Figure 40 and Figure 41 for the following steps.

A2a. First, locate the center of the door 1.

A2b. Mark a vertical pencil line 2 on the mounting surface above the door, at the center.

A2c. Measure from the center of the bearing in one of the headplate brackets 3, downwards, to the top of door 4.

A2d. Using that measurement, measure that distance upwards from the top of the door to the mounting surface and mark a horizontal pencil line 5 which intersects the vertical pencil line.

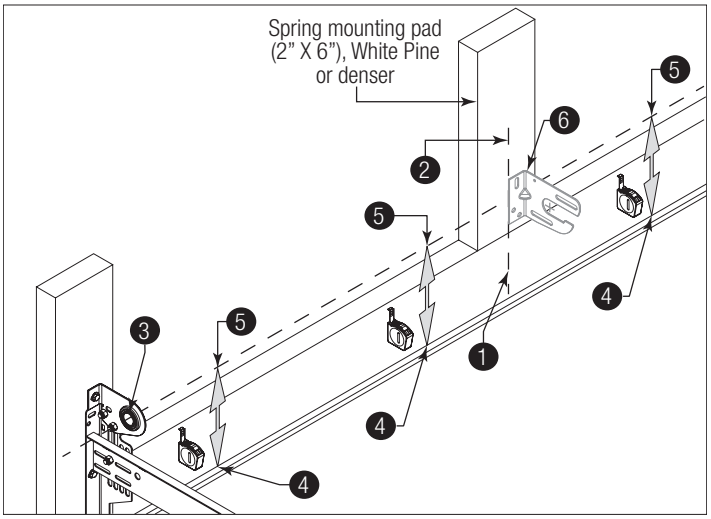


Figure 40, Left Side Shown

1	Center Of The Door	4	Top Of Door
2	Vertical Line	5	Horizontal Line
3	Headplate Brackets		

A2e. Mark a vertical pencil line 2 on the mounting surface above the door, at the center.

A2f. Align the edge of the spring anchor bracket 6 with the vertical pencil line and the center of the spring anchor bracket with the horizontal pencil line 3; this is to ensure the torsion shaft is level between the spring anchor bracket and headplate brackets.

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

A2g. Attach the spring anchor bracket to the mounting surface, using 5/16" x 1-5/8" RED HEAD lag screws 7, as shown.

IMPORTANT: Use a 5/16" x 2-1/2" RED HEAD lag screw 8 instead of the 5/16" x 1-5/8" RED HEAD lag screw if mounting surface is covered by drywall. The lag screw must be attached through the bottom hole 9 of the spring anchor bracket. If mounting surface is a 2" x 6" board installed on top of masonry, drill a clearance hole in masonry for the 5/16" x 2-1/2" RED HEAD lag screws.

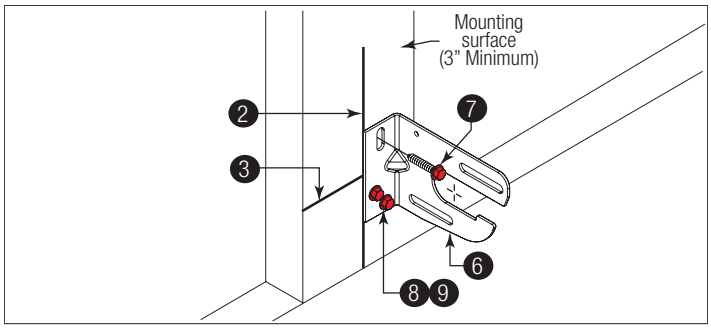


Figure 41

2	Vertical Line	7	5/16" x 1-5/8" RED HEAD lag screws
6	Spring Anchor Bracket	8	5/16" x 2-1/2" RED HEAD lag screw
3	Horizontal Line	9	Bottom Hole

A3 TORSION SPRING ASSEMBLY

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

IMPORTANT: The spring winding cones are not always color coded. Identify the torsion springs provided as either right wound (red winding cone) 1, which goes on the LEFT SIDE or left wound (black winding cone) 2, which goes on the RIGHT SIDE.

IMPORTANT: On single spring applications, only a right wound (red winding cone), is required.

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

See Figure 42 and Figure 44 for the following steps.

A3a. Facing the inside of the door, lay the torsion shaft 3 on the floor. Lay the torsion spring with the black winding cone and the black cable drum 4 at the right end of the torsion shaft. Lay the torsion spring with the red winding cone and the red cable drum 5 at the left end of the torsion shaft. Slide the spring anchor bracket bearing 6 onto the torsion shaft followed by the torsion springs and cable drums.

IMPORTANT: The spring anchor bracket bearing, torsion springs, and cable drums must be positioned, as shown.

A3b. With assistance, pick up the torsion spring assembly and slide one end of the torsion shaft through one headplate bracket 7.

A3c. Lay the middle of the torsion shaft into the spring anchor bracket 8.

A3d. Slide the other end of the torsion shaft into the other headplate bracket 9.

A3e. Position the torsion shaft so that equal amounts 10 of the shaft extend from each headplate bracket.

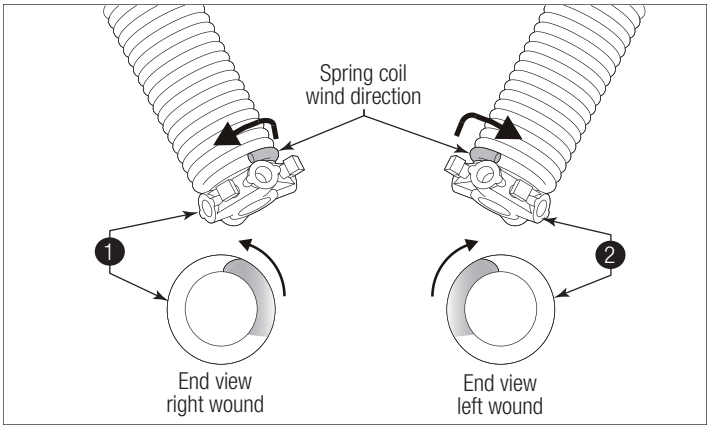


Figure 42

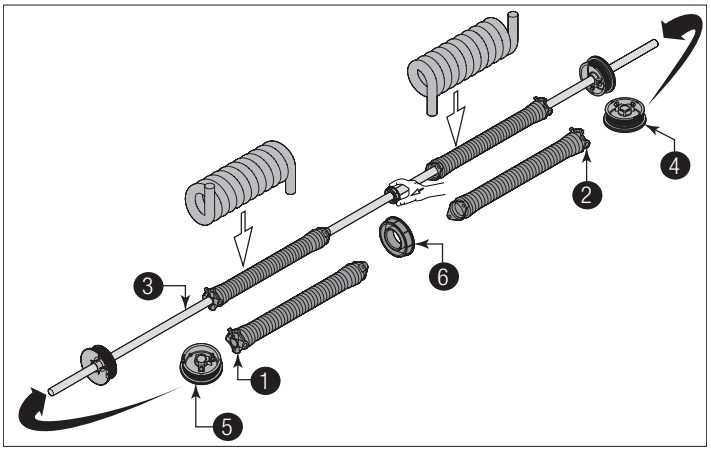


Figure 43

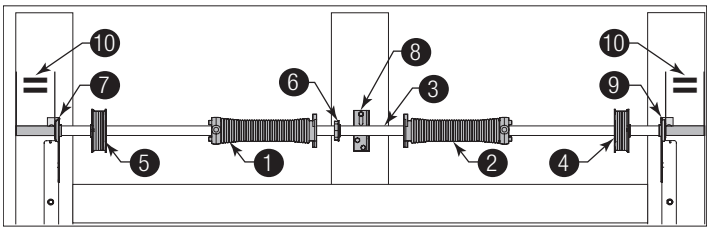


Figure 44

1	Right Wound (Red Winding Cone)	6	Spring Anchor Bracket Bearing
2	Left Wound (Black Winding Cone)	7	Headplate Bracket
3	Torsion Shaft	8	Spring Anchor Bracket
4	Black Cable Drum	9	Headplate Bracket
5	Red Cable Drum	10	Equal Amounts

A4 ATTACHING SPRINGS TO SPRING ANCHOR BRACKETS

IMPORTANT: The high spring tension warning tag(s) 1 supplied must be securely attached to the spring anchor bracket(s) in plain view. Should a replacement high spring tension warning tag be required, contact Overhead Door Corporation for replacement.

See Figure 45 through Figure 47 for the following steps.

A4a. Assemble the high spring tension warning tags using the attachment clip 2 into the hole in the spring anchor bracket 3.

NOTE: One high spring tension warning tag is required for each spring anchor bracket.

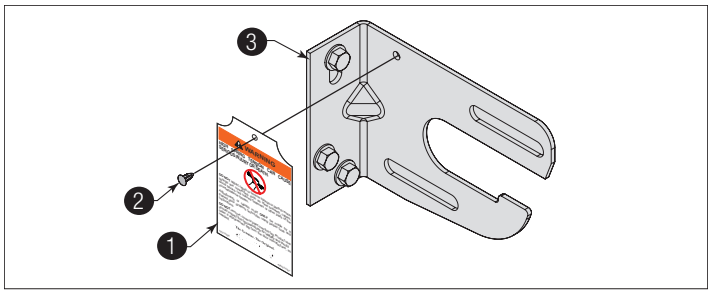


Figure 45

A4b. Slide spring anchor bracket bearing 4 into the spring 5.

A4c. Align the stationary spring cone(s) 6 with the holes in the spring anchor bracket.

A4d. Secure the torsion spring(s) to the spring anchor bracket with (2) 3/8" - 16 x 1-1/2" hex head bolts 7, (2) 3/8" lock washers 8 and (2) 3/8" - 16 hex nuts 9.

IMPORTANT: Never use more than one bearing when attaching two springs to one spring anchor bracket.

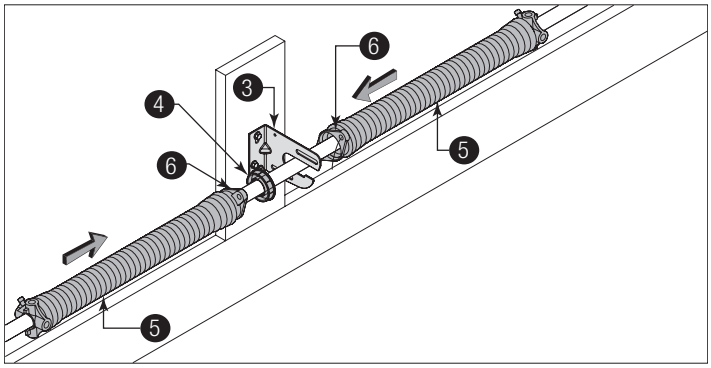


Figure 46

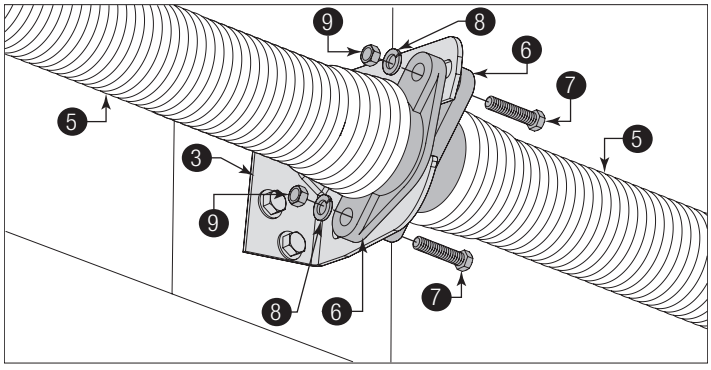


Figure 47

1	Spring Tension Warning Tag	6	Stationary Spring Cone(s)
2	Attachment Clip	7	3/8" - 16 x 1-1/2" Hex Head Bolts
3	Spring Anchor Bracket	8	3/8" Lock Washers
4	Spring Anchor Bracket Bearing	9	3/8" - 16 Hex Nuts
5	Spring		

A5 ATTACHING COUNTERBALANCE LIFT CABLES

See Figure 48 through Figure 50 for the following steps.

A5a. Starting on the left hand side, thread the counterbalance lift cable (1) up and around the front side of the left hand cable drum (2).

IMPORTANT: Verify that there are no obstructions in the travel path of the door sections or counterbalance lift cables.

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

NOTICE

FAILURE TO REMOVE ALL SLACK OUT OF THE COUNTERBALANCE LIFT CABLES, WILL CAUSE DOOR OPERATIONAL PROBLEMS.

A5b. Hook (3) the counterbalance lift cable into the left hand cable drum. Slide the left hand cable drum up against the left hand headplate bracket (4). Counterbalance lift cable should terminate at the 3 o'clock position (9) - 6 o'clock position (10).

WARNING

TO AVOID RISK OF COUNTERBALANCE FAILURE CAUSING DEATH OR SERIOUS INJURY, THE COUNTERBALANCE LIFT CABLE MUST TERMINATE BETWEEN THE 3 O'CLOCK AND 6 O'CLOCK POSITION. IF THE COUNTERBALANCE CABLE DOES NOT TERMINATE IN THE CORRECT POSITION, THE CABLE LENGTH MUST BE CORRECTED BY A TRAINED DOOR SYSTEMS TECHNICIAN BEFORE CONTINUING INSTALLATION.

A5c. Rotate the left hand drum and torsion shaft until counterbalance lift cable is taut. Now attach locking pliers (5) to the torsion shaft (6) and brace locking pliers up against jamb (7) to keep counterbalance lift cable taut.

A5d. Tighten the set screws (8) in the drum to 14-15 ft-lbs of torque (once set screws contact the torsion shaft, tighten screws an additional 1/2 turn for solid shaft and one full turn for tubular shaft).

A5e. Repeat for right hand side.

IMPORTANT: Inspect each counterbalance lift cable making sure it is seated properly onto the cable drum and that both counterbalance lift cables have equal tension.

A5f. **Check Counterbalance Lift Cables for Equal Tension:**

1. Attach locking pliers to track above top roller.

2. Grasp cable at approximate mid-door height location.

3. Draw cable toward you about 1/2" to 1" and release, noting the response of the cable.

4. Repeat above steps for other cable.

5. Adjust cable tension as needed until right and left cables both respond the same.

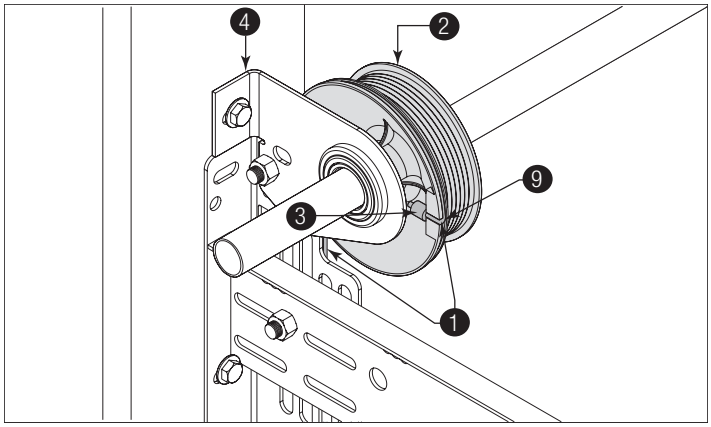


Figure 48, Left Side Shown

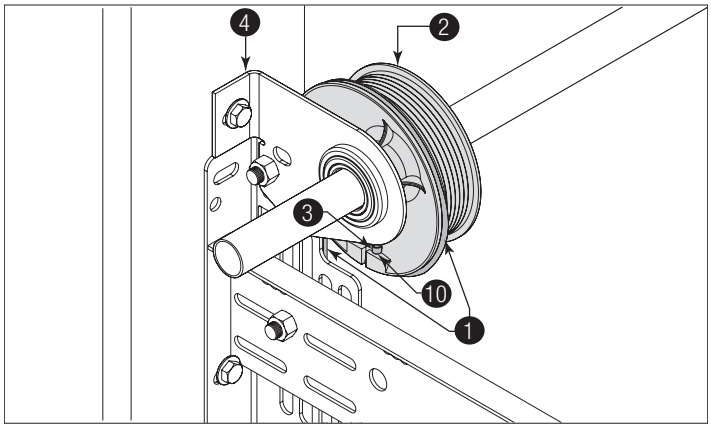


Figure 49, Left Side Shown

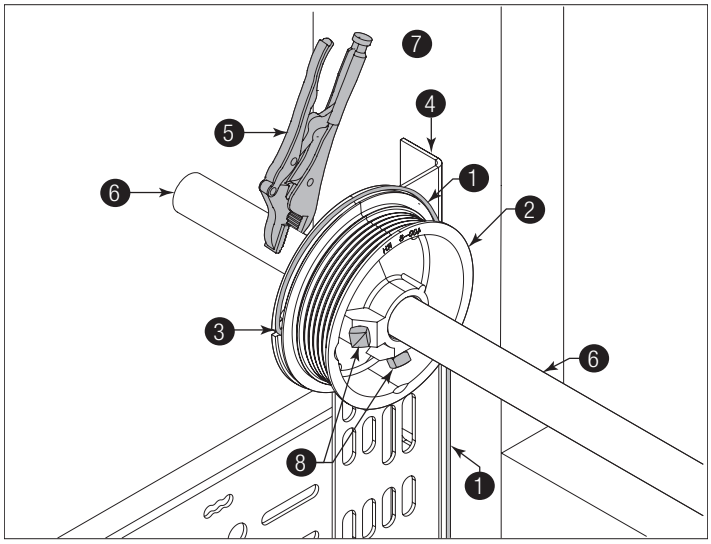


Figure 50, Left Side Shown

1	Counterbalance Lift Cable	6	Torsion Shaft
2	Cable Drum	7	Jamb
3	Hook	8	Set Screws
4	Headplate Bracket	9	3 O'Clock Position
5	Locking Pliers	10	6 O'Clock Position

A6 CHALKING TORSION SPRING(S)

NOTE: If your springs have stenciling, then skip this step.

See Figure 51 for the following steps.

A6a. Draw a chalk line horizontally along the center of the torsion spring coils 1. As the torsion spring is wound, the chalk line will create a spiral 2. This spiral can be used to count and determine the number of turns that are applied on the torsion spring 3.

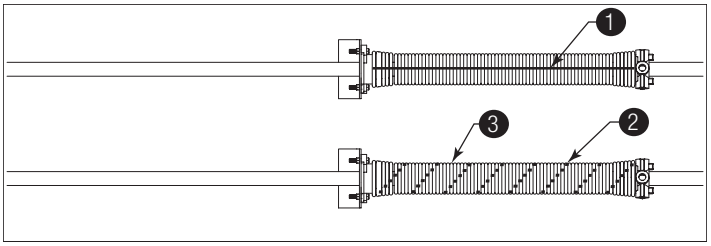


Figure 51

1	Draw horizontal chalk line prior to winding	3	Spirals created after winding
2	Spiral		

A7 SECURING DOOR FOR SPRING WINDING

See Figure 52 for the following steps.

A7a. With the door in the fully closed position, place locking pliers 4 onto both vertical tracks 1 and 2 just above the third track roller 3. This is to prevent the garage door from rising while winding spring(s). Ensure that:

A7b. **Check the following before attempting to wind torsion spring(s):**

- Counterbalance lift cables are secured at bottom corner brackets, See Figures 12 through 15.
- Counterbalance lift cables are unobstructed in their route to cable drums.
- Counterbalance lift cables are correctly installed and wound onto cable lift drums.
- Counterbalance lift cables are taut and have equal tension on both sides.
- Cable lift drums are against the headplate brackets and set screws are tight.
- Torsion spring or springs are installed correctly.
- Review the work order sheet, to determine number of spring turns required.

⚠ WARNING

FAILURE TO PLACE LOCKING PLIERS ONTO VERTICAL TRACKS CAN ALLOW DOOR TO RAISE DURING SPRING WINDING AND CAUSE SEVERE OR FATAL INJURY.

⚠ CAUTION

TO AVOID POSSIBLE DAMAGE TO YOUR DOOR, THE DOOR MUST BE CLOSED AND LOCKED WHEN WINDING OR MAKING ANY ADJUSTMENTS TO THE SPRING(S).

Winding Bars (Steel Rods)	Size Of Winding Bar (Inches)	Spring Inner Diameter Used On
▬▬▬	1/2" dia. x 18"	2" and 2-5/8"
	5/8" dia. x 24"	3-3/4"

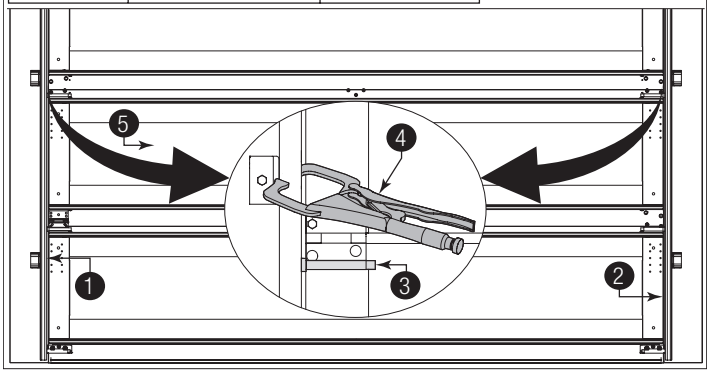


Figure 52

1	Left Side Vertical Track	4	Locking Pliers
2	Right Side Vertical Track	5	Second Section
3	Track Roller		

A8 WINDING SPRING(S)

⚠ DANGER

WINDING SPRINGS IS AN EXTREMELY DANGEROUS PROCEDURE. THIS SHOULD BE PERFORMED ONLY BY A TRAINED DOOR SYSTEM TECHNICIAN, OR THIS WILL RESULT IN DEATH OR SERIOUS INJURY.

⚠ WARNING

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

⚠ DANGER

PRIOR TO WINDING THE SPRING, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS SHOWN IN FIGURE 54. OTHERWISE THE SPRING FITTING MAY RELEASE FROM SPRING AND RESULT IN SEVERE OR FATAL INJURY.

See Figure 53 and Figure 54 for the following steps.

A8a. Position a ladder slightly to the side of the spring so that the winding cone is easily accessible, and so your body is not directly in line with the winding bars 1.

A8b. Review the Product Data Summary Sheet paperwork 2 or the label that came with your springs to determine required number of complete spring turns to balance your door.

How to Wind Torsion Springs:

1. Insert one winding rod snugly into winding cone 3, to full socket depth.

2. Maintaining a tight grip on the winding rod rotate it slowly in the proper direction 4, as shown below.

3. If there is any slippage of the winding rod in the winding cone socket, reverse the direction of winding and return the cone to its original position. Remove the winding rod from the winding cone socket. Reseat the winding rod in the socket. Start over at Step #1.

4. When the winding rod is vertical above the winding cone, insert another winding rod into one of the other sockets, being careful to seat it snugly and at full socket depth.

5. Hold the spring with the second winding bar, and remove the first.

6. Repeat Steps #2 through #5 until the complete turns have been applied.

IMPORTANT: Check the work order sheet for the required number of complete turns, to balance your door.

IMPORTANT: After winding the spring(s), tighten the set screws 5 in the winding cone to 14-15 ft-lbs of torque (once set screws contact the torsion shaft 6, tighten screws an additional 1/2 turn for solid shaft and one full turn for tubular shaft).

The Genuine. The Original. OVERHEAD DOOR

Product Data Summary

Page 1 of 2
Print Date 3/3/2025 13:41 PM

Sales Order: 3075285 Line:1.1 Customer:
Product: 521.CS Job Name:
Quantity: 5 Purchase Order:
Schedule Ship Date: 04-APR-25 Label:

EXAMPLE

MODEL: 521 DOOR SIZE: 13' 10" x 9' 10" DOOR DESIGN: Standard Panel
COLOR: Black 315 TRACK SIZE: 3" Track TRACK TYPE: High Lift Angle Mount Out To Wood
OPERATION: JackShaft SPRING TYPE: TORSION WINDLOAD: None

SECT	HT	STRUT	WINDOW	LAYOUT	ISLO				
(16)						BALANCE WT:	588.471	HORZ TRACK THICKNESS:	0.101
(15)						SPRING LOCATION:	Front Mount	LENGTH 1:	104
(14)						SPRING CYCLES:	10,000 Cycles	RADIUS 1:	15
(13)						DRUM:	D525-54	LENGTH 2:	0
(12)						SPRING ID:	3-3/4"	RADIUS 2:	
(11)						WIRE DIAM:	0.3437	HORZ ANGLE TYPE:	1.750" x 2.875" x .099"
(10)						SPRING LEN:	36.5	HORZ ANGLE LENGTH:	93
(9)						STOCK LEN:		VERT TRACK THICKNESS:	0.101
(8)						QUANTITY:	2	LENGTH 1:	105
(7)						TURNS:	9.75	VERT ANGLE TYPE:	1.750" x 2.875" x .099"
(6)								VERT ANGLE LENGTH 1:	161
(5)	24.3 73	Top Rail: HS1 x 1	1/2" Solarban 70XL Tempered Equiv Insul					LENGTH 2:	
(4)	22.7 43	NONE	1/2" Solarban 70XL Tempered Equiv Insul					BRKAWAY TRACK THICKNESS:	0.101
(3)	22.7 43	NONE	1/2" Solarban 70XL Tempered Equiv Insul					LENGTH 1:	33
(2)	22.7 43	NONE	1/2" Solarban 70XL Tempered			SHAFT TYPE:	1" Solid	LENGTH 2:	0
								BRKAWAY ANGLE TYPE:	1.375" x 2.375" x .099"

Figure 53

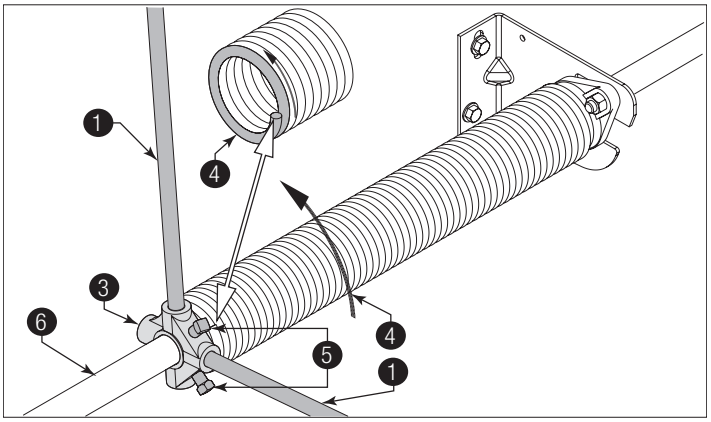


Figure 54

1	Approved Winding Rods	4	Proper Direction
2	Product Data Summary Sheet	5	Set Screws
3	Winding Cone	6	Torsion Shaft

A9 ATTACHING REAR BACK HANGS (NOT INCLUDED)

WARNING

IN THE EVENT THE SPRING(S) WERE OVER-WOUND, HOLD THE DOOR DOWN FIRMLY AND CAUTIOUSLY REMOVE LOCKING PLIERS FROM VERTICAL TRACKS TO PREVENT IT FROM RISING UNEXPECTEDLY.

See Figures 55, 56, and 57 for the following steps.

A9a. 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 THE DOOR INTO THE LOOSE HORIZONTAL TRACKS CAN RESULT IN DOOR FALLING CAUSING DEATH OR SERIOUS INJURY.

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

A9b. Using the chart below, select the appropriate perforated angle. Fabricate and install rear back hangs, as shown.

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 lb. to 610 lb.
1-1/4" x 1-1/4" x 15 Gauge	220 lb. to 440 lb.
1-1/4" x 1-1/4" x 16 Gauge	175 lb. to 350 lb.

WARNING

KEEP HORIZONTAL TRACKS PARALLEL AND WITHIN 3/4" TO 7/8" (19 MM - 22 MM) MAXIMUM OF DOOR EDGE. OTHERWISE THE TRACK ROLLERS CAN COME OUT AND DOOR WILL FALL, RESULTING IN DEATH OR SERIOUS INJURY.

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 BEEN BENT MUST BE REPLACED. FAILURE TO SECURELY BRACE THE HORIZONTAL TRACK CAN RESULT IN DOOR FALLING CAUSING DEATH OR SERIOUS INJURY.

NOTICE

DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE REAR BACK HANGS THAT IS 4" (102 MM) OR MORE BEYOND A SOUND FRAMING MEMBER.

NOTICE

IF REAR BACK HANGS ARE TO BE INSTALLED OVER DRYWALL, USE TWO 5/16" X 2" HEX-HEAD LAG SCREWS AND MAKE SURE LAG SCREWS ENGAGE INTO SOLID STRUCTURAL LUMBER.

DANGER

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

NOTICE

PERFORATED ANGLE MUST BE ATTACHED TO SOUND FRAMING MEMBERS AND NAILS SHOULD NOT BE USED.

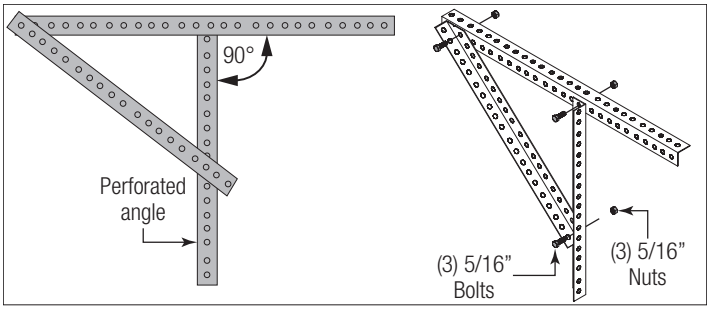


Figure 55

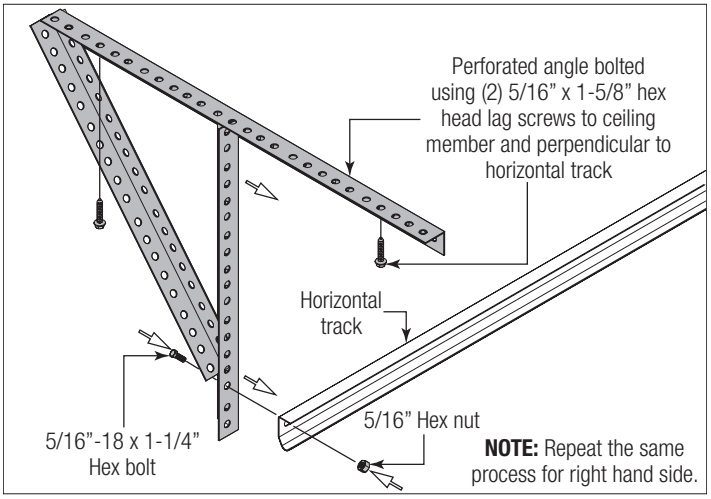


Figure 56

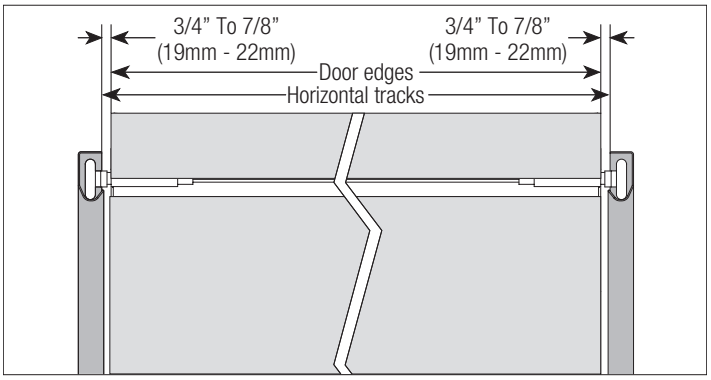


Figure 57

A10 ATTACHING WEATHERSTRIPS (NOT INCLUDED)

NOTICE

WHEN PERMANENTLY ATTACHING THE WEATHERSTRIPS TO THE JAMBS, AVOID PUSHING THE WEATHER-STRIPS TOO TIGHTLY AGAINST THE FACE OF DOOR.

See Figure 58 for the following steps.

A10a. Permanently attach the nails to the weatherstrips on both door jambs 1 and the header 2. The weatherstrips were temporarily attached in Preparing the Opening, in the pre-installation section of this manual.

NOTE: For clarity, door isn't shown.

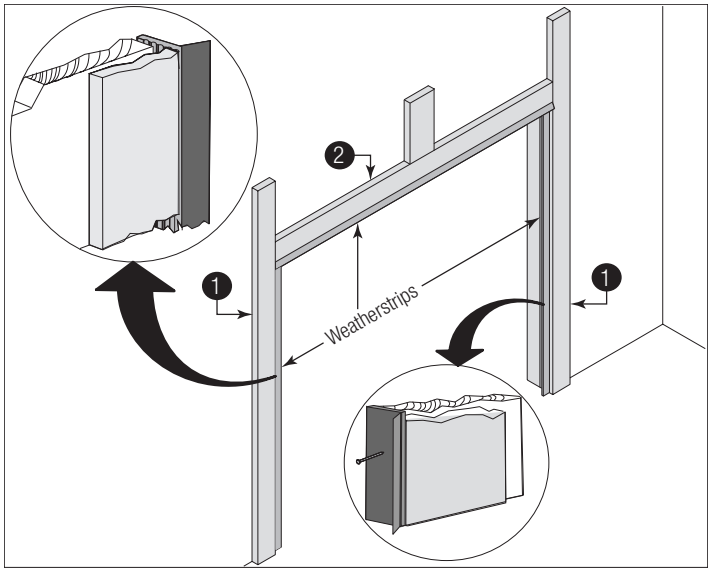


Figure 58, Weatherstrips

1	Door Jambs	2	Header

A11 ATTACHING DOOR LABELS

IMPORTANT: Using the illustration, attach the appropriate labels to the appropriate location on the section. See Figure 59. If any labels are missing, worn or damaged, call your Overhead Ribbon Distributor for replacement.

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

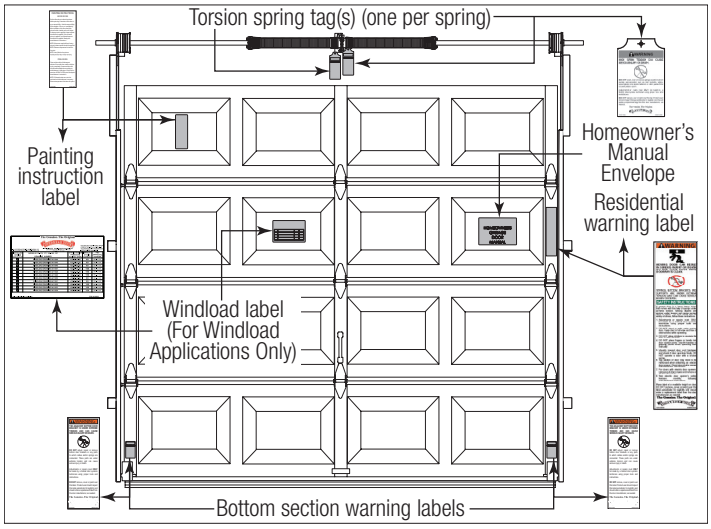


Figure 59

A12 BALANCING DOOR

CAUTION

WINDOWS MAY CAUSE THE TOP SECTION TO BE SIGNIFICANTLY HEAVIER THAN THE REMAINING SECTIONS. TO PREVENT ANY SUDDEN DOOR ACCELERATION BETWEEN THE TOP AND BOTTOM, MOTOR OPERATE ALL DOORS WITH WINDOWS.

DANGER

EXTREME CAUTION SHOULD BE USED WHEN MAKING ADJUSTMENTS TO THE SPRINGS AS FAILURE TO FOLLOW THE INSTRUCTIONS OR USE APPROVED WINDING BARS CAN LEAD TO DEATH OR SERIOUS INJURY TO PERSONS OR PROPERTY. BEFORE ATTEMPTING TO MAKE ADJUSTMENTS TO THE SPRING, MAKE SURE YOU HAVE READ AND UNDERSTAND THE INSTRUCTIONS. IF YOU ARE UNCLEAR ON ANY ASPECT OF THE INSTALLATION PROCEDURES, YOU SHOULD CONSULT A TRAINED DOOR SYSTEMS TECHNICIAN.

See Figure 60 for the following steps.

A11a. Remove locking pliers. Lift door and check its balance. Adjustments to the required number of spring turns stated may be necessary. If door rises off floor more than 2 ft. under spring tension alone, reduce spring tension. If the door is hard to rise or drifts down on its own, add spring tension. A poorly balanced door can cause garage door operator problems.

A11b. To adjust spring tension, fully close door. Apply locking pliers to track above third track roller. Place locking pliers on torsion shaft, as shown in Step Attaching Counterbalance Lift Cables. Insert a winding rod (1) into the winding cone. Push upward on the winding rod slightly while carefully loosening the set screws (2) in the winding cone (3).

WARNING

BE PREPARED TO SUPPORT THE FULL FORCE OF THE TORSION SPRING ONCE THE SET SCREWS ARE LOOSE. IF NOT PREPARED, THEN THE WINDING BAR CAN MOVE SUDDENLY AND COME OUT OF THE WINDING CONE AND CAUSE SEVERE OR FATAL INJURY.

Carefully adjust spring tension 1/4 turn. Retighten both set screws to 14-15 ft. lbs. of torque in the winding cone and repeat for the other side. Recheck door balance and re-adjust spring tension if needed.

IMPORTANT: Do not adjust more than 1 turn from the recommended number of turns.

If the door still does not operate easily, lower the door into the closed position, unwind spring(s) completely, and recheck the following items:

A11c. Is the door level?

A11d. Are the torsion shaft and flag angles / angle mount level and plumb?

A11e. Does the distance between the flag angles / angle mount equal door width plus 3-3/8" to 3-1/2"?

A11f. Do the counterbalance lift cables have equal tension? Adjust if necessary.

A11g. Rewind the spring(s).

A11h. Make sure door is not rubbing on jambs.

IMPORTANT: If door still does not balance properly, then contact a trained door system technician.

NOTE: Complete Step B7 now to attach the door labels to the section.

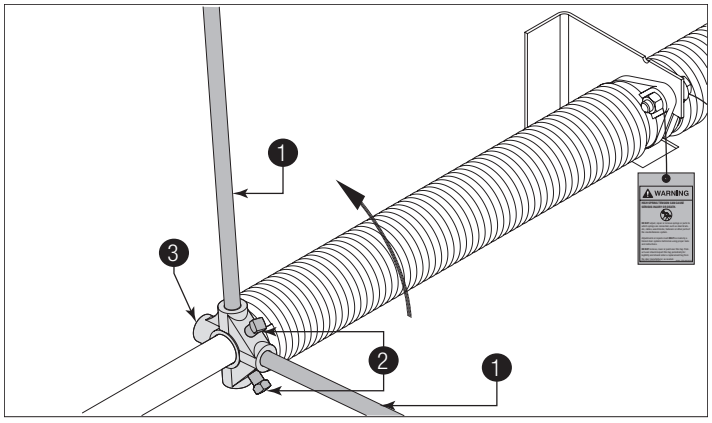


Figure 60

1	Winding Rod	3	Winding Cone
2	Set Screws		

Extension Springs

B1 ATTACHING REAR BACK HANGS (NOT INCLUDED)

NOTE: Temporarily support the horizontal track with rear back hangs as shown in Step A9, without lifting door and then proceed to Step B2.

B2 ATTACHING FRONT CABLE LIFT SHEAVES

See Figure 61 for the following steps.

IMPORTANT: Measure the height to determine if you have 3" front cable lift sheaves or 4" front cable lift sheaves.

If you have 3" front cable lift sheaves:

B2a. Secure the front cable lift ❶ sheave to the flag angle ❸ using (1) 3/8" - 16 hex nut ❹.

If you have 4" front cable lift sheaves:

B2b. Secure the front cable lift sheave ❷ to the flag angle ❸ using (1) 3/8" - 16 hex nut ❹.

B2c. Repeat the same process for the right hand side.

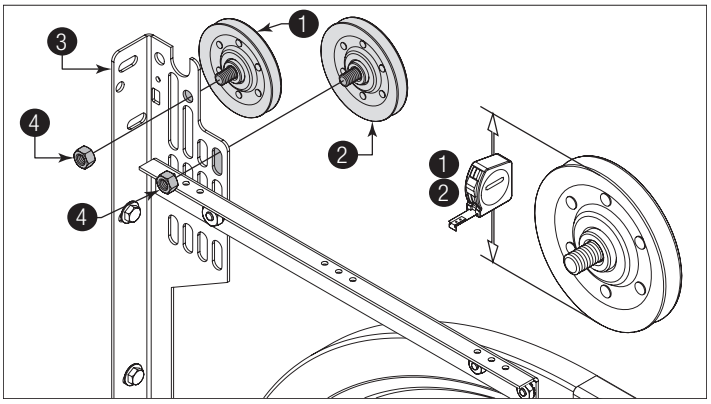


Figure 61, Left Side Shown

1	3" Front Cable Lift Sheaves	3	Flag Angle
2	4" Front Cable Lift Sheaves	4	3/8" - 16 Hex Nut

B3 ATTACHING EXTENSION SPRINGS

See Figure 62 through Figure 68 for the following steps.

B3a. Remove the locking pliers ❶ 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 ❶ TO THE BACK LEG OF BOTH HORIZONTAL TRACKS ❷, BELOW THE BOTTOM TRACK ROLLERS ❸ TO KEEP THE DOOR FROM LOWERING. FAILURE TO DO SO, COULD RESULT IN DEATH OR SERIOUS INJURY.

NOTE: The illustration shown in Figure 52 shows the outside of the door in the open position.

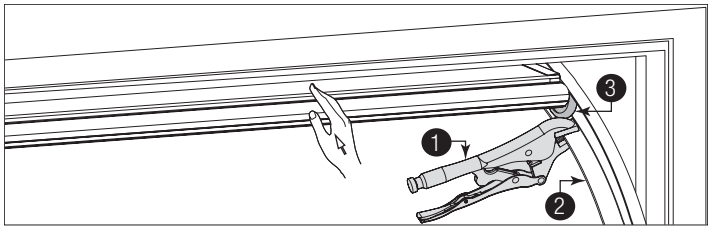


Figure 62, Left Side Shown

1	Locking Pliers	3	Bottom Track Rollers
2	Horizontal Tracks		

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

⚠ DANGER

PROPER INSTALLATION OF RESTRAINT CABLES IS IMPORTANT. THESE RESTRAINT CABLES HELP PREVENT PERSONAL INJURY OR PROPERTY DAMAGE BY RETAINING THE BROKEN PIECE OF THE SPRING IN CASES OF EXTENSION SPRING FAILURE. FAILURE TO INSTALL RESTRAINT CABLES WILL RESULT IN DEATH OR SERIOUS INJURY.

If You Have One Pair Of Extension Springs:

See Figure 63 for the following steps.

B3b. Hook one end of each extension spring ❹ into each perforated angle ❺, 6" to 8" ❻ above the horizontal track ❷.

B3c. Hook the sheave fork ❼ through the opposite end of extension spring and attach the sheave fork to the rear cable lift sheave ❽ using one 3/8" - 16 x 1" hex head bolt ❾ and one 3/8" - 16 hex nut ❿.

B3d. Repeat the same process for the other side.

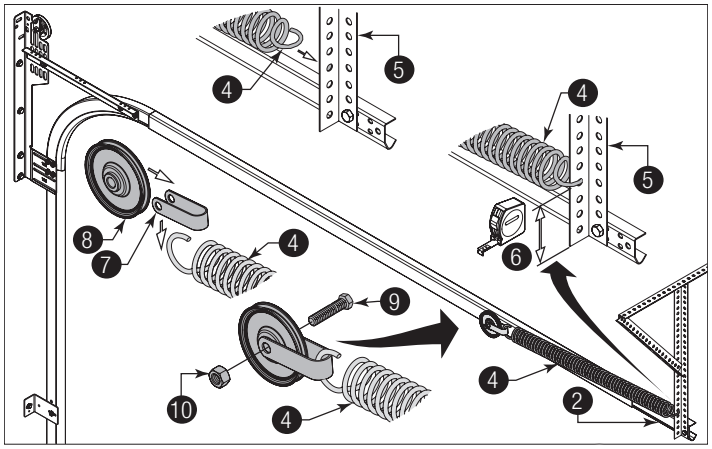


Figure 63, Left Side Shown

2	Horizontal Track	7	Sheave Fork
4	Extension Spring	8	Rear Cable Lift Sheave
5	Perforated Angle	9	3/8" - 16 X 1" Hex Head Bolt
6	6" to 8"	10	3/8" - 16 Hex Nut

If You Have Two Pairs Of Extension Springs:

See Figure 64 for the following steps.

B3b. Hook one end of each extension spring ❹ into each perforated angle ❺, 6" to 8" ❻ above the horizontal track ❷.

B3c. Hook the sheave fork ❼ through the yoke plate ⓫ and attach it to the rear cable lift sheave ❽ using one 3/8" - 16 x 1" hex head bolt ❾ and one 3/8" - 16 hex nut ❿. Hook the yoke plate to each ends of the extension springs.

B3d. Repeat the same process for the other side.

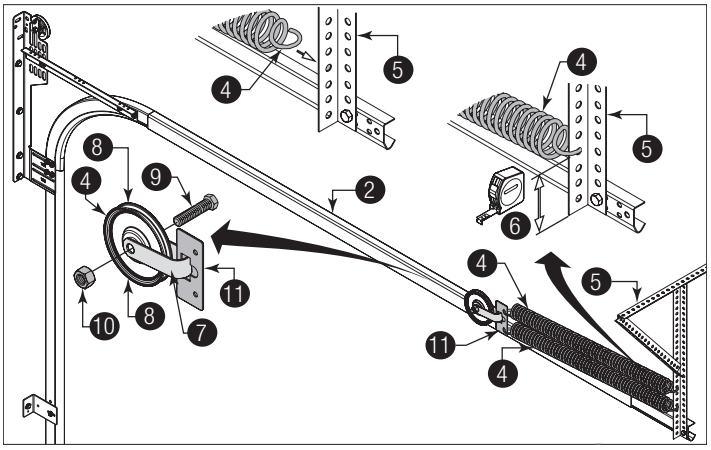


Figure 64, Left Side Shown

2	Horizontal Track	8	Rear Cable Lift Sheave
4	Extension Spring	9	3/8" - 16 x 1" Hex Head Bolt
5	Perforated Angle	10	3/8" - 16 Hex Nut
6	6" to 8"	11	Yoke Plate
7	Sheave Fork		

See Figure 65 and Figure 66 for the following steps.

B3e. Using the looped end of the restraint cable 12, tie it to the perforated angle 5.

B3f. Feed the other end of restraint cable 13 through the extension spring 4 . Pull the restraint cable taut and tie it to the appropriate holes in the headplate angle 14.

B3g. Repeat the same process for the other side.

NOTICE

RESTRAINT CABLES MUST BE TAUT.

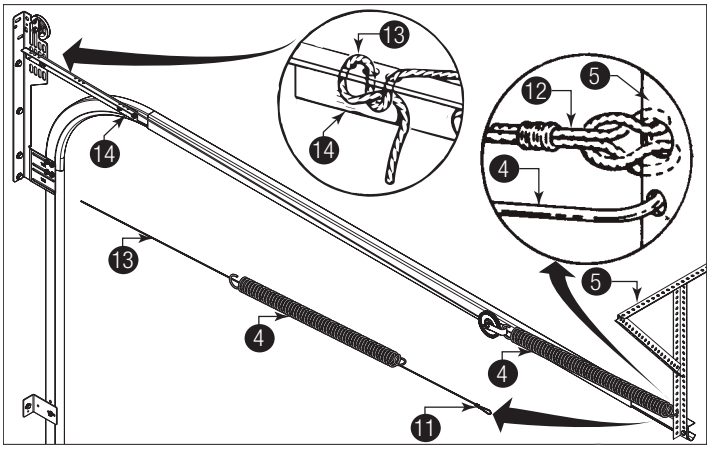


Figure 65, Left Side Shown

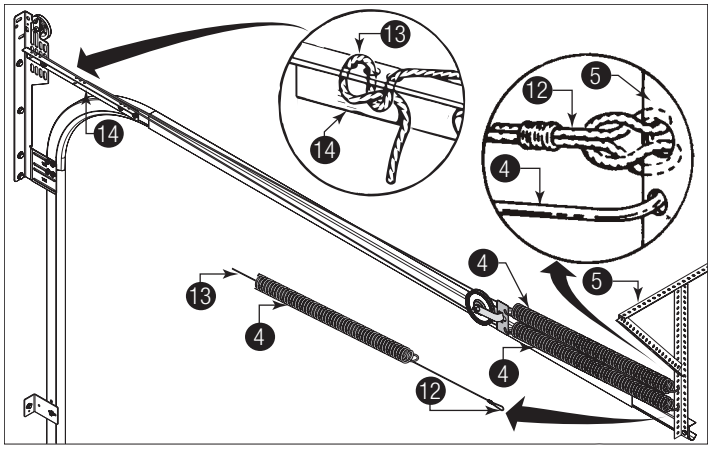


Figure 66, Left Side Shown

4	Extension Spring	13	Other End Of Restraint Cable
5	Perforated Angle	14	Headplate Angle
12	Looped End Of Restraint Cable		

See Figure 67 and Figure 68 for the following steps.

B3h. Route each of the counterbalance lift cables 15 over the front cable lift sheaves 6 and around the rear cable lift sheaves 8.

B3i. Pull equal tension on both extension springs 4 and secure counterbalance lift cables to headplates 14.

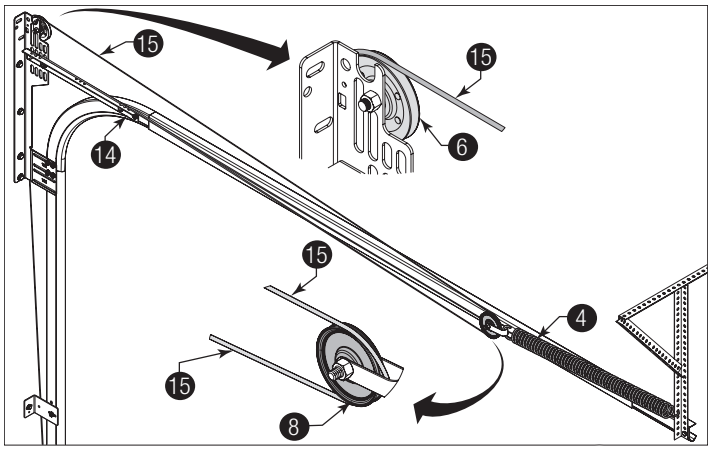


Figure 67, Left Side Shown

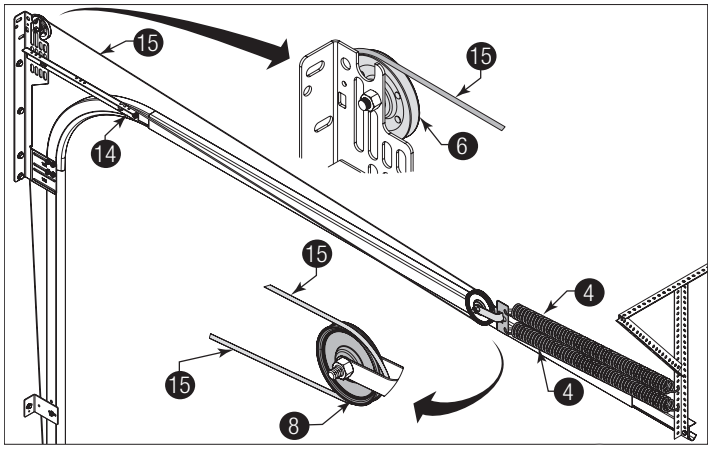


Figure 68, Left Side Shown

15	Counterbalance Lift Cables	4	Extension Spring
6	Front Cable Lift Sheaves	14	Headplate Angle
8	Rear Cable Lift Sheave		

B4 COUNTERBALANCE LIFT CABLE ADJUSTMENTS

B4a. 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.

B4b. Measure relaxed extension spring length for your door height and verify with chart.

IMPORTANT: Spring length must be the same for both extension springs to allow even door balance.

B4c. Carefully remove the locking pliers from the horizontal track and lower the door into the closed position.

B4d. 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)	62.5” (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)	73.5” (1867 mm)
8’0”	27” (686 mm)	75” (1905 mm)

B5 BALANCING DOOR

CAUTION

WINDOWS MAY CAUSE THE TOP SECTION TO BE SIGNIFICANTLY HEAVIER THAN THE REMAINING SECTIONS. TO PREVENT ANY SUDDEN DOOR ACCELERATION BETWEEN THE TOP AND BOTTOM, MOTOR OPERATE ALL DOORS WITH WINDOWS.

DANGER

EXTREME CAUTION SHOULD BE USED WHEN MAKING ADJUSTMENTS TO THE SPRINGS AS FAILURE TO FOLLOW THE INSTRUCTIONS CAN LEAD TO DEATH OR SERIOUS INJURY TO PERSONS OR PROPERTY. BEFORE ATTEMPTING TO MAKE ADJUSTMENTS TO THE SPRING, MAKE SURE YOU HAVE READ AND UNDERSTAND THE INSTRUCTIONS. IF YOU ARE UNCLEAR ON ANY ASPECT OF THE INSTALLATION PROCEDURES, YOU SHOULD CONSULT A TRAINED DOOR SYSTEMS TECHNICIAN.

CAUTION

HOLD THE DOOR DOWN TO PREVENT IT FROM RISING UNEXPECTEDLY IN THE EVENT THE SPRING(S) WERE OVER-WOUND AND CAUTIOUSLY REMOVE LOCKING PLIERS FROM VERTICAL TRACKS.

See Figure 69 for the following steps.

B5a. 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, loosening the knot 1 in the headplate angle 2. If the door is hard to rise or drifts down on its own, adjust extension spring length by tightening the knot 1 in the headplate angle 2. A poorly balanced door can cause garage door operator problems.

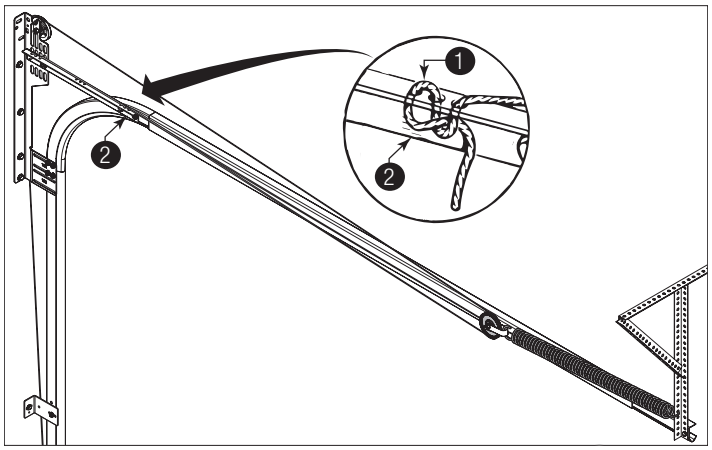


Figure 69, Left Side Shown

1	Knot	2	Headplate Angle

IMPORTANT: Whenever adjusting extension spring length for door balance, always open the door to the fully open position and return the locking pliers to the horizontal tracks below the bottom track rollers, as shown in Figure 52.

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

B5b. Is the door level?

B5c. Are the flag angles level and plumb?

B5d. Does the distance between the flag angles equal door width plus 3-3/8” to 3-1/2”?

B5e. Do the counterbalance lift cables have equal tension? Adjust if necessary.

B5f. Make sure door is not rubbing on jambs.

IMPORTANT: If door still does not balance properly, then contact a trained door system technician.

B6 ATTACHING WEATHER SEAL

NOTE: Complete Step A10 now to permanently attach the weatherstrips and then proceed to Step B7.

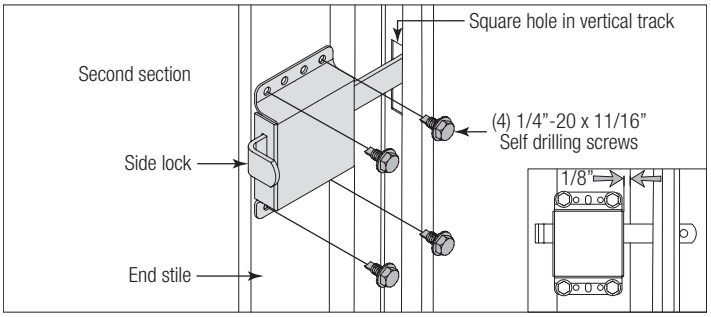
B7 ATTACHING DOOR LABELS

NOTE: Complete Step A11 now to permanently attach the door labels.

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 7/8" 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.

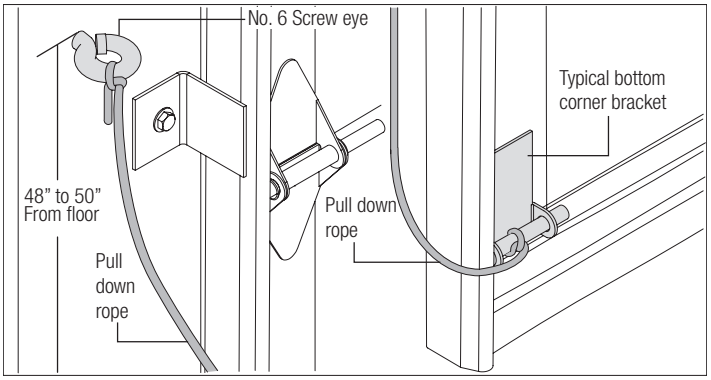


Pull Down Rope

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.



Cleaning Your Garage Door

NOTICE

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 may help to 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.

NOTICE

THE USE OF DETERGENTS CONTAINING GREATER THAN 0.5% PHOSPHATE IS NOT RECOMMENDED FOR USE IN GENERAL CLEANING OF GARAGE DOORS. BE SURE TO CLEAN BEHIND WEATHER-STRIPS ON BOTH SIDES AND TOP OF DOOR.

NOTICE

NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

NOTICE

DO NOT USE ANY WINDOW CLEANING FLUIDS, SCOURING COMPOUNDS, GRITTY CLOTHS OR SOLVENT-BASED CLEANERS OF ANY KIND.

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 Overhead 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 operation go to **www.dasma.com** and reference TDS 165.

CAUTION

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 (if present) 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 points only. If you are unable to reach the lift handles/suitable gripping points only, use pull-down rope (if present) affixed to the side of door. Door should close completely with little resistance.

Using An Electric Operator:

IMPORTANT: If present, Pull-down rope 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, reinforce 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 online at **www.OverheadDoor.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. 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.

DANGER

GARAGE DOOR SPRINGS, COUNTERBALANCE LIFT CABLES, BRACKETS, AND OTHER HARDWARE ATTACHED TO THE SPRINGS ARE UNDER EXTREME TENSION, AND IF HANDLED IMPROPERLY, CAN CAUSE DEATH OR SERIOUS 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 (HEADPLATE 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 DEATH OR SERIOUS INJURY, HAVE ANY SUCH WORK PERFORMED BY A TRAINED DOOR SYSTEMS TECHNICIAN USING PROPER TOOLS AND INSTRUCTIONS.

Torsion Springs:

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

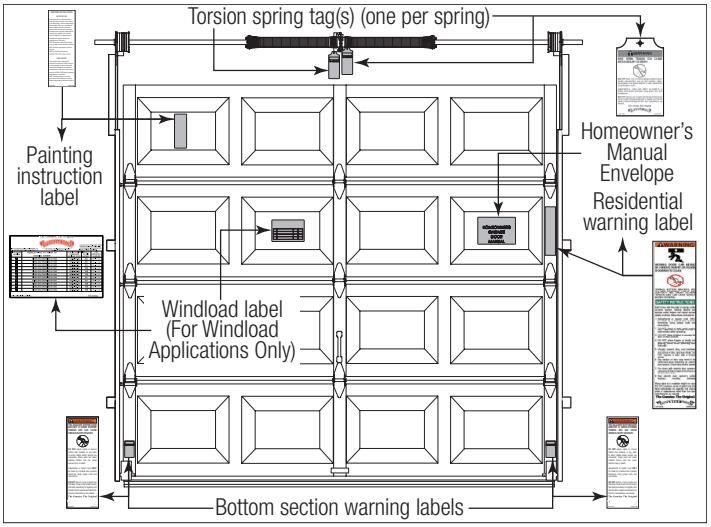
2. Door Balance:

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. If door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down), have it adjusted by a trained door systems technician. **DO NOT** attempt to repair or adjust Torsion Springs yourself.

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, or the door track. DO NOT oil a cylinder lock. If actuation is difficult, use a graphite dust to lubricate.

Check for Presence of Safety Labels:



The Genuine. The Original.

Thermacore® Collection Garage Door Limited Warranty

The Distributor of Overhead Door Corporation products whose name appears below ("Seller") warrants to the original purchaser of the Thermacore® garage door model below (the "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 periods of time, measured from the date of installation:

- Seller warrants the door sections against splitting, cracking, or deterioration due to rusting through for the period of time listed below:
  Model 5740 – (190 Series) – Limited lifetime*
  Model 5720 – (290 Series) – Twenty (20) years
  Model 5760 – (490 Series) – Limited lifetime*
  TWO (2) YEARS against peeling or color fade of finish on Product sections with Black finish, Walnut, Mission Oak or Golden Oak wood grain finish which materially alters the color of the Product and cannot be remedied by cleaning with the recommended solution.
- Seller warrants the Product door sections from delamination of the polyurethane foam from the steel skins of the panel for a period of ten (10) years.
- Seller warrants all other components of the Product for a period of one (1) year.

**Limited lifetime shall mean as long as the original purchaser owns, and the Product remains installed in, the home in which the Product is originally installed.*

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. Seller's repair or replacement labor is included for a period of one (1) year form the date of purchase. After that, 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, failure to comply with Product painting instructions, or acts of God or any other cause beyond the reasonable control of Seller. This warranty does not cover any damage or deterioration caused by exposure to salt water, chemical fumes or other corrosive or aggressive environments, whether naturally occurring or man-made, including, but not limited to, environments with a high degree of humidity, sand, dirt or grease. Product repaired or replaced under this warranty shall receive a factory original finish. This warranty does not cover the costs to repaint Product.

Products with Black, Dark Brown or Wood Grain finishes are susceptible to thermal bowing as described in DASMA (Door & Access Systems Manufacturers Association) Technical Data Sheet 185; Except as expressly provided in this warranty, Seller does not warrant Products with these finishes against warping, rubbing or other issues associated with thermal bowing and strongly recommends against selecting such finishes for Products which are to be installed in areas that experience high heat and/or high UV conditions, such as the Southwest United States, Central America, and the Middle East.

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 OVERHEAD DOOR CORPORATION BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Overhead Door Corporation 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 Seller 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.

ORIGINAL PURCHASER: _____

INSTALLATION ADDRESS: _____

SELLER: _____

SELLER'S ADDRESS: _____

FACTORY ORDER #: _____

DATE OF INSTALLATION: _____

SIGNATURE OF SELLER: _____

R900-392 10/2019

Thank you for your purchase.

PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE

If you need assistance, please contact your local Overhead Door Ribbon Distributor. To find your local Overhead Door Ribbon Distributor, go to the Find a Ribbon Distributor section online at **www.OverheadDoor.com**.

Product may be covered by one or more patents.
See **www.overheaddoor.com/about-us/patents** for details.