

















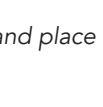
# Commercial Garage Door Installation & Owners Manual

Thank you for your purchase of a Haas Door Sectional door system. This system is designed to provide years of trouble free service with very little maintenance required. Please keep this Installation and Owners Manual for future reference.

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**SAFETY SYMBOLS:** The following safety symbols alert you to important SAFETY precautions to prevent injury and damage.

 <b>Professional installers ONLY!</b>	 <b>Frosted Glass Care</b>
 <b>Review all instructions prior to start of install!</b>	 <b>WARNING! INJURY OR DAMAGE MAY OCCUR!</b>
 <b>Wear safety gear!</b>	 <b>STOP! Follow carefully, or unsatisfactory results may occur.</b>
 <b>D.I.Y.</b> Not included - Do it yourself (D.I.Y.) item.	 <b>HANDLE CORRECTLY!</b> Always carry the panels vertically. The panels can crease if carried horizontally/flat.
 <b>Wind load doors have additional installation requirements. Read the supplemental requirements provided with wind load garage doors.</b>	 <b>DO NOT</b> attach the track/components through Drywall.
 <b>Garage doors with windows have additional installation requirements. Read the supplemental requirements.</b>	 <b>CRUSH HAZARD!</b> The door is heavy. If the track is not installed correctly, the door can fall out of the track and crush what is below.
 <b>Building Code and DASMA Compliant. Make sure to follow all local building codes and DASMA guidelines for the best performance.</b>	 <b>Parallel</b> Elements should be parallel to each other.
	 <b>Perpendicular</b> Elements should be perpendicular to each other.

**INSTALLER:** After installation is complete, fill out, attach labels, and place this manual near the garage door.

Serial #: \_\_\_\_\_ Order #: \_\_\_\_\_ (Located on the door edge.)

Date of Install: \_\_\_\_\_

Installed By: \_\_\_\_\_ Phone: \_\_\_\_\_

## SAFETY WARNINGS:

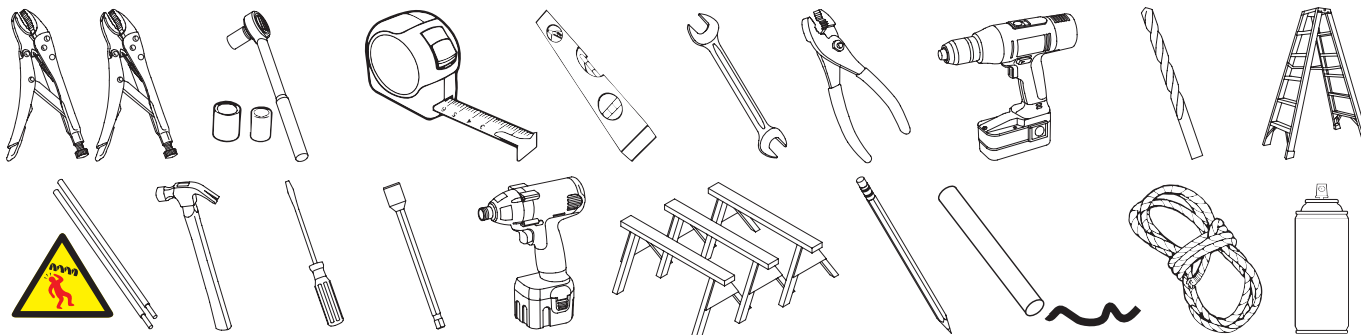


## READ ALL SAFETY WARNINGS

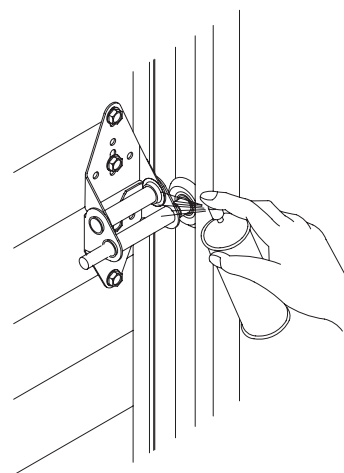
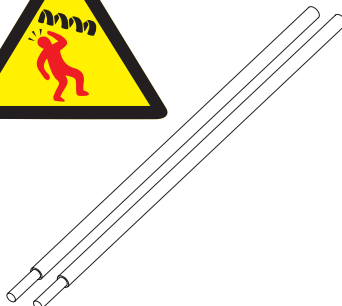
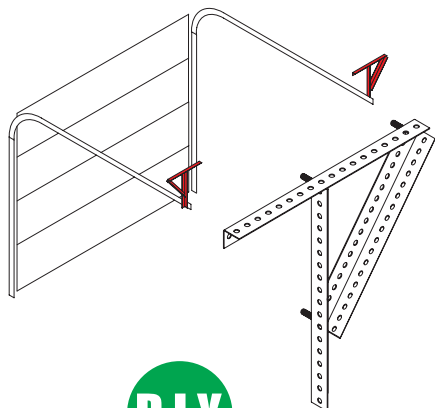


- **WARNING!** The garage doors are heavy. Use assistance to lift it.
- Ensure you have all the correct tools before you start the installation and follow all installation instructions carefully.
- **Keep hands and fingers clear of all section joints, tracks, and other door parts** when the door is opening and closing to avoid injury. The pull rope and/or the (no-cost optional) lift handle should be used when opening or closing a manual lift door.
- **Do not permit children to play beneath or around any garage door, door ropes, or electric operating controls.**
- **Do not climb on struts.**
- Garage doors use springs to counterbalance the weight of the door. **DO NOT attempt to remove an old door.** Removal should only be performed by a qualified sectional overhead garage door technician. Extension springs and torsion springs are under extreme pressure. Attempting to remove a torsion spring assembly without proper training or tools may result in an uncontrolled release of spring forces, which can cause serious or fatal injury.
- **Only use solid steel winding bars to wind torsion spring assemblies.** Using a substitute (like a screw driver) for winding bars will risk severe injury and liability.
- The BOTTOM CORNER BRACKETS, EXTENSION SPRINGS, CABLES, AND TORSION SPRINGS are under extreme tension. **DO NOT attempt to loosen red fasteners on these components.** Components that are loosened while still under tension will separate violently from the door assembly and/or release the spring with dangerous force.
- **Horizontal track installations must use sway braces on the rear of the track to prevent sideways movement.** If the track rails are not properly anchored, they may spread and allow the door to fall out, causing severe injury and damage.

## Tools Needed:

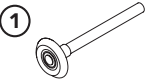

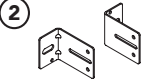

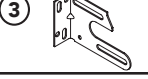
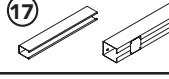
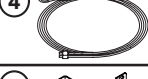
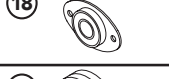
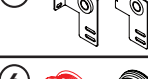
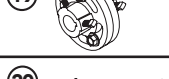



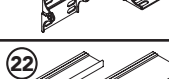


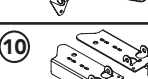

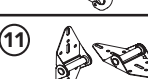
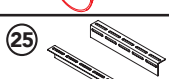

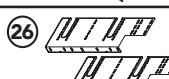
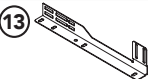






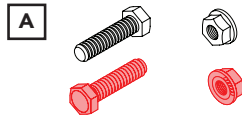
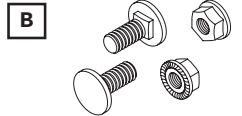
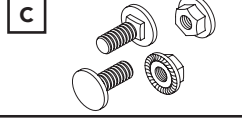
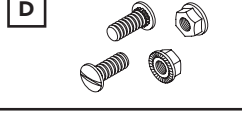
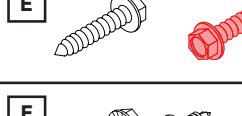
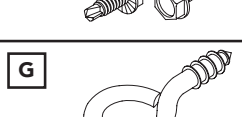
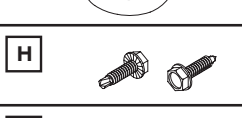
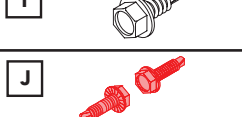

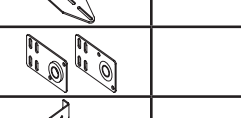
## Preparation:



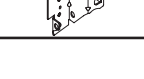


D.I.Y.

## Hardware:

Hardware Identification			
	Roller		Lift Handle/Step Plate Spacers
	Jamb Brackets (Dependent on height)		Shaft
	Spring Anchor		E-Strut(s)
	Torsion Cables		Football Retainer
	End Bearing Plate		Coupler
	Cable Drums		Half-Hinge
	Top Bracket		Narrow Rail Hinge
	Lift Handle(s)/ Step Plate		Cap Strut(s)
	End Hinge/ Roller Carrier		Hinge Shim
	Bottom Bracket		Drum
	Intermediate Hinge		5-Slot Angle
	Stamped Steel Bearing		Double End Bearing Plate
	Flag Bracket		Double Spring Anchor
	Torsion Spring		

Fasteners	
	3/8" x 1 1/2" Hex Head Bolt and 3/8" Serrated Washer Hex Nut
	5/16" x 3/4" Carriage Bolt and 5/16" Serrated Washer Hex Nut
	1/4" x 5/8" Carriage Bolt and 1/4" Serrated Washer Hex Nut
	1/4" x 5/8" Track Bolt and 1/4" Serrated Washer Hex Nut
	5/16" x 1 5/8" Lag Bolt
	1/4" x 3/4" Self tapping Hex Head Screw
	Pull Rope Tie Down Eyelet
	#6 - 1/2 Hex Head Tek Screw
	5/16" x 1" Self tapping Hex Head Tek Screw
	1/4" x 1" Self tapping Hex Head Screw

Low Head Room Torsion Spring Front and Rear Mount	
	Low Head Room Front and Rear Top Fixture
	End Bearing Plate
	Low Head Room Front and Rear Outside Hook-up Bottom Fixture

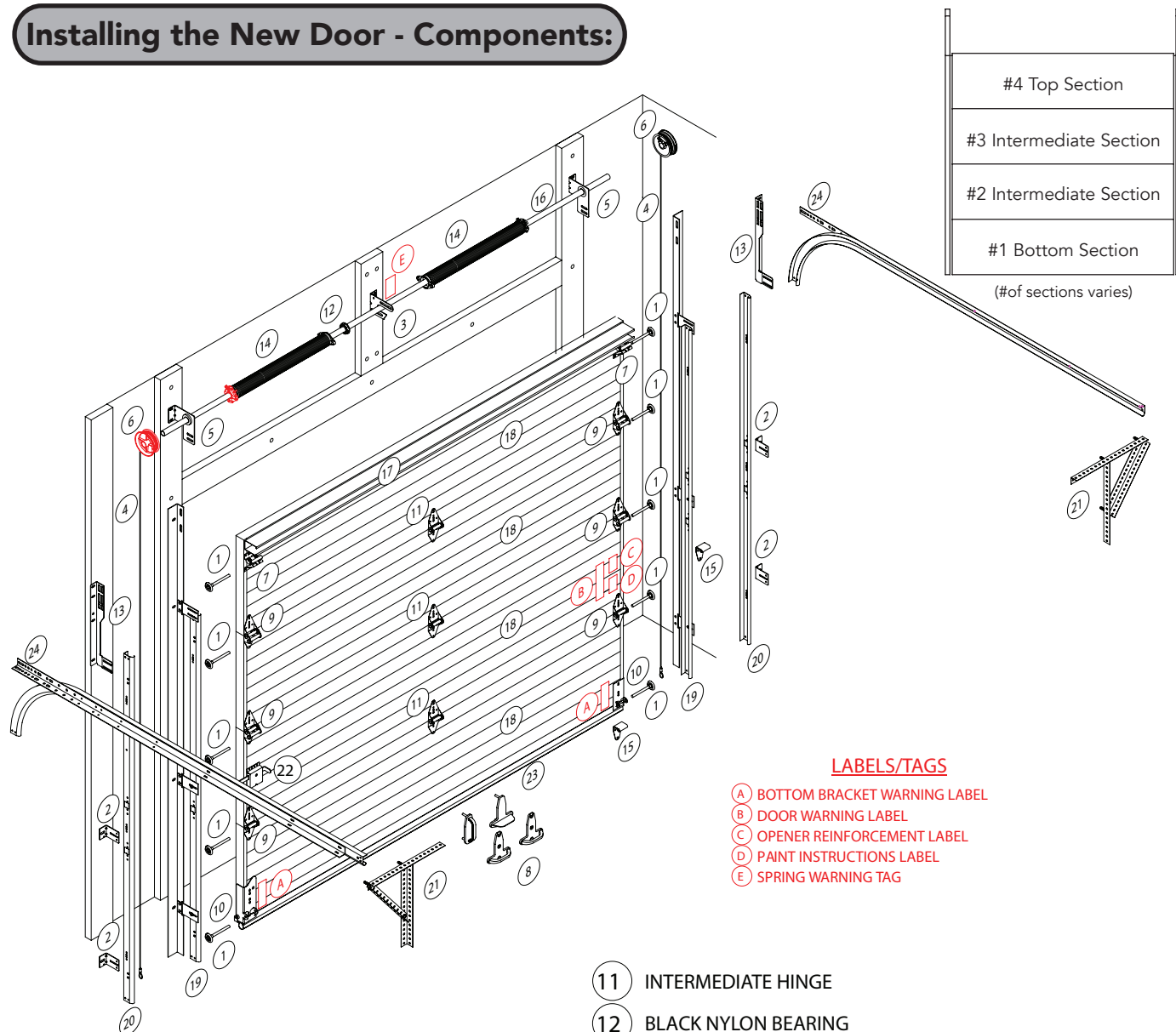
## Need to find more info on your door?

Simply scan the QR code on the section label of your door!

Door Finder® is designed to be used from your mobile device but you can also enter the serial number from a desktop computer on [i.haasdoor.com/doorfinder](http://i.haasdoor.com/doorfinder).



## Installing the New Door - Components:



#4 Top Section

#3 Intermediate Section

#2 Intermediate Section

#1 Bottom Section

(#of sections varies)

### LABELS/TAGS

- (A) BOTTOM BRACKET WARNING LABEL
- (B) DOOR WARNING LABEL
- (C) OPENER REINFORCEMENT LABEL
- (D) PAINT INSTRUCTIONS LABEL
- (E) SPRING WARNING TAG

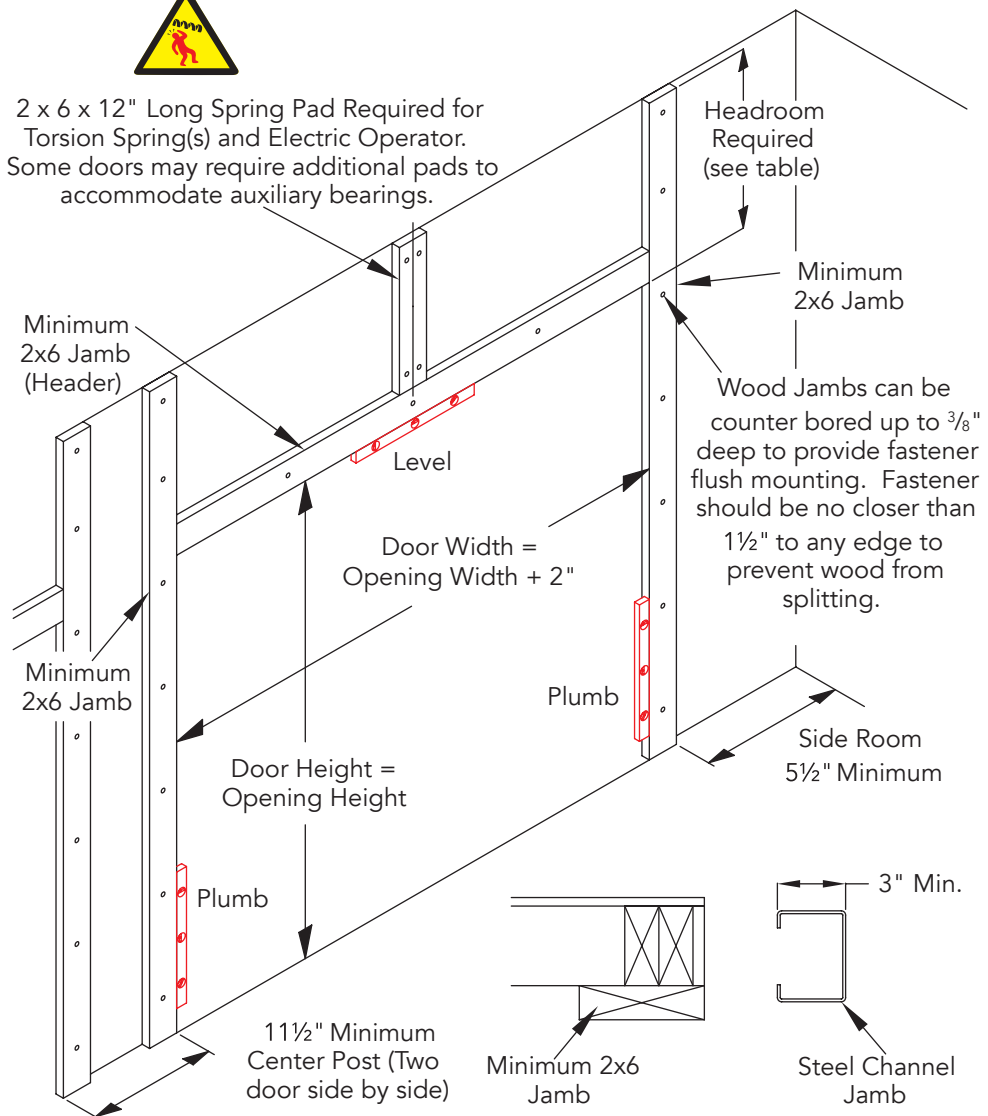
- (1) ROLLER
- (2) JAMB BRACKETS
- (3) SPRING ANCHOR
- (4) TORSION CABLE
- (5) END BEARING PLATE (L&R)
- (6) CABLE DRUM (L & R)
- (7) TOP BRACKET
- (8) STEP PLATE AND LIFT HANDLES (OTIONAL)
- (9) END HINGE/ROLLER CARRIER
- (10) BOTTOM BRACKET (L & R)
- (11) INTERMEDIATE HINGE
- (12) BLACK NYLON BEARING
- (13) FLAG BRACKET (L & R)
- (14) TORSION SPRING (L & R)
- (15) LIFT HANDLES/STEP PLATES
- (16) TUBE SHAFT
- (17) E STRUT
- (18) DOOR PANEL
- (19) VERTICAL TRACK/ANGLE ASSEMBLY (L & R)
- (20) VERTICAL TRACK (L & R)
- (21) HANGER (DYI - NOT SUPPLIED)
- (22) SLIDE LOCK (OPTIONAL)
- (23) BOTTOM SEAL
- (24) HORIZONTAL TRACK & ANGLE (L & R)

## Opening Preparation:

TRACK RADIUS	Counter-balance Type	Minimum Head-room*
12" RADIUS	Torsion	11.5"
	Extension	10.5"
15" RADIUS	Torsion	15.5"
	Extension	13.5"
LOW HEADROOM	Rear Torsion	3"
	Front Torsion	11.5"
	Extension	6"



2 x 6 x 12" Long Spring Pad Required for Torsion Spring(s) and Electric Operator. Some doors may require additional pads to accommodate auxiliary bearings.



Please reference  
DASMA Technical Data  
Sheet #156  
for proper instructions.  
[www.dasma.com](http://www.dasma.com)



**WARNING!** Torsion spring installation requires a center spring mounting pad. **Minimum size should be 2" x 6" x 12" of Grade 2 or better Southern /Yellow Pine.** It should be attached securely using (4) 3/8" x 3" lag screws. Lag screws not included. Use (4) 3/8" masonry anchors to mount into concrete. **DO NOT** use wood labeled Spruce/Pine/Fir (SPF).



- If the spring pad splits during or after the torsion spring(s) are wound, it should be replaced by a professional installer. **DO NOT attempt to remove or repair the mounting pad(s) once a spring is wound.**
- DO NOT install spring mounting pads, track, or sway braces through drywall.** The drywall reduces the engagement area of the lag screws, reducing the strength of the door assembly.



**STOP!** If installing Rear Torsion, Low Head Room Spring Counterbalance, the spring pad will be mounted on the ceiling with the same requirements for strength.

**STOP!** If door being installed is a designated Wind Load garage door, a 1" overlap of the door to the door frame is required.

**STOP!** Before you begin installation of your Haas Door, verify you have the proper materials and clearances required.

- Ensure you have enough space to maneuver the door sections to prevent potential damage.
- Confirm the door is the proper size for the opening.
- Confirm you have enough side and head room for the planned installation. \*Electric operators require additional headroom. See instructions provided with operator for exact amount.

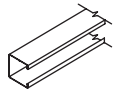
## STEP 1:

### Non-Insulated Door

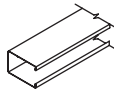


Model	13'-3" thru 16'-2"		16'-3" thru 18'-2"		18'-3" thru 23'-2"		23'-3" thru 24'-2"		24'-3" thru 30'-2"	
	Qty	Size	Qty	Size	Qty	Size	Qty	Size	Qty	Size
C2011, C2011-L, C2011-S C2411, C2411-L, C2411-S	1 E-Strut per section	2"	1 E-Strut per section	2"	1 E-Strut per section	3"	1 E-Strut per section	4"	1 E-Strut per section	6"
C2460, C2461 C2470, C2470L, C2480, C2480L, C2480-S	1 E-Strut per section	2"	1 E-Strut per section	2"	1 E-Strut per section	3"	1 E-Strut per section	4"	Maximum Door Width: 24'-2"	
C2511, C2511-L, C2511-S	1 E-Strut per section	2"	Maximum Door Width: 16'-2"							

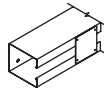
Model	8'-0" thru 13'-11"		14'-0" thru 18'-2"		18'-3" thru 30'-2"					
	Qty	Size	Qty	Size	Qty	Size	Qty	Size	Qty	Size
C2460, C2460L	1 E-Strut per section	2"	1 E-Strut per section	2"	Maximum Door Width: 18'-2"					



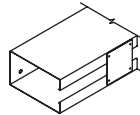
2" E-Strut



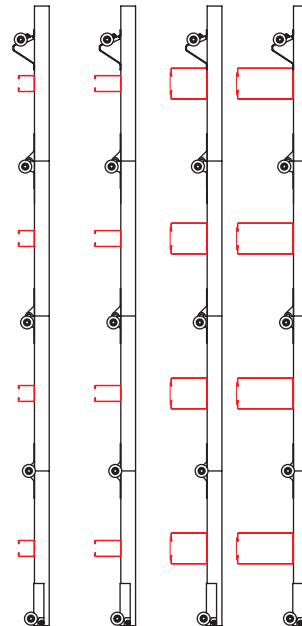
3" E-Strut



4" E-Strut



6" E-Strut

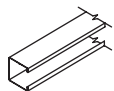


For window sections,  
strut should be at top.

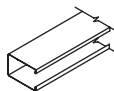
### Insulated Door



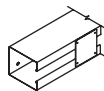
Model	13'-3" thru 18'-2"		18'-3" thru 23'-2"		23'-3" thru 24'-2"		24'-3" & over	
	Qty	Size	Qty	Size	Qty	Size	Qty	Size
714, 716, 732, 733, 750, 751, 780, 790, 814, 816, 832, 833, 2014, 2016, 2032, 2033, 2080, 2081, 2082, 2090, 5214, 5216, 5280, 5814, 5816, 5880	1 E-Strut per section	2"	1 E-Strut per section	3"	1 E-Strut per section	4"	1 E-Strut per section	6"
610, 612, 614, 616, 632, 633, 660, 664, 670, 673, 680, 690, 710, 712, 760, 764, 770, 773 2010, 2012, 2060, 2064, 2070, 2073, 5270, 5280	1 E-Strut per section	2"	Maximum Door Width: 18'-2"					



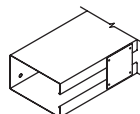
2" E-Strut



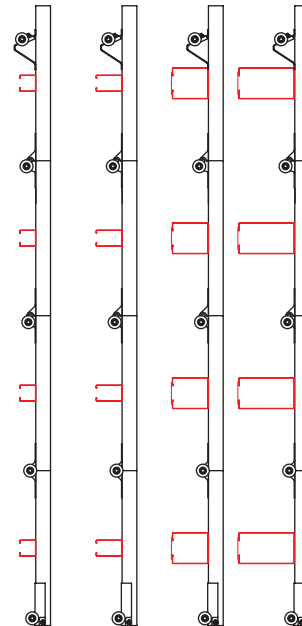
3" E-Strut



4" E-Strut



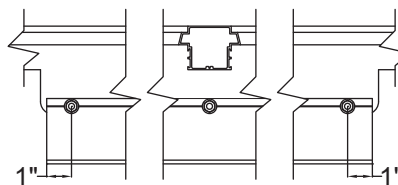
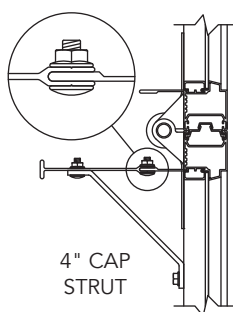
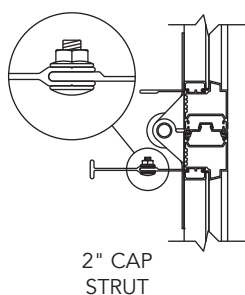
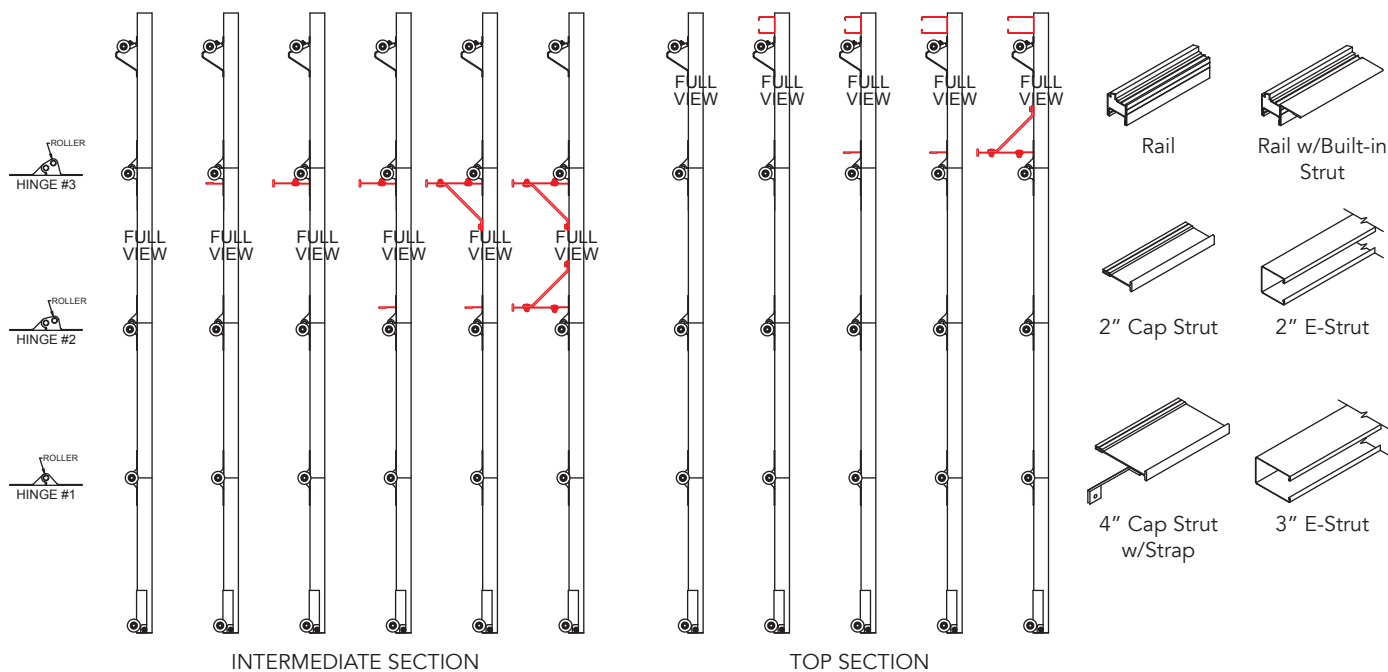
6" E-Strut



For window sections,  
strut should be at top.



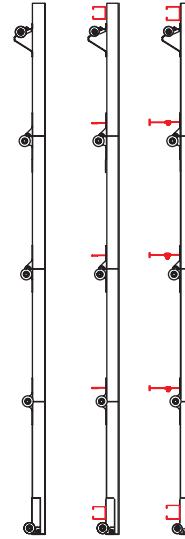
	Door Width Up To:	Up to 8'-2"		8'-3" thru 12'-2"		12'-3" thru 14'-2"		14'-3" thru 16'-2"		16'-3" thru 18'-2"		18'-3" thru 24'-2"		24'-3" thru 28'-2"	
		Qty	Size	Qty	Size	Qty	Size	Qty	Size	Qty	Size	Qty	Size	Qty	Size
Intermediate Section	1/8" Glass	No Strut	N/A	No Strut	N/A	1	Built-in Strut	1	Built-in Strut w/ 2" cap strut	1	Built-in Strut w/ 2" cap strut	2	Built-in Strut w/4" cap strut	2 of each	-Built-in Strut -4" cap strut
	1/4" or 1/2" Glass	No Strut	N/A	1	Built-in Strut	1	Built-in Strut w/ 2" cap strut	1	Built-in Strut w/ 2" cap strut	2	Built-in Strut w/ 2" cap strut	2	Built-in Strut w/4" cap strut	2 of each	-Built-in Strut -4" cap strut
Top Section	1/8" Glass	No Strut	N/A	No Strut	N/A	1	2" E-Strut	1	2" E-Strut	1	2" E-Strut	1 of each	-Built-in Strut -3" E-Strut	1 of each	-Built-in Strut w/4" cap strut -3" E-Strut
	1/4" or 1/2" Glass	No Strut	N/A	1	2" E-Strut	1	2" E-Strut	1	2" E-Strut	1	Built-in Strut w/ 2" E-strut	1 of each	-Built-in Strut -3" E-Strut	1 of each	-Built-in Strut w/4" cap strut -3" E-Strut



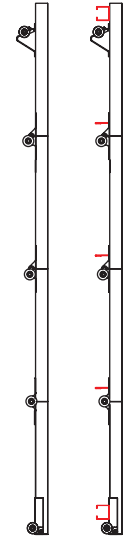
# CA-110/CA-110i



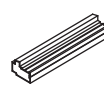
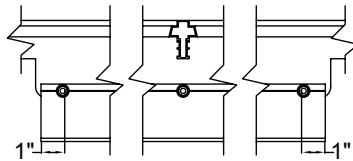
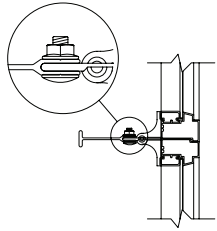
	Door Width Up To:	Up to 8'-2"		8'-3" thru 12'-2"		12'-3" thru 15'-2"		15'-3" thru 16'-2"	
		Qty	Size	Qty	Size	Qty	Size	Qty	Size
Top Section	1/8" Glass (CA-110)	No Strut	N/A	No Strut	N/A	1 of each	-Built-In Strut -2" E-Strut	1 of Each	-Built-In Strut with 2" Cap -2" E-Strut
	1/4" or 1/2" Glass (CA-110i)	No Strut	N/A	1 of each	Built-In Strut w/ 2" E-Strut	N/A		N/A	
Intermediate Section	1/8" Glass (CA-110)	No Strut	N/A	No Strut	N/A	1	Built-In Strut	1	Built-In Strut w/ 2" Cap Strut
	1/4" or 1/2" Glass (CA-110i)	No Strut	N/A	1	Built-In Strut	N/A		N/A	
Bottom Section	1/8" Glass (CA-110)	No Strut	N/A	No Strut	N/A	1	2" E-Strut	1	2" E-Strut
	1/4" or 1/2" Glass (CA-110i)	No Strut	N/A	1	2" E-Strut	N/A		N/A	



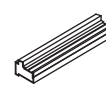
CA-110 Strut Schedule



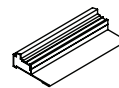
CA-110i Strut Schedule



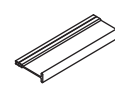
Top Rail



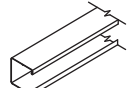
Bottom Rail



Bottom Rail w/Built-in Strut



2" Cap Strut

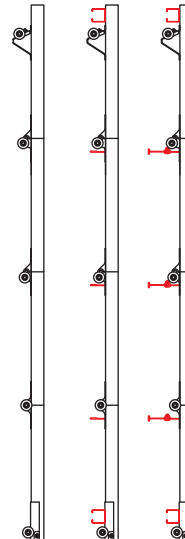


2" E-Strut

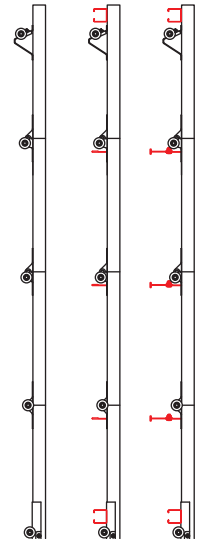
# CA-315/CA-315i



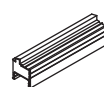
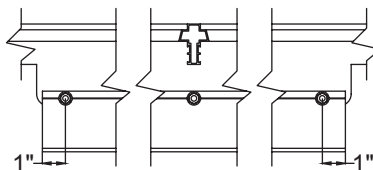
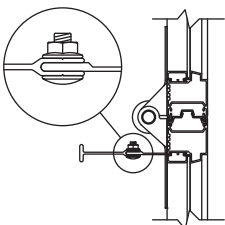
	Door Width Up To:	Up to 8'-2"		8'-3" thru 12'-2"		12'-3" thru 15'-2"		15'-3" thru 16'-2"	
		Qty	Size	Qty	Size	Qty	Size	Qty	Size
Top Section	1/8" Glass (CA-315)	No Strut	N/A	No Strut	N/A	1	2" E-Strut	1	2" E-Strut
	1/4" or 1/2" Glass (CA-315i)	No Strut	N/A	1	2" E-Strut	1	2" E-Strut	1	2" E-Strut
Intermediate Section	1/8" Glass (CA-315)	No Strut	N/A	No Strut	N/A	1	Built-In Strut	1	Built-In Strut w/2" Cap Strut
	1/4" or 1/2" Glass (CA-315i)	No Strut	N/A	1	Built-In Strut	1	Built-In Strut w/2" Cap Strut	1	Built-In Strut w/2" Cap Strut
Bottom Section	1/8" Glass (CA-315)	No Strut	N/A	No Strut	N/A	1 of Each	-Built-In Strut -2" E-Strut	1 of Each	-Built-In Strut with 2" Cap -2" E-Strut
	1/4" or 1/2" Glass (CA-315i)	No Strut	N/A	1 of Each	-Built-In Strut -2" E-Strut	1 of Each	-Built-In Strut w/2" Cap Strut -2" E-Strut	1 of Each	-Built-In Strut w/2" Cap Strut -2" E-Strut



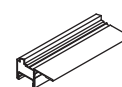
CA-315 Strut Schedule



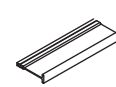
CA-315i Strut Schedule



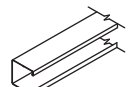
Rail



Rail w/Built-in Strut



2" Cap Strut




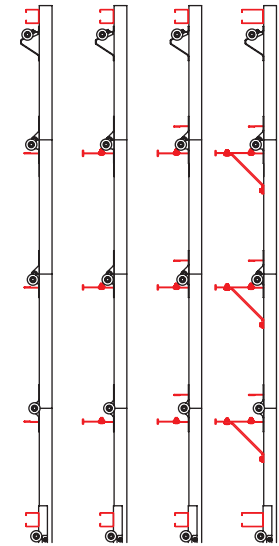
2" E-Strut



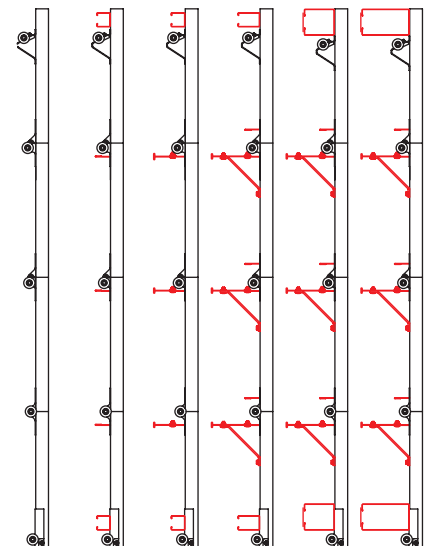
# CA320/CA320i



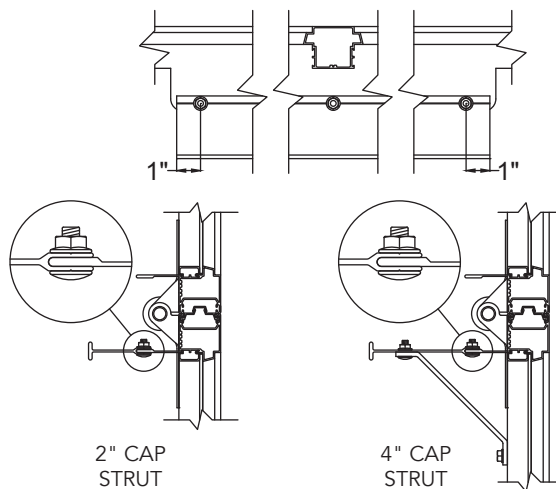
	Door Width Up To:	Up to 8'-2"		8'-3" thru 12'-2"		12'-3" thru 14'-2"		14'-3" thru 16'-2"		16'-3" thru 18'-2"	
		Qty	Size	Qty	Size	Qty	Size	Qty	Size	Qty	Size
Top Section	1/8" Glass (CA320)	No Strut	N/A	No Strut	N/A	1	2" E-Strut	1	2" E-Strut	1	2" E-Strut
	1/4" or 1/2" Glass (CA320i)	No Strut	N/A	1	2" E-Strut	1	2" E-Strut	1	2" E-Strut	1 of Each	-Built-in Strut -2" E-Strut
Intermediate Section	1/8" Glass (CA320)	No Strut	N/A	No Strut	N/A	1	Built-in Strut	1	Built-in Strut w/ 2" cap strut	1	Built-in Strut w/ 2" cap strut
	1/4" or 1/2" Glass (CA320i)	No Strut	N/A	1	Built-in Strut	1	Built-in Strut w/ 2" cap strut	1	Built-in Strut w/ 2" cap strut	2	Built-in Strut w/ 2" cap strut
Bottom Section	1/8" Glass (CA320)	No Strut	N/A	No Strut	N/A	1 of Each	-Built-in Strut -2" E-Strut	1 of Each	-Built-in Strut w/ 2" cap strut -2" E-Strut	1 of Each	-Built-in Strut w/ 2" cap strut -2" E-Strut
	1/4" or 1/2" Glass (CA320i)	No Strut	N/A	1 of Each	-Built-in Strut -2" E-Strut	1 of Each	-Built-in Strut w/ 2" cap strut -2" E-Strut	1 of Each	-Built-in Strut w/ 2" cap strut -2" E-Strut	1 of Each	-Built-in Strut w/ 2" cap strut -2" E-Strut
	Door Width Up To:	18'-3" thru 20'-2"		20'-3" thru 23'-2"		23'-3" thru 24'-2"		24'-3" thru 28'-2"			
		Qty	Size	Qty	Size	Qty	Size	Qty	Size		
Top Section	1/8" Glass (CA-320)	1 of Each	-Built-in Strut -3" E-Strut	1 of Each	-Built-in Strut -3" E-Strut	1 of Each	-Built-in Strut -4" E-Strut	1 of Each	-Built-in Strut -6" E-Strut		
	1/4" or 1/2" Glass (CA-320i)	1 of Each	-Built-in Strut -3" E-Strut	N/A		N/A		N/A			
Intermediate Section	1/8" Glass (CA-320)	1	Built-in Strut w/4" cap strut	1	Built-in Strut w/4" cap strut	1	Built-in Strut w/4" cap strut	1	Built-in Strut w/4" cap strut		
	1/4" or 1/2" Glass (CA-320i)	2	Built-in Strut w/4" cap strut	N/A		N/A		N/A			
Bottom Section	1/8" Glass (CA-320)	1 of Each	-Built-in Strut w/4" cap strut -3" E-Strut	1 of each	-Built-in Strut w/4" cap strut -3" E-Strut	1 of each	-Built-in Strut w/4" cap strut -4" E-Strut	1 of each	-Built-in Strut w/4" cap strut -6" E-Strut		
	1/4" or 1/2" Glass (CA-320i)	1 of Each	-Built-in Strut w/4" cap strut -3" E-Strut	N/A		N/A		N/A			



CA-320i Strut Schedule



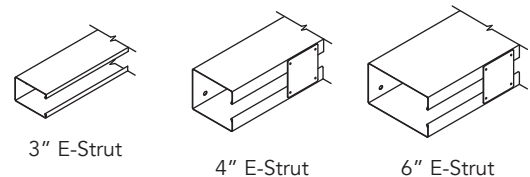
CA-320 Strut Schedule



Rail Rail w/Built-in Strut

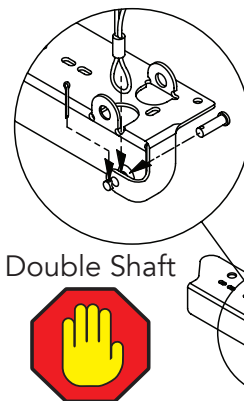
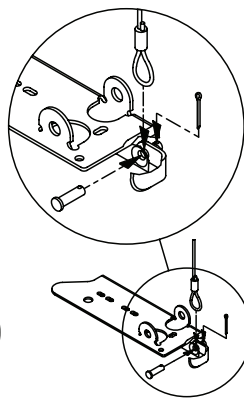
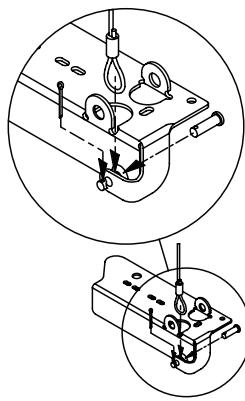
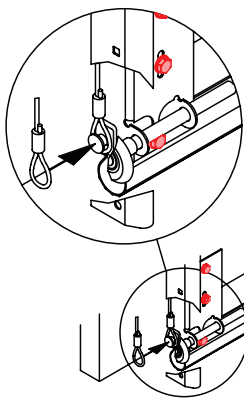


2" Cap Strut 4" Cap Strut w/Strap 2" E-Strut



3" E-Strut 4" E-Strut 6" E-Strut

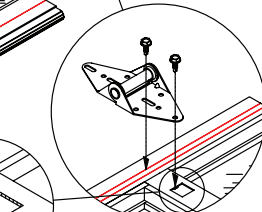
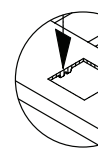
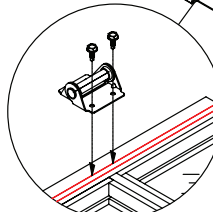
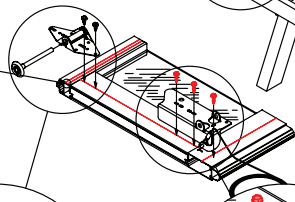
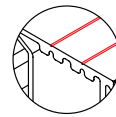
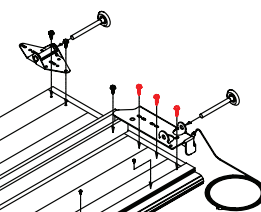
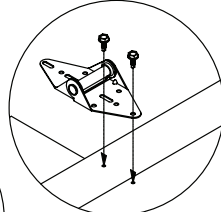
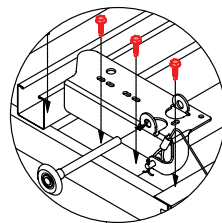
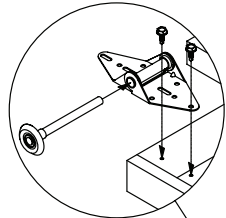
## STEP 2:



Double Shaft



## STEP 3:

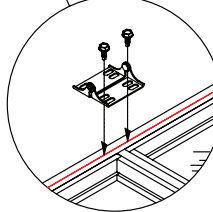
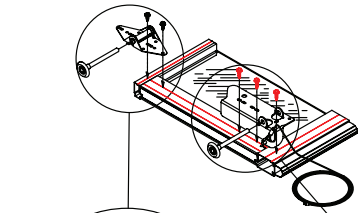


CA 315 & CA 315i  
CA 320 & CA 320i

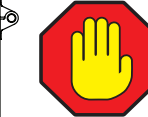
CA 315 & CA 315i  
CA 320 & CA 320i

CA 315 & CA 315i

CA 320 & CA 320i



Outside  
of door



Inside  
of door

Outside  
of door

Inside  
of door

CA 110

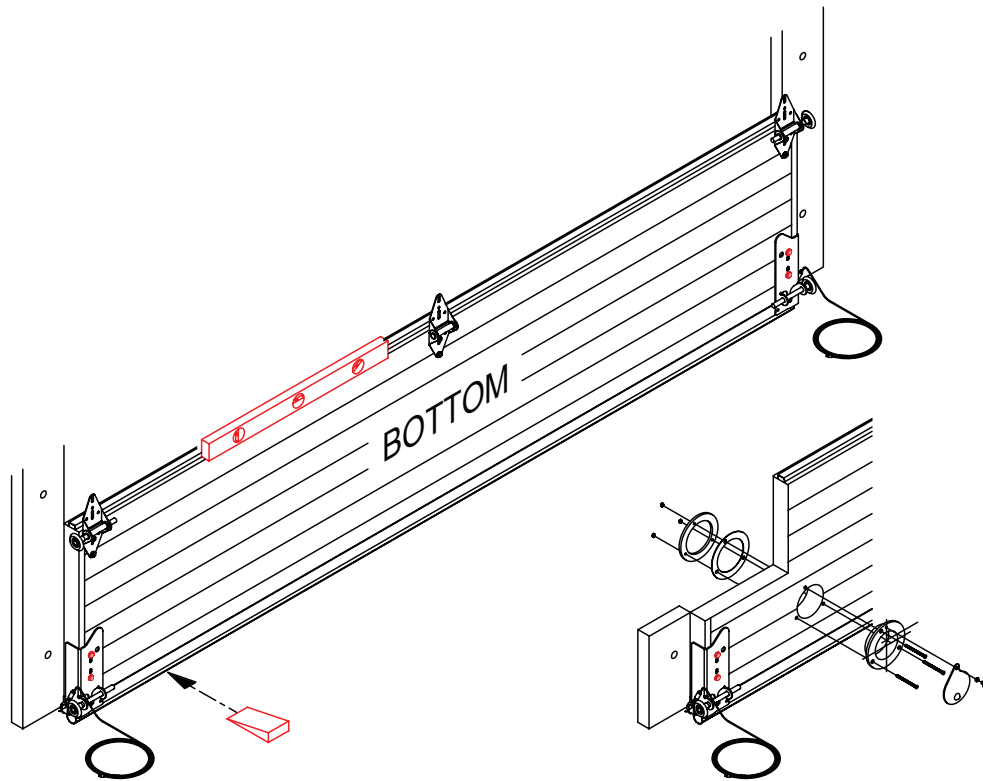
CA 315 & CA 315i  
CA 320 & CA 320i

CA 110

CA 110

CA 110

## STEP 4:



## STEP 5:



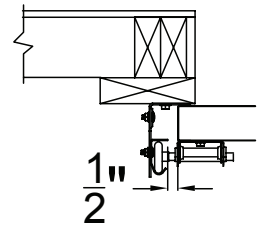
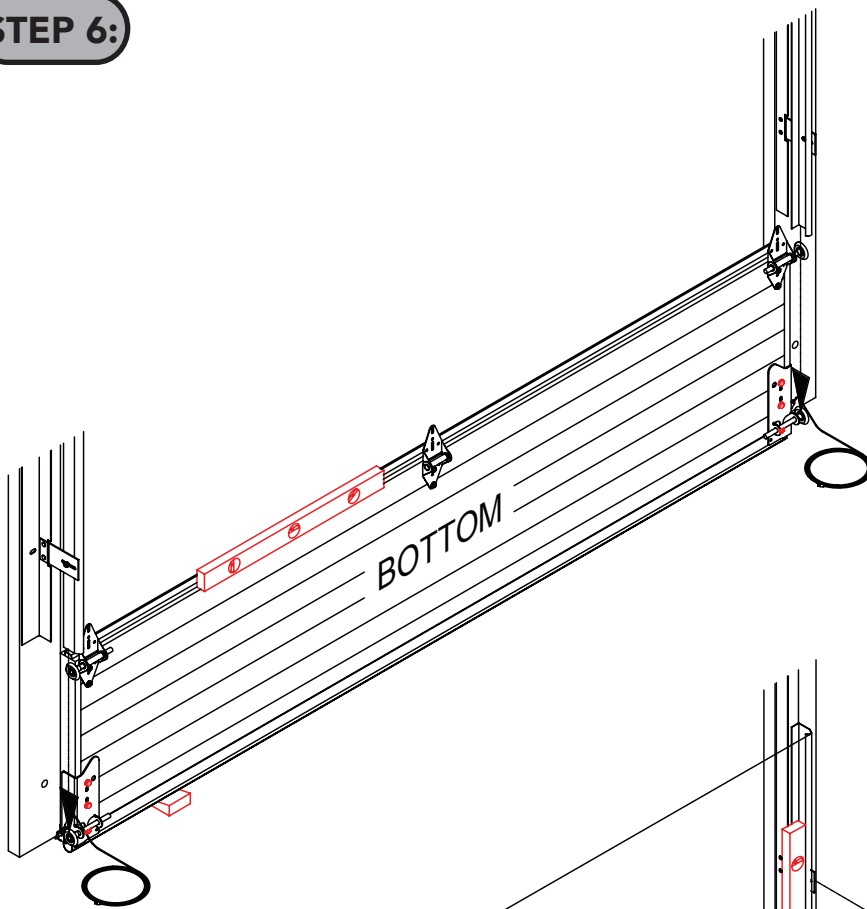
	For 2" Track	For 3" Track
Top Section	Top Bracket	
	Hinge #7	Hinge #9
Intermediate Section		
	Hinge #6	Hinge #8
Intermediate Section		
	Hinge #5	Hinge #7
Intermediate Section		
	Hinge #4	Hinge #6
Intermediate Section		
	Hinge #3	Hinge #5
Intermediate Section		
	Hinge #2	Hinge #4
Lock Intermediate Section		
	Hinge #1	Hinge #3
Bottom Section		
	Top Bracket	

	For 2" Track	For 3" Track
2" Top Section	Top Bracket	
	No Hinge Shims Hinge #7 No Hinge Shims	Hinge #9
2" Intermediate Section		
	No Hinge Shims Hinge #6 No Hinge Shims	Hinge #8
2" Intermediate Section		
	No Hinge Shims Hinge #5 No Hinge Shims	Hinge #7
2" Intermediate Section		
	No Hinge Shims Hinge #4 Hinge Shims	Hinge #6
Full View Section		
	No Hinge Shims Hinge #4 No Hinge Shims	Hinge #6
Full View Section		
	No Hinge Shims Hinge #3 No Hinge Shims	Hinge #5
Full View Lock Section		
	Hinge Shims Hinge #1 No Hinge Shims	Hinge #3
2" Bottom Section		
	Top Bracket	

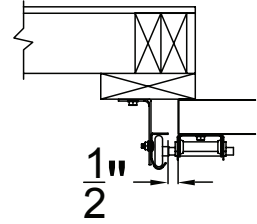
	For 2" Track	For 3" Track
2" Top Section	Top Bracket	
	No Hinge Shims Hinge #7 No Hinge Shims	Hinge #9
2" Intermediate Section		
	No Hinge Shims Hinge #6 No Hinge Shims	Hinge #8
2" Intermediate Section		
	No Hinge Shims Hinge #5 No Hinge Shims	Hinge #7
2" Intermediate Section		
	No Hinge Shims Hinge #4 Hinge Shims	Hinge #6
Full View Section		
	Hinge Shims Hinge #3 No Hinge Shims	Hinge #5
2" Intermediate Section		
	No Hinge Shims Hinge #2 No Hinge Shims	Hinge #4
2" Intermediate Section		
	No Hinge Shims Hinge #1 No Hinge Shims	Hinge #3
2" Bottom Section		
	Top Bracket	

Shims for Full View Sections

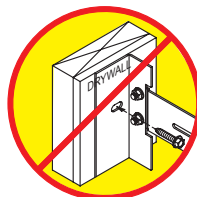
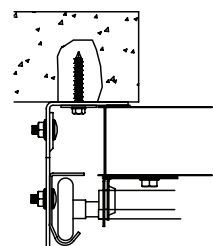
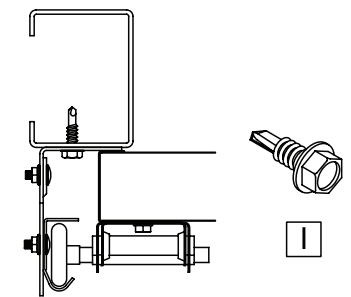
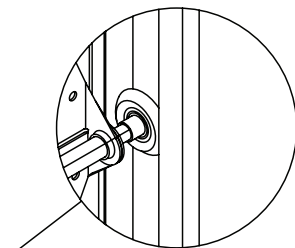
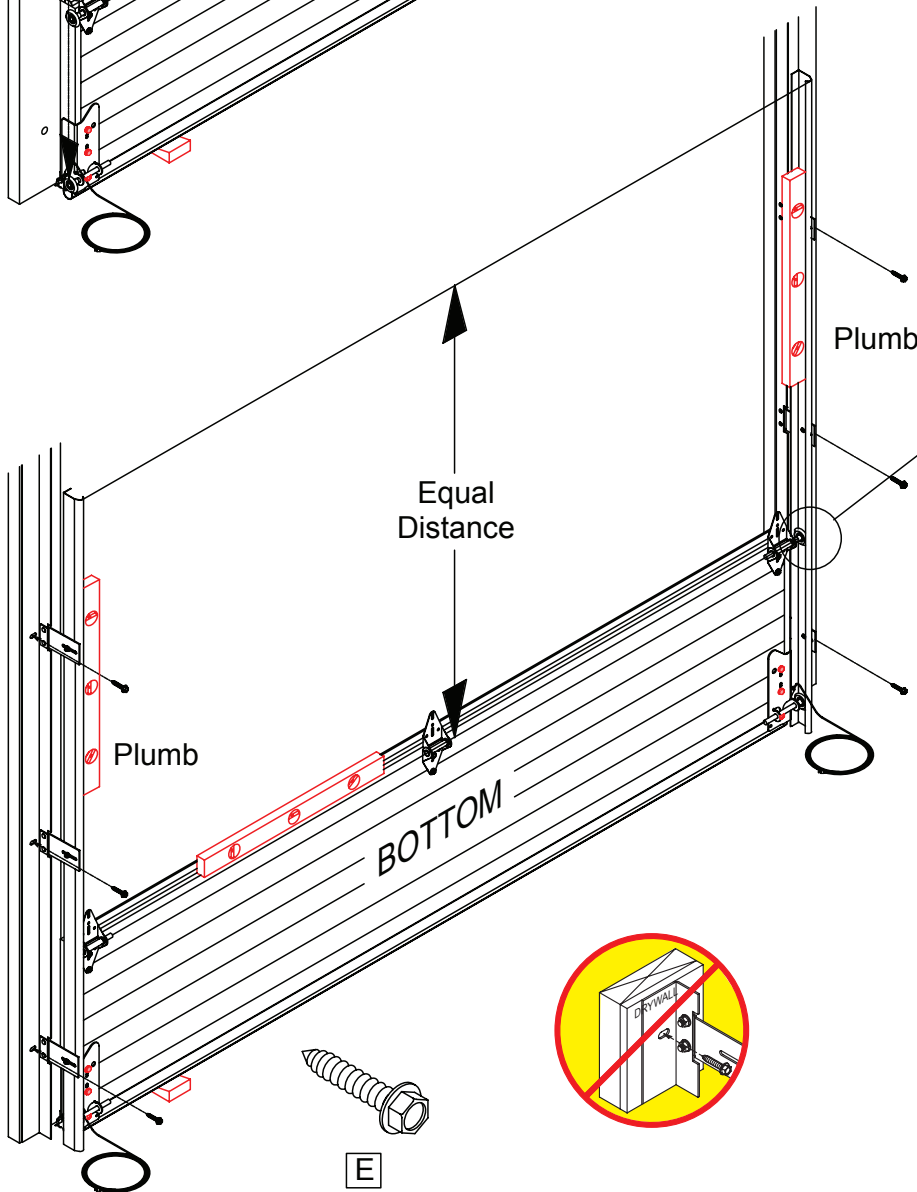
**STEP 6:**



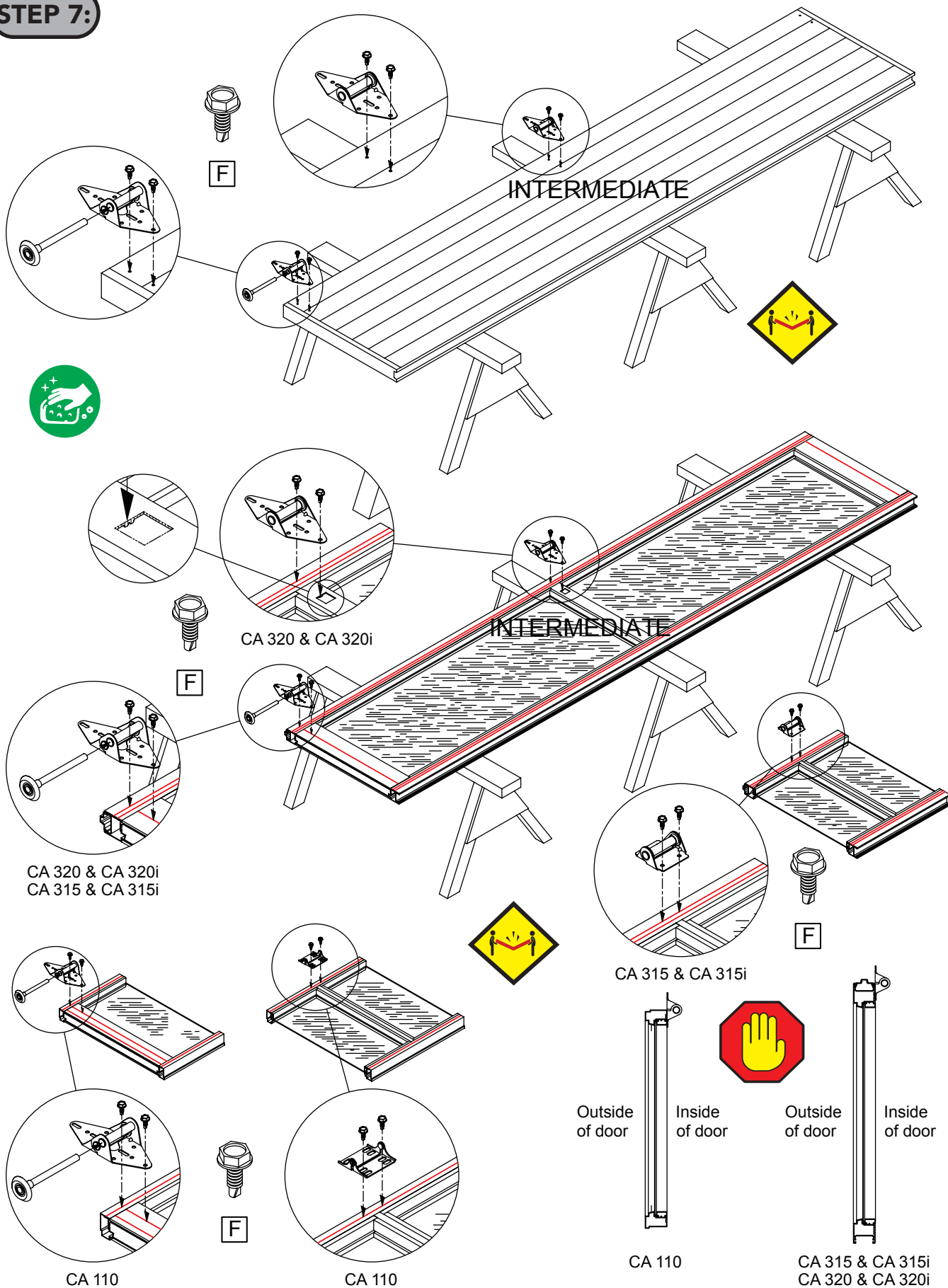
REVERSE ANGLE MOUNT



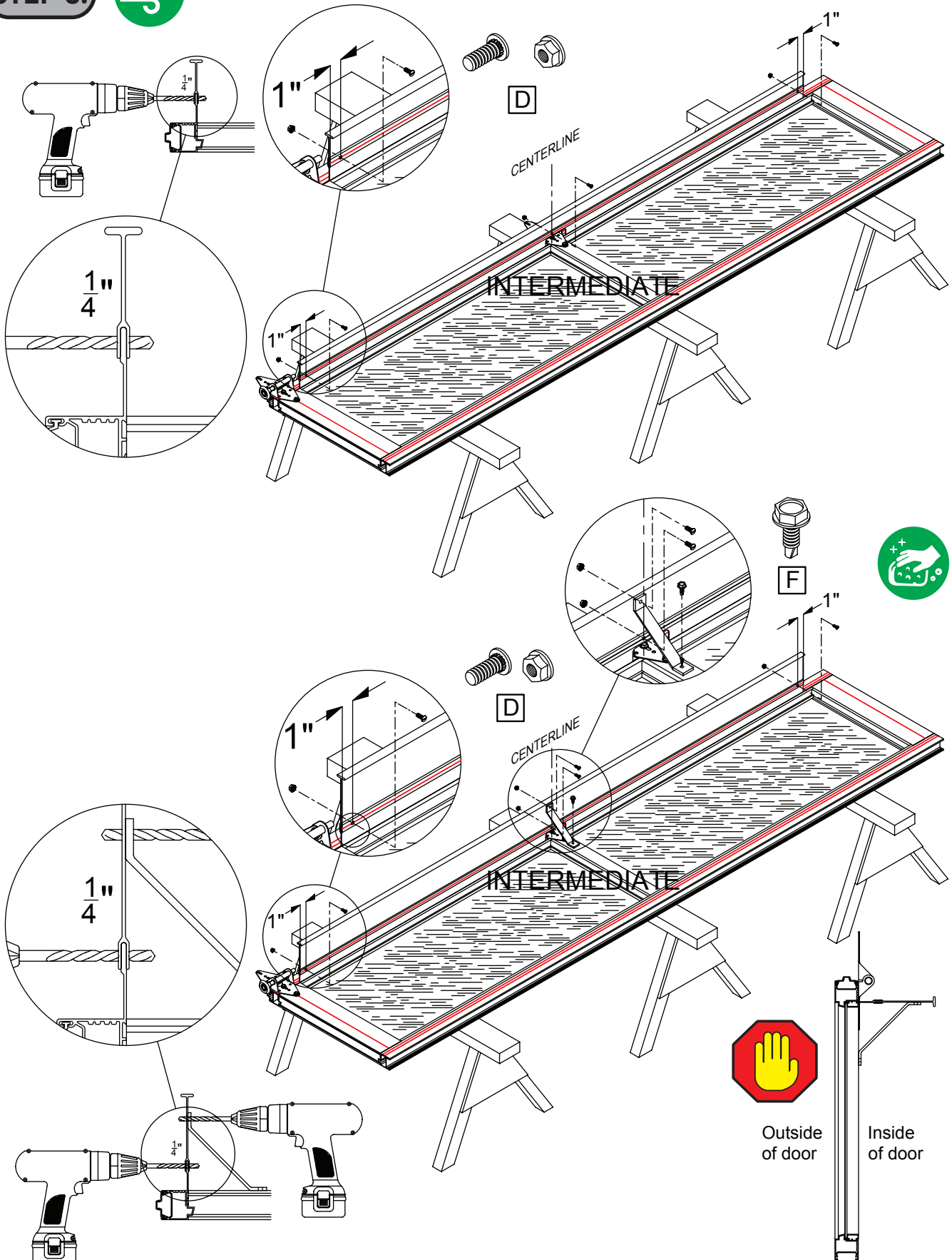
BRACKET MOUNT  
or ANGLE MOUNT



# STEP 7:



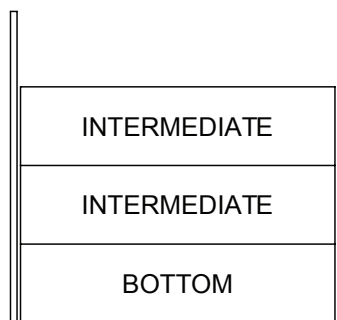
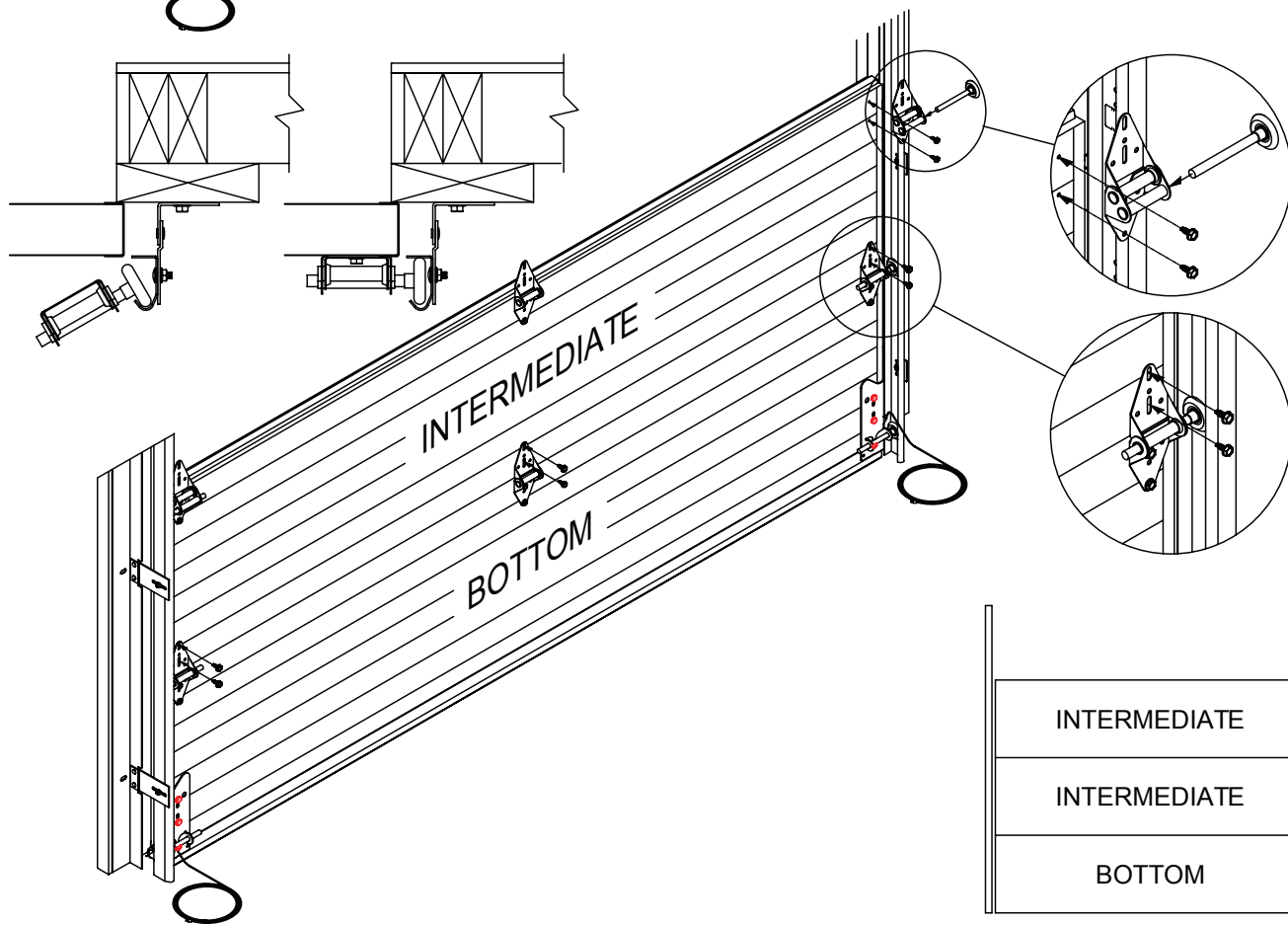
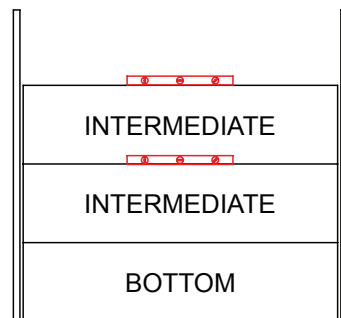
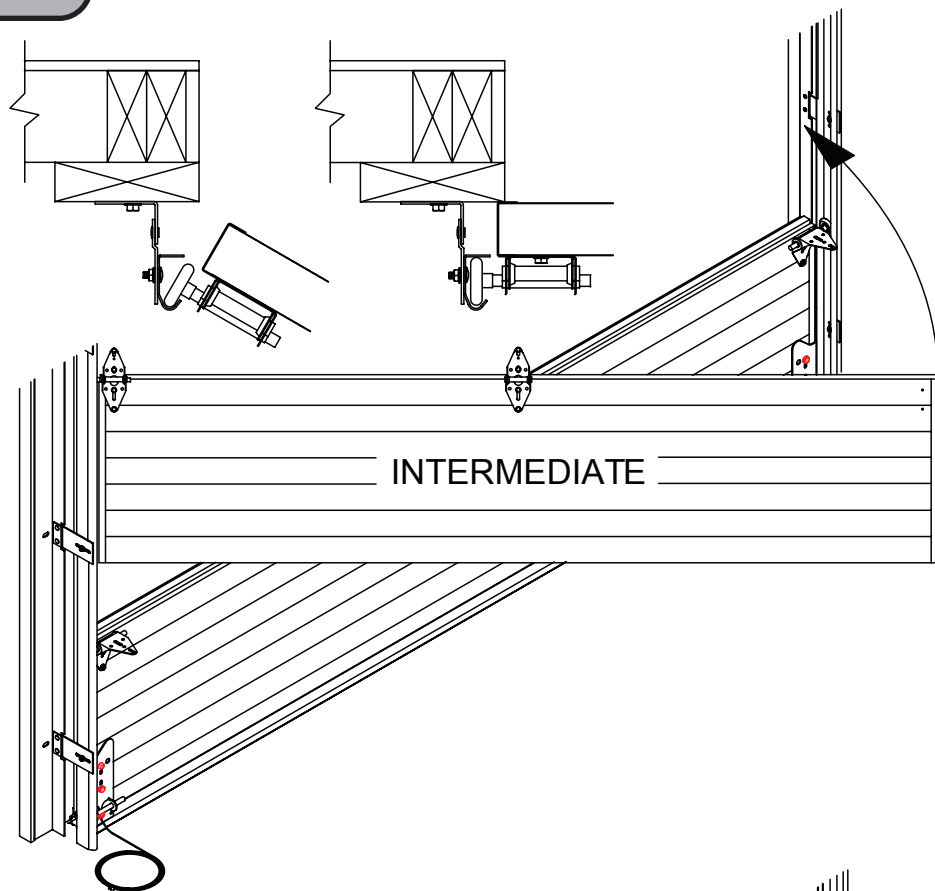
STEP 8:



CA 320 & CA 320i

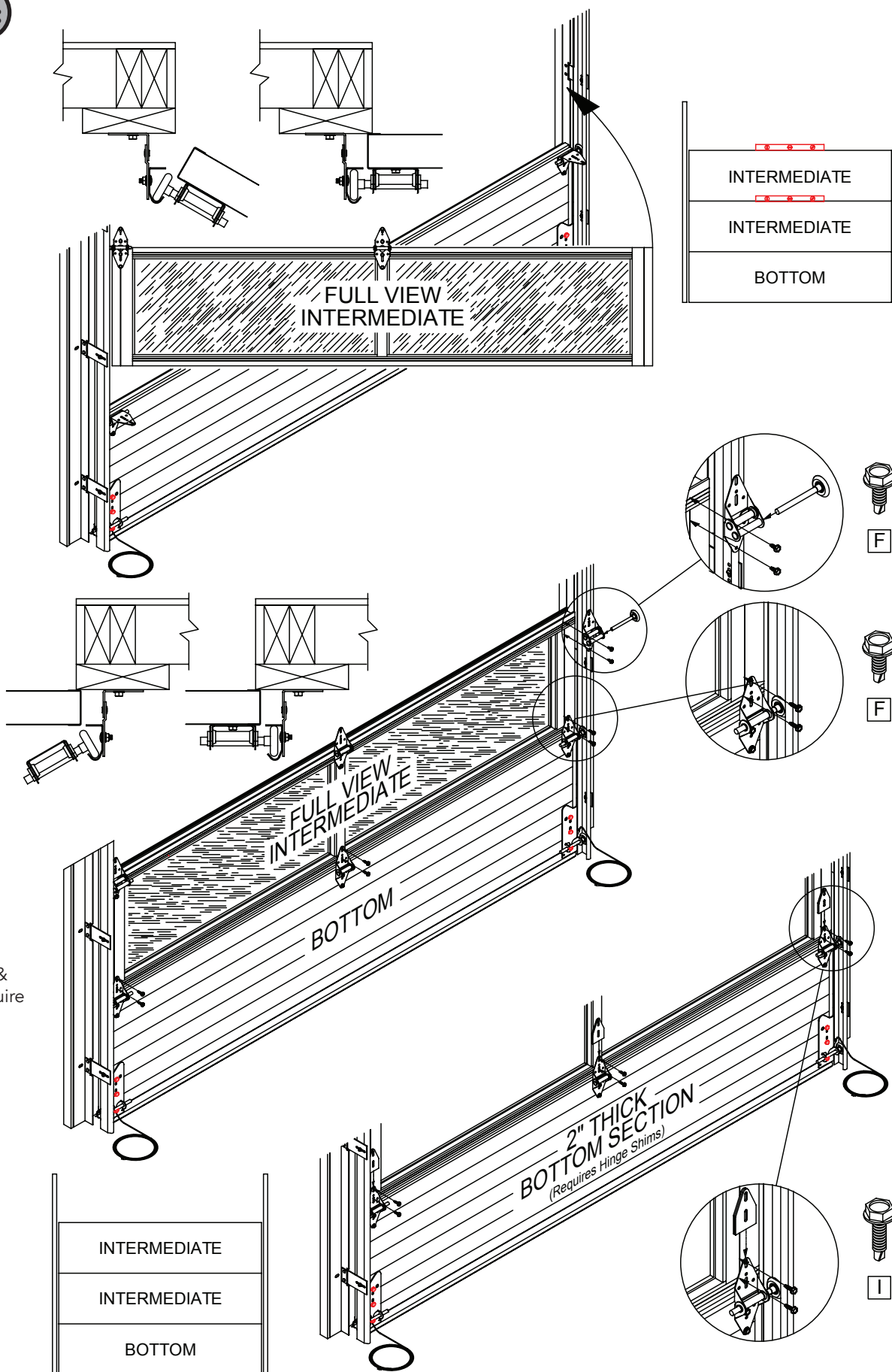


**STEP 9:**



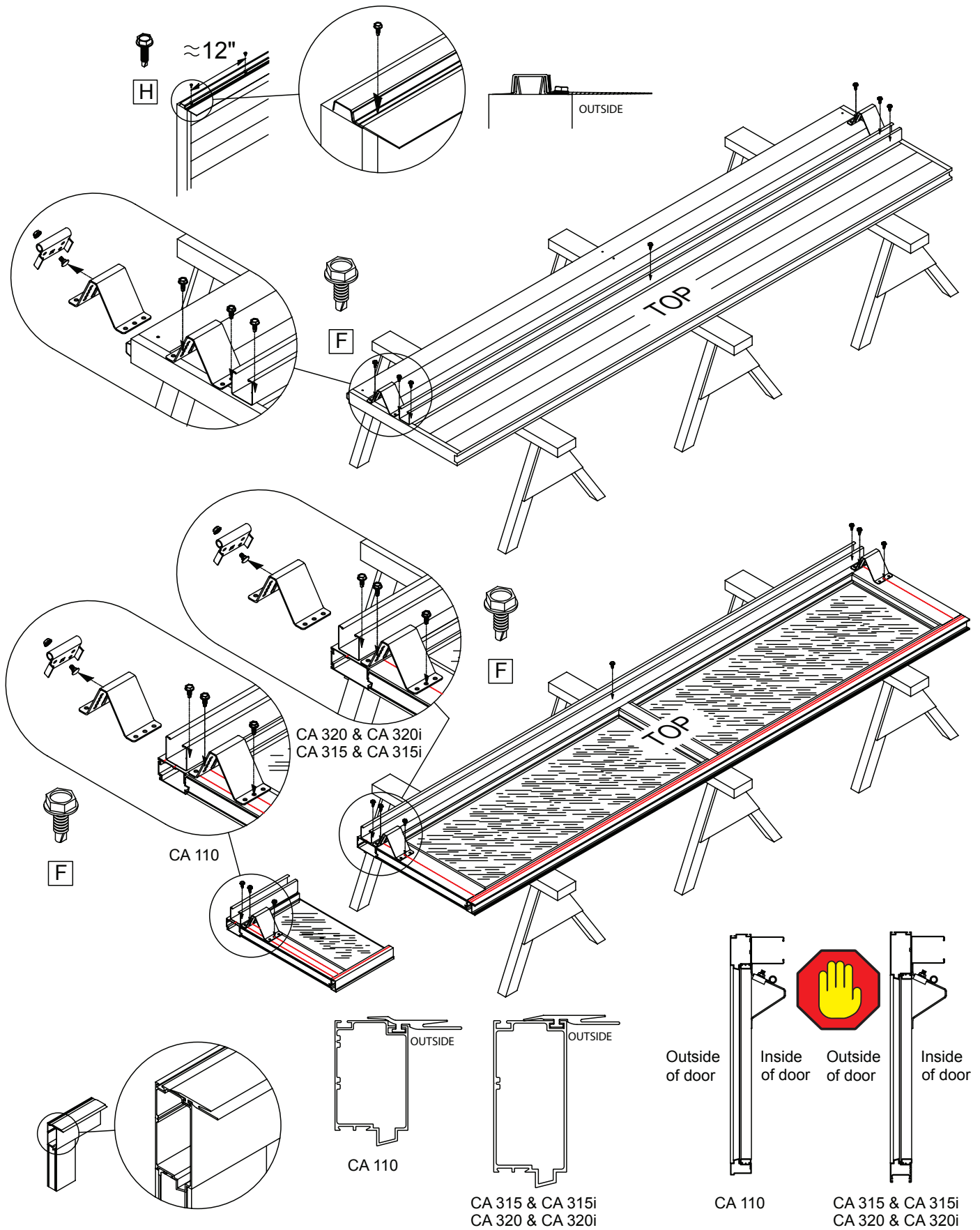


# STEP 10:



Ribbed Steel & 2000 Series require hinge shims.

# STEP 11:



**STEP 12:**



Choose next Step.

**STEP 13A:**

Front Torsion Spring

**STEP 13B:**

High Lift  
Front Torsion Spring

**STEP 13C:**

Vertical Lift  
Front Torsion Spring

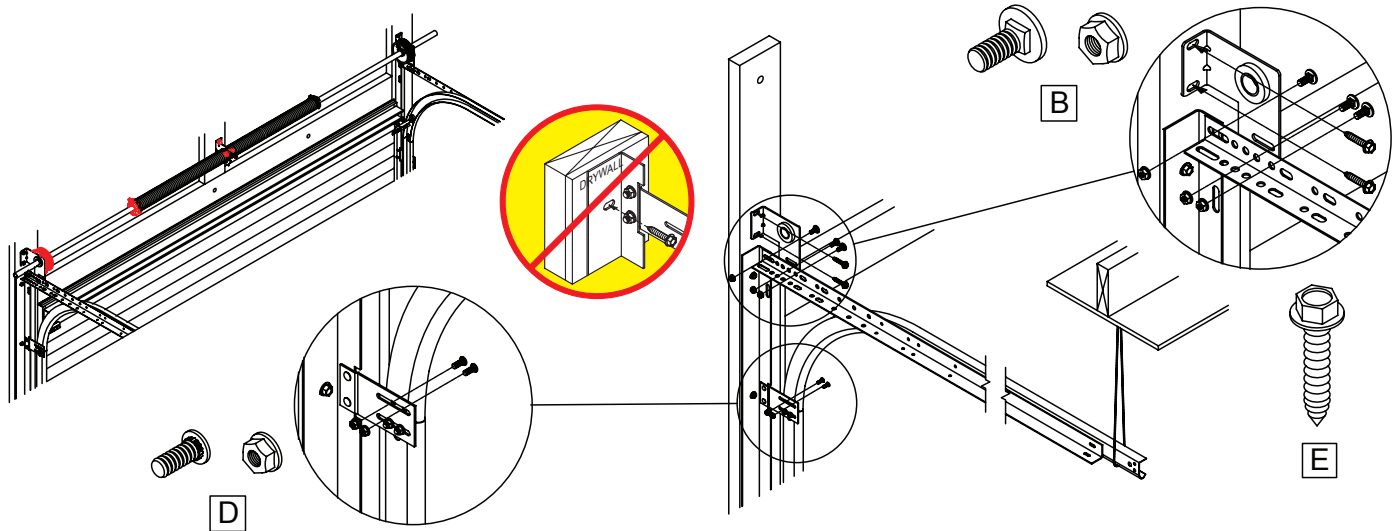
**STEP 21:**

Front Low-Headroom  
Torsion Spring

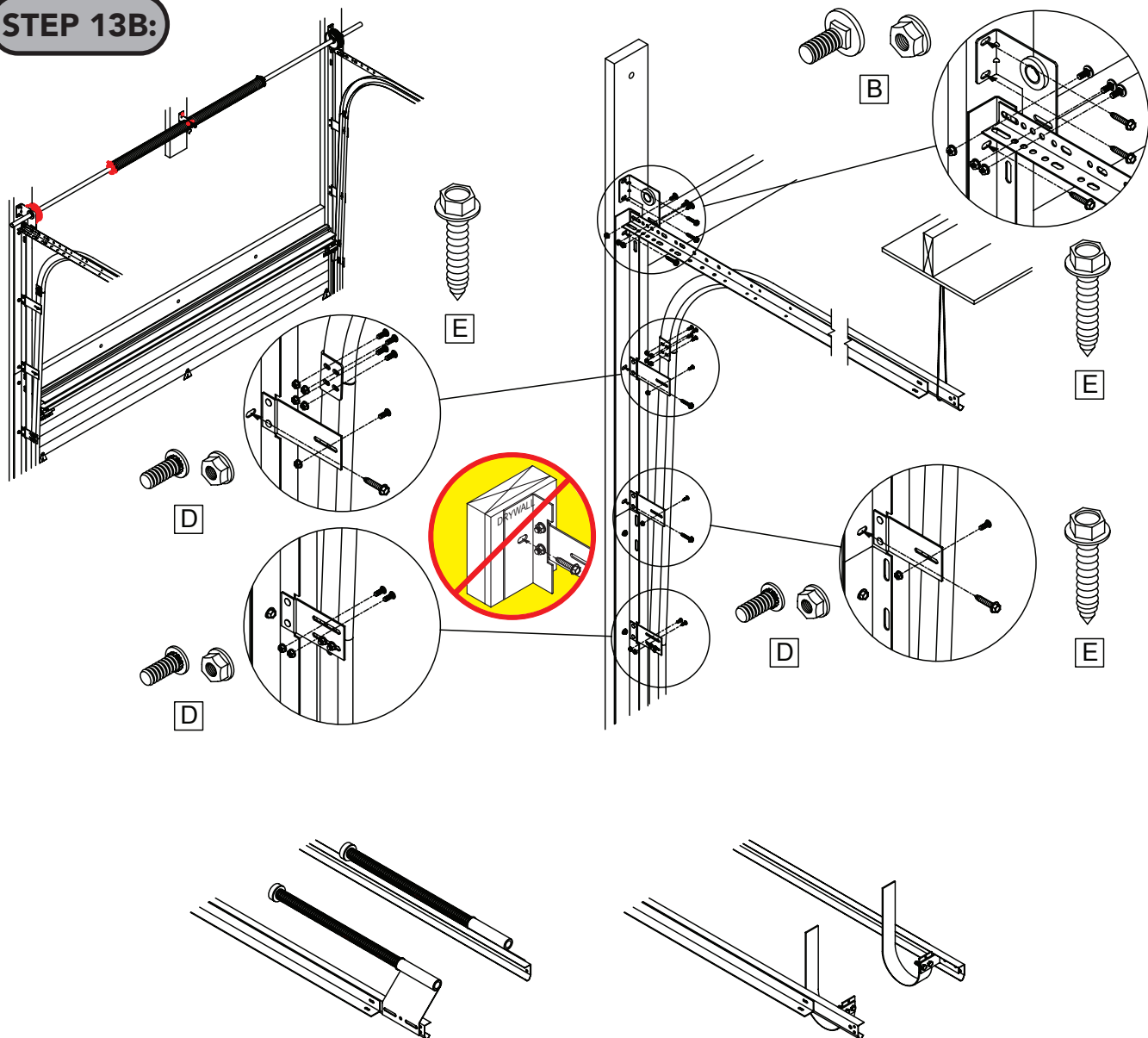
**STEP 28:**

Rear Low-Headroom  
Torsion Spring

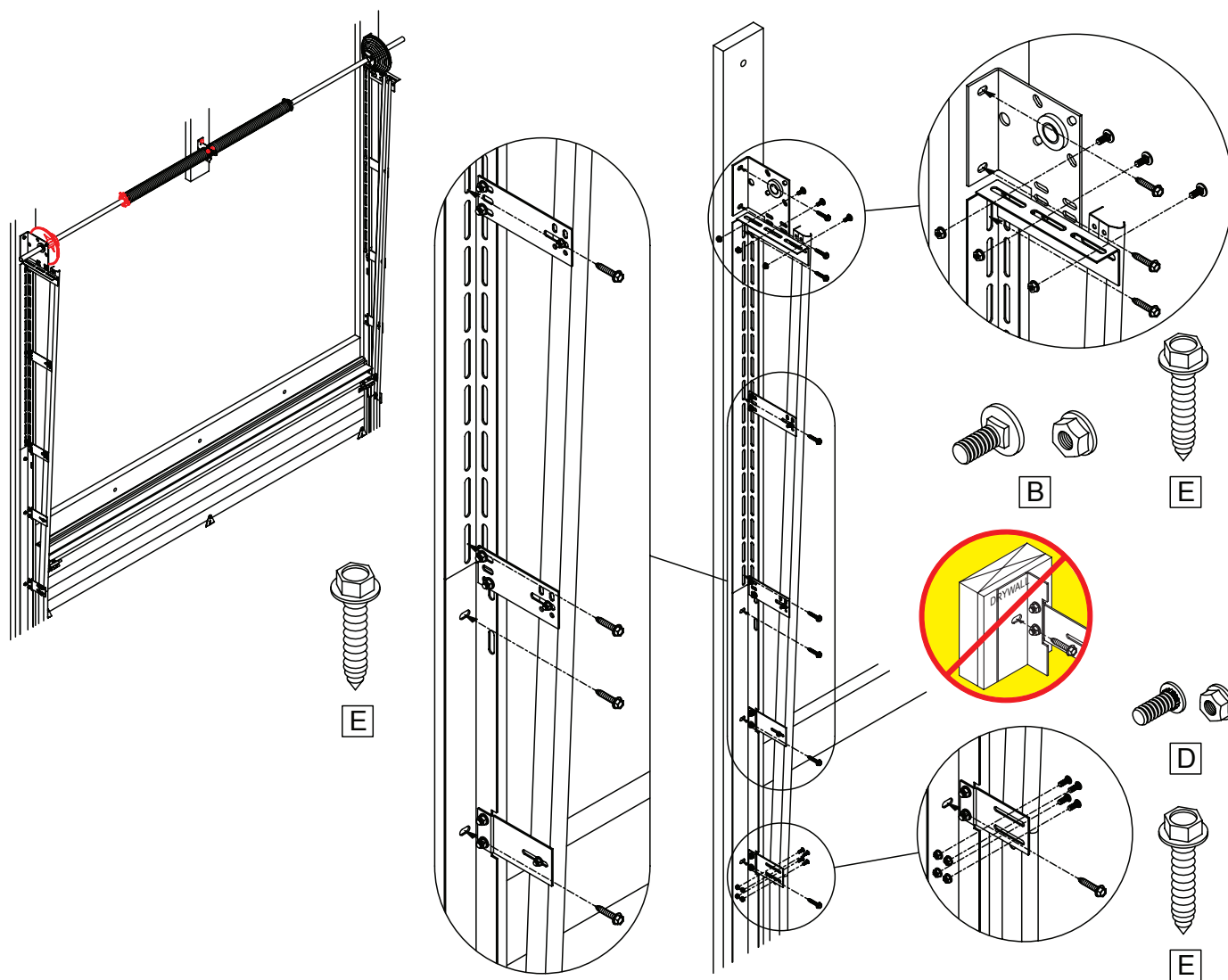
### STEP 13A:



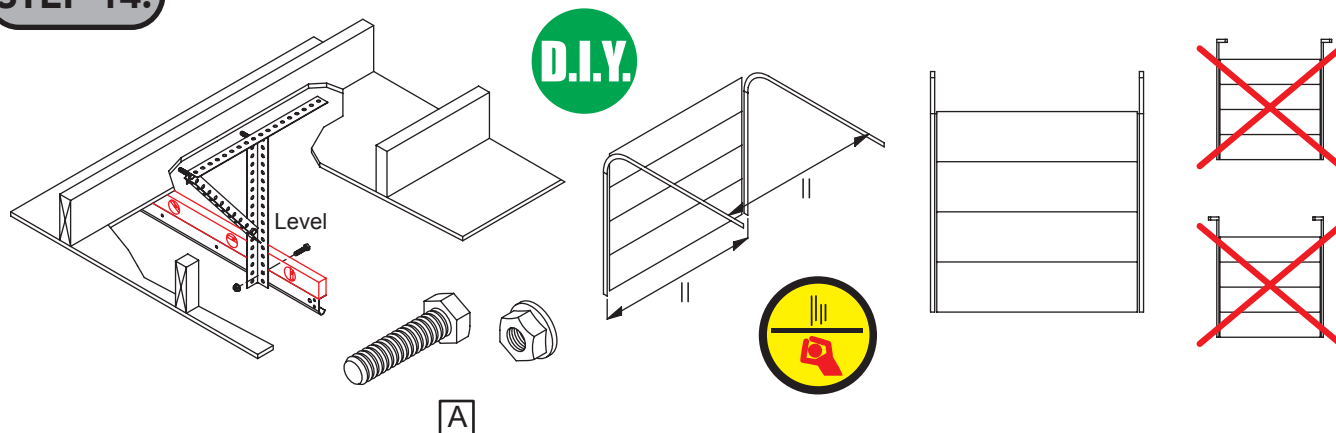
### STEP 13B:



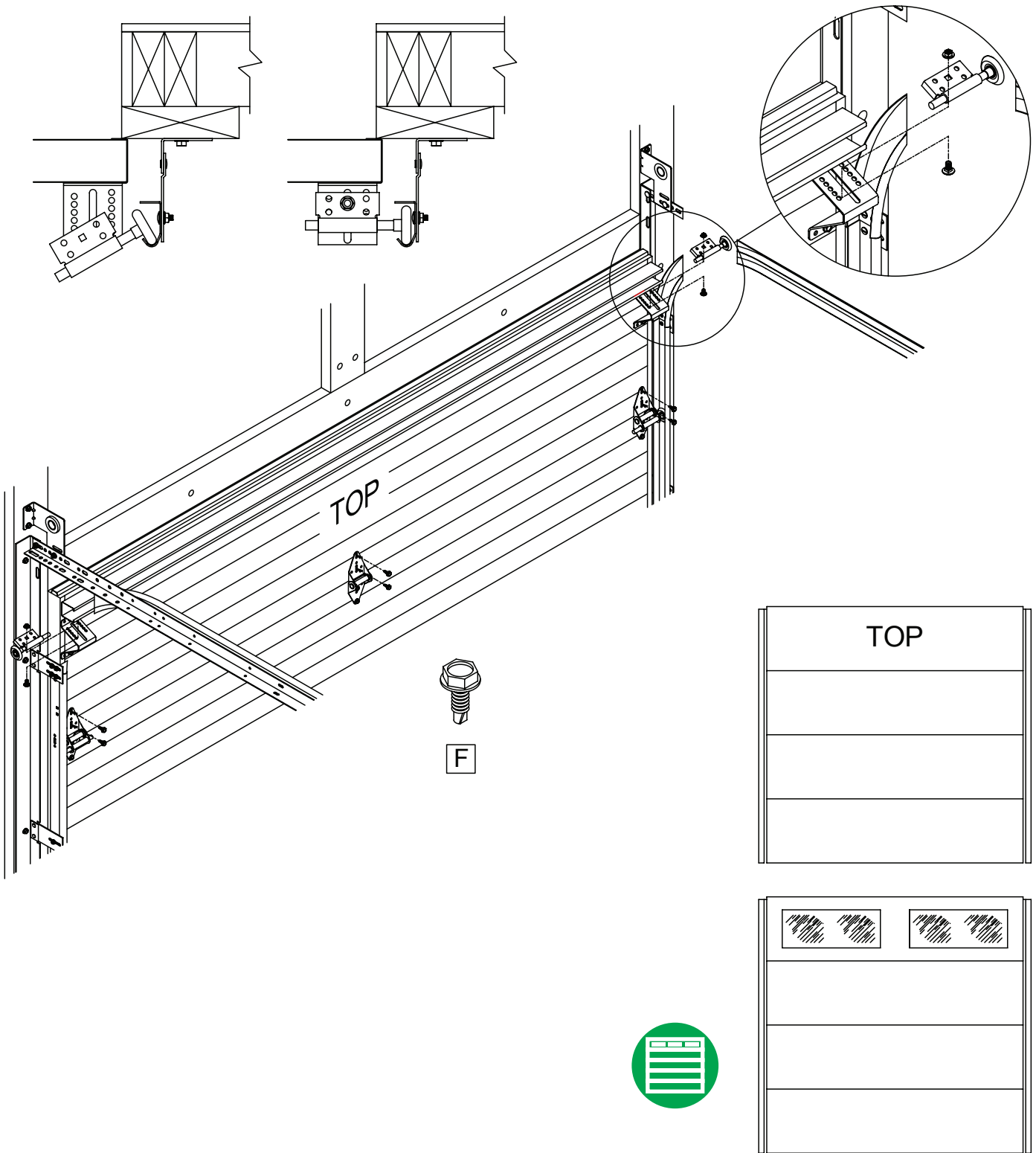
**STEP 13C:**



**STEP 14:**

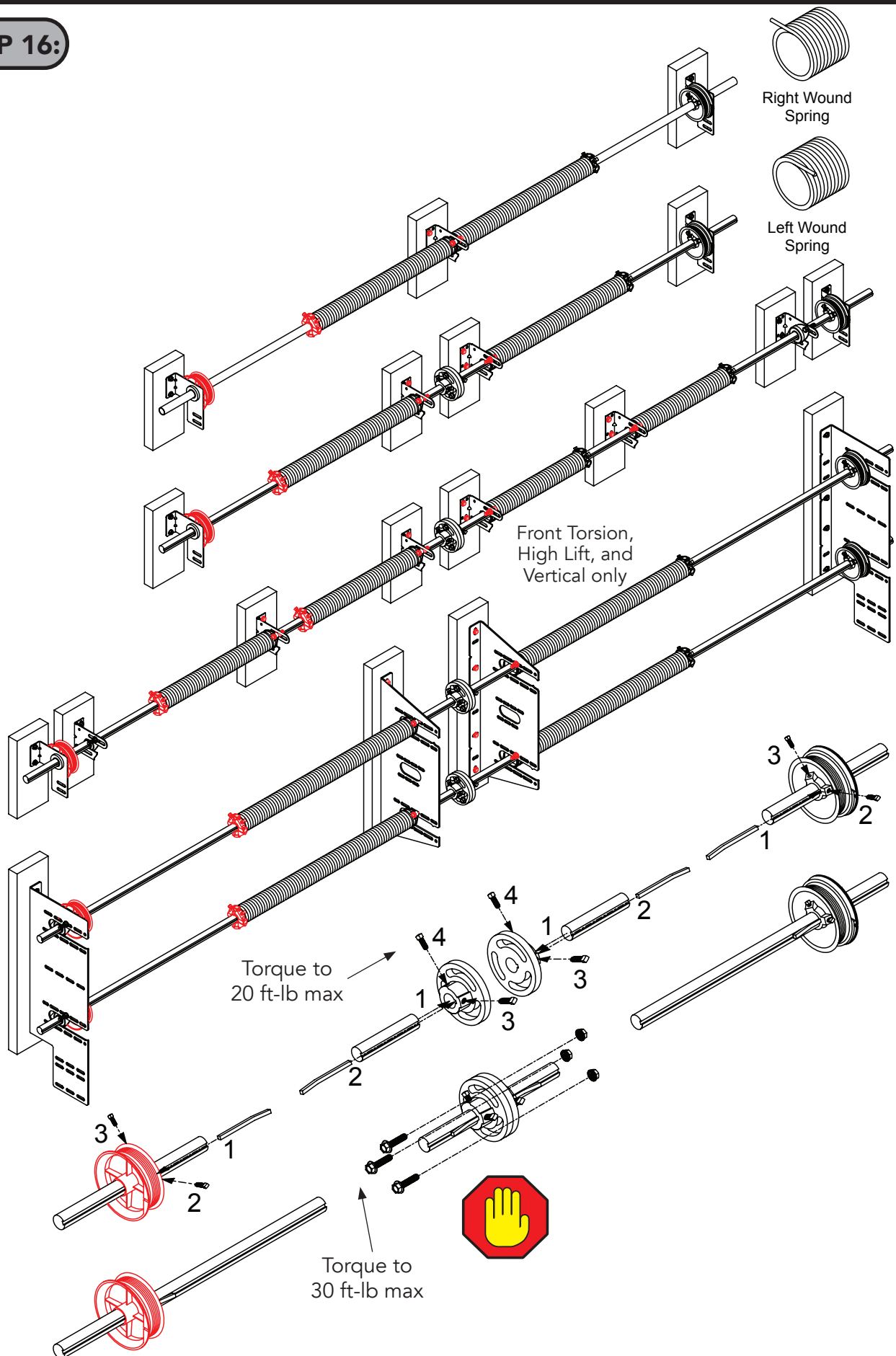


**STEP 15:**





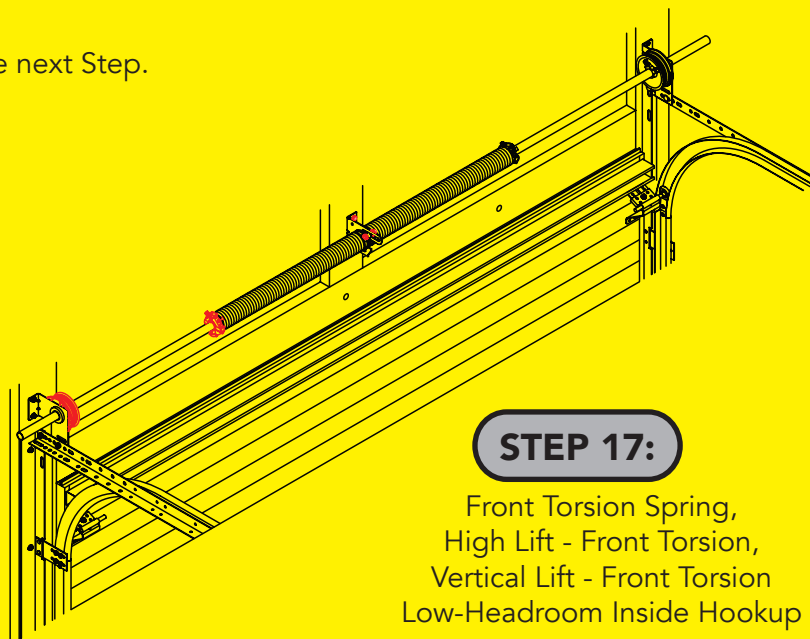
**STEP 16:**





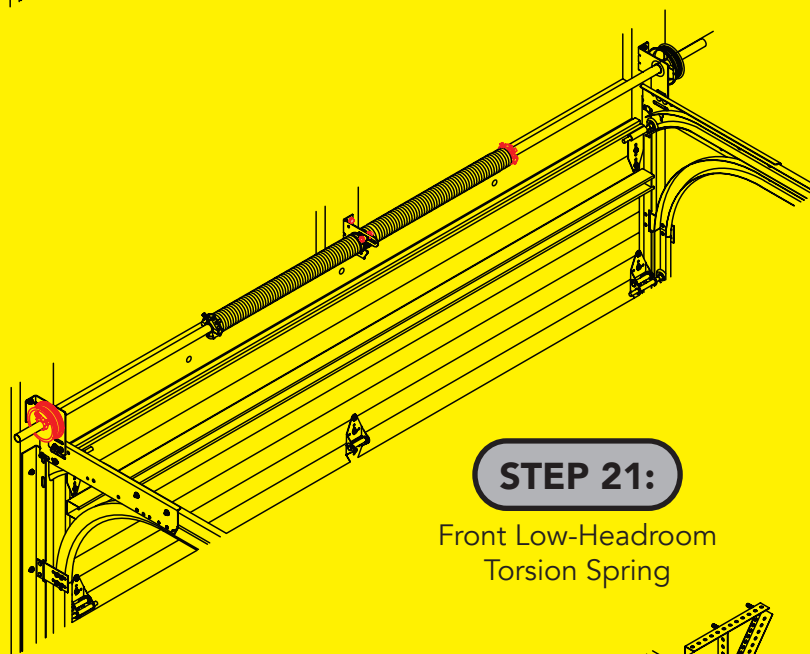


Choose next Step.



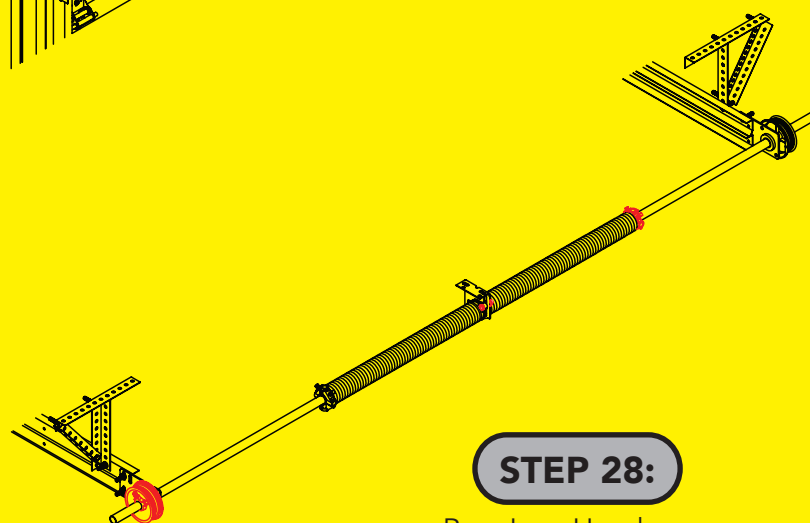
### STEP 17:

Front Torsion Spring,  
High Lift - Front Torsion,  
Vertical Lift - Front Torsion  
Low-Headroom Inside Hookup



### STEP 21:

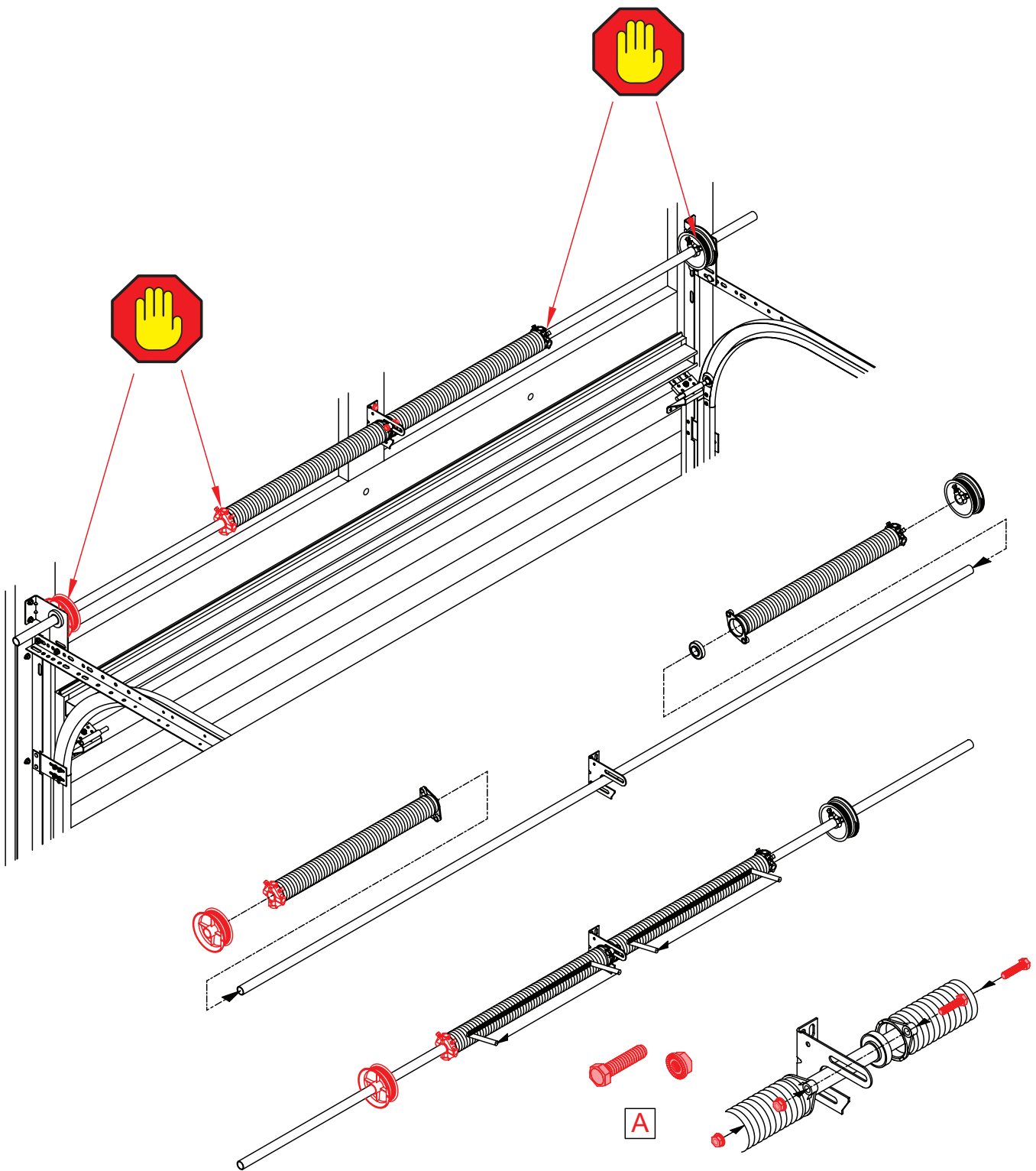
Front Low-Headroom  
Torsion Spring



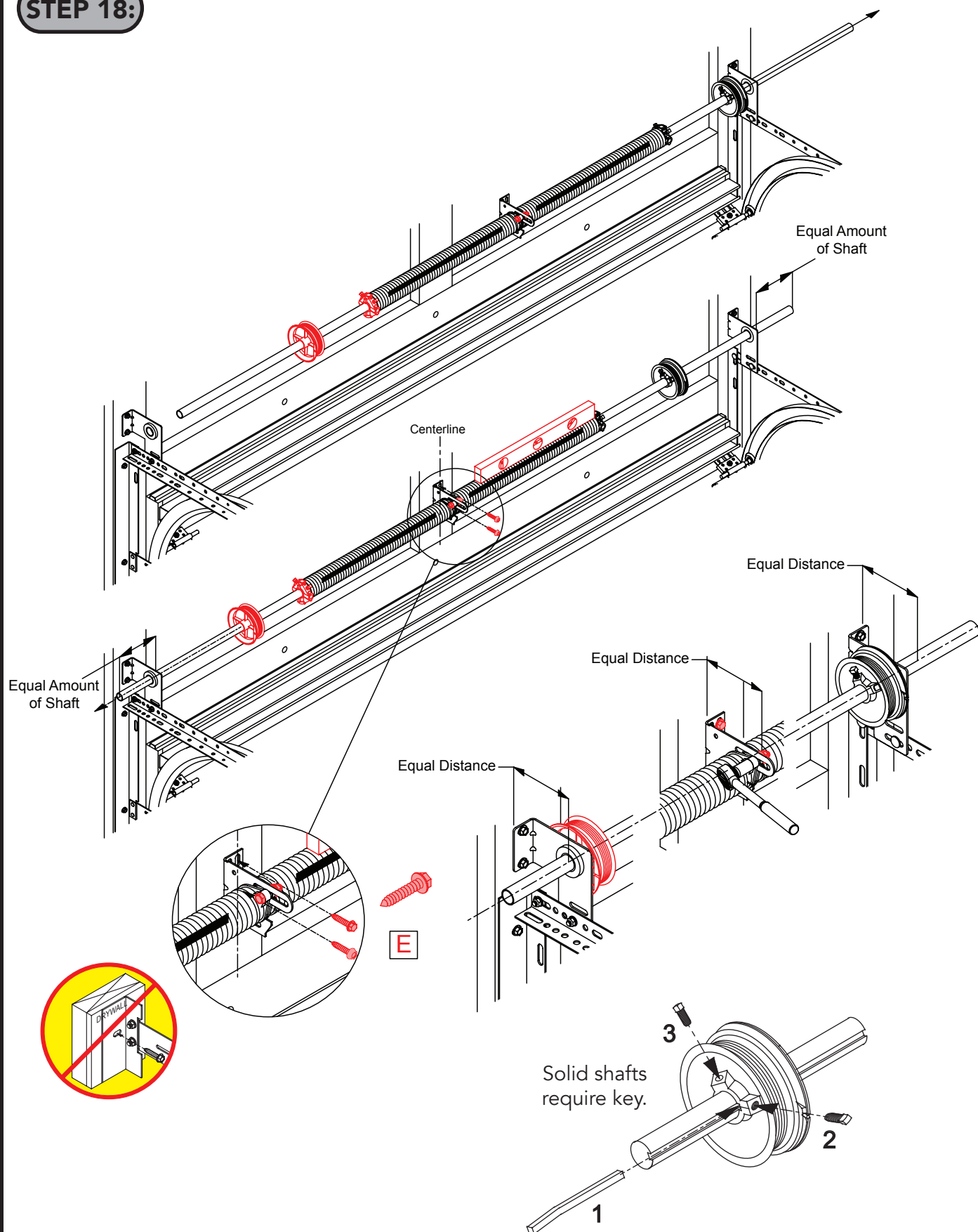
### STEP 28:

Rear Low-Headroom  
Torsion Spring

**STEP 17:**

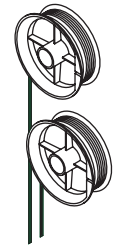


**STEP 18:**



# STEP 19:

Double Shaft



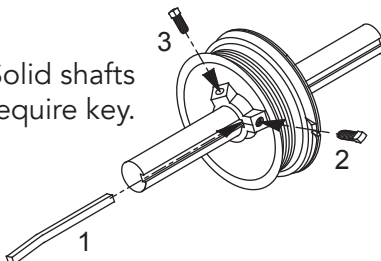
Torque spec:  
 Tube Shaft - 240 in-lb max  
 Solid Shaft - 240 in-lb recommended  
 300 in-lb max

2

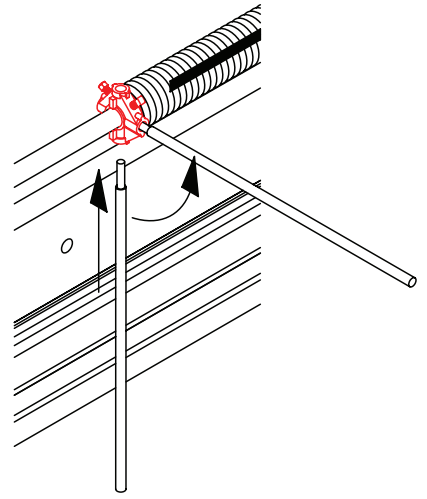
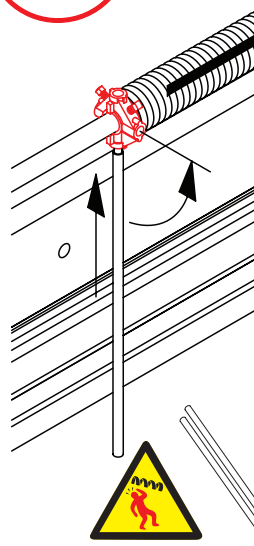
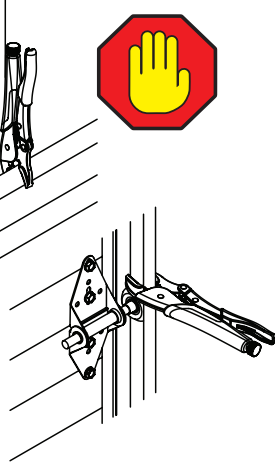
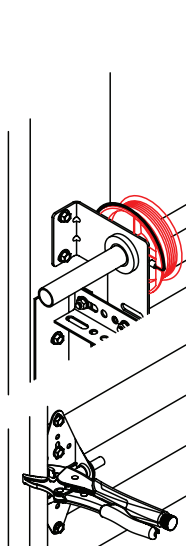
1



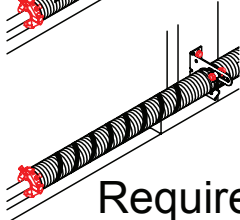
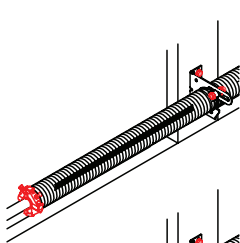
Solid shafts  
 require key.



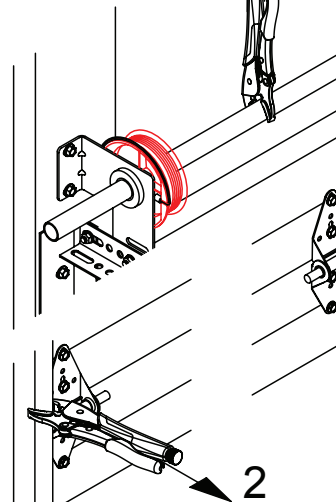
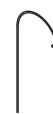
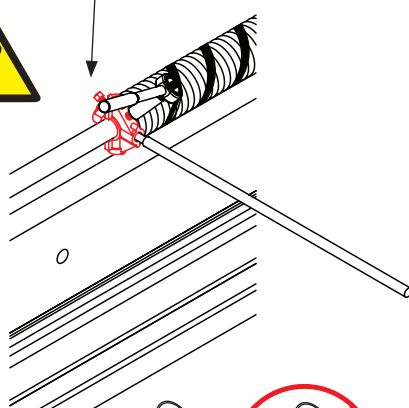
**STEP 20:**



Torque spec:  
 Tube Shaft - 240 in-lb max  
 Solid Shaft - 240 in-lb recommended  
 300 in-lb max

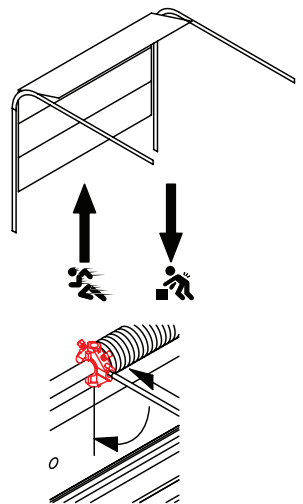
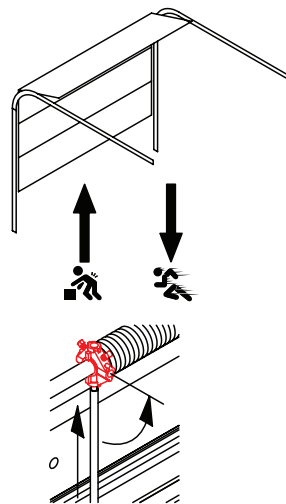
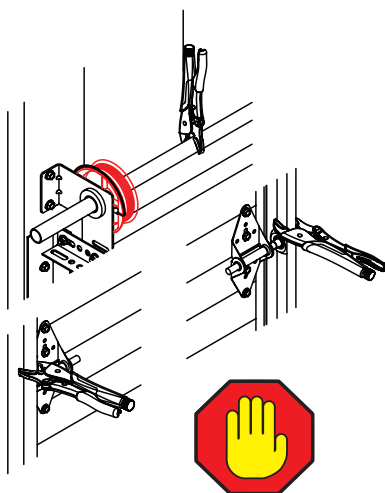
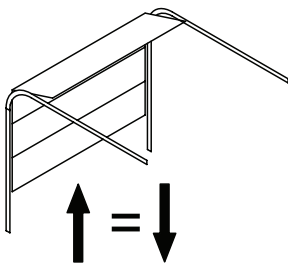


Required #  
 of Turns

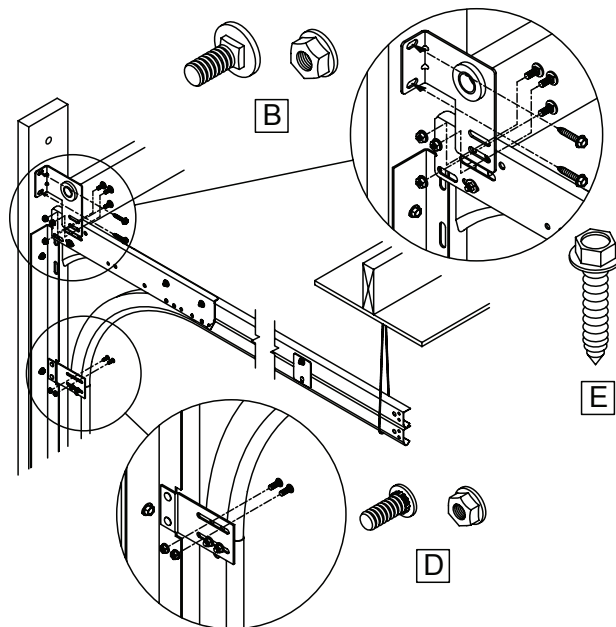
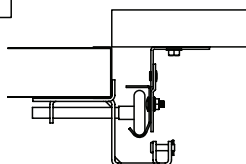
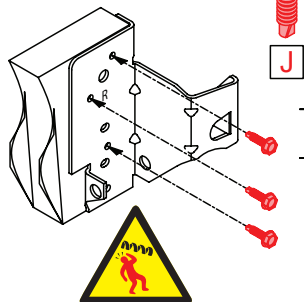
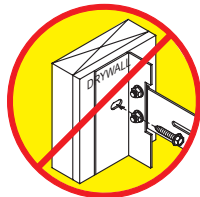
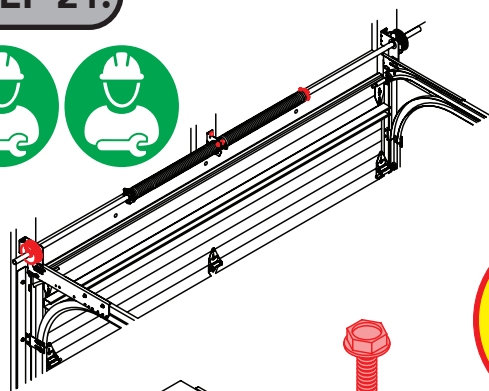


3

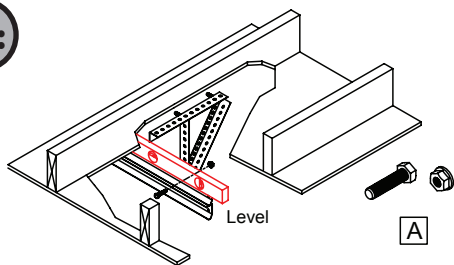
2



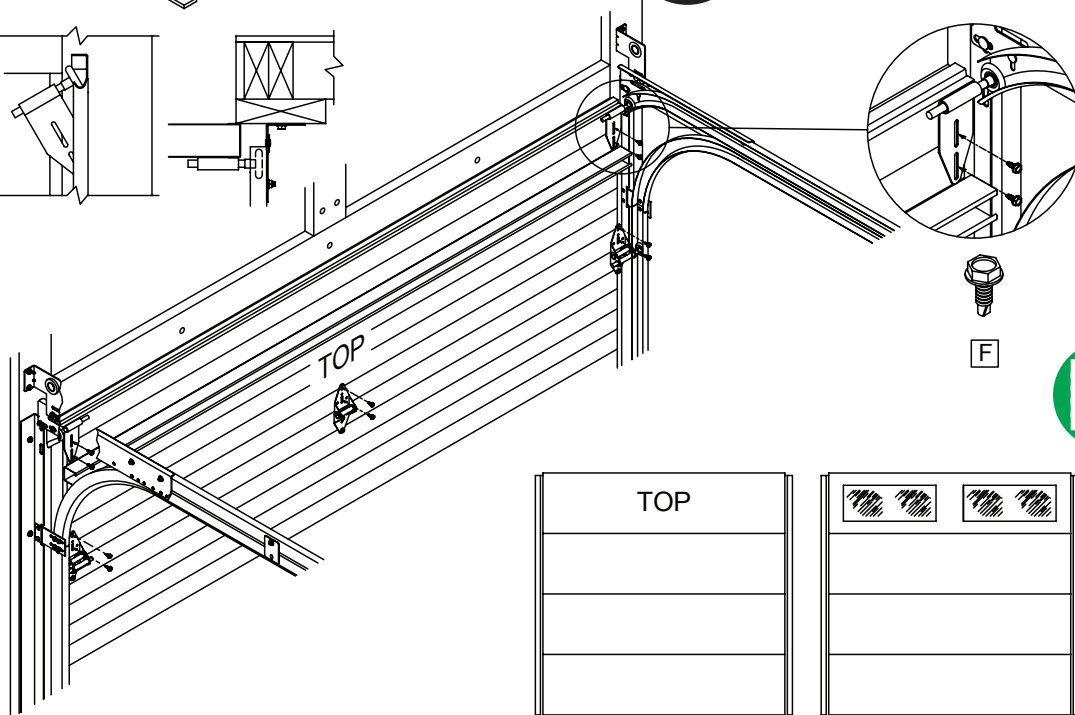
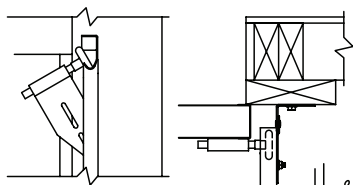
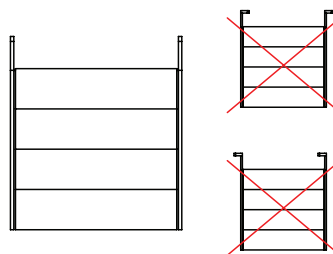
## STEP 21:



## STEP 22:



A

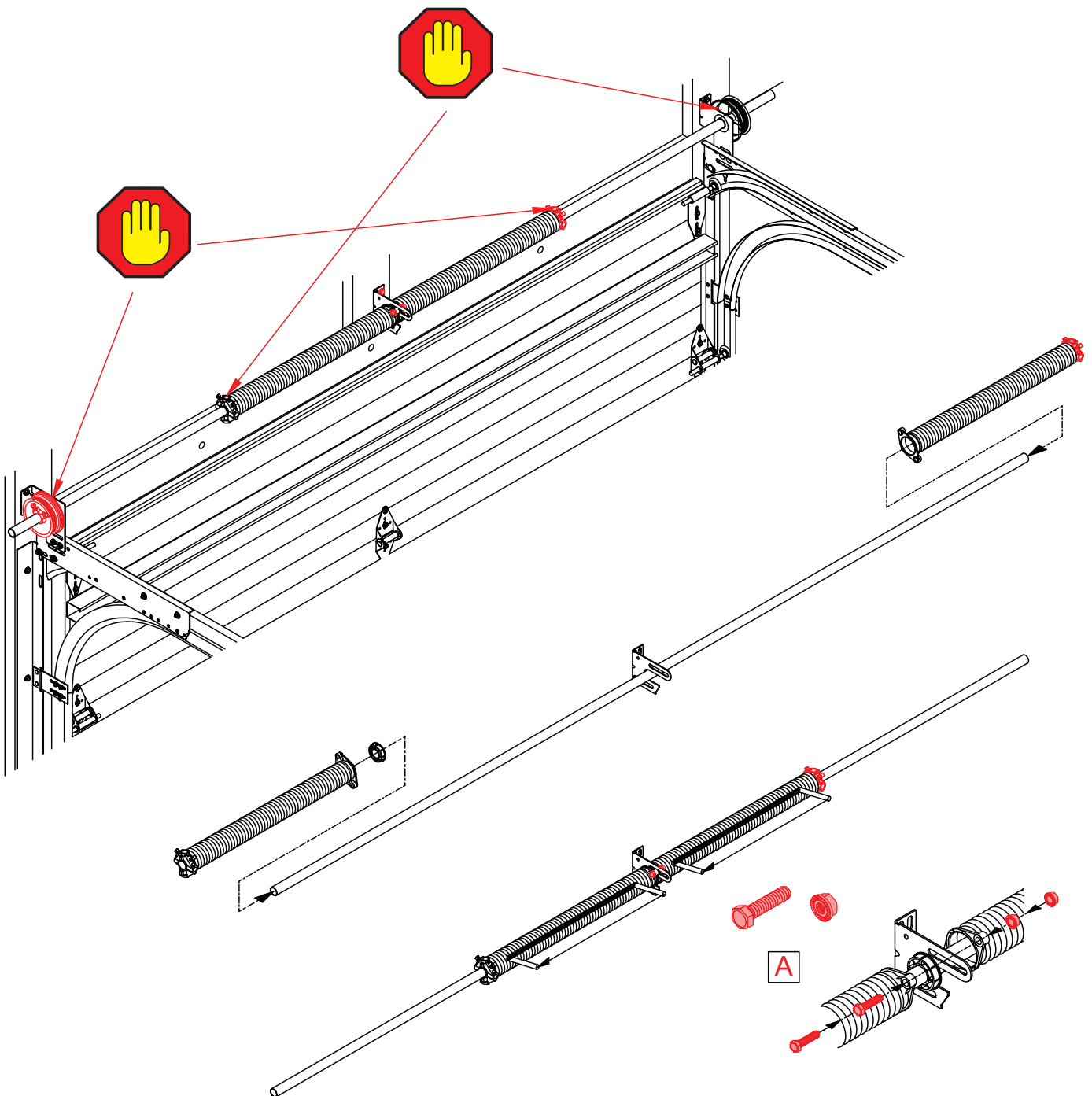


F



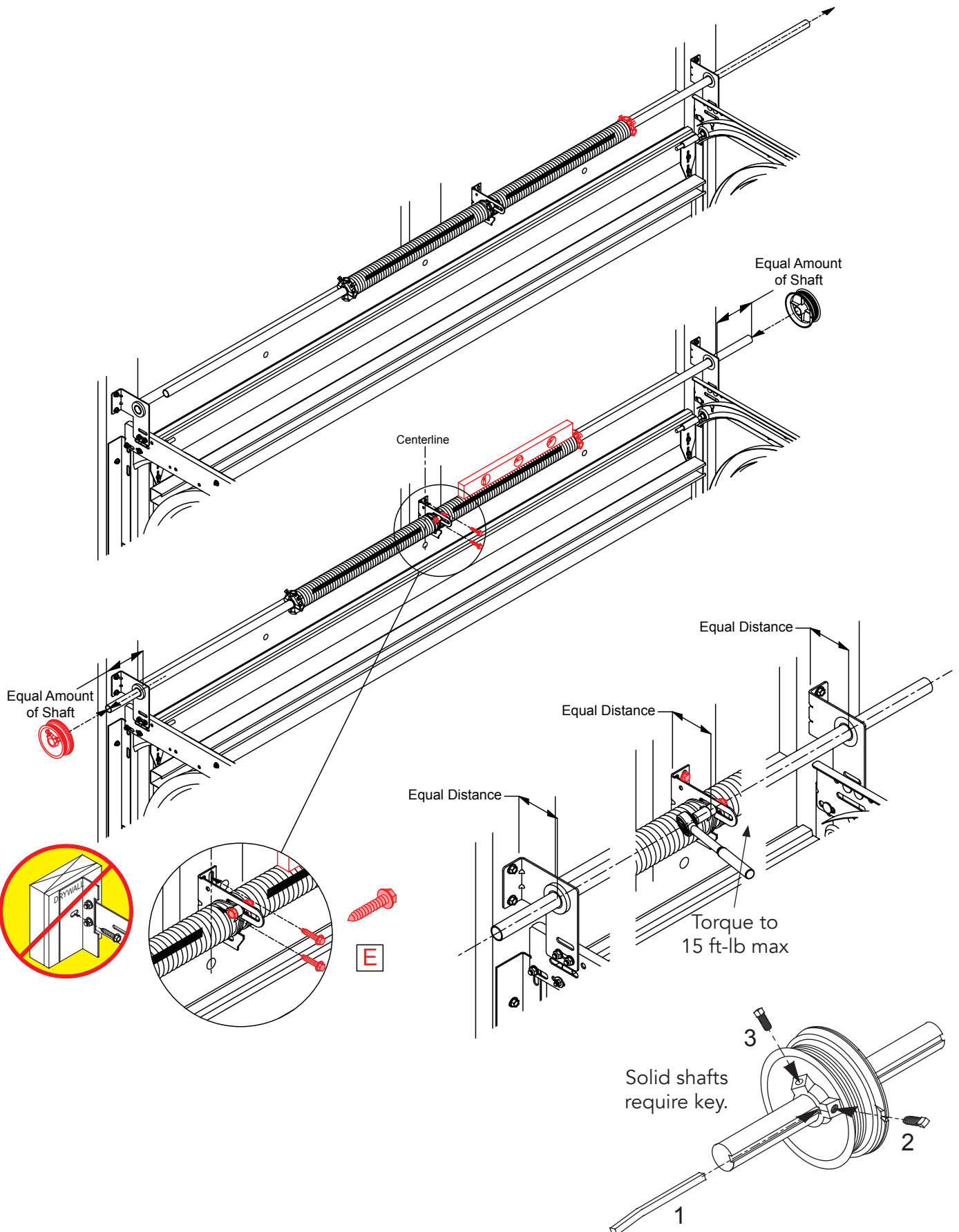
**STOP!** The installation of the Front Torsion Spring is COMPLETE!  
Continue to page 41 for handle installation.

**STEP 23:**

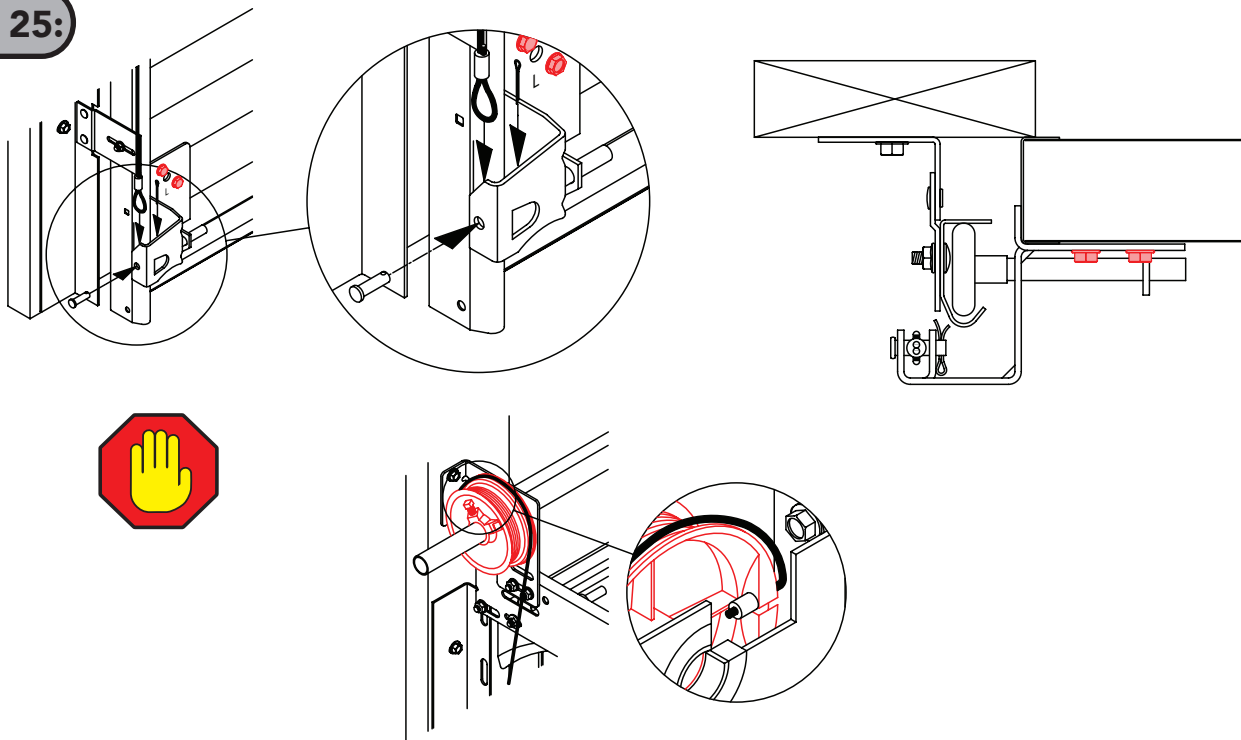




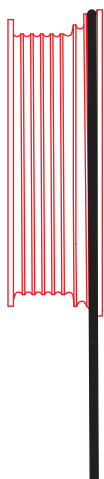
# STEP 24:



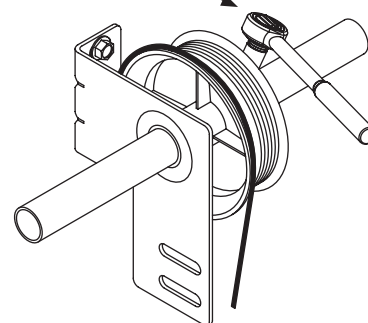
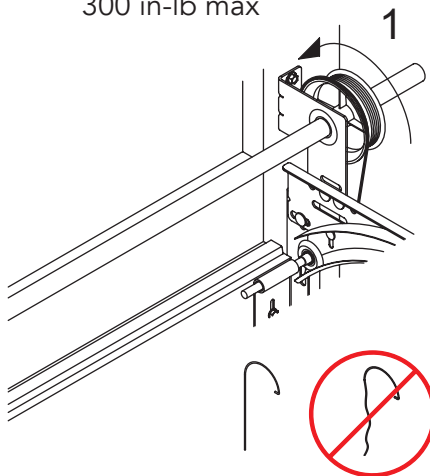
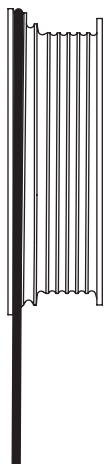
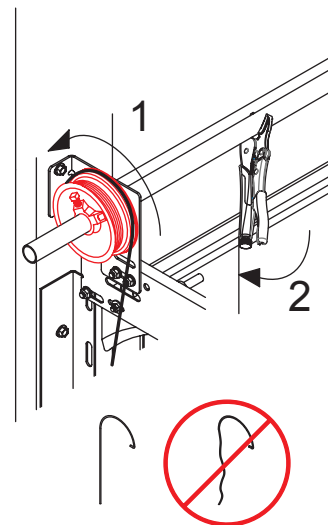
## STEP 25:



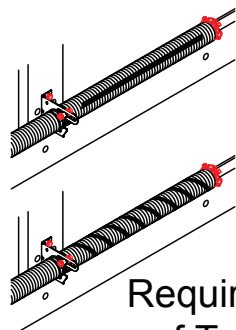
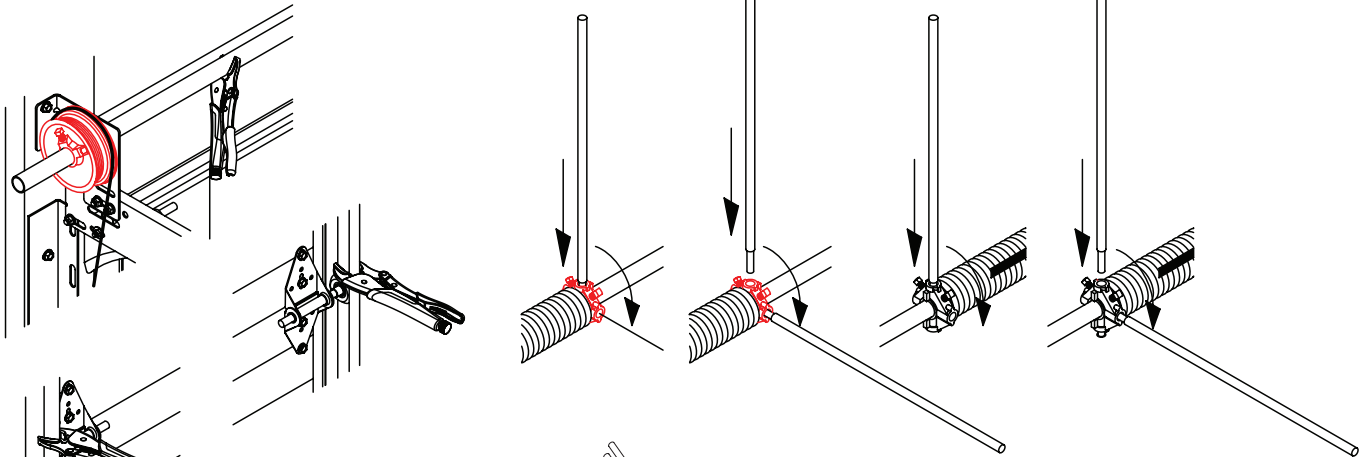
## STEP 26:



Torque spec:  
 Tube Shaft - 240 in-lb max  
 Solid Shaft - 240 in-lb recommended  
 300 in-lb max

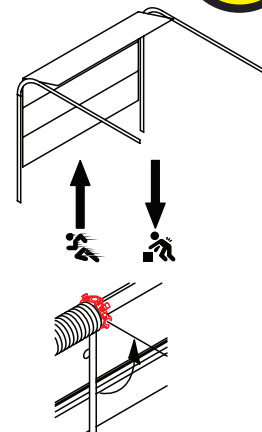
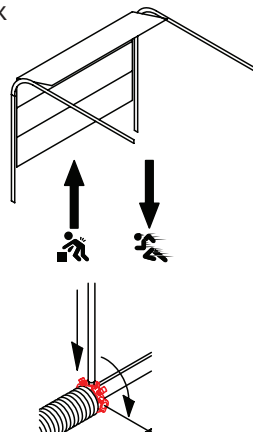
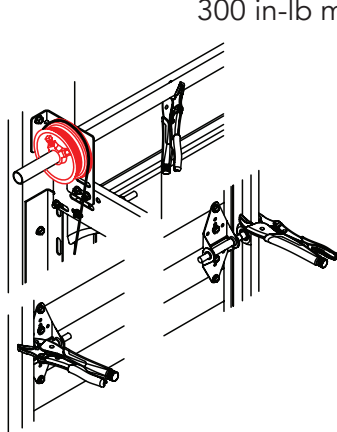
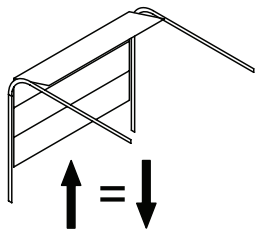
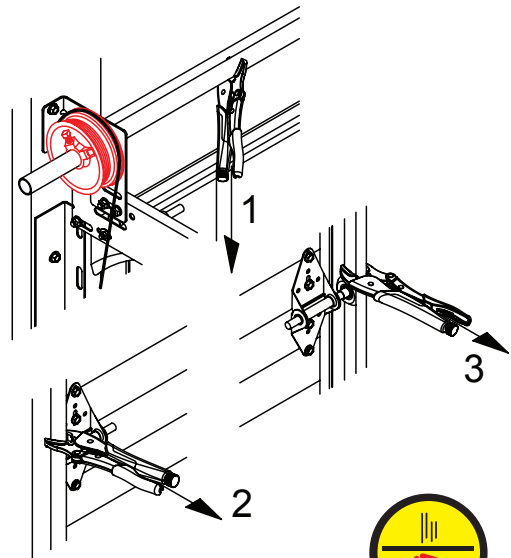


# STEP 27:

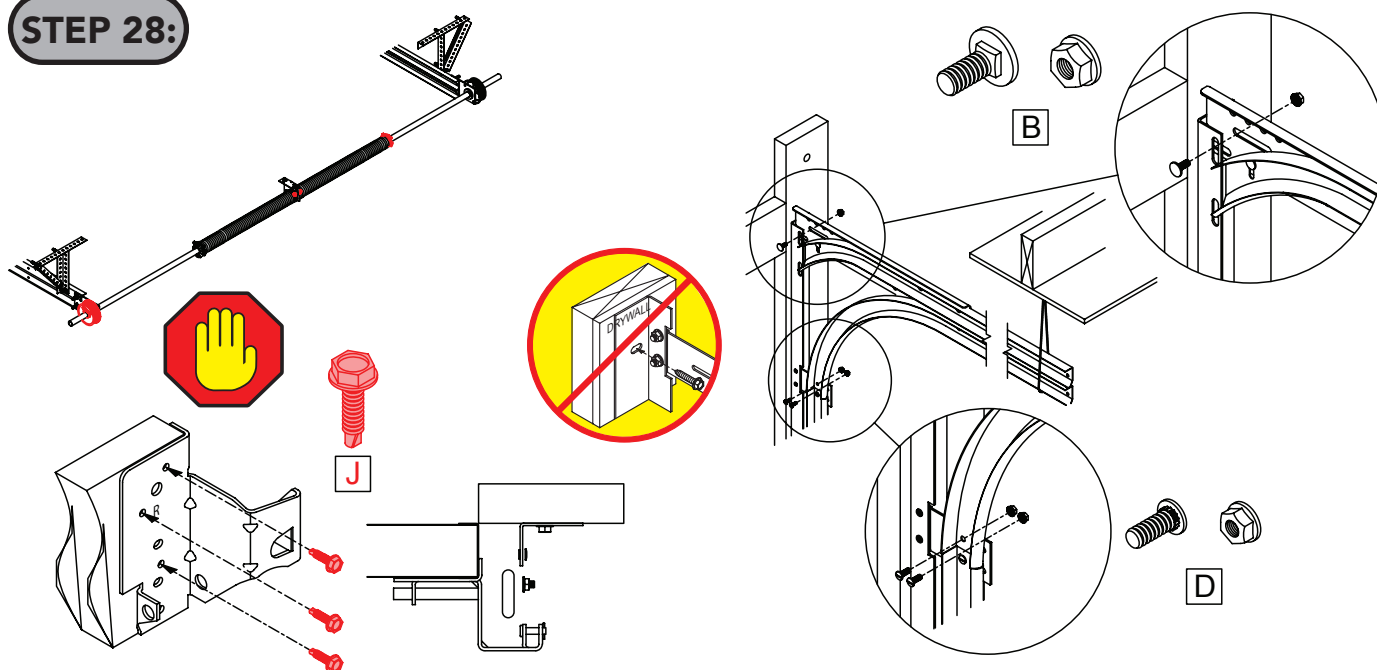


Required #  
of Turns

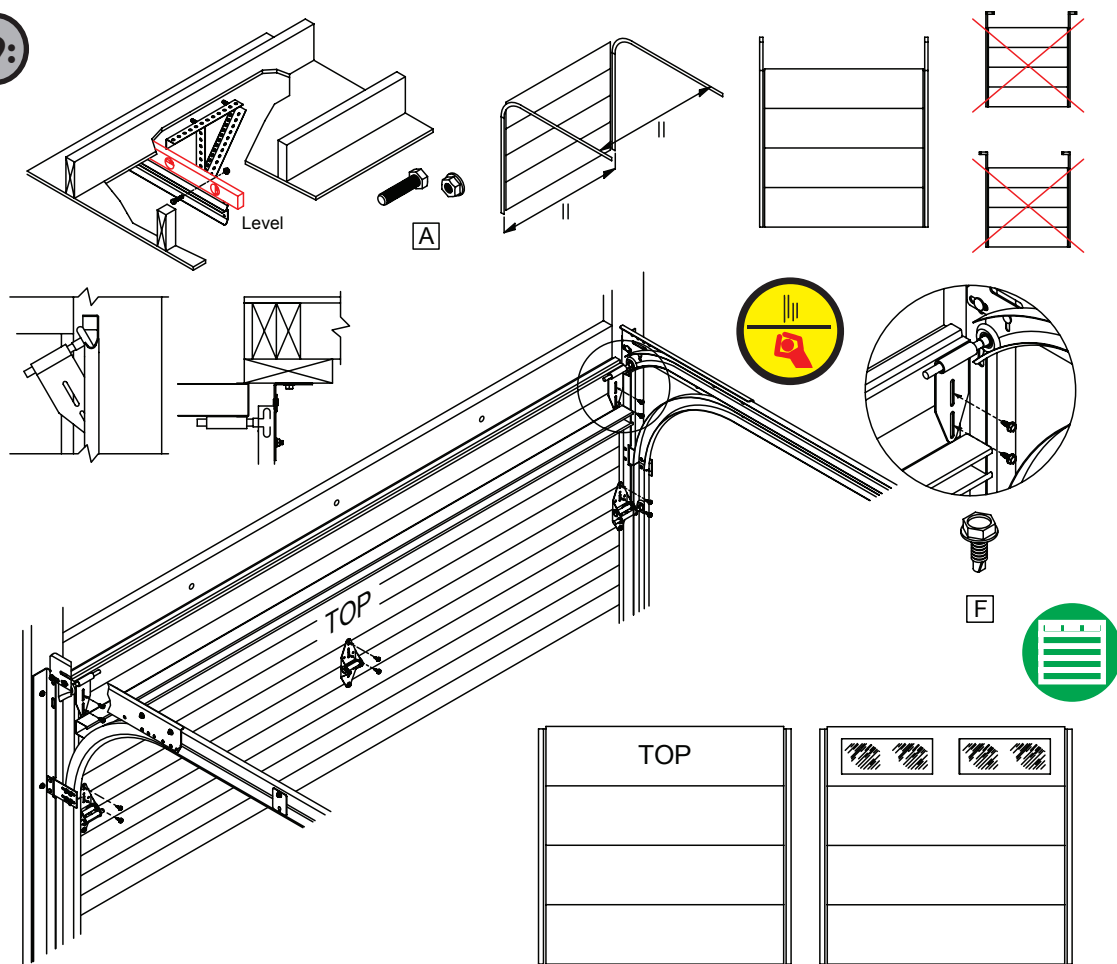
Torque spec:  
Tube Shaft - 240 in-lb max  
Solid Shaft - 240 in-lb recommended  
300 in-lb max



## STEP 28:

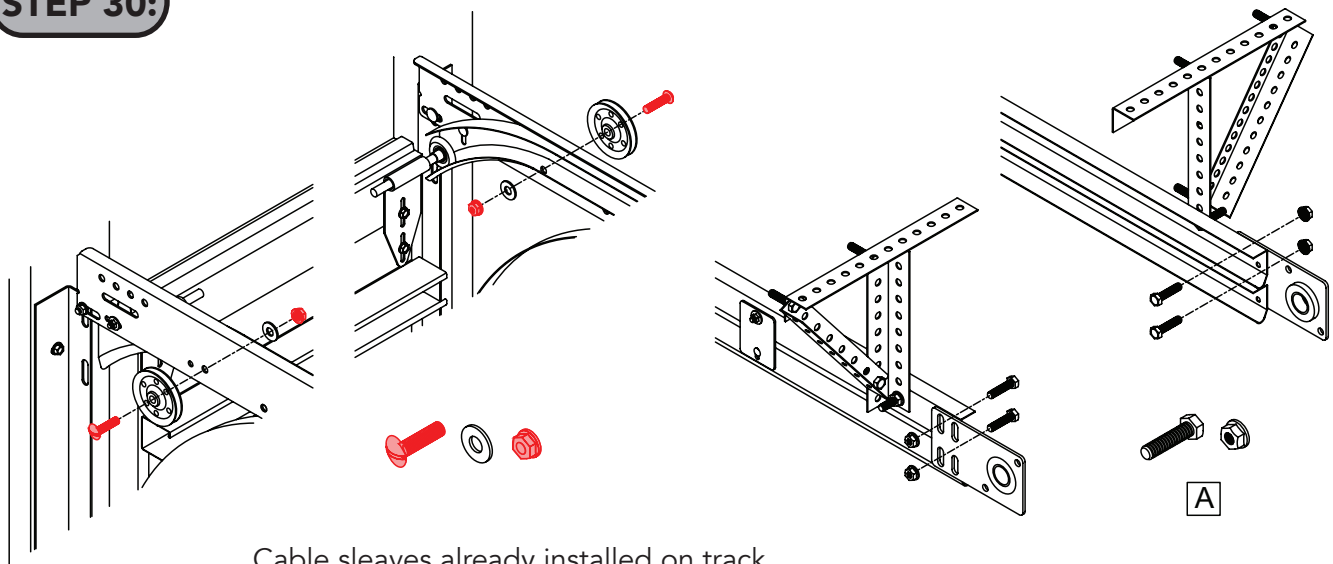


## STEP 29:



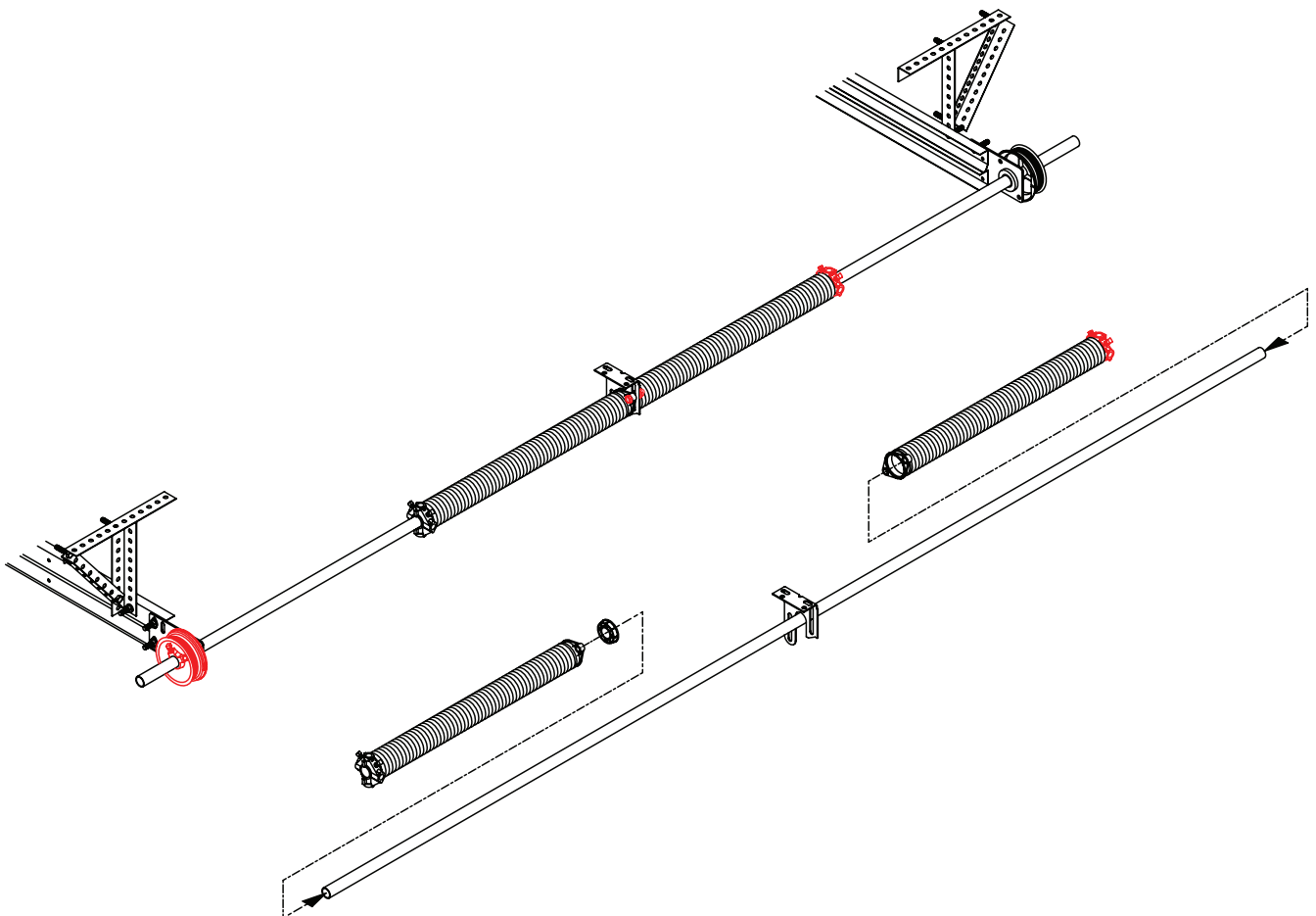
**STOP!** The installation of the Front Low-Headroom is **COMPLETE!**  
Continue to page 41 for handle installation.

### STEP 30:

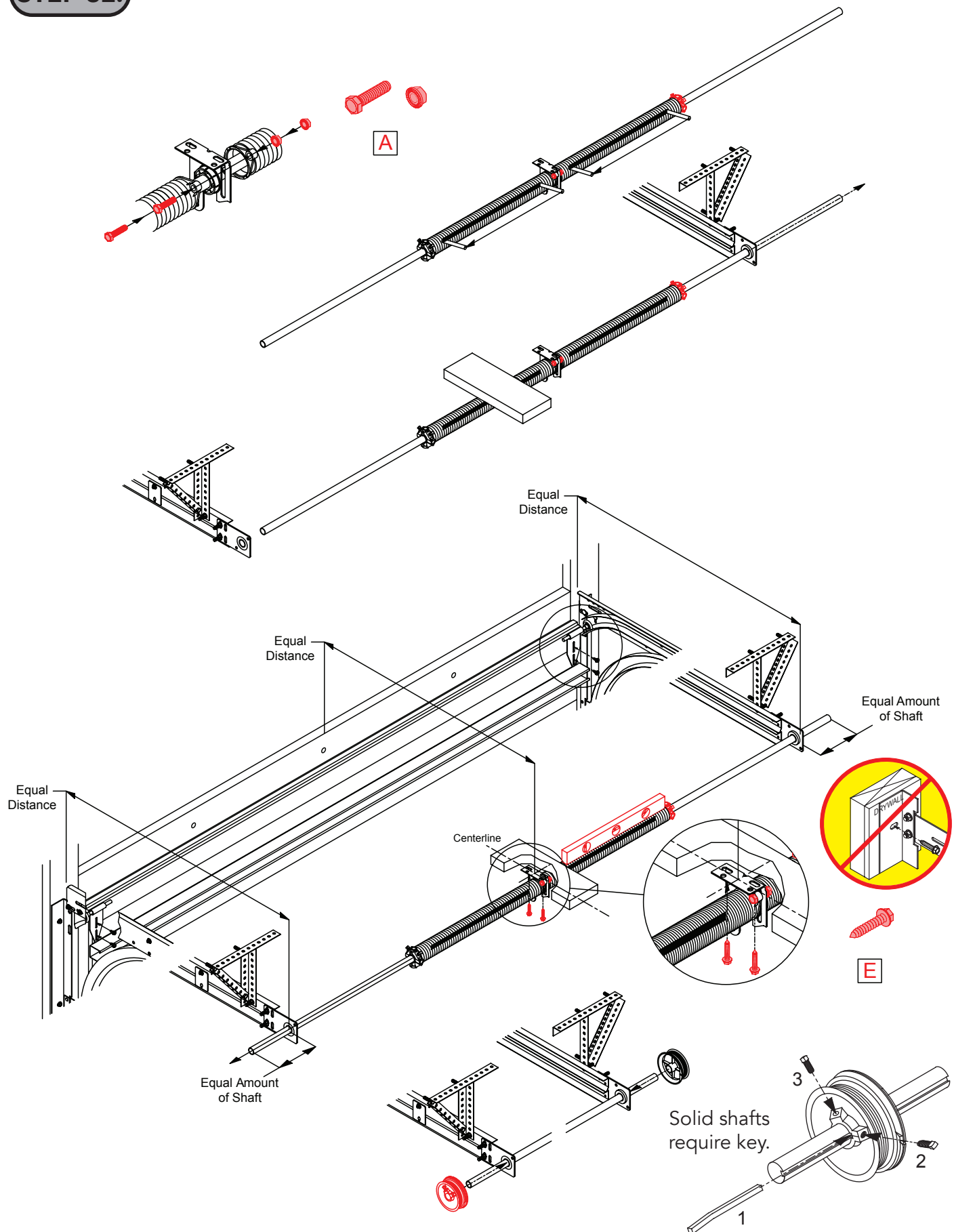


Cable sleeves already installed on track for commercial rear torsion doors.  
Shown only for maintenance reference.

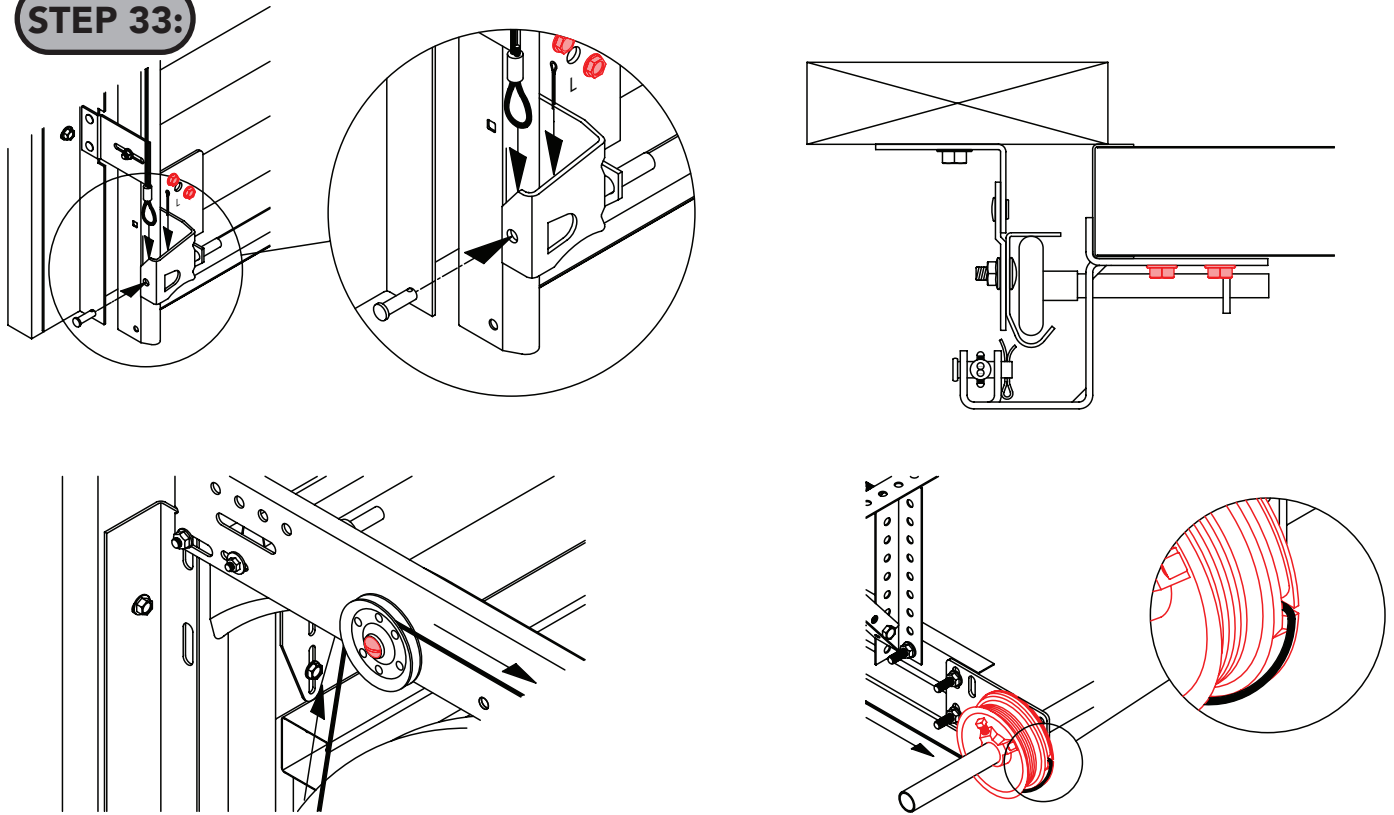
### STEP 31:



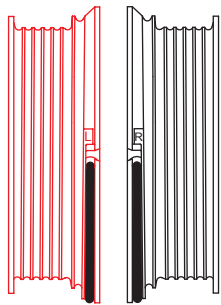
# STEP 32:



### STEP 33:

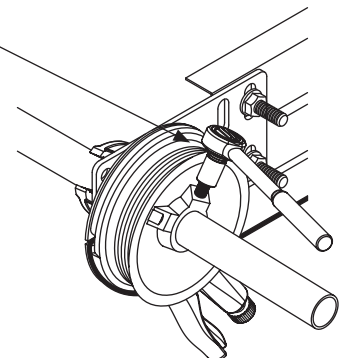
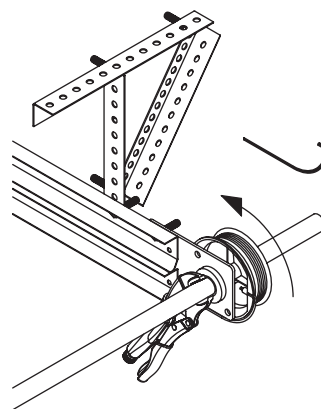
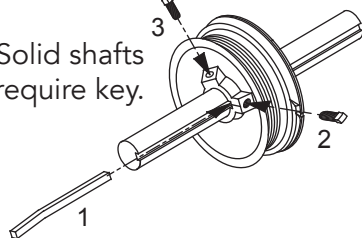


### STEP 34:



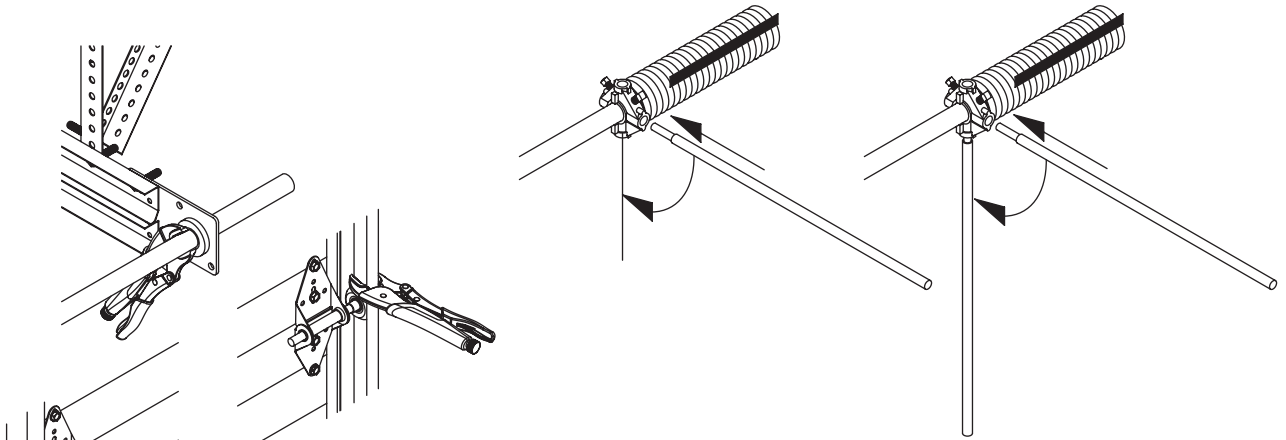
Torque spec:  
 Tube Shaft - 240 in-lb max  
 Solid Shaft - 240 in-lb recommended  
 300 in-lb max

Solid shafts  
 require key.

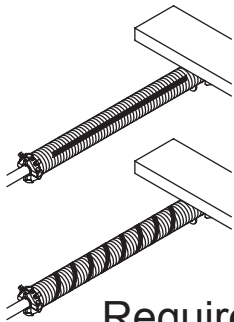




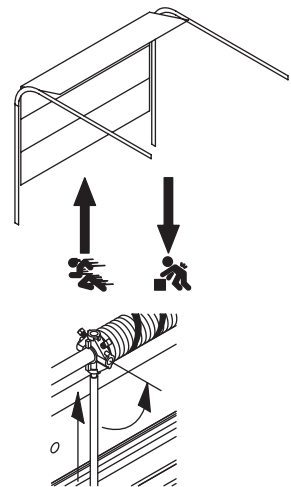
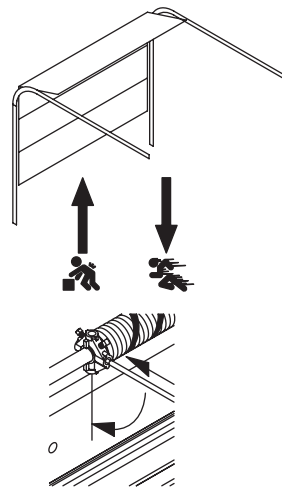
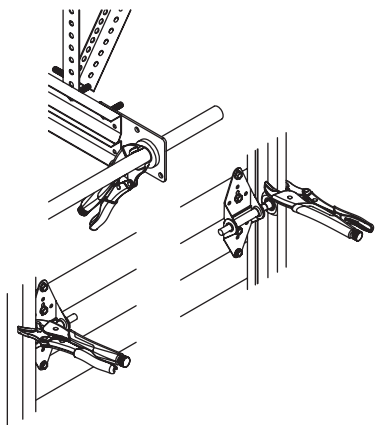
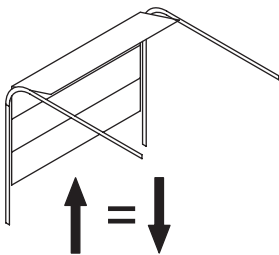
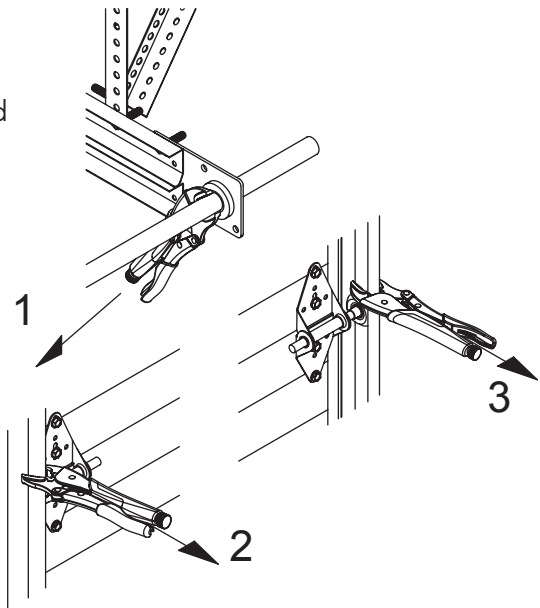
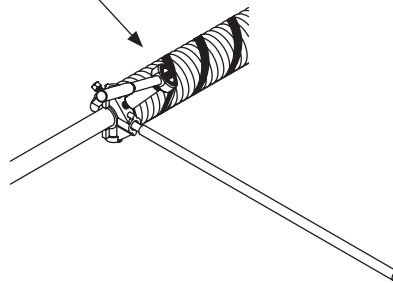
# STEP 35:



Torque spec:  
 Tube Shaft - 240 in-lb max  
 Solid Shaft - 240 in-lb recommended  
 300 in-lb max

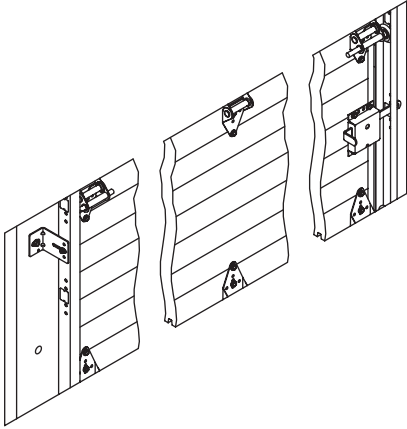


Required  
 # of  
 Turns

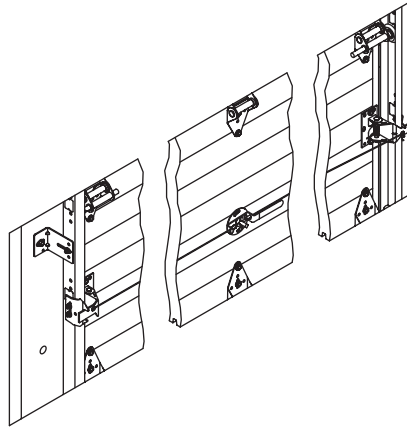


**STOP!** The installation of the Rear Low-Headroom is **COMPLETE!**  
 Continue to page 41 for handle installation.

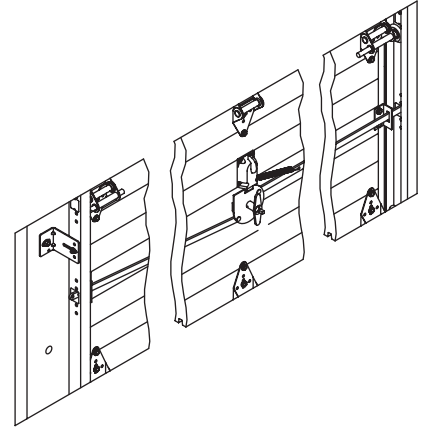
### Slide Lock Kit:



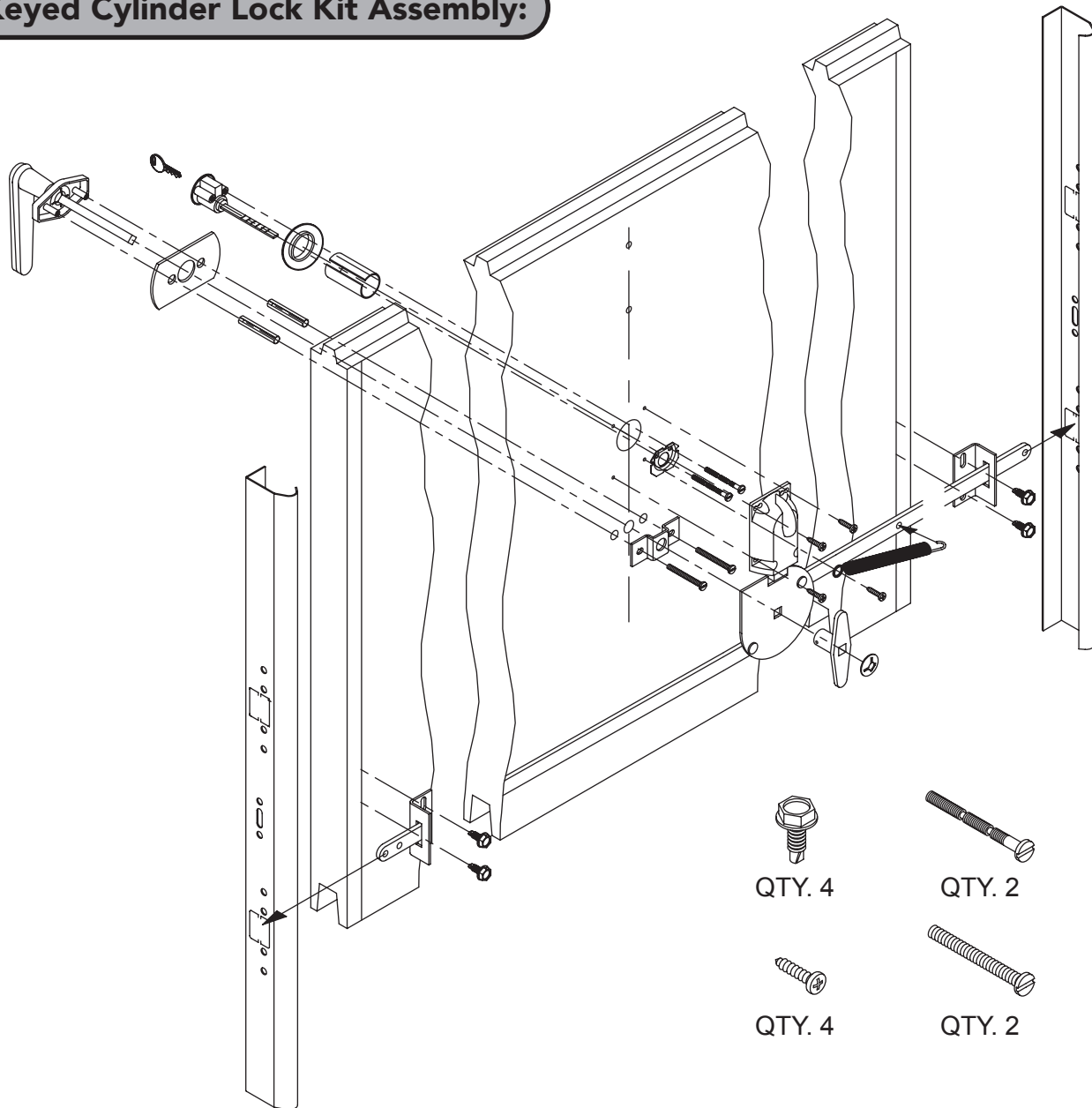
### Snap Lock Kit:



### Keyed Cylinder Lock Kit:



### Keyed Cylinder Lock Kit Assembly:



# Keyed Cylinder Lock Assembly Drilling Template:

1. USING THE TWO OUTER PRE-PUNCHED HOLES IN THE STILE, SHOWN AT THE BOTTOM OF THE TEMPLATE, AS A GUIDE DRILL TWO  $\frac{3}{8}$ " HOLES THROUGH THE OUTER SKIN OF THE SECTION THAT THE KEYED CYLINDER LOCK IS TO BE MOUNTED. BE SURE TO DRILL THESE TWO HOLES STRAIGHT AND PLUMB SO THAT ALL THE HOLES WILL LINE UP PROPERLY.

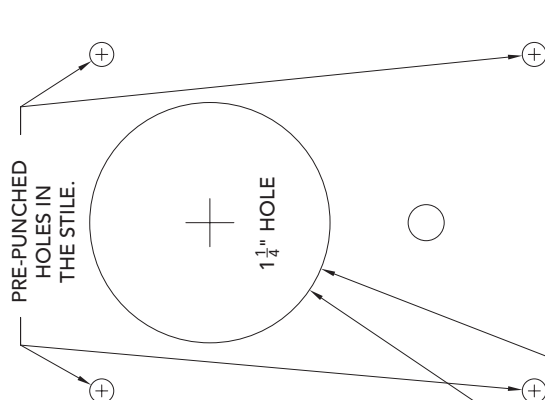
2. USE THE TWO HOLES DRILLED IN STEP 1 AND THE CORRESPONDING HOLES IN THE TEMPLATE TO ALIGN PROPERLY. TAPE THE TEMPLATE TO THE OUTSIDE SKIN OF THE SECTION.

3. DRILL A  $1\frac{1}{4}$ " HOLE THRU THE OUTER SKIN AT THE LOCATION INDICATED ON THE TEMPLATE.

6. DRILL THREE  $\frac{1}{2}$ " HOLES THRU THE OUTER SKIN AT THE LOCATIONS INDICATED ON THE TEMPLATE.

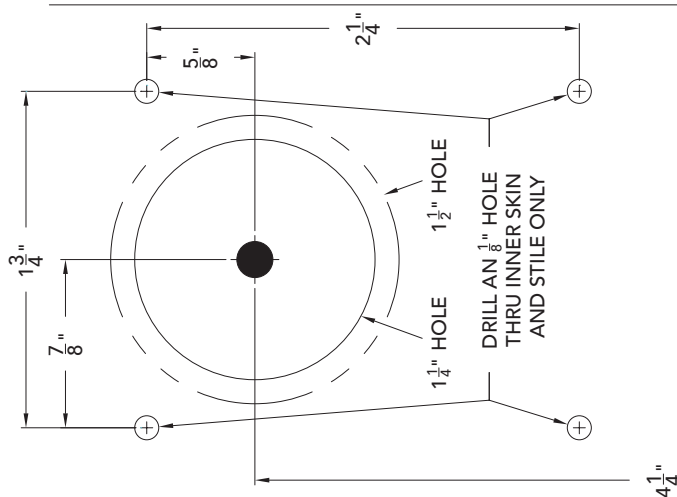
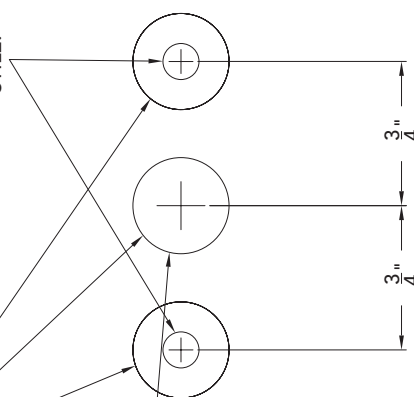
3. KNOCK OUT THE  $1\frac{1}{4}$ " PRE-PUNCHED PLUG LOCATED IN THE STILE.

5. KNOCK OUT THE  $\frac{1}{2}$ " PRE-PUNCHED PLUG LOCATED IN THE STILE.



## PAN SECTION

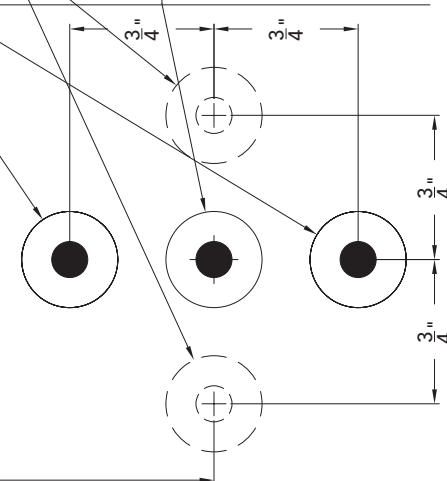
PRE-PUNCHED HOLES IN THE STILE.



## HT SECTION

4. DRILL A  $\frac{1}{2}$ " HOLE THRU OUTER SKIN AND FOAM INSULATION ONLY USING THE PREVIOUSLY DRILLED  $\frac{3}{16}$ " HOLE. OPTIONAL HOLE LOCATION.

5. DRILL A  $\frac{1}{2}$ " HOLE THRU THE ENTIRE PANEL USING THE PREVIOUSLY DRILLED  $\frac{3}{16}$ " HOLE AS A PILOT.



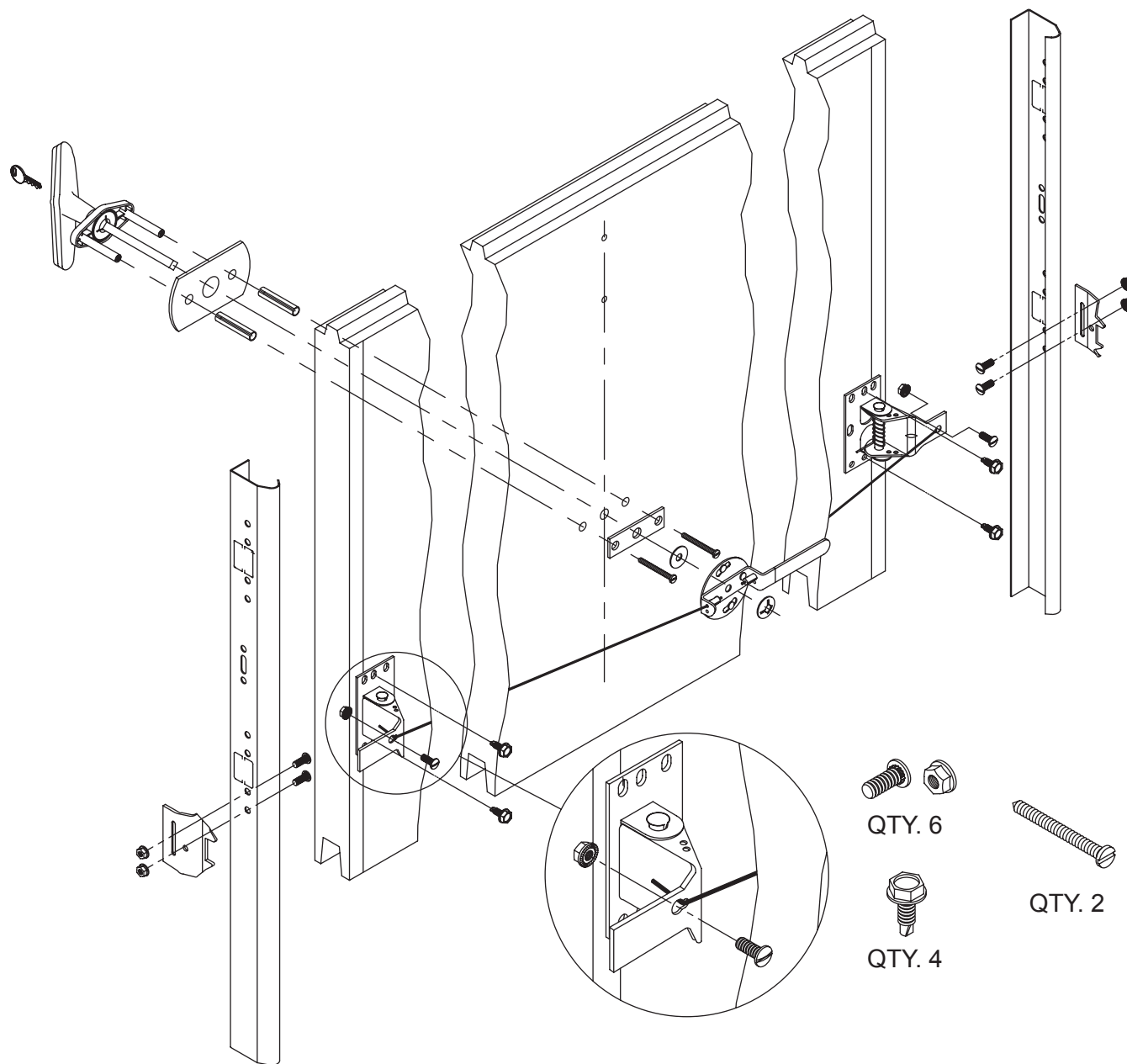
1. TAPE THE TEMPLATE TO THE INSIDE SKIN OF THE SECTION THAT THE KEYED CYLINDER LOCK IS TO BE MOUNTED.

2. DRILL A  $\frac{3}{16}$ " HOLE THRU THE ENTIRE SECTION AT THE SOLID DOT LOCATIONS SHOWN ON THE TEMPLATE.

3. DRILL A  $1\frac{1}{2}$ " HOLE THRU THE OUTER SKIN AND FOAM INSULATION USING THE PREVIOUSLY DRILLED  $\frac{3}{16}$ " HOLE AS A PILOT.

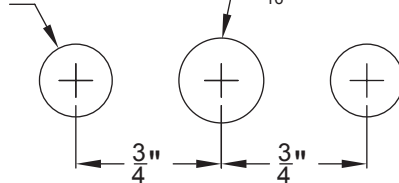
DRILL A  $1\frac{1}{4}$ " HOLE THRU THE INNER SKIN AND INTERNAL STILE ONLY USING THE PREVIOUSLY DRILLED  $\frac{3}{16}$ " HOLE AS A PILOT.

## Snap Latch Kit Assembly & Template:



$\text{Ø}\frac{3}{8}$ " HOLE - THRU  
(2 PLCS.)

$\text{Ø}\frac{7}{16}$ " HOLE - THRU

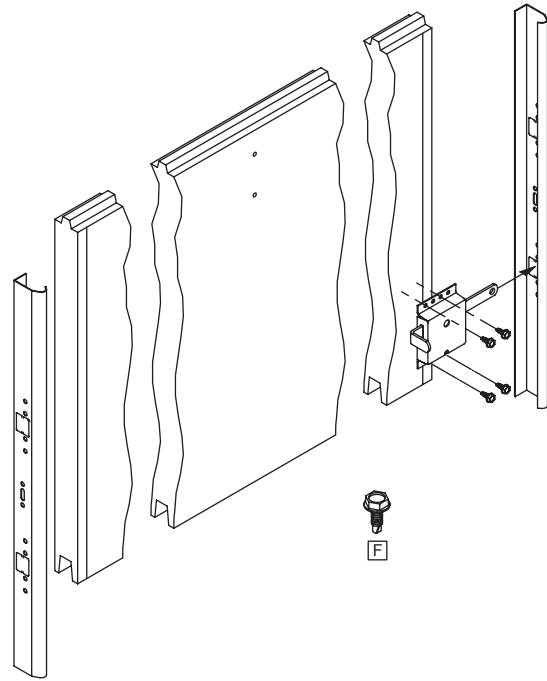


DRILL  
TEMPLATE

## Slide Lock Kit Assembly:

Only one lock is needed for manual operation garage door  
- left or right side.

A lock is not recommended with an operator.

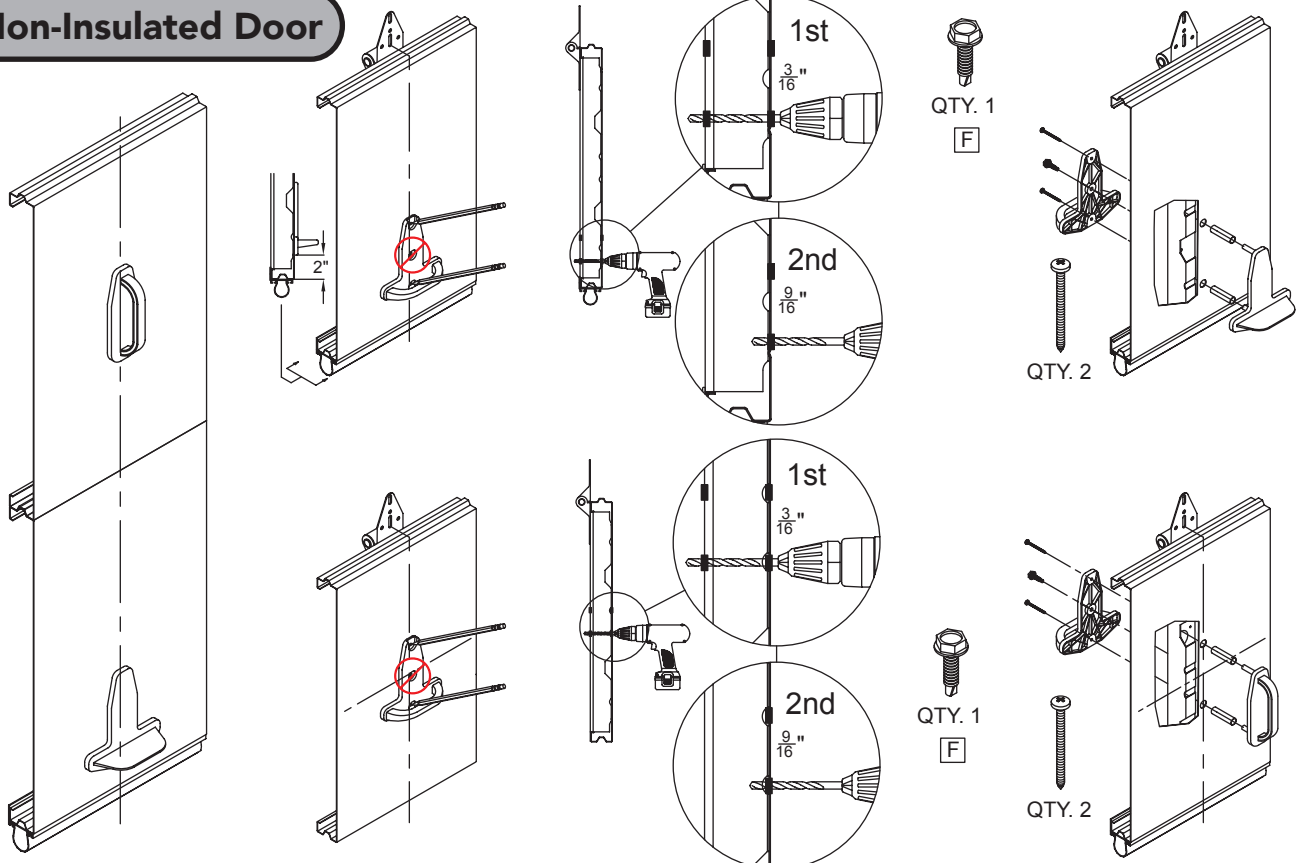


## Lift Handle/Step Plate Installation Instructions:

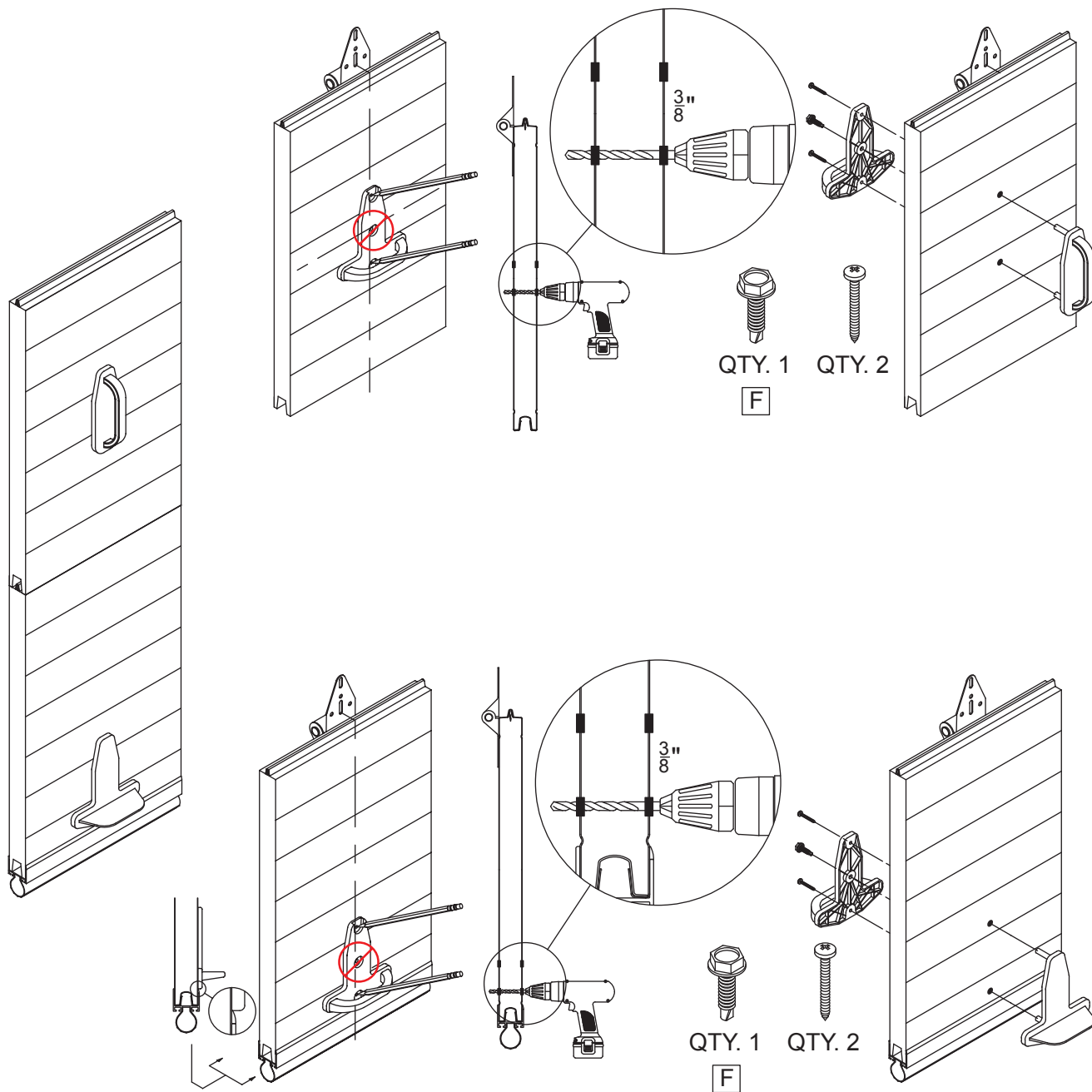


**STOP:** In accordance with industry standards, Haas Door recommends the installation of a lift handle to avoid injury if manual operation is required. Lift handles are a no-cost option. If you would like a handle, please fill out the form at [www.haasdoor.com/handles](http://www.haasdoor.com/handles), and we will send you one at no charge.

### Non-Insulated Door



## Insulated Door





# Supplemental and Decorative Hardware Installation Instructions

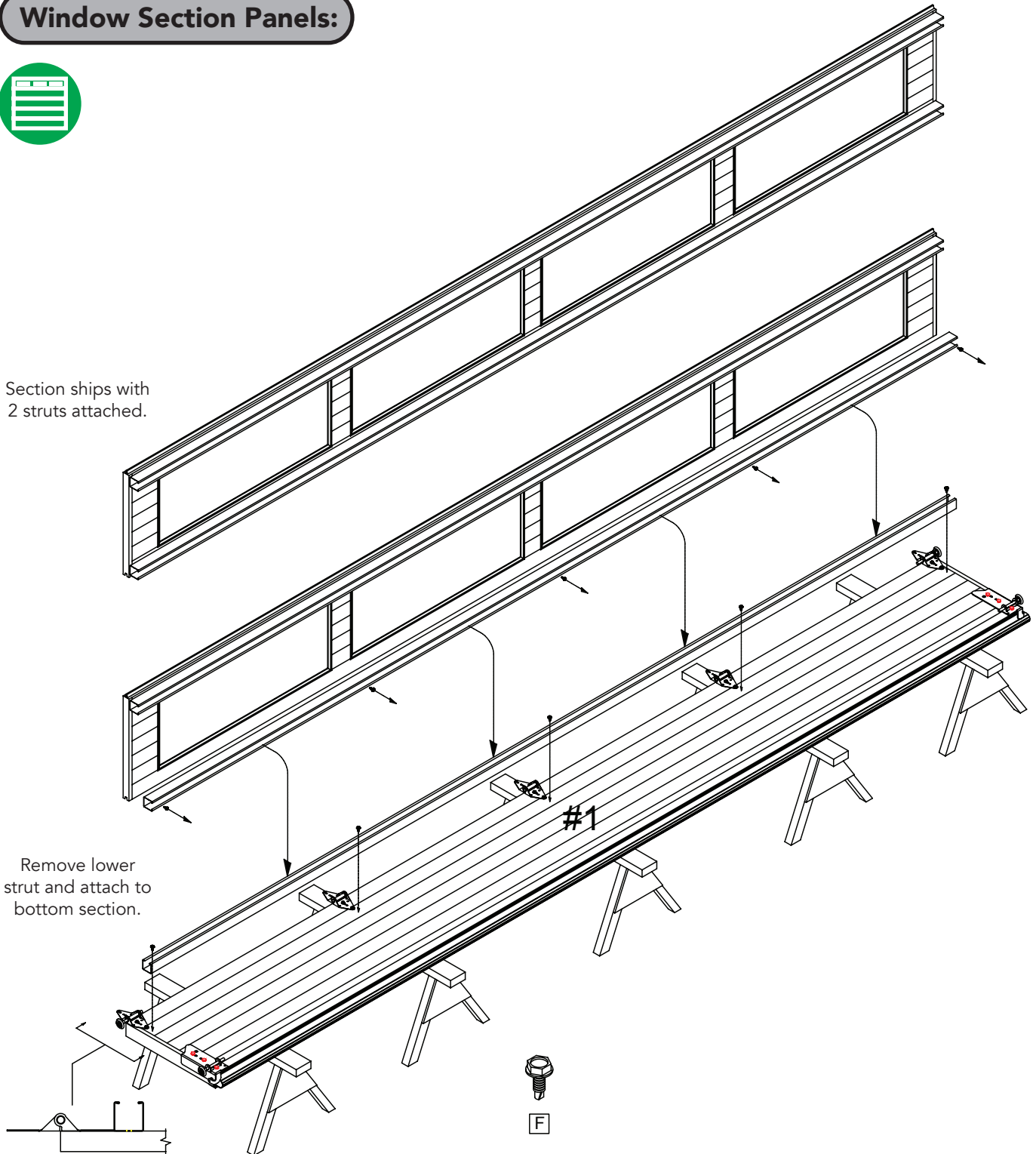
Models: 660, 661, 663, 664, 760, 761, 763, 764, 2060, 2061, 2063,  
2064, 2460, 2461, 2560, and 2561

## Window Section Panels:



Section ships with  
2 struts attached.

Remove lower  
strut and attach to  
bottom section.

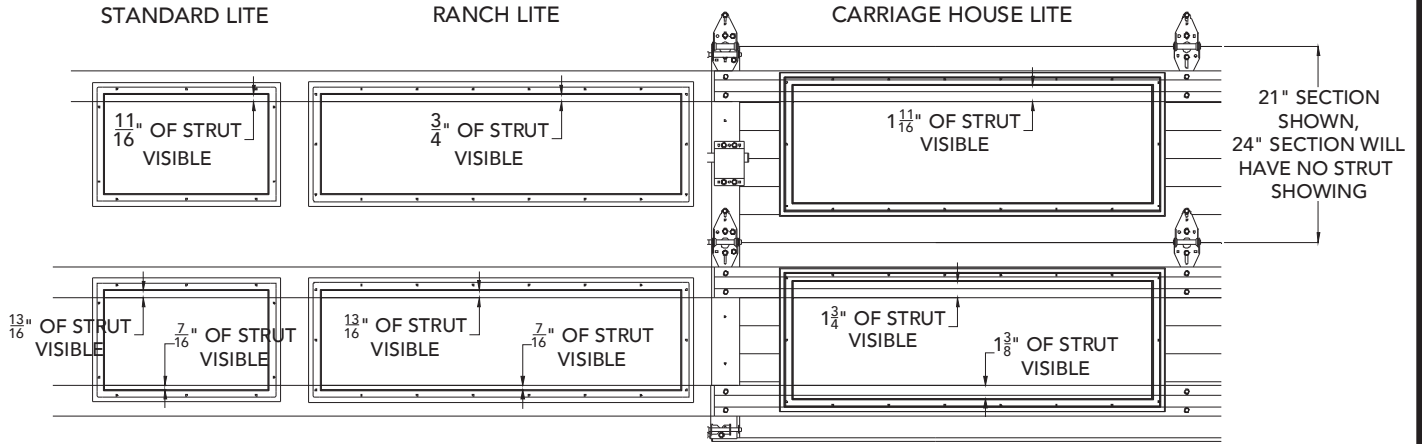




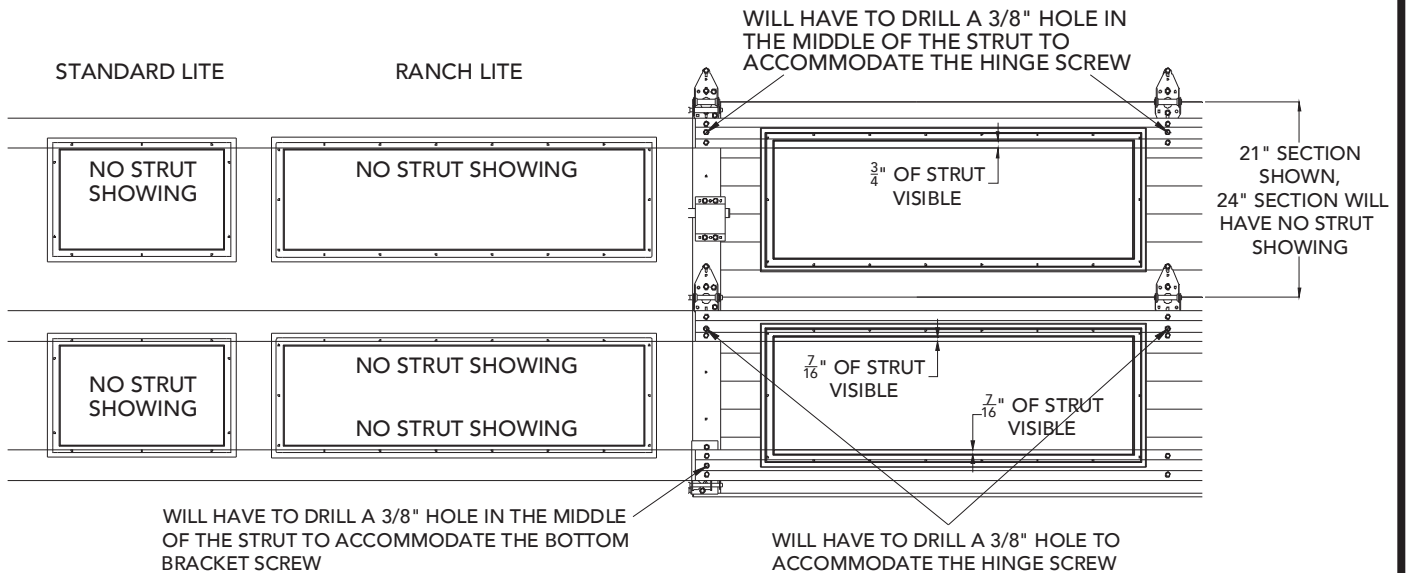
## Alternate E-Strut Location

Use diagrams below to adjust E-Strut when lites are down one side on 21" section heights. Moving as shown will minimize visibility of E-Strut from outside of building.

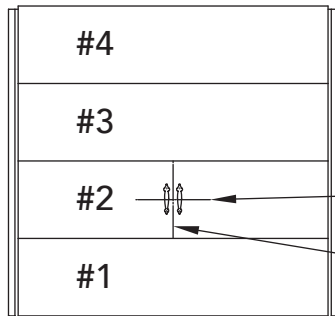
### Location of E Strut as Shown on Drawing



### New Location of E Strut to Minimize Visibility

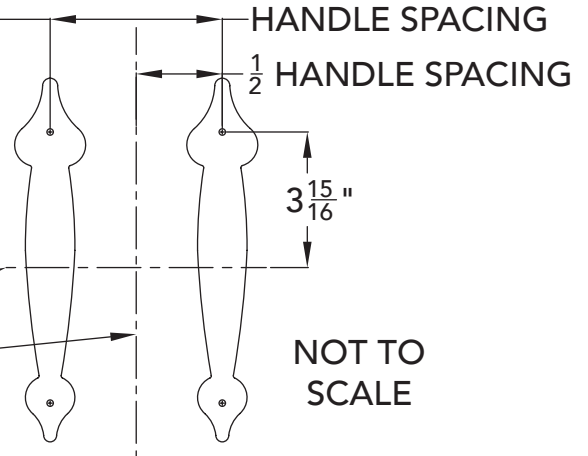


## Decorative Handle Positioning:

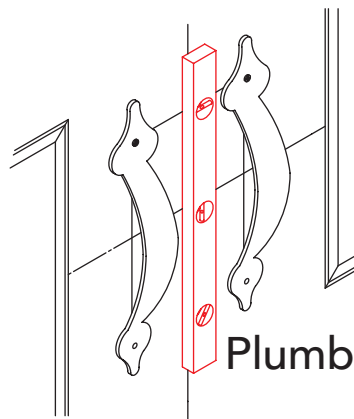
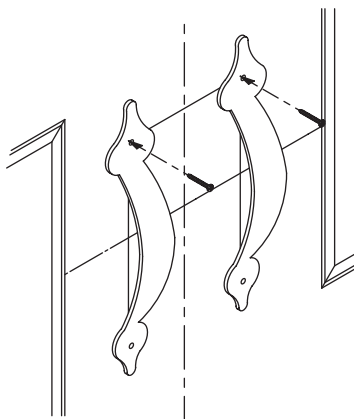
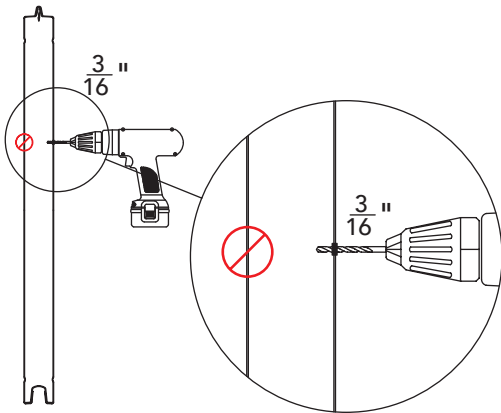
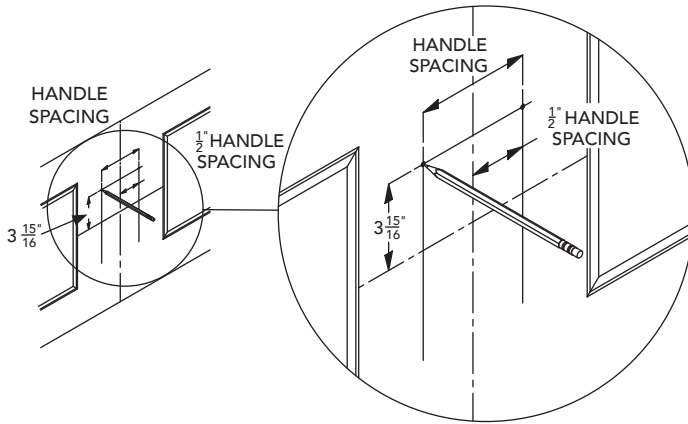


SECTION WIDTH	
8' - 8'7"	8'8" - 10'2"
8' - 8'7"	13' - 15'11"
16' - 16'11"	17' - 18'2"
HANDLE SPACING	
3"	5"

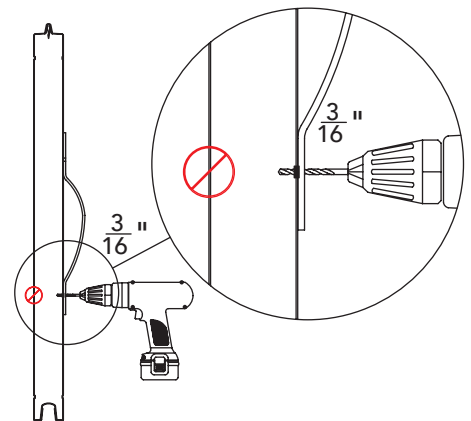
HORIZONTAL CENTERLINE OF SECTION  
VERTICAL CENTERLINE OF SECTION



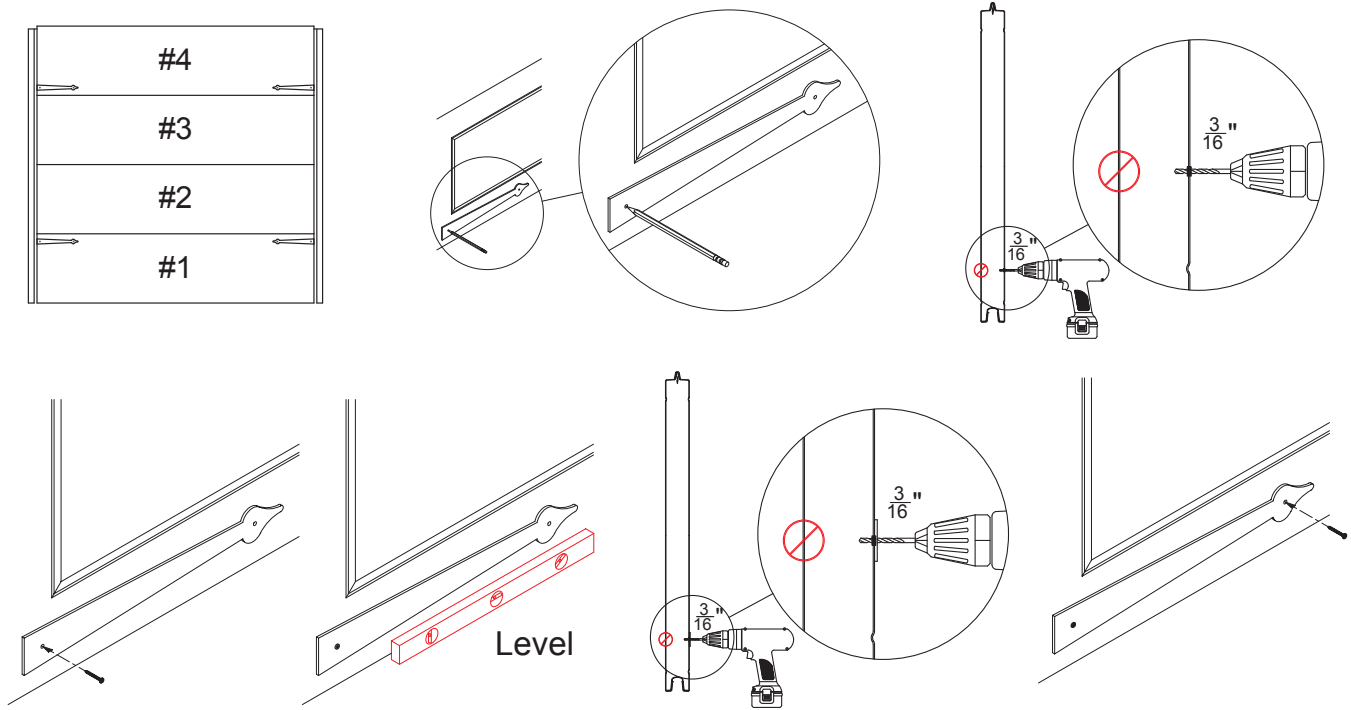
NOT TO SCALE



Plumb



## Optional Decorative Hinge Straps:



## Frosted Glass Care:

To clean frosted (acid-etched) glass, simply follow a few important rules:

1. In most cases, acid-etched glass can be washed with plenty of clean water and a soft sponge or non-ammonia glass cleaner.
2. Do not wash acid-etched glass when it is fully exposed to the sun or a nearby heat source.
3. Never use aggressive cleaning materials such as razor blades, steel wool, abrasive, etc. to clean glass.
4. Always clean the full surface of the acid-etched glass using water or glass cleaner even if only one small area of the glass is dirty. Never do spot cleaning, because it might create halos on the glass.
5. Once cleaned, the glass should be rinsed with clean water and wiped off all over with a soft lint-free cotton cloth.
6. Use plenty of water to avoid scratching or damaging the surface of the glass. Never try to remove impurities with a dry and/or dirty cloth, as this may cause scratches on the glass surface by rubbing impurities on the glass.
7. During the whole cleaning process, never apply any excessive pressure as this may damage the acid-etched glass surface by polishing it too much.
8. Always use standard glass cleaners containing alcohol to clean the acid-etched glass.
9. If any stains still remain, repeat the cleaning sequence.
10. Never use products containing hydrofluoric acid, fluorine, chlorine or ammonia derivatives because they can damage the acid-etched surface of the glass. Never use highly acidic and alkaline products as they can abrade the glass surface.

## Painting:

Any garage door surface to be repainted must be properly prepared to assure the continued performance of the coating system. The following instructions must be followed to ensure proper repainting results.

1. Dirt, loose chalk, and mildew must be removed prior to repainting. Heavier dirt accumulations must be addressed prior to repainting by the use of a diluted solution of Spic and Span® (1 cup into 5 gallons of warm water). Always rinse the surface thoroughly to remove any of the cleaning agents.
2. Minor scratches, which have not left the metal substrate exposed, can be lightly sanded or buffed to create a smoother surface. Care must be taken, however, not to expose the substrate. Once this exposed metal condition exists, the likelihood of rusting is greatly increased. Should the metal substrate be observed during this operation, see the following paragraph. (Do not use steel wool.)
3. Exposed metal must be treated to prevent rust from forming. To do so, sand the general area lightly and use a primer specifically designed to protect any exposed galvanized steel metal from corrosion. Allow sufficient time for the primer to dry before applying the topcoat. If either red or white rust is evident, scrape or brush away as much rust as possible and then sand lightly, removing ALL rust before priming. Care must be taken, however, not to destroy the galvanized surface.
4. After the door has been properly prepared, it must be coated within 24 hours using high-quality latex exterior house paint. The surface must be completely dry prior to painting. Avoid painting at temperatures below 50° F. Follow the paint manufacturer's recommendations to apply a uniform coat at the proper thickness.



**STOP! CAUTION:** Use of paints containing linseed oil, lacquer, or alkyd base solvents voids the warranty of this door.

## Maintenance:

Routine maintenance performed once annually will help assure long-lasting, quiet, trouble-free operation of your Haas Door sectional door.

### Visual Inspection

Look at the garage door springs, cables, rollers, pulleys and other door hardware. If you suspect problems, have a qualified person make repairs. Do not attempt to replace door hardware yourself.



**WARNING! Springs are under high tension. Only qualified persons should adjust them.**

### Squeaky Springs

Squeaky springs don't necessarily mean something is wrong. Try applying a spray-on lubricant to reduce the noise. If this doesn't work, call a professional garage door installer for service.

### Lubricate

Lubrication should be done with silicone grease. Lubricate all moving parts of the door including hinges, springs, steel rollers and lift cables. However, do not lubricate plastic parts such as plastic rollers.

### Cleaning

Dirt and mildew must be removed to maintain the desired appearance. Use a mild household cleaner and wipe down the surface of the door. Rinse surface thoroughly to remove any cleaning agent.

### Replacement Parts:

To obtain replacement parts for your Haas Door garage door, such as the bottom seal, hinges, springs, sections, and glass, contact your Haas Door dealer, whom will often have items in stock to assist you. To find a dealer near you, see the front cover of this installation manual, reference the label on the side of the section, or visit our dealer locator found on [haasdoor.com](http://haasdoor.com).

## Haas Door is Committed to Quality

As a member of the Door and Access Systems Manufacturers Association (DASMA), Haas Door is committed to upholding industry standards for quality and safety. In addition to these guidelines, Haas Door has developed its own quality assurance procedures.

Each raw material used in the manufacturing process is inspected daily for quality assurance. Steel used on the inside and outside skins is checked for accuracy in thickness and finish. The insulation material, a high density environmentally compliant polyurethane foam, is tested continuously on each production line to ensure that the correct density, blend of material, cure time and calculated R-values are achieved.

Samples of manufactured doors are tested for quality and durability. Doors are cycled tens of thousands of times to test the performance and endurance of the sections, hinges, springs, cables, rollers, bottom seals, and track. Strength is measured using two separate tests. Individual sections are subjected to a dead load test, and complete doors are wind load tested. This ensures that Haas Door garage doors will meet wind load requirements for building codes across the world.

Haas Door continues to perform testing outside of the manufacturing facility, as both prototype and current doors are installed in various locations and monitored for durability. External labs are also used to test specific components to ensure quality standards.

Quality people and quality products are what make Haas Door the best garage door manufacturer in the industry.

## Open the door to endless possibilities!

### For more information about your door:

The Haas Door label contains extensive information about your door and provides links to even more data specific to your purchase. To access this data, you can scan the QR code on the door label with your smartphone, or you can visit [i.haasdoor.com/doorfinder](https://i.haasdoor.com/doorfinder) to enter the serial number provided. Both methods will give you information such as the type of door, color, weight, order number, configuration, and technical drawings of the door.



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