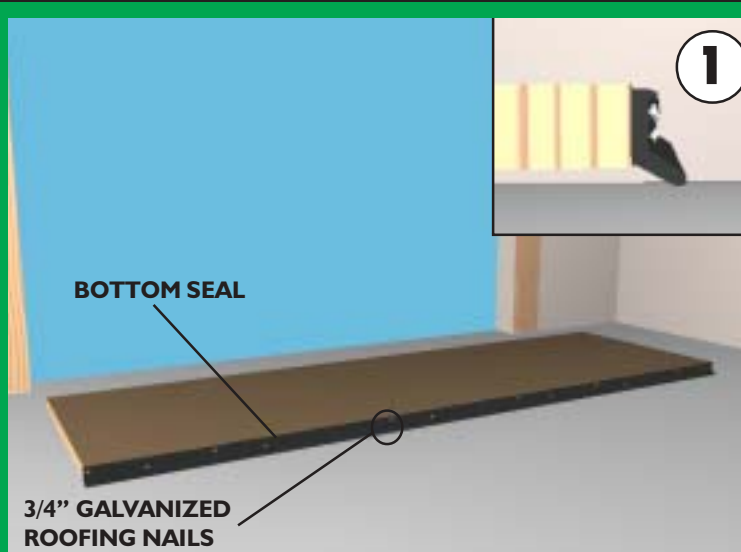


START HERE

IMPORTANT! READ IMPORTANT SAFETY NOTICES AND REFER TO INSERT SHEET INSTRUCTIONS TITLED "REMOVING THE OLD DOOR/PREPARING THE OPENING". IF THE INSERT SHEET INSTRUCTIONS ARE NOT INCLUDED, CONTACT WAYNE-DALTON CORP. FOR A FREE COPY. If removing an existing door, carefully follow the directions given on the insert sheet instruction in the portion titled "Removing the Old Door".

WARNING! REMOVAL OF AN EXISTING DOOR CAN BE DANGEROUS. FOLLOW INSERT SHEET INSTRUCTIONS CAREFULLY, OTHERWISE SERIOUS INJURY OR DEATH COULD RESULT.

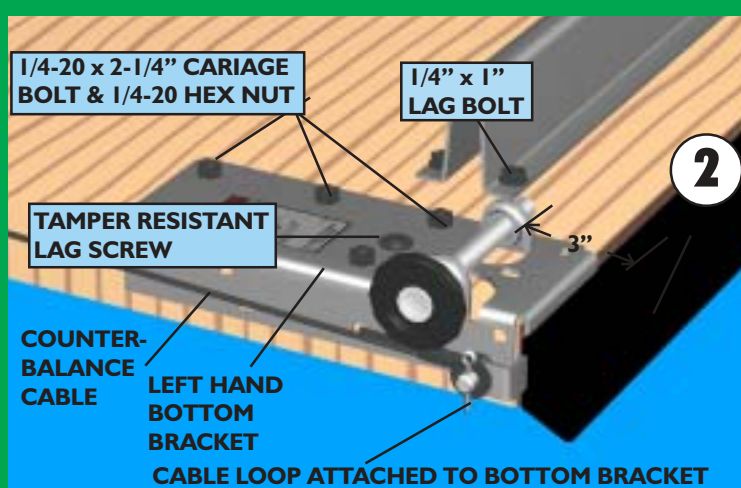
Begin the installation of the door by checking the opening. It must be the same size as the door. Vertical jamba must be plumb and the header level. Side clearance, from edge of door to wall, must be minimum of 3-1/2" (89 mm) on each side, for 2" Track. Side clearance, from edge of door to wall, must be minimum of 4-1/2" (114 mm) on each side, for 3" Track. For proper opening preparation refer to the portion of the insert sheet instructions titled "Preparing the Opening". Check floor for level at opening. If floor is more than 1/4" out of level, section and/or floor modification will be needed, for proper door seal.



Align the bottom seal with the angled extension to the outside of the door as illustrated. Starting at one end of the door, attach the seal to the bottom of the section with 3/4" long galvanized roofing nails (not supplied). Stretch the seal slightly and nail the seal to the bottom of the door every 6".

Once the seal is fastened, cut any extra material off so the seal is even with both ends of the door.

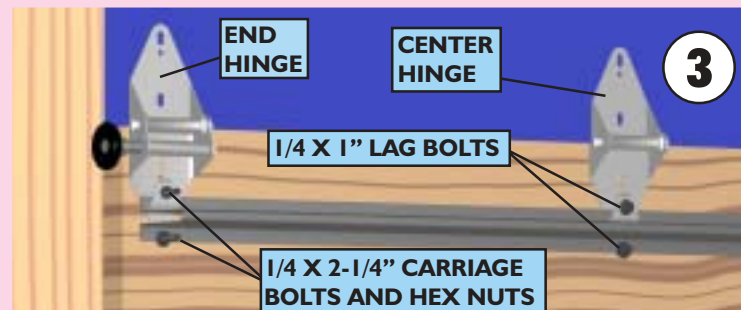
With the bottom section face down, locate the bottom brackets, counter balance cables, the required hinges, and the reinforcing struts.



Bottom brackets are left and right. Secure the counterbalance cable using clevis pin, washer and cotter key. Place the brackets over the bottom corners of the section, aligning the bottom of the bracket with the bottom of the section. Using the bracket as a template, drill (3) 9/32" dia. holes thru the section. Secure the bracket to the section with (3) 1/4-20 x 2-1/4" carriage bolts and hex nuts each. Insert a tamper resistant lag screw to help secure bottom bracket. Insert (1) roller in each bottom bracket.

SEE FIGURE 11 for strut installation

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



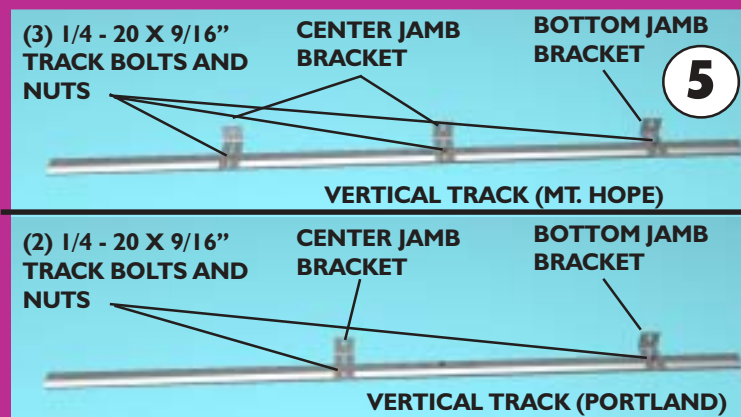
Three section doors (up to and including 7'-3" high) start with #2 end hinges between 1st and 2nd section, then #4 hinges between 2nd and 3rd section. Four section doors (over 7'-3" high) start with #1 end hinges between 1st and 2nd section, then #2 hinges between 2nd and 3rd section, and #3 hinges between 3rd and 4th section.

Locate the lower leaf of the 1st end hinges and required center hinges over the predrilled holes in the end stiles and center stiles at the top of the bottom section. Secure the end hinges to the section using (2) 1/4-20 x 2-1/4" carriage bolts and hex nuts each. Secure the center hinges to the section using (2) 1/4 x 1" lag bolts each. Insert (1) roller in each end hinge.



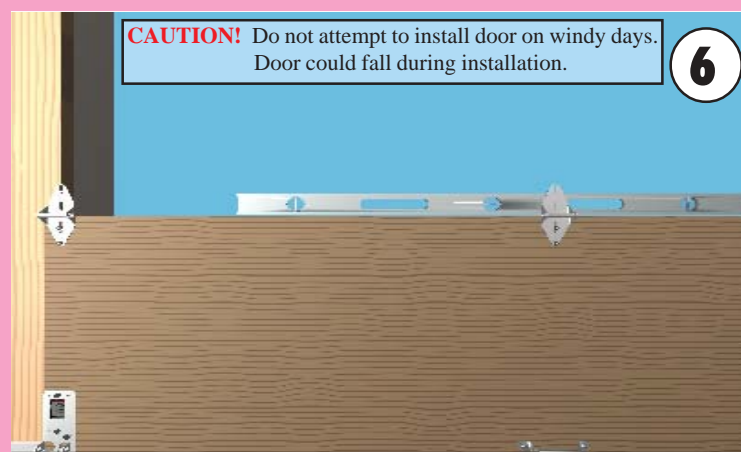
With assistance lift section and place rollers over the tops of the vertical tracks. Install by guiding rollers into the vertical track on both sides and gently lowering this section onto the bottom section. Keeping the ends of the sections aligned, install remaining section(s), except top section, in same manner. Fasten all hinges to connect the sections with (2) 1/4-20x2-1/4" carriage bolts and hex nuts and 1/4 x 1" lag bolts.

Locate the left and right flagangles, vertical tracks, and (2) bottom jamb brackets. Lay the flagangles on the floor, positioning the mounting flanges away from each other. Orient the non-slotted ends of the vertical track toward the flagangles. Align the back legs of the track 2-3/16" from the jamb side of the flagangle. Secure the track to the flagangles using (2) 1/4-20 x 9/16" track bolts and nuts per side. **NOTE:** Tighten nuts finger tight.



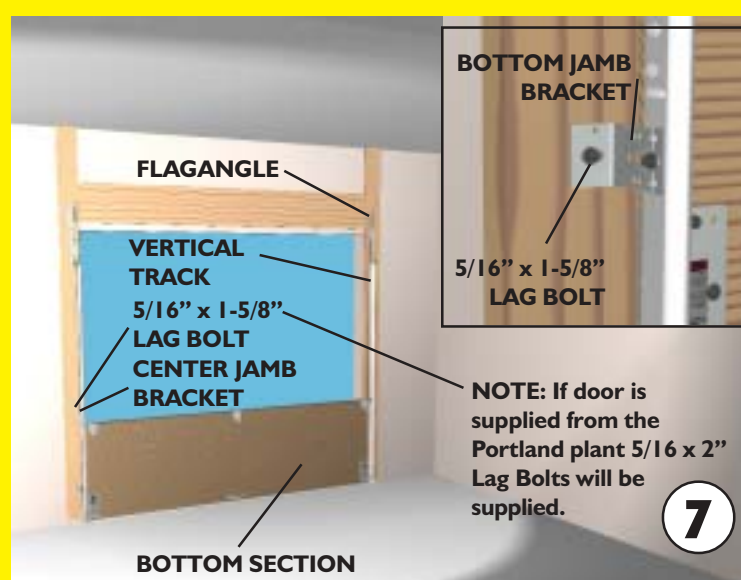
Position the bottom jamb brackets (smaller in length) 10-1/2" up from the bottom of the vertical track and align the top hole in the bracket with the upper hole in the track. Secure the jamb brackets to the track using (1) 1/4-20 x 9/16" track bolt and flanged hex nut for each bracket. Install (2) center jamb brackets centered between bottom jamb bracket and flagangle.

Note: Portland doors only require (1) center jamb brackets equally spaced between the flagangle and the bottom jamb bracket.

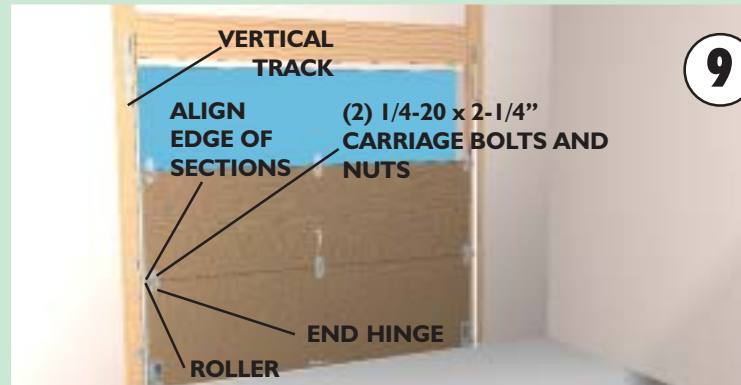
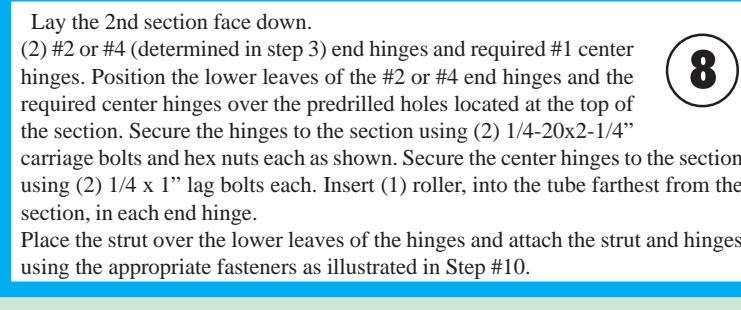


Before installing the bottom section, measure and cut perimeter seal (not included) for entire garage door opening. Temporarily nail the perimeter seal to the door jamba and header. This will help hold the bottom door section in place. Refer to the insert sheet on preparing the opening. **Now comes the single most important step in installing the Wayne-Dalton garage door system.** Center the bottom section in the door opening. Level it using wooden shims under the bottom astragal if needed. Once the bottom section is level, all the other components will automatically align. Hold the section in the opening while attaching vertical tracks.

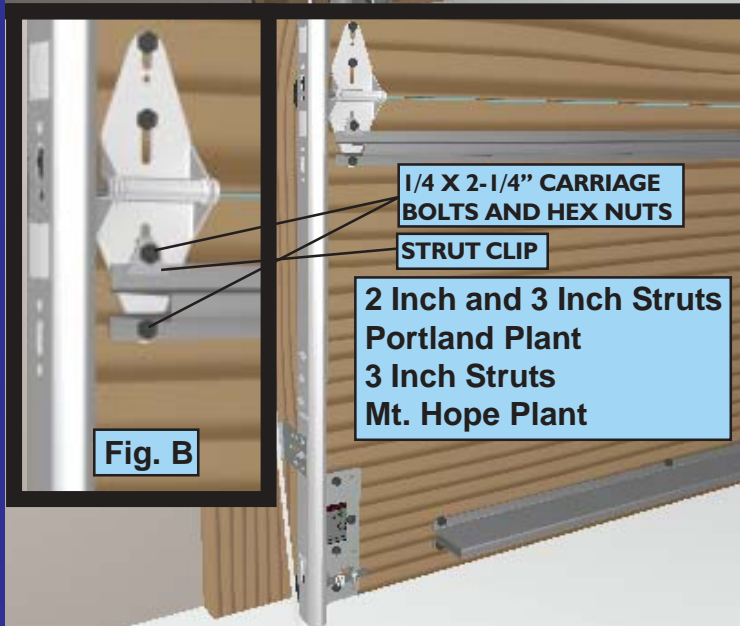
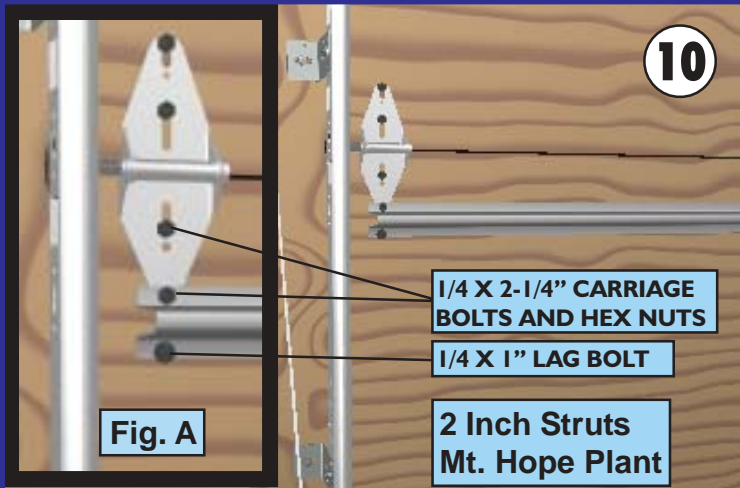
NOTE: In the event that the bottom section was shimmed to level it, the vertical track on the same side of the section must also be raised the thickness of the shim(s). The tops of the vertical track must be level.



Position the vertical track over the rollers of the bottom section. Make sure the counterbalance cable is located between the rollers and the door jamb. Loosely fasten bottom jamb bracket and flagangle with one (1) 5/16" x 1-5/8" lag bolt each, but do not install a lag bolt into the center jamb brackets yet. Run the counterbalance cable over between vertical track and edge of door section. Hang the cable over the top of the flagangle. Repeat for other side. **IMPORTANT!** The tops of the vertical tracks must be level from side to side.



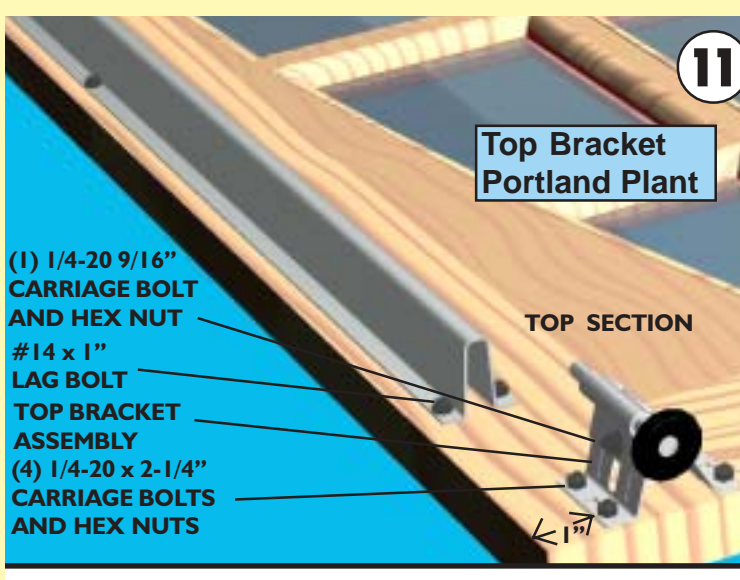
Identify the supplied top brackets. On top sections supplied from the Portland Plant, measure down from the top of the section on each end 1" for "A" top brackets. With a pencil, place a horizontal line on the top rail. Position the top brackets at the horizontal lines and align the edge of the bracket with the edge of the section. On sections supplied from the Mount Hope Plant, use the Z shaped top bracket. For proper top bracket orientation, follow the illustration for your top section. Align the top bracket with the edge of the section.



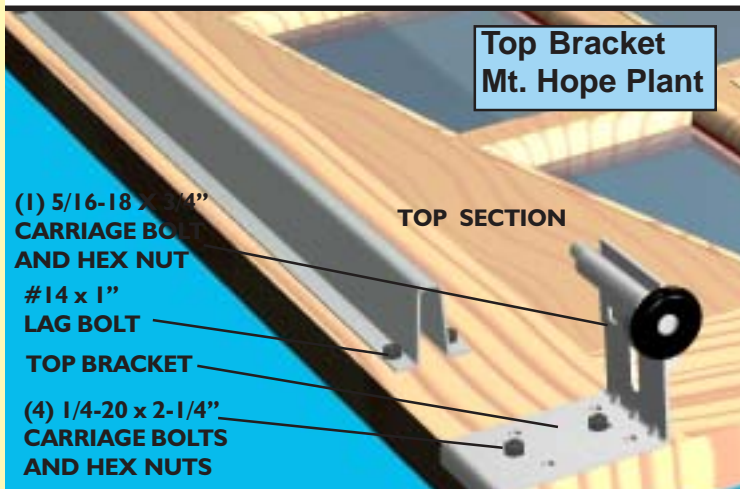
SECTION STRUTTING SCHEDULE

Doors up to 7'3" (3 section) require 4 Struts.
Doors over 7'3" (4 section) require 4 Struts.
Doors 8'0" thru 16'2" wide, use 2 inch Struts. (manufactured in the Mt. Hope plant see Fig. A) (manufactured in the Portland plant see Fig. B).
Doors 16'3" thru 18'0" wide, use 3 inch Struts. (See Fig. B.)

To install horizontal track, place the curved end over the top roller. Align the bottom of the horizontal track with the top of vertical track. Secure the track to the flagangle with two (2) 1/4-20 track bolts.



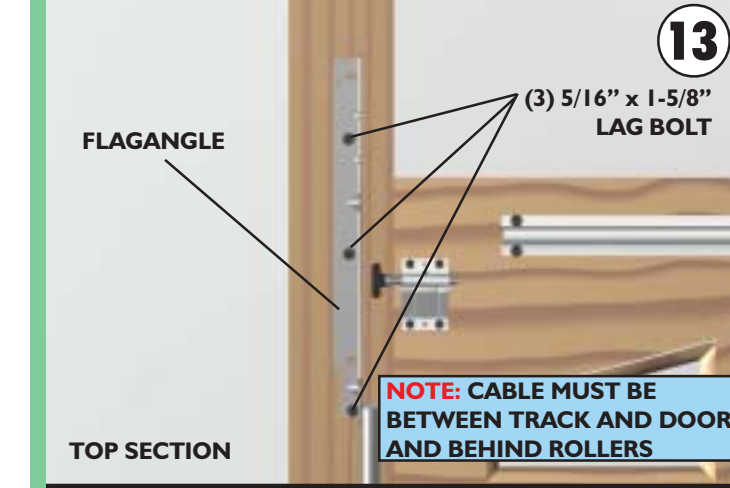
Lay the strut on the top/bottom rail of the section and center the strut with equal dimensions from each end. Drill pilot holes into section with 1/8 inch drill. (BE EXTREMELY CAREFUL NOT TO DRILL THRU SECTION. ONLY DRILL 1 inch DEEP.) Attach the strut using #1/4"x1" lag bolts at each attachment point.



Using the top bracket as a template, drill 9/32" dia. holes through the section. Secure the brackets using (2) 1/4-20 x 2-1/4" carriage bolts and hex nuts (Mt. Hope) (4) 1/4-20 x 2-1/4" carriage bolts and hex nuts (Portland). Insert a roller into each top bracket and loosen the bolt in the adjustable slides. Proper adjustment will be required once the rest of the track is installed.

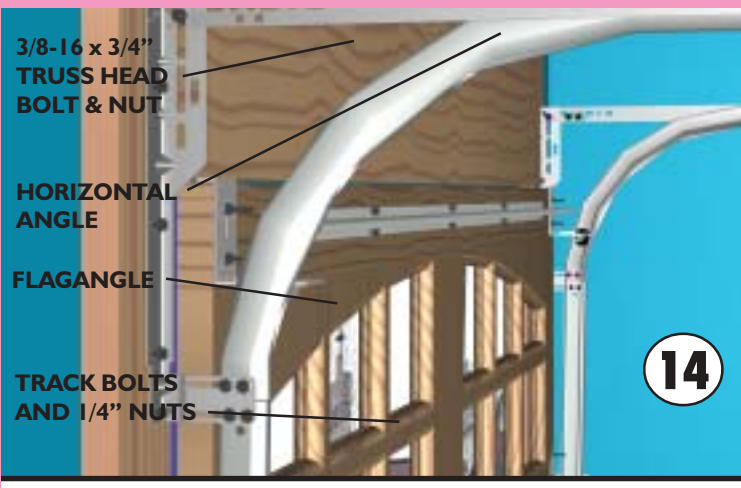


Place the top section in the door opening and secure it temporarily by driving a nail into the header near the center of the door and bending it over the section. Keeping the ends of the sections aligned. Once section is secure, fold the upper leaves of the hinges from the third or fourth section up and secure to the top section with (2) 1/4-20 x 2-1/4" carriage bolts and hex head nuts in each hinge.



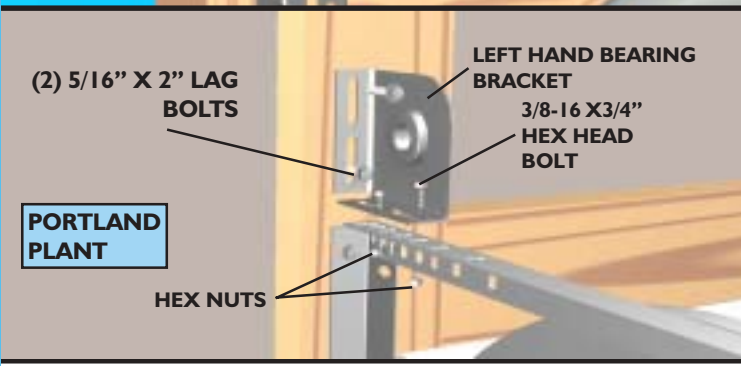
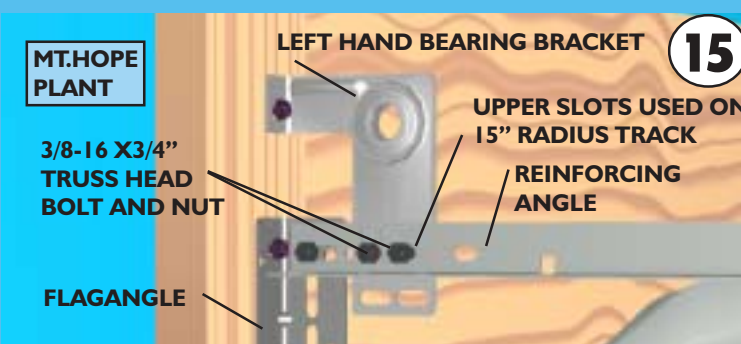
When installing a door, vertical track alignment is critical. Position the flagangle 1-11/16" (43mm) from the edge of the door. Tighten the first lag bolt then secure flagangle to the jamb with (2) 5/16" x 1-5/8" lag bolts (5/16" x 2" lag bolts if supplied by Portland plant). Repeat for the other vertical track. Now complete the vertical track installation on both sides by securing center jamb bracket(s) and tightening other lag bolts. **IMPORTANT!** Ensure that flagangles are parallel with door sections.

Bolt the reinforcing angle to the slot in the flagangle using one (1) 3/8-16x3/4" truss head bolt and nut. Repeat for other side. With tracks installed you can adjust the top brackets. Vertically align the top section with the lower sections. Once aligned, position top roller in adjustable slide against horizontal track to maintain position and tighten nuts(s). Repeat for other side. Remove the nail from above the top section.



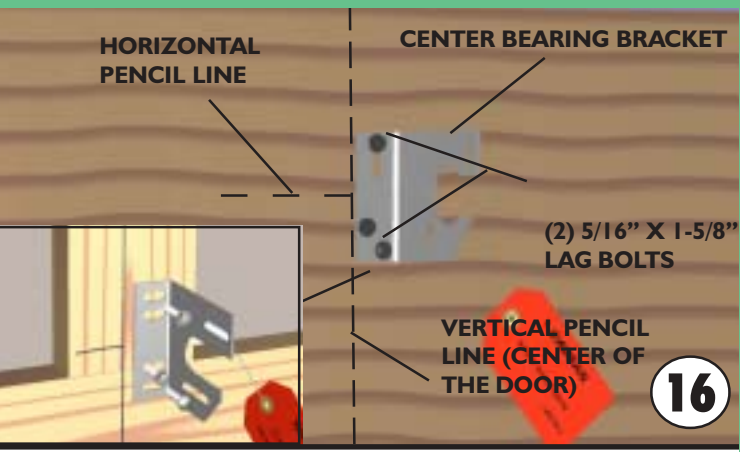
IMPORTANT! Failure to remove nail before attempting to raise door could cause permanent damage to top section.

WARNING! DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR AS OUTLINED IN STEP #21, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE INJURY OR DEATH.



MT. HOPE PLANT: Locate the end bearing bracket above the flagangle and secure the bracket to the reinforcing angle using two (2) 3/8-16x3/4" truss head bolts and nuts. Once the bracket is secured to the reinforcing angle, secure the top of the bracket to the jamb using one (1) 5/16"x1-5/8" lag bolt.

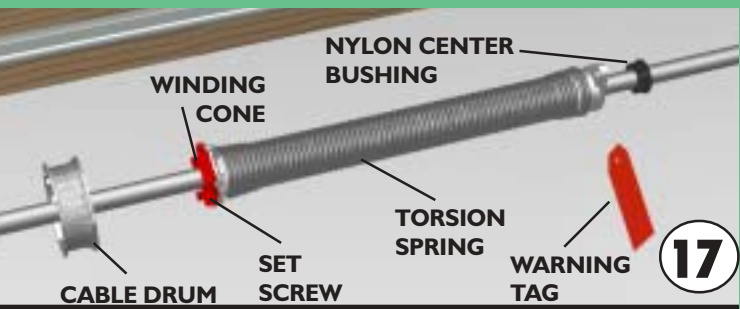
PORTLAND PLANT: Locate the end bearing brackets above the flagangles and secure the brackets to the reinforcing angles using (2) 3/8-16 x 3/4" hex head bolts and nuts. Once the bracket is secured to the reinforcing angle, secure the top of the bracket to the jamb using (2) 5/16"x 2" lag bolt.



Locate the center of the door and mark a vertical pencil line on the spring pad. Then measure the distance from the center of the bearing hole in the end bearing bracket to the top of the door. Using that same distance, mark a horizontal line on the spring pad, measuring up from the top of the door. Position the center bearing bracket along the vertical pencil line on the spring pad as shown. In addition, position the center bearing bracket halfway over the horizontal pencil line. This will level the torsion tube through end bearing brackets when installed. Attach the center bearing bracket to the spring pad using two (2) 5/16"x1-5/8" lag bolts and one (1) 5/16"x2" tamper-resistant lag bolt.

IMPORTANT! Use the 5/16"x1-5/8" tamper-resistant lag bolt ONLY if spring pad is mounted over masonry.

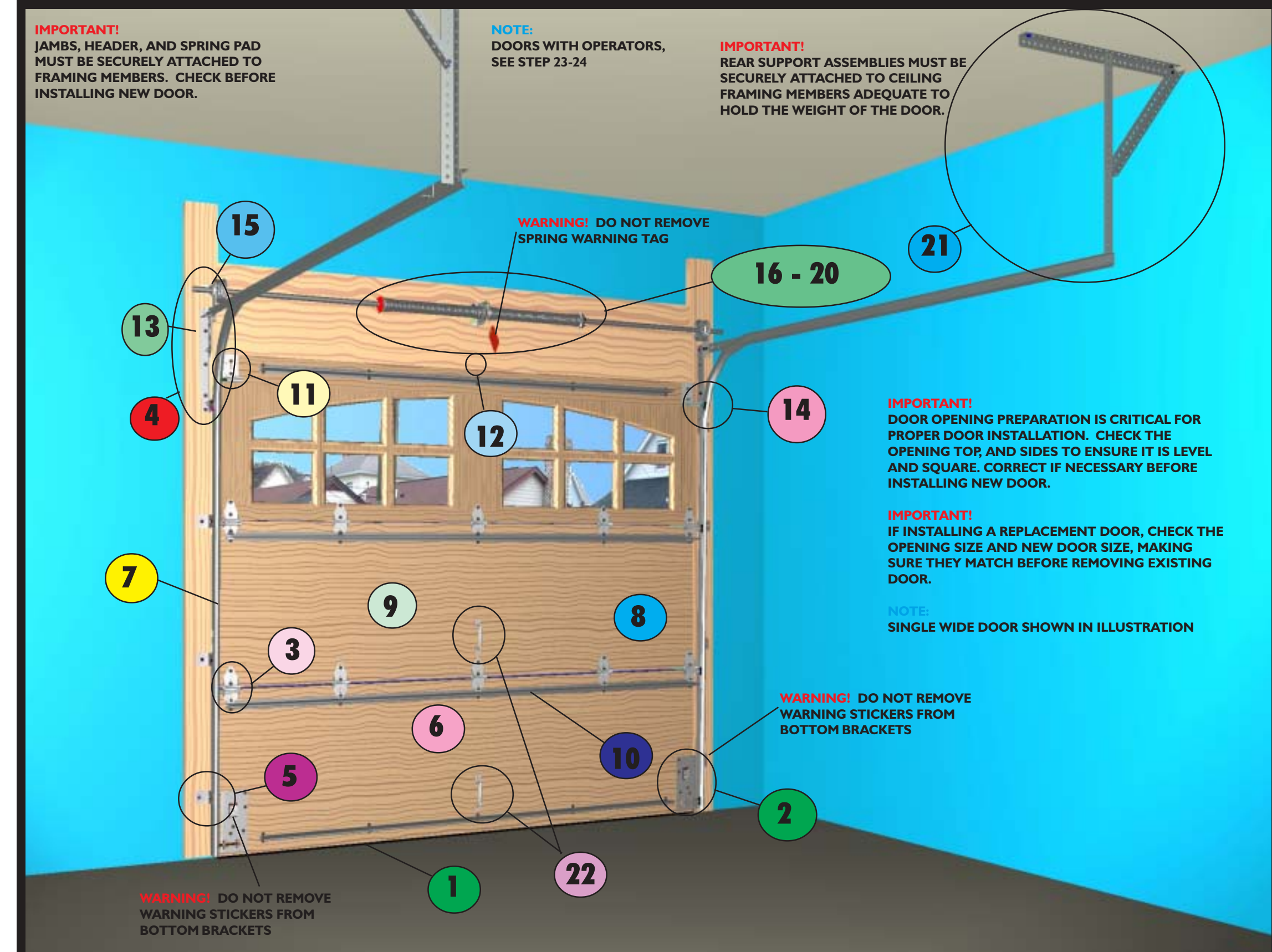
IMPORTANT! Tamper-resistant lag bolt MUST be attached through the bottom hole of the center bearing bracket.



Facing the inside of the door, lay the torsion tube on the floor. Lay the black color coded spring and cable drum on the floor at the right end of the tube. Then lay the red color coded spring and cable drum on the floor at the left end of the tube. Slide nylon center bushing onto the torsion tube followed by the spring(s) and cable drums. The nylon center bushing, spring(s), and cable drums must be positioned as shown in the illustrations. With assistance, pick up the torsion tube assembly and slide one end of the tube through one end bearing bracket. Lay the torsion tube into the center bearing bracket and slide the loose end of the tube into the opposite end bearing bracket. Position the torsion tube so that equal amounts of the tube extend out from both end bearing brackets.

NOTE: Some lighter weight doors are provided with only one (1) torsion spring (shown above). The single spring may be color coded either red or black. Position spring accordingly, as outlined above.

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



IMPORTANT! JAMBS, HEADER, AND SPRING PAD MUST BE SECURELY ATTACHED TO FRAMING MEMBERS. CHECK BEFORE INSTALLING NEW DOOR.

NOTE: DOORS WITH OPERATORS, SEE STEP 23-24

IMPORTANT! REAR SUPPORT ASSEMBLIES MUST BE SECURELY ATTACHED TO CEILING FRAMING MEMBERS ADEQUATE TO HOLD THE WEIGHT OF THE DOOR.

IMPORTANT! DOOR OPENING PREPARATION IS CRITICAL FOR PROPER DOOR INSTALLATION. CHECK THE OPENING TOP, AND SIDES TO ENSURE IT IS LEVEL AND SQUARE. CORRECT IF NECESSARY BEFORE INSTALLING NEW DOOR.

IMPORTANT! IF INSTALLING A REPLACEMENT DOOR, CHECK THE OPENING SIZE AND NEW DOOR SIZE, MAKING SURE THEY MATCH BEFORE REMOVING EXISTING DOOR.

NOTE: SINGLE WIDE DOOR SHOWN IN ILLUSTRATION

WARNING! DO NOT REMOVE WARNING STICKERS FROM BOTTOM BRACKETS

WARNING! DO NOT REMOVE WARNING STICKERS FROM BOTTOM BRACKETS



Wayne-Dalton Corp.
P.O. Box 67
Mt. Hope, Ohio 44660

IMPORTANT SAFETY NOTICES

Read these instructions carefully before attempting installation. If in question about any of the procedures, do not perform the work. Instead, have a qualified door agency do the installation or repairs.

- Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
- It is always recommended to wear eye protection when using tools, otherwise serious eye injury could result.
- Avoid installing your new door on windy days. Door could fall during the installation and cause damage and personal injury.
- If the door is to be electrically operated at any time, all pull ropes **MUST** be removed to prevent injury or death to children who may become entangled in the rope. The locking mechanism **MUST** also be disengaged.
- Operate door **ONLY** when properly adjusted and free of obstructions.
- To avoid serious injury to fingers or hands, never place fingers or hands into space between door sections when closing door. Always lift handle/gripping point when manually operating door.
- Should the door become hard to operate or completely inoperative, a qualified door agency should correct the problem to prevent damage to the door or serious personal injury.
- DO NOT PERMIT** children to play with the garage door or the electrical controls. Fatal injury could result, should the child become entrapped between the door and the floor.
- To prevent serious injury or death, avoid standing in the open doorway or walking through the doorway while the door is moving.
- Door is constantly under **EXTREME SPRING TENSION**. To prevent possible serious injury or death, adjustments, repairs, removal or installation, **ESPECIALLY OF SPRING ASSEMBLIES, CABLES OR BOTTOM CORNER BRACKETS**, should be performed **ONLY** by qualified door service people.
- If your existing garage door opener does not have a reversing mechanism, you should consider purchasing one that has up to date safety features. These features can prevent opener related property damage or personal injury.
- Check all bolted connections monthly during the lifetime of the door to prevent damage or personal injury caused by loose connections.
- Definition of key words used in this manual:

WARNING! -- Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.

IMPORTANT! -- Required step for safe and proper door operation.

NOTE: -- Information assuring proper installation of the door.

MAINTENANCE AND PAINTING INSTRUCTIONS FOR 7100 SERIES WOOD DOORS

These instructions apply to 7100 SERIES wood doors. The interior/exterior and all edges of the door must be properly primed, finished and maintained if satisfactory performance is to be achieved.

The purpose of the finishing is to both protect and beautify the substrates. These recommendations for finishing are intended as a guide to achieve both functions for a reasonable service life of wood doors.

Doors must be completely finished prior to installation, or immediately after installation. Improper storage, transportation or delays in finishing that exposes wood surfaces to moisture or other contaminations will result in the warranty being voided.

SURFACE PREPARATION

All surfaces must be clean, free of dust and dirt, and any other contamination. Any scarring or stains that occur during transportation, handling and storage must be resanded to the original condition.

PAINTED FINISHES

Prime all interior/exterior surfaces and edges using Acrylic water based stain blocking primer approved for use on each species of wood substrate being finished (special finishes are required on Cedar to prevent tannin stains from appearing). If the door is factory primed, the above priming is not required, proceed as follows. Finish paint all interior/exterior and edges with two coats of 100% Acrylic latex exterior house paint. Follow paint manufacturer's label directions completely for all coatings.

CLEAR OR STAINED FINISHES

If staining, apply an exterior grade stain approved for use on each species of wood substrate being finished to all surfaces, following manufacturer's label directions. Stain selected must be compatible with Alkyd varnishes. After proper drying time (or if stain is not being applied), apply 1 coat of waterproof exterior Alkyd varnish reduced 20% with mineral spirits to all surfaces and edges. After recommended drying time before re-coating, apply two additional coats of waterproof exterior Alkyd varnish to all surfaces and edges. Follow finish manufacturer's label directions completely for each coating applied. Store finished door in a dry, moderate temperature area prior to installation. Any surface scarring during handling or installation of the finished door must be touched up as above. *Note: Do not stain MDO plywood, paint only.*

MAINTENANCE AND REFINISHING

Yearly inspection of the exterior of the garage door will reveal the extent of weathering and timing of refinishing. When the finish becomes eroded or thin, clean and prime the areas of deterioration as above, followed by a complete refinishing with two coats of a compatible finish, following finish manufacturer's label directions.

7100 SERIES Wood Doors LIMITED WARRANTY

The Manufacturer warrants the 7100 SERIES DOORS for a period of ONE YEAR from the time of delivery against any defect in workmanship or material. All 7100 Series Doors must be properly protected with a recommended finishing stain/paint. This warranty is void if the buyer fails to follow the Manufacturer's finishing instructions. Wood doors must be protected from moisture prior to the painting process. UNDER NO CIRCUMSTANCES SHOULD THE 7100 SERIES DOOR BE EXPOSED TO ANY MOISTURE PRIOR TO PAINTING OR THIS WARRANTY SHALL BE VOID.

Wayne-Dalton Corp. uses high quality material for framework, door skins, overlays, and panel materials. Exposure of wood to the environment may cause bowing, checking and/or cracking of a door component regardless of efficiency of painting. This is not considered a defect, it is an uncontrollable characteristic of natural wood. The dealer and the end user have the responsibility to select the type of finishing material and/or door which will offer the best results and longevity for the climate and/or environmental condition which they will use the product.

The Manufacturer warrants the garage door hardware, track, and springs against defects in workmanship or material for a period of ONE YEAR from date of purchase. Other conditions and exceptions as contained herein apply.

Manufacturer shall, upon notification, correct such nonconformity at its option, by repairing or replacing any defective part(s). This warranty covers material only and excludes all other charges incurred.

NO EMPLOYEE, DISTRIBUTOR, OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THE FOREGOING WARRANTIES IN ANY WAY OR GRANT ANY OTHER WARRANTY ON BEHALF OF MANUFACTURER.

The Manufacturer shall not be responsible for any damage resulting to or caused by its products by reason of installation, improper storage, unauthorized service, alteration of products, neglect or abuse, or attempt to use the products for other than the customary usage or for their intended purposes. The above warranty becomes null and void if holes are drilled other than those specified by the Manufacturer. The above warranty does not cover normal wear or any damage beyond Manufacturer's control or replacement labor.

IF THIS WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS WARRANTY ACT, NO WARRANTIES, EXPRESSED OR IMPLIED, (INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), SHALL EXTEND BEYOND THE APPLICABLE TIME PERIOD STATED IN BOLD FACE TYPE ABOVE.

IF THIS WARRANTY COVERS A COMMERCIAL PRODUCT, THE FOREGOING WARRANTIES ARE LIEU OF ALL OTHER WARRANTIES AND NO REPRESENTATIONS, GUARANTEES, OR WARRANTIES, EXPRESSED OR IMPLIED, (INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), ARE MADE BY MANUFACTURER IN CONNECTION WITH THE MANUFACTURE OR SALE OF ITS PRODUCTS.

Claims for defects in material and workmanship covered by this warranty shall be made in writing to the dealer from whom the product was purchased within the warranty period. Manufacturer may either send a service representative or have the product returned to the Manufacturer at Buyer's expense for inspection. If judged by Manufacturer to be defective in material or workmanship, the product will be replaced or repaired at the option of Manufacturer, free from all charges except authorized transportation and replacement labor.

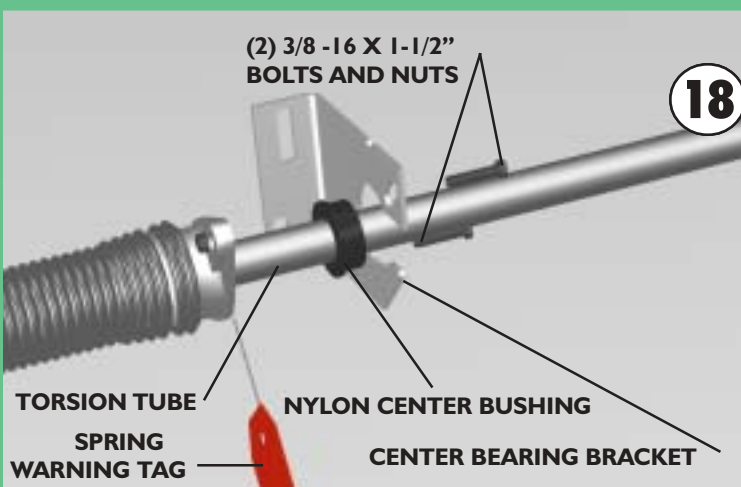
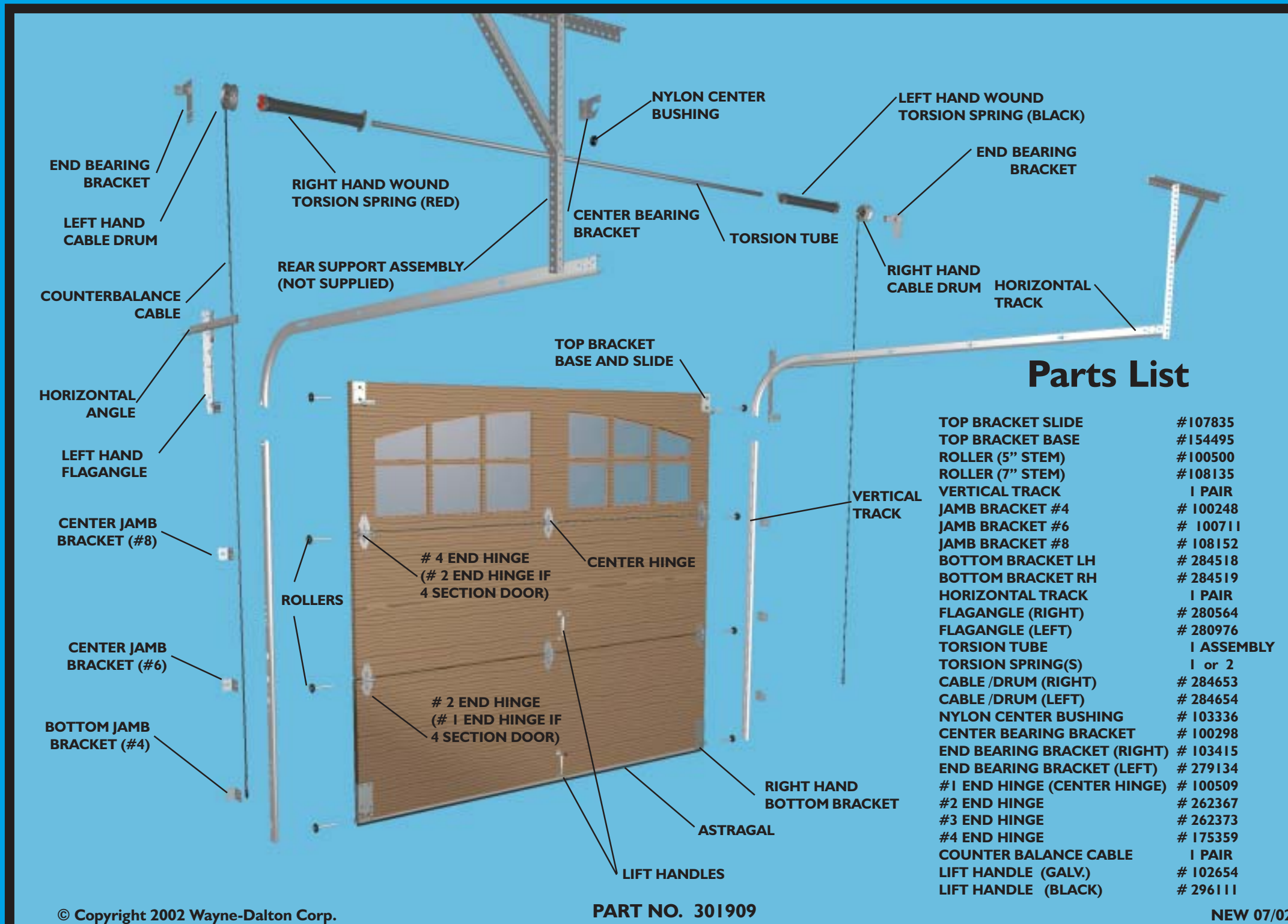
THE REMEDIES OF BUYER SET FORTH HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER REMEDIES. THE LIABILITY OF MANUFACTURER, WHETHER IN CONTRACT, TORT, UNDER ANY WARRANTY, OR OTHERWISE, SHALL NOT EXTEND BEYOND ITS OBLIGATION TO REPAIR OR REPLACE, AT ITS OPTION, ANY PRODUCT OR PART FOUND BY MANUFACTURER TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP. MANUFACTURER SHALL NOT BE LIABLE FOR COST OF REMOVAL OR INSTALLATION OR SHALL NOT BE RESPONSIBLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE.

This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state. However, some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Yearly maintenance as described in the Maintenance and Painting Instructions for Wood Doors is required or warranty shall be void. All safety warning labels must be applied and remain on the garage door after installation. Should you need any additional copy, contact your local authorized Wayne-Dalton Distributor.



7100 Series - Torsion Spring Installation Instructions and Owners Manual



Rotate the left hand drum and shaft until cable is taut. Attach locking pliers to shaft and brace pliers against header to keep cable drum against the end bearing bracket and the cable taut.

Rotate the right hand drum until cable is taut. Slide the cable drum against the end bearing bracket and tighten set screws in right hand cable drum.

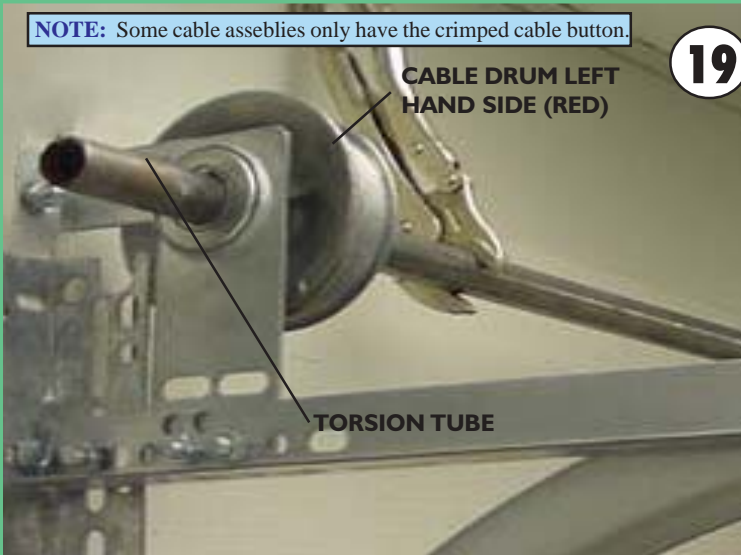
CAUTION! Check each cable, making sure both are seated properly on the cable drums.

Slide the nylon center bushing into the end of one (1) stationary spring cone and align the cone(s) with the holes in the center bearing bracket. Secure the spring(s) to the center bearing bracket with two (2) 3/8-16 x 1-1/2" bolts and nuts. Clamp locking pliers onto both vertical tracks just above the third roller. This is to prevent door from raising while winding the spring(s).

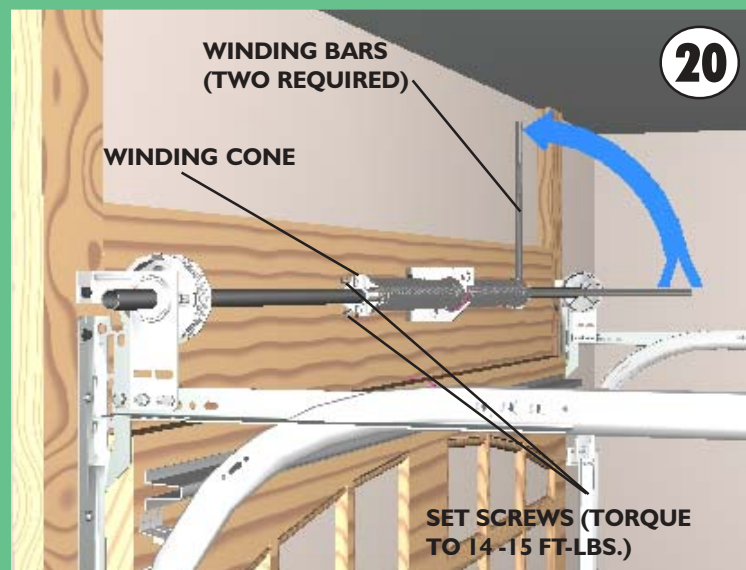
NOTE: Alternate center bearing bracket does not require nylon center bushing

IMPORTANT! Spring under tension can be dangerous. Spring warning tag must be attached to center bearing bracket in obvious sight. If this tag is missing, contact Wayne-Dalton Corp. for free replacements.

WARNING! FAILURE TO CLAMP TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE INJURY OR DEATH.



Thread the counterbalance cables around the back side of the cable drums. Before hooking cables into drums, slide the loose cable buttons against the crimped buttons and with a pliers bend a 90 degree angle in the cable. Hook the cables into the drums. Slide the left hand cable drum against the end bearing bracket and tighten the set screws in the drum to 14 -15 lbs. of torque (Once set screw contact the tube, tighten screws one full turn).



Position a ladder slightly to the side of spring so that the winding cone is easily accessible, yet your body is not in the path of the winding bars. Check the tag(s) attached to the spring(s) for the number of required spring turns.

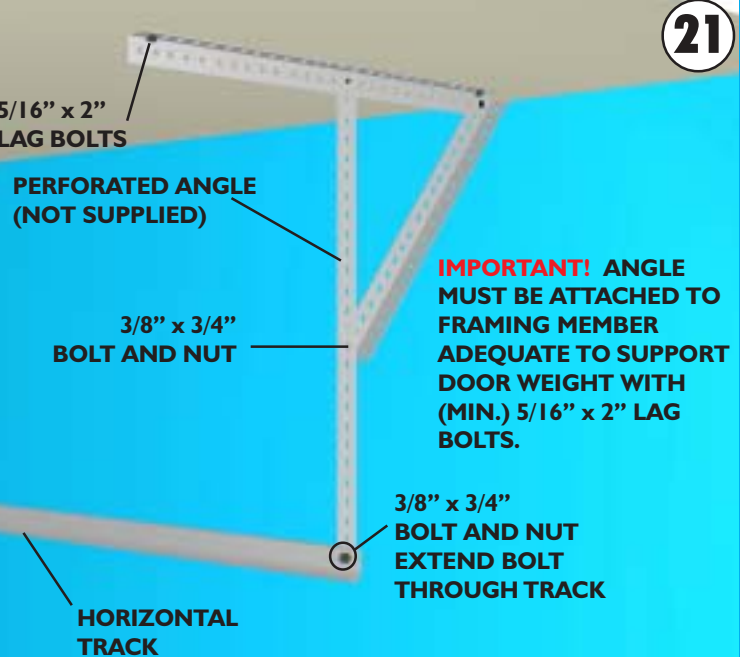
	Mt. Hope	Portland
6'0" Door Height	= Approx. 6-3/4 Turns	
6'3" Door Height	= Approx. 7 Turns	
6'6" Door Height	= Approx. 7-1/4 Turns	Approx. 7-3/4 Turns
6'9" Door Height	= Approx. 7-1/2 Turns	Approx. 8 Turns
7'0" Door Height	= Approx. 7-1/2 Turns	Approx. 8-1/4 Turns
7'6" Door Height	= Approx. 8 Turns	Approx. 8-3/4 Turns
7'9" Door Height	= Approx. 8-1/4 Turns	Approx. 9-1/4 Turns
8'0" Door Height	= Approx. 8-1/2 Turns	Approx. 9-1/2 Turns

Insert the winding bars into holes of winding cone, one after the other, and rotate winding cone upward toward ceiling 1/4 turn at a time until correct number of full turns for your door height is achieved. As the last 1/4 turn is achieved, hold winding bar securely in the winding cone, tighten the set screws on the winding cone to 14 -15 ft.-lbs. of torque. SLOWLY and CAREFULLY remove the winding bars. If required, repeat for the other side.

Hold the door down to prevent it from rising unexpectedly, in the event the spring(s) were over wound, and carefully remove the locking pliers from the vertical tracks. Raise the door until the top section and half of the next section are in a horizontal position. Do not raise door any further since rear of horizontal track is not yet supported.

WARNING! RAISING DOOR FURTHER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE INJURY OR DEATH.

Now clamp a pair of locking pliers to the vertical tracks just above the second roller on one side, and just below the second roller on the other side. This will prevent the door from raising or lowering while installing the rear support.



Using perforated angle, fabricate rear support for horizontal tracks as shown. Using lag bolts, make sure that support is fastened into ceiling joist, or adequate framing members to hold the weight of the door. Keeping the horizontal track parallel to the edge of the door sections, raise the horizontal track to a level position and bolt it to the rear support structure. Track must be secured and braced to prevent movement. The bolt should extend into the track to act as a roller stop. Repeat for other side. Remove locking pliers and close door.

WARNING! KEEP HORIZONTAL TRACK PARALLEL AND WITHIN 3/4" (19 mm) OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SERIOUS INJURY OR DEATH.

Permanently attach the vinyl perimeter seal to both door jambs and the header. Now, lift the door and check its balance. Unwind spring(s) if door lifts by itself or if it is hard to pull down. Wind spring(s) if door is difficult to lift or too easy to pull down.

To adjust spring tension, fully close door. Apply locking pliers to track above third roller. Insert a winding bar into the winding cone. Push upward on the winding bar while carefully loosening the set screws in the winding cone. SEE NOTE BE PREPARED TO SUPPORT THE FULL FORCE OF THE TORSION SPRING ONCE THE SET SCREWS ARE LOOSE.

IMPORTANT! Pushing the winding bar too far will cause the counterbalance cables to fall off the cable drums.

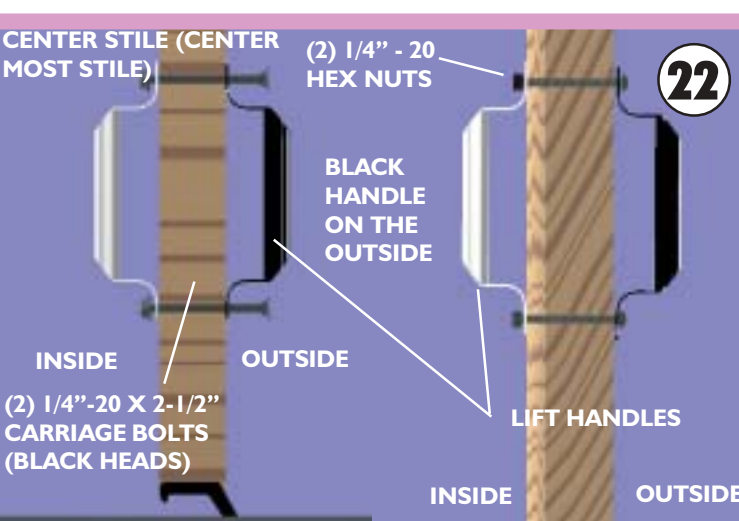
NOTE: On doors with one spring, it will be necessary to clamp the torsion tube with locking pliers to keep counterbalance cables on cable drums BEFORE loosening set screws.

Carefully adjust spring tension 1/4 turn. Retighten both set screws in the winding cone and if required, repeat for the other side. Retcheck door balance DO NOT ADJUST MORE THAN 1/2 TURN FROM THE RECOMMENDED NUMBER OF TURNS.

If the door still does not operate easily, lower the door into the closed position, UNWIND THE SPRING(S) FULLY (Reference the insert sheet "Removing the Old Door/Preparing the Opening" section on Torsion Spring Removal), and recheck the following the items:

- Check the door for level.
- Check the torsion tube for level.
- Check the track spacing.
- Check the counterbalance cables for equal tension.
- Check track for potential obstruction of the rollers.
- Check locking pliers onto track and rewind spring(s).

IMPORTANT! If door still does not operate properly, then contact a qualified door agency.



Standard Bottom Section Lift Handle/Gripping Point - Locate the exterior center stile or center most stile (**NOTE:** For flush doors find the center most stile by locating the center most hinge.). Measure up 3" from bottom of section and drill (1) 9/32" dia. hole. Place the lift handle in the vertical position so that it's lower hole falls over the hole that was drilled. Using the lift handle as a template drill the top hole through the stile. Assemble the outside and inside lift handle/gripping point back to back to the section, with the black handle on the outside, using (2) 1/4" X 2 1/2" carriage bolts and nuts.

Standard Lock Section Lift Handle/Gripping Point - Raise the door to a comfortable working height and secure with locking pliers to the track. Locate the exterior center stile on the lock section or the center most stile of the section. (**NOTE:** Lift handles must be lined up vertically.) Mark a vertical line on the section at that point. (**NOTE:** Some Garage Doors may require both lift handles to be installed on bottom section. If your bottom section is 28 in. or 29 in. install both lift handles on bottom section. Install bottom lift handle per instructions, then install second lift handle Min. of 20 in. and a Max. of 30 in. above bottom lift handle.) Measure up 4 inches from the bottom of the second section. Using this measurement as a guide, position lift handle bottom hole and make a mark at the top hole in lift handle. This should give you a Min. of 20 in. and a Max. of 30 in. between lower lift handle/gripping point and the middle of the upper lift handle/gripping point. If needed reposition upper lift handle to stay within Min. and Max. dimension.

Drill 9/32 in. holes through section. Assemble the outside and inside lift handle/gripping point back to back to the section, with the black handle on the outside, using (2) 1/4" x 2 1/2" carriage bolts and nuts.

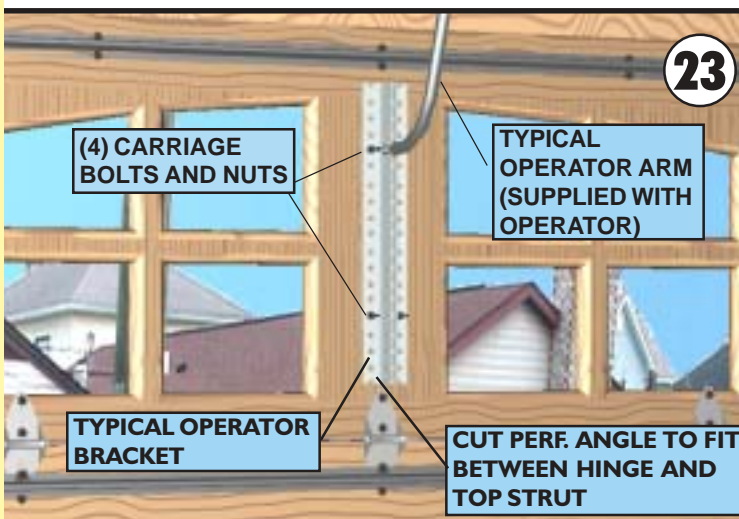
SEE OPERATOR INSTRUCTIONS FOR DETAILS ON INSTALLATION TYPICAL OPERATOR INSTALLATION

If you are installing an electric operator on your door, the following information is provided to ensure proper function of your door/operator installation. Step #23 shows a typical means of connecting the operator arm to the operator stile located in the center of the top section.

INSTALLATION TIPS:

- Follow the installation instructions supplied with your operator.
- Reinforce top section per manufacturer's recommendation prior to attaching operator.
- Install trolley rail 1" to 1-1/2" (25 - 38 mm) above high arc of top section of the door.
- Mount operator to ceiling so that 1" to 1-1/2" (25 - 38 mm) clearance is maintained between trolley rail and top section when door is fully open (trolley rail will slope down towards rear).
- Operator bracket will be (2) pieces of perforated angle cut to fit between the Ubar and the center hinge. Thru bolt both angles to top section as illustrated below.

WARNING! OPERATOR MUST BE TESTED AT TIME OF INSTALLATION AND MONTHLY THEREAFTER TO ENSURE THAT DOOR REVERSES ON CONTACT WITH 2 X 4 BOARD LAID FLAT UNDER THE DOOR. FAILURE TO ADJUST OPERATOR, IF NECESSARY, CAN RESULT IN SEVERE INJURY OR DEATH. IF YOUR OPERATOR IS EQUIPPED WITH PHOTOELECTRIC SYSTEM, THEN THIS MUST BE TESTED AT THE SAME TIME TO ENSURE THAT DOOR DOES NOT CLOSE AND A CLOSING DOOR OPENS IF SYSTEM IS OBSTRUCTED. FAILURE TO MAKE ADJUSTMENTS, IF NECESSARY, CAN RESULT IN SEVERE INJURY OR DEATH.



IMPORTANT! ANGLE MUST BE ATTACHED TO FRAMING MEMBER(S)

