



Installation & Owners Manual For Residential Steel Doors

Read Instructions Thoroughly Before Starting Installation

Thank you for your purchase of a Haas Sectional door system. This system is designed to provide years of trouble free service with very little maintenance required.

It is important that you thoroughly read these instructions before proceeding with the installation of the door system. Throughout the instructions you will see a stop sign next to instructions in bold type. It is important that you follow these important installation points before continuing.

Once you have completed the installation of your door please keep the instructions for future reference.

IMPORTANT

Installation of the Sectional door and spring counterbalance system is to be performed by qualified sectional overhead garage door technician. The following instructions are intended for use by installers familiar with all aspects of sectional overhead garage doors who have a general understanding of garage door industry terminology. Thoroughly read the entire sectional door and counterbalance system instructions, **BEFORE** beginning the installation. Strict compliance to these instructions will insure an effective, safe, and efficient installation that provides years of trouble-free customer satisfaction.

IMPORTANT

WARNING

TORSION AND EXTENSION SPRING ASSEMBLIES ARE UNDER EXTREME TENSION AT ALL TIMES AND CAN BE DANGEROUS. INSTALLATION, REMOVAL AND/OR ADJUSTMENTS TO A TORSION SPRING OR WEIGHT COUNTERBALANCE ASSEMBLY (INCLUDING ALL BEARING BRACKETS, CABLES, DRUMS AND BOTTOM FIXTURES) SHOULD BE PERFORMED BY QUALIFIED GARAGE DOOR TECHNICIAN.

WARNING

- IMPORTANT -

To protect yourself from injury, carefully read the following safety information and warnings before you install your new garage door or attempt to remove your old door.



This symbol means **WARNING / CAUTION**. Personal injury and/or property damage may occur if instructions are not followed carefully. Please pay close attention to instructions following this symbol.



This symbol means **STOP!** Unsatisfactory installation results and/or poor product performance may occur if instructions are not followed carefully. Please pay close attention to instructions following this symbol.

- SAFETY INFORMATION -

You can install your new garage door yourself, if:

1. You have help (your garage door can weigh up 600 pounds.)
2. You have the right tools and reasonable mechanical aptitude or experience
3. You follow these instructions very carefully.

-Garage doors use springs to counterbalance them. There are two types of springs used – **extension springs** and **torsion springs**. If your old door uses torsion springs, do not attempt to remove the door or the springs yourself.

Have a qualified door repair service person remove them.



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.

-When installing a door with torsion springs, always use solid steel winding bars. Winding bars are available from professional door installers. **The use of screwdrivers or any substitutes for winding bars will risk severe injury.**

-The brackets at the bottom corners of your garage door are under great tension. **Do not attempt to loosen any bracket fasteners.** Otherwise, the bracket could fly out with dangerous force.

-Keep hands and fingers clear of section joints, track, and other door parts when the door is opening and closing to avoid injury. The lift handle and/or pull rope should be used when opening or closing a non-powered door.

-Extension spring doors must never be operated without properly installed spring containment cables.

-Horizontal track installations must use sway braces on the rear of the track to prevent sideways movement. If the tracks are not properly anchored they might spread, allowing the door to fall and cause severe injury and damage.

-Torsion spring installations require center spring mounting pad(s). The mounting pads may be wood (2" x 6" x 12" minimum) that must be of good quality and firmly attached to a supporting structure using four (4) 3/8" X 3" lag screws.

The wood used for the mounting pad should be made of Grade 2 or better Southern Yellow Pine (Southern Pine or Yellow Pine.)



Do not use wood labeled Spruce-Pine- Fir (SPF). If the pad is to be anchored to concrete use four 3/8" masonry anchors. If the wood mounting pad(s) 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.**

- It is not recommended to install spring mounting pad(s), track, or sway braces through drywall. The drywall reduces the engagement area of the lag screws and reduces the strength of the door assembly.

-Torsion springs, extension springs, cables, and bottom fixtures are under strong spring tension. Do not attempt to loosen any fasteners on these components. You could suddenly release the spring forces and risk severe injury.

-Do not permit children to play beneath or around any garage door or electric operating controls.

Tools Needed

- (2) C-Clamps or "Vise Grip" Style Pliers
- Hammer
- Flat Head Screwdriver
- Tape Measure
- Carpenters Level
- Ratchet Wrench and Socket Set including 7/16", 5/16", and 3/8"
- Open End Wrench Set including 3/8"
- Pliers
- 6' Step Ladder
- Electric Drill with a good quality Drill Bit Set
- Power Screw Gun/Driver
- Winding Bars
- Impact
- 6" extension

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Hanger Kit

You may need to build track hangers, as these are not supplied with your standard door kit. You will need at least:
(6) six, 18" to 30" pieces of 1/8" x 1-1/2" punched angle.
(4) four 5/16" x 1-1/2" lag screws to anchor them to the trusses.

(8) eight of each:

5/16" x 3/4" hex-head bolts

5/16" lock washers

5/16" nuts

Haas Door Painting Instructions

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 dilute solution of Spic and Span® (1cup 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 to, 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. Painting should not be done in the early morning. Avoid painting at temperatures below 50F. Follow the paint manufacturer's recommendations to apply a uniform coat at the proper thickness.

CAUTION: Use of paints containing linseed oil, lacquer or alkyl base solvents voids the warranty of this door.

Preparation

Clear away all household items to make room. It is important to have adequate space to maneuver the door sections and parts. Take time to see that all household items are cleared away and that nothing will hinder you when installing the new door.

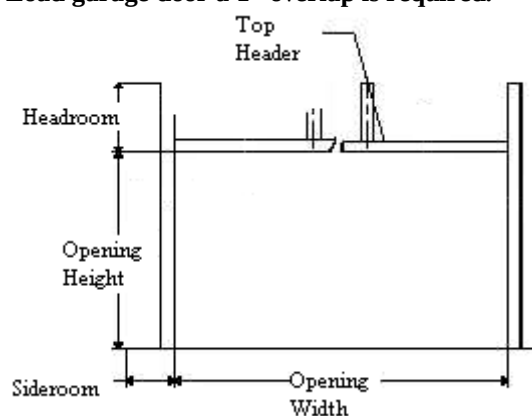
Before you begin the installation of your Haas Sectional Door, verification of proper materials and clearances required will insure a trouble-free installation. While performing this inspection:

-Check the opening to ensure that it is plumb and square. This is essential for a good fit and proper installation.

-Check the opening width (see Figure1) and verify that the door is the proper size for the opening. Wood jambs require the door size to be the same size as the framed opening with stop moldings nailed to the inside of the opening to seal the door.

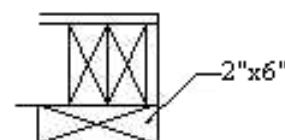


If door being installed is a designated Wind Load garage door a 1" overlap is required.



(Figure1)

Wood Jambs



(Figure 2)

- Check for adequate side room available (see Figure 1). The door system requires 3 3/4" (95.25mm) for 2" track.

- Check for adequate headroom available (see Figure 1). The door system requires:

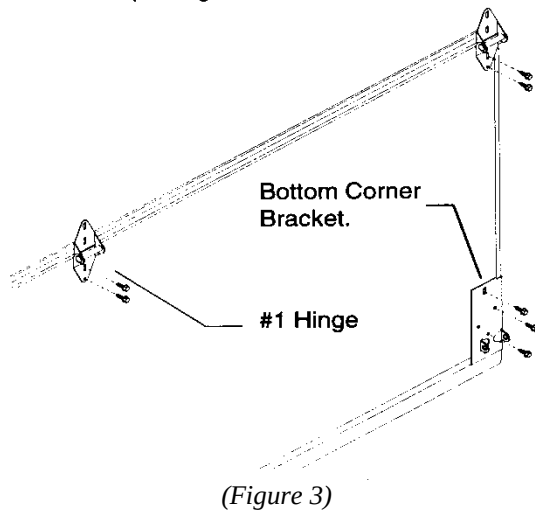
	Headroom Required*
12" Radius Torsion	11.5" (280mm)
15" Radius Torsion	15.5" (356mm)
12" Radius Extension	6" (254mm)
15" Radius Extension	6" (356mm)
Low Head room Rear Torsion	3" (102mm)
Low Headroom Front Torsion	10" (204mm)
Low Headroom Extension	6" (102mm)

***Electric operators require additional headroom. See instructions provided with operator for exact amount.**

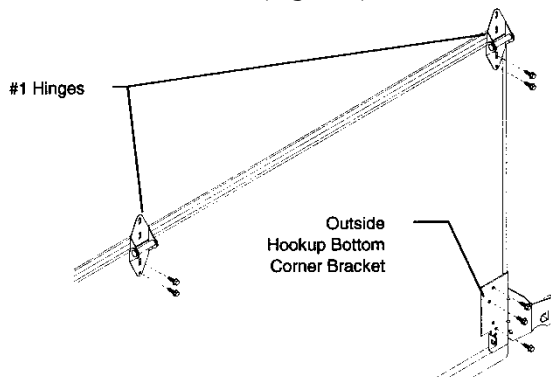
Once you have verified all of the basic installation requirements, you can start the installation.

INSTALLING THE NEW DOOR**STEP 1**

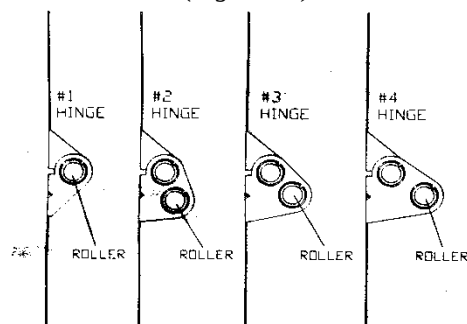
First find the bottom section. (The bottom section has a rubber weather seal attached to its bottom edge with small screws.) Place the bottom section onto a clean smooth non-abrasive work surface. If using saw horses as a work surface, with sections over 10ft long you must use at least four saw horses to support the section. Cover the sawhorses with cloth or cardboard to protect the door from scratching. Attach the bottom corner brackets using $\frac{1}{4}$ " x $\frac{3}{4}$ " long self-drilling screws (see Figure 3) to both ends of the door section. (For rear mount low headroom see Figure 3R). Then attach #1 hinges, also using $\frac{1}{4}$ " x $\frac{3}{4}$ " long self-drilling screws, to each stile location on the top of the section (see Figure 4, for hinge identification).



(Figure 3)



(Figure 3R)



(Figure 4)

*Hinges also stamped with number

STEP 2

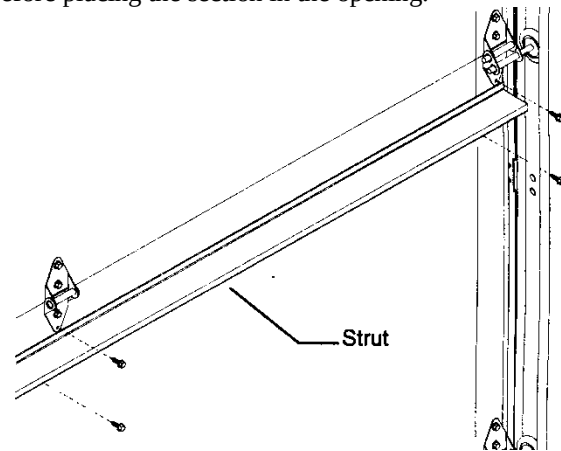
If door being installed is a designated Wind Load garage door refer to the included Wind Load Supplemental Instruction booklet for special instructions.

First look at Table 1 to see if your door requires struts. If no U-Bars are required then go one to Step 3. If your door requires U-Bar(s) they are to be fastened using (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " long self-drilling screws **per stile location**.

-If your door requires one U-Bar it will be installed on the top section just above the top corner bracket on STEP 10

-If your door requires three U-bars the first U-Bar should be installed now on the bottom section just below the top hinges on the section as shown (see Figure 5). It should be located just below the top hinges on the section as shown (see Figure 5). The second U-Bar will be installed on the second section for a four section high door and the third section for a five section high door. The third U-Bar will be installed on the top section just above the top corner bracket on the last section.

For ease of installment it is best to attach the struts right before placing the section in the opening.



(Figure 5)

Residential Garage Door Strut Schedule

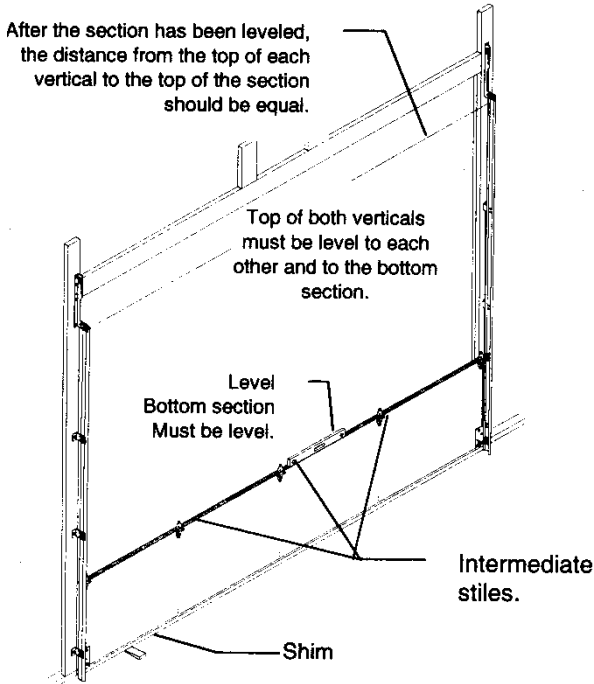
Model	Color	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"
All RHT & RMT	White, Gray, Almond, Sandstone	No Strut	1, 2" per Door	1, 2" per Door	3, 2" per Door	3, 2" per Door
All RHT & RMT	Brown, Hunter Green	3, 2" per Door	3, 2" per Door	3, 2" per Door	3, 2" per Door	3, 2" per Door
248, 248L	White, Brown, Almond, Sandstone	No Strut	1, 2" per Door	1, 2" per Door	3, 2" per Door	3, 2" per Door
258, 258L	White, Brown, Almond, Sandstone	No Strut	1, 2" per Door	1, 2" per Door	3, 2" per Door	3, 2" per Door

(Table 1)

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STEP 3

Position the bottom section by centering the section in the opening. Level the door section in the opening, using shims if necessary (see Figure 6). Once the section is level, insert the rollers into the bottom brackets and the #1 hinges on each end of the section.



(Figure 6)

STEP 4

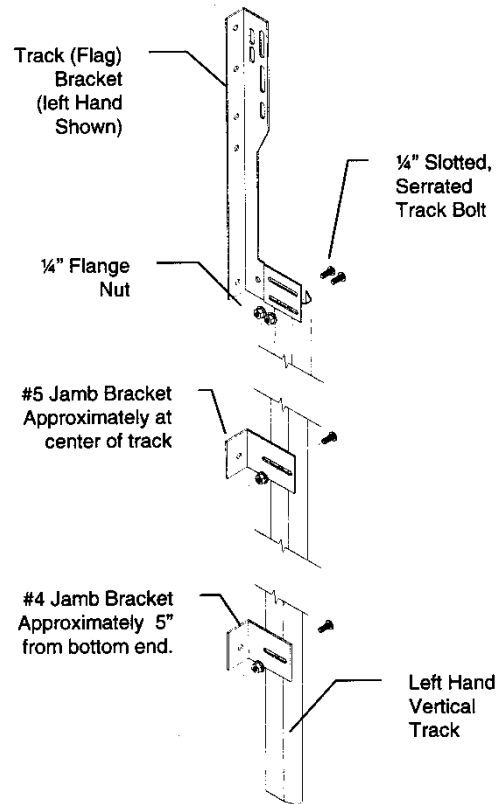


If door being installed is a designated Wind Load garage door refer to the included Wind Load Supplemental Instruction booklet for special instructions.

If jamb brackets are already attached to track continue on to Step 5 if not continue.

Begin by laying out the parts for each vertical track. Attach the two jamb brackets to the vertical track (see Figure 7) using 1/4" slotted track bolts and 1/4" flange nuts. Compare each mounting bracket for size, as one is slightly longer than the other. They are stamped with a number "4" or number "5" (#1 & #3 for 1-3/8" door and #4 & #5 for a 1-3/4" door). The number "4" bracket is shorter and it is mounted towards the bottom end of the vertical track about 5" from the end. Next attach the number "5" bracket to the track at approximately the center of the track. (For 8' high doors you will also attach a number "6" bracket to the track above the number "5" bracket)

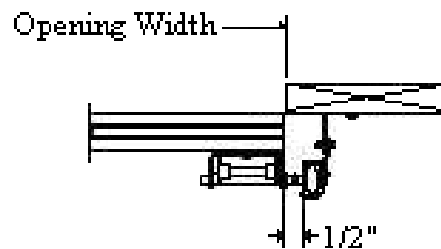
Attach the upper "flag" brackets to the upper end of the vertical track using two 1/4" slotted track bolts and two 1/4" flange nuts. Repeat this process again for the right hand vertical track assembly.



(Figure 7)

STEP 5

Position the right hand track over the rollers as shown (see Figure 8). Space the vertical track 1/2" from door as shown. Before attaching the vertical track/angle or brackets to the doorjamb, be sure that the vertical track/angle or brackets are plumb and parallel to the door section.



(Figure 8)

Attach the vertical track brackets to the doorjamb by using 5/16" x 1-1/2" hex head lag screws on wood jambs. It is not recommended to install lag screws through drywall into wood jamb. If mounting directly to masonry, concrete anchors must be used (supplied by installer). Repeat process for the left hand track.



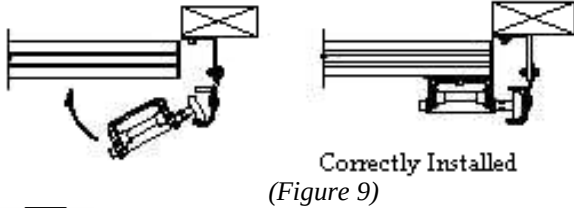
Both tracks must be plumb and parallel to each other for proper operation of door!

STEP 6

Locate the #2 section and attach #1 hinges to each intermediate stile location using two (2) 1/4" x 3/4" long self-drilling screws. Attach a U-Bar if instructed to do so in

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STEP 2. Place the section into the opening on top of the bottom section. Attach the # 2 hinges and rollers onto both ends of the section. Do this by first inserting the roller into the end hinge. Then hook rollers into vertical track and swing end hinge into door section. Then fasten hinges from section below using two (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " long self-drilling screws (see Figure 9).

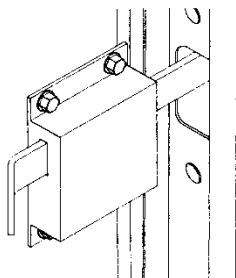


If door being installed is a designated Wind Load garage door make sure there is at least a 1" overlap on each side between the end of the door and the jamb.

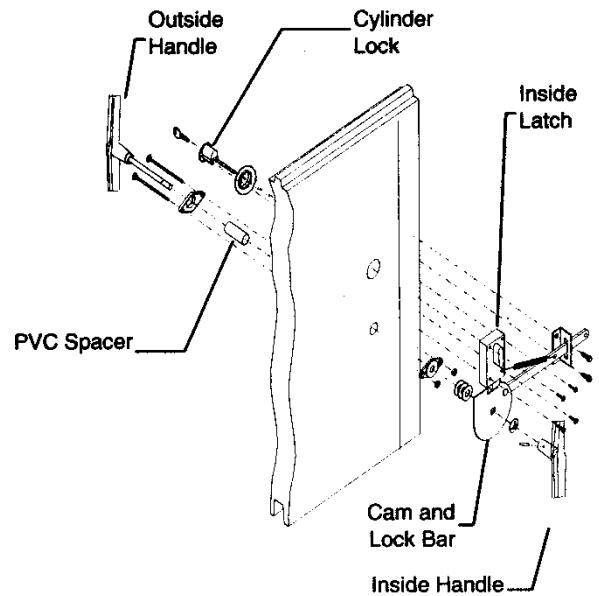
Locate the #3 section and attach # 1 hinges to each intermediate stile location using two (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " long self-drilling screws. Attach a U-Bar if instructed to do so in STEP 2. Place the section into the opening on top of the #2 section. Attach the #3 hinges and rollers onto both ends of the section. Do this the same way the #2 hinges were installed (see Figure 9). Fasten hinges from section below using two (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " long self-drilling screws. If installing a five section high door, you will attach a #4 hinge to the top of the fourth section.

STEP 7

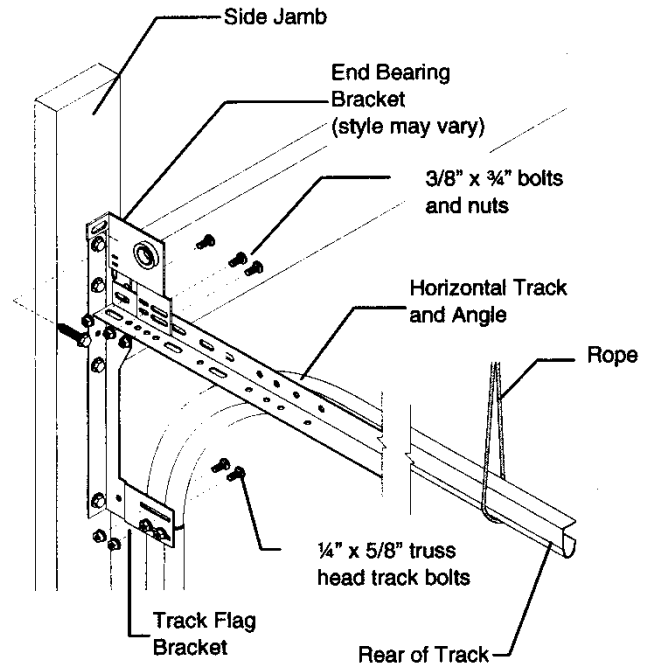
The inside slide lock or cylinder lock is installed in the #2 (second) section. The slide lock can be installed at either end of the section. The slide bar of the lock should rest against the top of one of the rectangular slots in the vertical track (for slide lock, see Figure 10) (for cylinder lock, see Figure 11) (for snap latch lock, see instructions enclosed with lock kit).



(Figure 10)



(Figure 11)



(Figure 12)

STEP 8

If installing a torsion spring door, attach the end bearing brackets to the horizontal angles using $\frac{5}{16}$ " x $\frac{3}{4}$ " bolts & nuts. If installing an extension spring door or rear mount double track installation of the end bearings is not required at this time. Form rope loops and attach them to a convenient overhead structural member. Insert the rear of the tracks through the loops to support the tracks during installation. Attach the bottom of the track radius to the flag brackets and fasten them using $\frac{1}{4}$ " x $\frac{5}{8}$ " truss head track bolts. The heads of the track bolts should be on the inside of the track (see Figure 12).

Attach the horizontal angle to the vertical track angle using a $\frac{5}{16}$ " x $\frac{3}{4}$ " bolt & nut. Attach the end-bearing bracket to the

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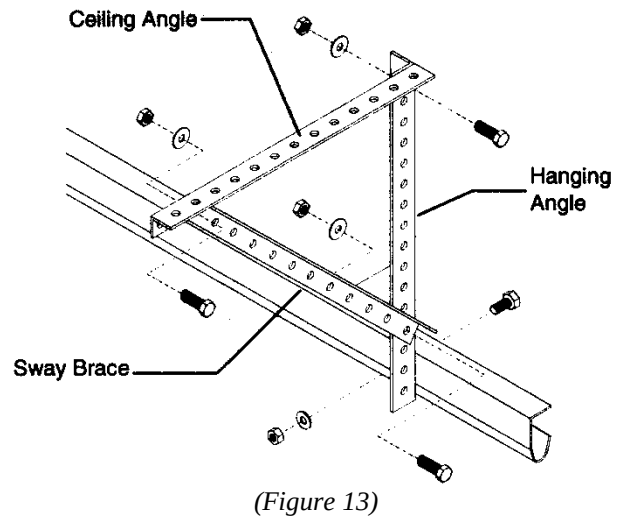
side jamb using 5/16" x 1-1/2" hex head lag screws on wood jambs. It is not recommended to install lag screws through drywall into wood jamb. If mounting directly to masonry, concrete anchors must be used (supplied by installer). Repeat process for the right hand track.

STEP 9

Replace the temporary rope support hangers with steel support angles (supplied by installer) (see Figure 13). Install sway braces after checking the horizontal track with a tape measure to verify that they are parallel to each other and square to the door sections. The support hangers for rear mount torsion installations must be a minimum of 2"x2"x1/8" black iron angle.



The steel supports must be strong enough to support the full door weight, and must be attached to a structurally sound member!



(Figure 13)

At this point your sectional door should be in the opening. The next step will be installing the counterbalance assembly. You will first have to locate your springs and determine what kind of springs were provided with your sectional door.

For torsion springs installation proceed to STEP 10-T on page 8

For extension spring installation proceed to STEP 10-E on page 11

For rear torsion mount double track installation proceed to STEP 10-R on page 13



WARNING



TORSION AND EXTENSION SPRING ASSEMBLIES WILL BE UNDER EXTREME TENSION AND CAN BE DANGEROUS. INSTALLATION AND/OR ADJUSTMENTS TO A TORSION SPRING OR WEIGHT COUNTERBALANCE ASSEMBLY (INCLUDING ALL BEARING BRACKETS, CABLES, DRUMS AND BOTTOM FIXTURES) SHOULD BE PERFORMED BY QUALIFIED GARAGE DOOR TECHNICIAN.



WARNING

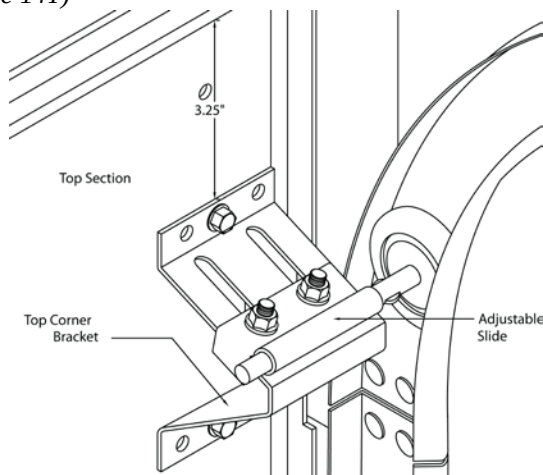


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TORSION SPRING INSTALLATION

STEP 10-T

Place the top section into position. Insert rollers into the adjustable slide on the top corner brackets. Measure down 3-1/4" from the top of the section and mark the position. Attach the brackets onto the top section with the top of the brackets at the 3-1/4" mark using two (2) 1/4" x 3/4" long self-drilling screw, one at the top and one at the bottom of the bracket. (See Figure 14T)

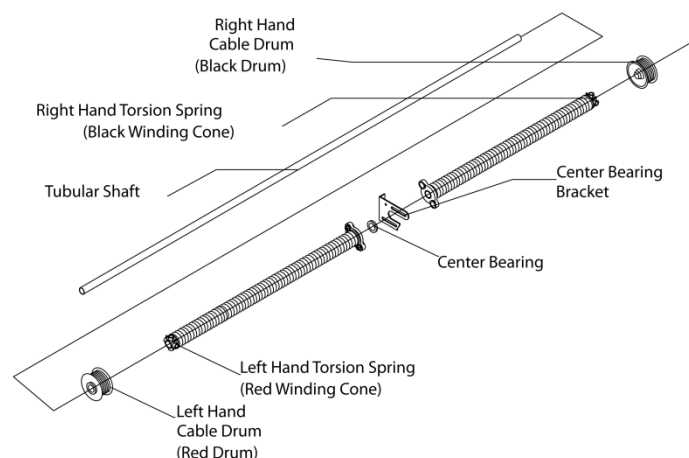


(Figure 14T)

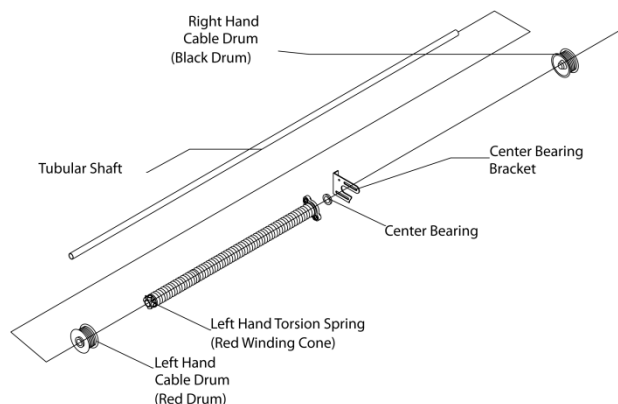
Adjust the bracket slide so the top section is perfectly vertical and tighten adjusting bolts securely. Attach the top leaves of the hinges from the preceding section using two (2) 1/4" x 3/4" long self-drilling screws. Attach a U-Bar if instructed to do so in STEP 2.

STEP 11-T

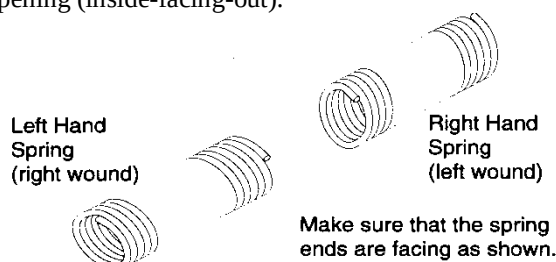
Locate the cable drums, torsion spring(s), center bearing bracket, center bearing and tubular shaft. (The spring(s) should be pre-mounted over the tubular shaft). Lay all of the parts out on the floor for double wide doors, see Figure 15T, for single wide doors, see Figure 16T.



(Figure 15T)



See Figure 17T for spring orientation. The components should be laid out as shown while facing the door from the inside of the opening (inside-facing-out).

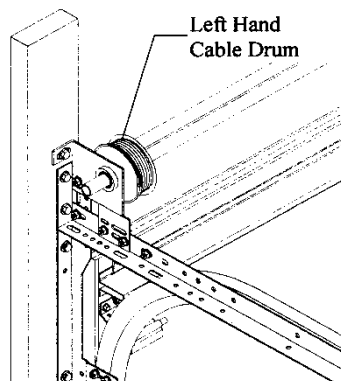


(Figure 17T)

Slide the center shaft support bearing/bracket, torsion spring(s) and cable pickup drums onto the shaft prior to lifting the shaft in place (see Figure 15T). The right hand (black) cable drum is to be placed on the right hand side of the opening (inside looking out) and the left hand (red) cable drum is mounted on the opposite side. The cable drum set screws should be facing towards the center of the opening. Hand tighten all the set screws on the springs and drums to prevent them from sliding off when you lift the shaft assembly into place. **Do not fully tighten the setscrews at this time.** Next lift the shaft assembly into place and slide the shaft through the bearing on the left end-bearing bracket and then over to the right and through the right end bearing bracket. (see Figure 18T)



Support the shaft assembly while lifting into place: failure to do so may result in bending due to the weight of the springs and bearing plate.



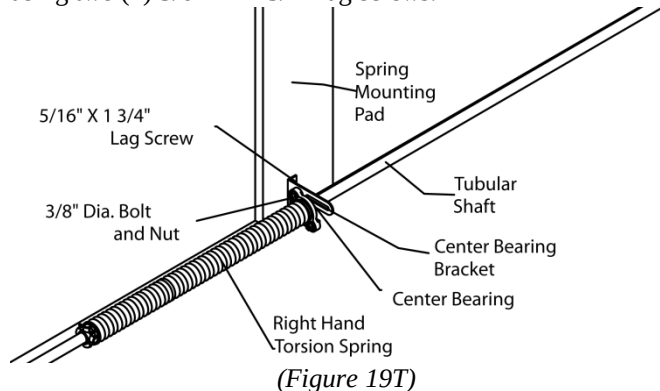
(Figure 18T)

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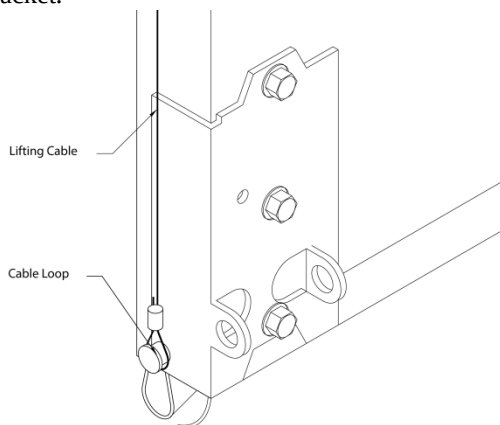
Ensure that the shaft assembly is level at all points before continuing.

After inserting the shaft assembly, securely anchor the center shaft support bracket(s) to the mounting pad (see Figure 19T) using two (2) 5/6" X 1-3/4" lag screws.



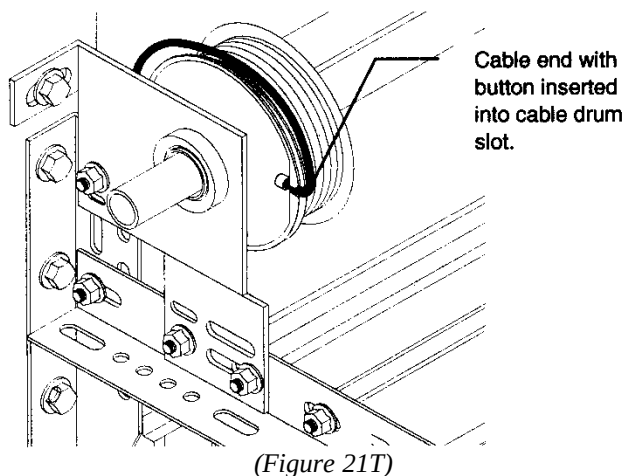
STEP 12-T

Attach the lift cables to the bottom brackets (see Figure 20T). Attach the cable loop end to the cable button on the left hand bottom bracket.



(Figure 20T)

Lead the cable up along side the door (between the door and the vertical track) up to the left hand cable drum. Wrap the cable up from behind the drum and over and insert the end through the cable entry slot on the drum (see Figure 21T).



(Figure 21T)



Ensure that the cables are wrapped correctly onto the first cable groove of the drums.

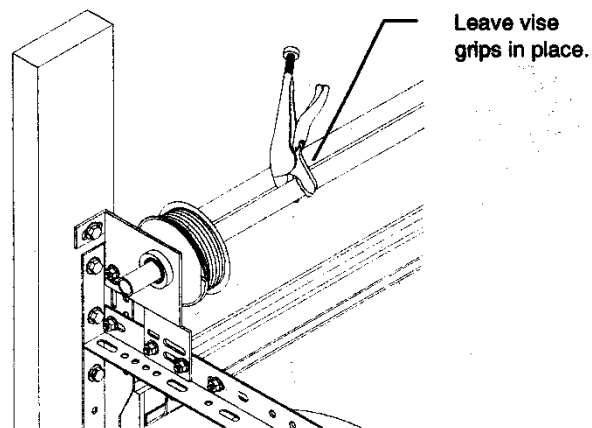
Rotate the cable drum so that the slack is pulled out of the cable; position the end of the shaft to allow for the correct amount of shaft extension beyond the end-bearing bracket. Slide the cable drum over to the left so that it is snug against the bearing on the end-bearing bracket. Tighten down the setscrews on the left hand cable drum.

While holding tension on the left hand cable, attach a pair of vise grips onto the torsion shaft and against the header to hold tension (see Figure 22T).

Repeat the process attaching the right hand cable to the right hand bottom corner bracket and to the right hand cable drum. Using the vise grips on the shaft, rotate lightly counter-clockwise to tension the cables.

While holding this position, attach another pair of vise grips to the shaft with the end against the wall in a manner that will prevent the shaft from rotating clock-wise.

Light, even tension is adequate.



(Figure 22T)



Ensure that the cables are equally tensioned before continuing.

Note: Leave the vise grips in place on the torsion shaft after you have finished installing both cables. Do not remove them until after you have wound the torsion spring(s).

STEP 13-T

You are now ready to wind the torsion springs. You will need a pair of winding bars. The winding bars must be made from 1/2" diameter cold rolled steel and must be at least 18" long. These are not furnished with your door but are available at most hardware stores.



WARNING: NO OTHER SUBSTITUTE TOOL CAN BE USED.

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The vise grips should still be on the torsion shaft and wedged against the header to prevent the shaft from turning. If you have removed the vise grips from the shaft and the cables have become loose **YOU MUST RE-TIGHTEN AND SET BOTH CABLES PROPERLY ON THE DRUMS BEFORE PROCEEDING!**



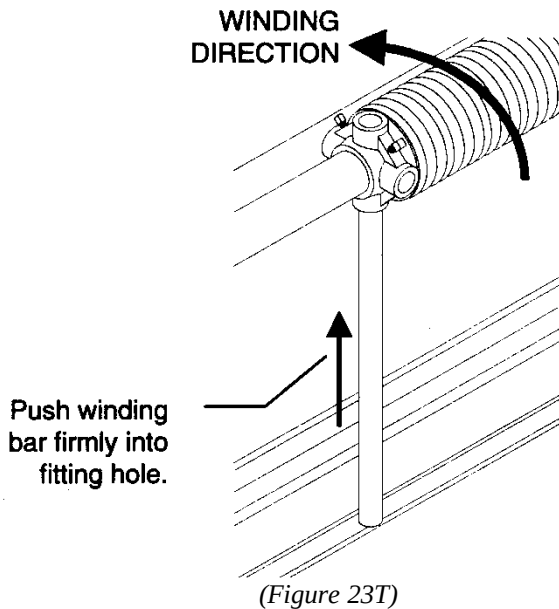
WARNING: NEVER STAND DIRECTLY IN FRONT OF THE WINDING BARS OR ALLOW ANYONE TO STAND IN LINE WITH THE WINDING BARS WHILE WINDING OR ADJUSTING SPRINGS.

Start winding the spring by drawing a chalk line horizontally across the spring(s). This will help you to keep track of the number of turns you have wound the spring(s).



A turn means one complete revolution of the winding cone.

Now place the first winding bar in place, and hold firmly, **CAREFULLY** start to wind the spring in an UPWARD direction (see Figure 23T).



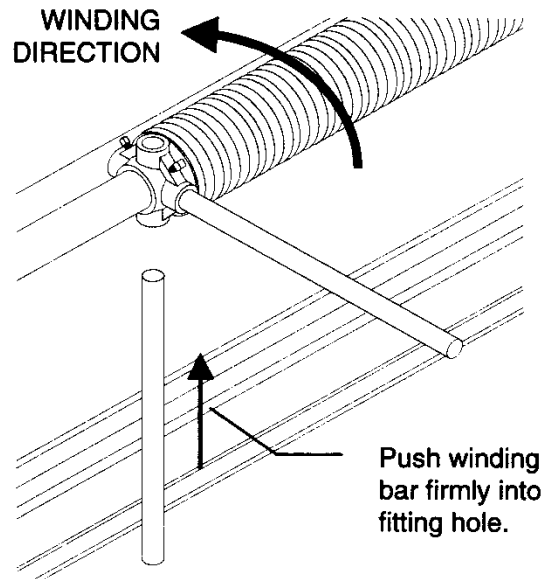
(Figure 23T)



DANGER: ALWAYS MAINTAIN CONTROL OF THE WINDING BARS BY KEEPING STEADY PRESSURE ON THE WINDING CONE AT ALL TIMES.

Locate the tag attached to each spring, noting the number of “turns” that the spring requires. You will need to wind the spring according to this tag information. Next insert the second bar in the hole of the winding cone and while holding it firmly with a little back pressure (see Figure 24T), remove the upper winding bar and turn (wind) the spring up another $\frac{1}{4}$ turn. Repeat this step-by-step procedure until the spring has been wound the proper number of turns.

While holding the winding bar, carefully tighten the two setscrews on the torsion spring winding cone. The setscrews should be tightened four (4) full additional turns after they have made initial contact with the torsion shaft. If your door has two springs, repeat the same procedure using the same extreme caution.



(Figure 24T)

After the spring(s) have been wound and the setscrews have been securely tightened remove the vise grips.

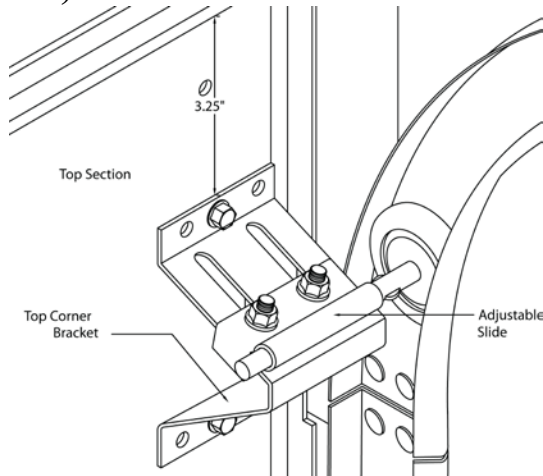


DANGER: As you lift the door for the first time, make sure that the top track rollers do not slip out of the horizontal tracks. (The track may spread if it has not been properly aligned). Do not stand beneath or under the door.

Try opening and closing the door. The effort to open and close the door should be the same. If the door seems “heavy” when you open it, but easy to close, you need to wind the spring an additional $\frac{1}{4}$ turn. If the door is very easy to open (will not stay on the floor) and is hard to close, you will need to unwind the springs $\frac{1}{4}$ turn. Do this following the same instructions in this step (step 12-T).

EXTENSION SPRING INSTALLATION**STEP 10-E**

Place the top section into position. Insert rollers into the adjustable slide on the top corner brackets. Measure down 3-1/4" from the top of the section and mark the position. Attach the brackets onto the top section with the top of the brackets at the 3-1/4" mark using two (2) 1/4" x 3/4" long self-drilling screw, one at the top and one at the bottom of the bracket. (See Figure 14E)



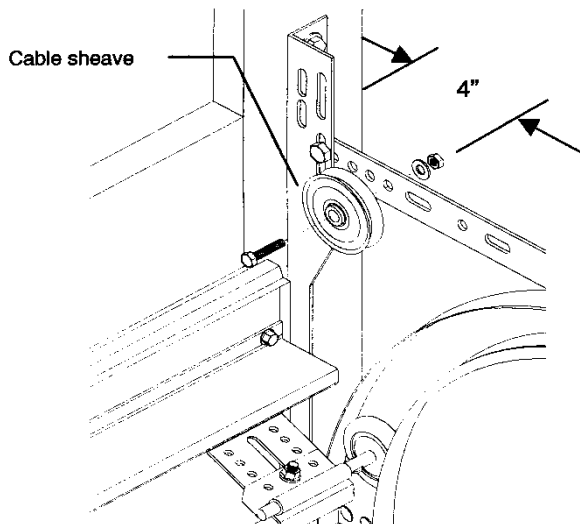
(Figure 14E)

Adjust the bracket slide so the top section is perfectly vertical and tighten adjusting bolts securely. Attach the top leaves of the hinges from the preceding section using two (2) 1/4" x 3/4" long self-drilling screws. Attach a U-Bar if instructed to do so in STEP 2.

STEP 11-E

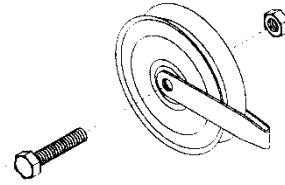
Carefully lift the door up to the full open position, clamp the door in place using large C-clamps or large vise-grips attached to the curved portion of the horizontal tracks. **You should have one or more helpers to assist you when lifting the door!**

Attach the cable sheaves to both of the horizontal angles as shown, approximately 4" from the doorjamb, using the 3/8" x 1-1/2" long hex head bolts and nuts (see Figure 15E).



(Figure 15E)

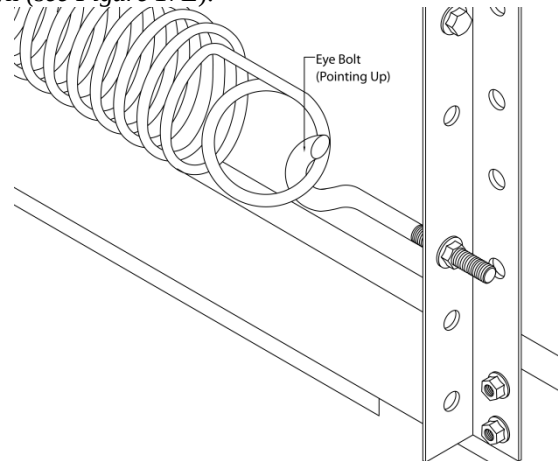
Attach the two- (2) sheave straps to the two (2) cable sheaves using 3/8" x 1-1/2" hex head bolts and nuts (see Figure 16E).



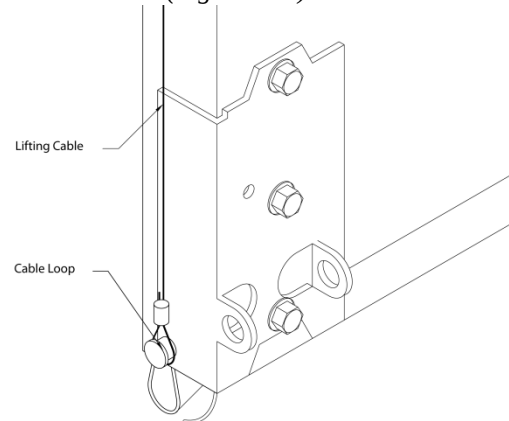
(Figure 16E)

Loop the end of extension spring through the sheave strap. Then attach the other end of the spring to the rear track hanger about 4" to 6" above the horizontal track using 2" eyebolts (see Figure 16E).

Make sure that the eyebolt hook is pointed up to prevent the spring from slipping off. Place the loop ends of the lifting cables over the cable stud on the bottom corner brackets as shown (see Figure 17E).



(Figure 16E)

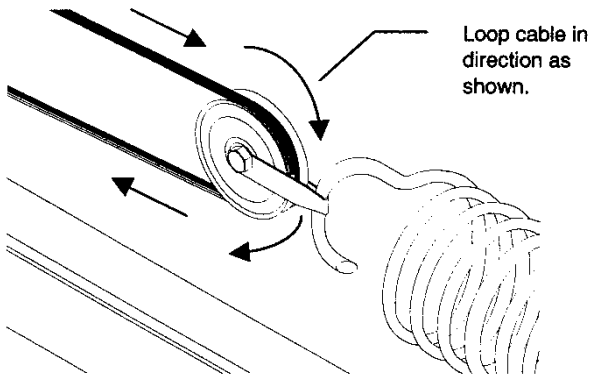


(Figure 17E)

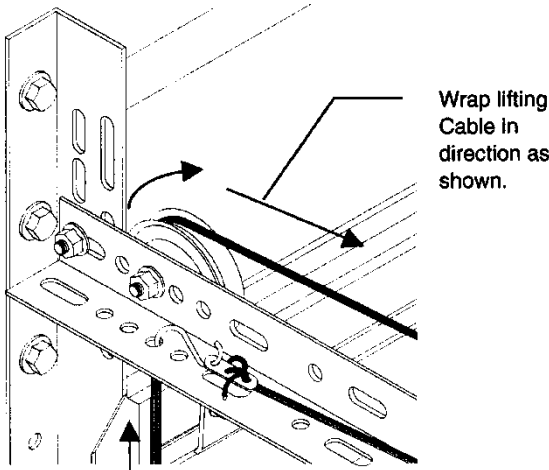
Lead the cable up along side the door (between the door and the vertical track) up to cable sheave.

Thread the cable back to, and around the spring cable sheave and back towards the door. (See Figure 89E and 19E). Tie the cable to the cable-anchor clip exactly as shown and then place an "s"-hook in the end of the clip (see Figure 20E). Pull the cable taut so it stretches the spring(s) about 1" and attach the cable to the horizontal angle with the "s"-hook.

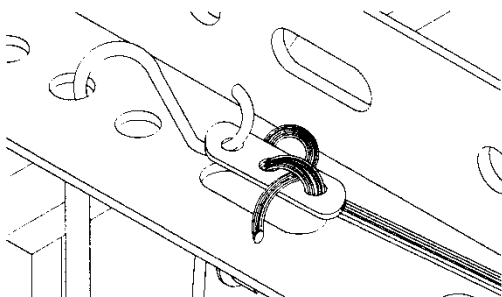
Residential Door and Counterbalance System Installation Manual



(Figure 18E)



(Figure 19E)



(Figure 20E)



DANGER: The cable must be tied to the cable clip exactly as shown to prevent the cable from slipping.

Weave any excess cable through the holes in the horizontal angle. Repeat this process for the other side cable and spring.



Make sure that both springs are equally tensioned before continuing. Unequal spring tension will cause the door to bind during operation.

STEP 12-E

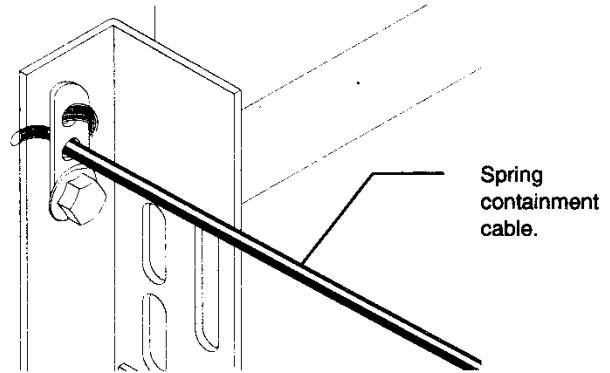
When the door is down, the extension springs are under extreme tension and could cause damage or severe injury should any fasteners or components fail. For this reason a spring containment cable is required for each spring.



DANGER: Spring containment cables

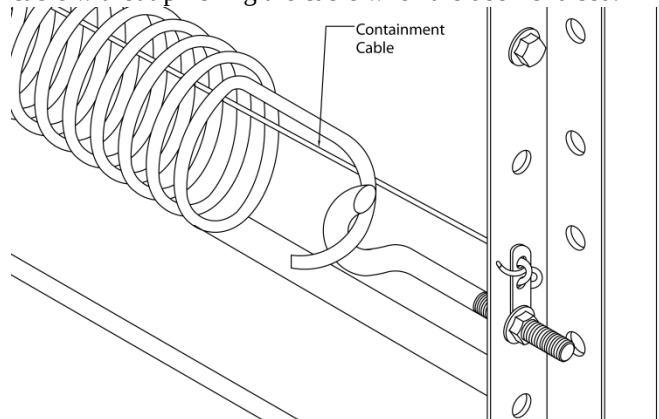
Must be installed for safe operation of the door.

Thread the containment cable through the entire length of the extension spring. First fasten the cable to the door jamb, using the 3-hole clip and the $\frac{3}{4}$ " lag bolts that mount the flag bracket to the door jamb (see Figure 21E).



(Figure 21E)

Thread the cable through the center hole of the clip and then back through the top hole of the clip. Complete the threading by inserting the end between the clip and the cable on the backside. Attach the other end of the cable to the track hanger (see Figure 22E). Do not pull the cable taut; allow enough slack in the cable to allow the spring to slide easily over the cable without pinching the cable when the door is raised.



(Figure 22E)

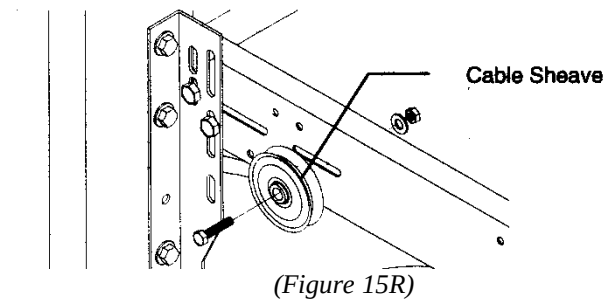
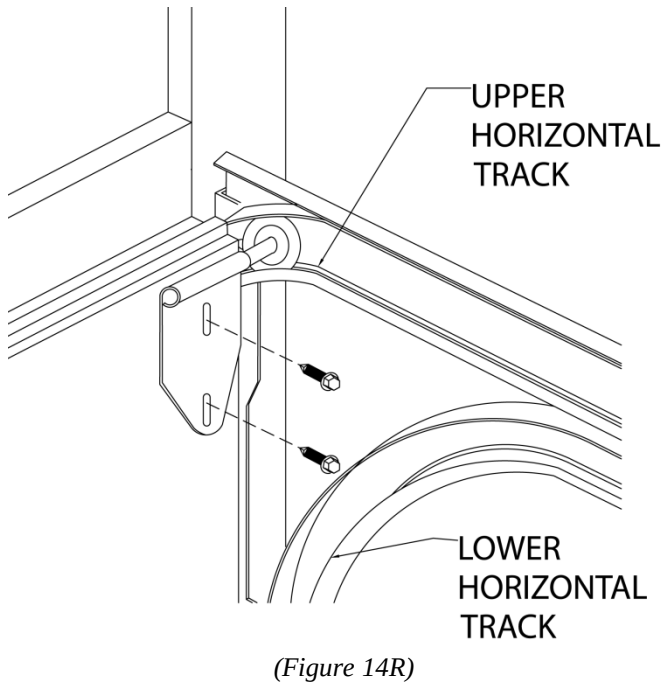
Repeat the process for the opposite spring. Double check that all fasteners are tight before releasing the C-clamps (or vise grips) and testing the door movement. Lower and raise the door and check for smooth operation. If the door comes down too fast or hits hard, you will need to increase the spring tension. Do this by raising the door and clamping it into place as before. Then pull the spring tighter by moving the "s"-hook one or two holes (on the horizontal angle) closer to the doorjamb. If the door comes down slowly or not all the way down, you will need to decrease the spring tension, do this by raising the door and clamping it into place as before. Then loosen the springs by moving the "s"-hook one or two holes (on the horizontal angle) further away from the doorjamb. You can fine-tune the door by adjusting the "eye-bolt" in or out on the track hanger.

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Installation Manual

REAR TORSION MOUNT DOUBLE FRONT MOUNT TRACK INSTALLATION

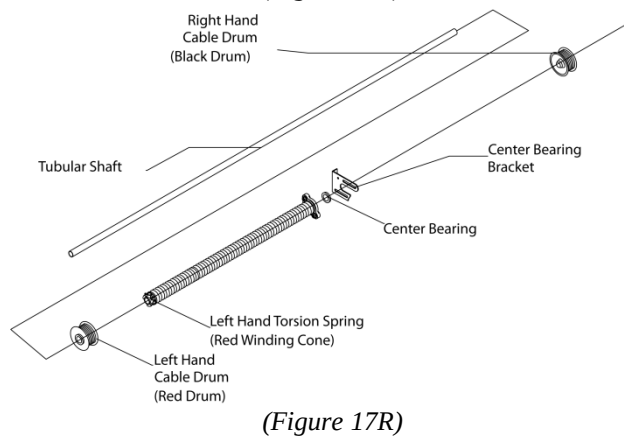
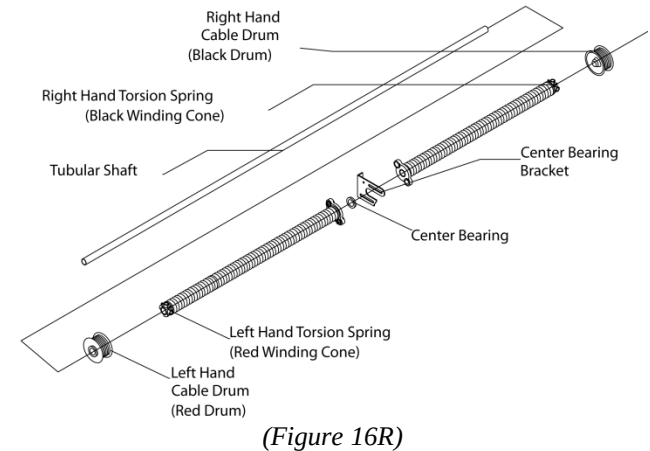
STEP 10-R

Insert a roller into the top corner bracket and attach to each end of the top section as shown, using two (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " self drilling screws (see Figure 14R). The track roller should be inserted into the upper horizontal track as shown. Attach a cable sheave to each horizontal track angle (see Figure 15R) using $\frac{3}{8}$ " x 1-1/2" hex head bolt, $\frac{3}{8}$ " washer and nut.

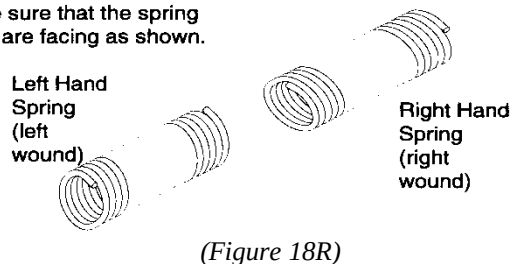


STEP 11-R

Locate the cable drums, torsion spring(s), center bearing bracket, center bearing and torsion shaft. The spring(s) should be pre-mounted over the shaft. Lay all of the parts out on the floor (for double wide doors, see Figure 16R) (for single wide doors, see Figure 17R) exactly as shown. See Figure 18R for spring orientation. The components should be laid out as shown while facing the door from the inside of the opening (inside-facing-out).



Make sure that the spring ends are facing as shown.



Slide the center shaft support bearing/bracket and torsion spring(s) onto the shaft. Tighten the setscrews on the spring fitting just enough to hold them in place while lifting the assembly. (Leave cable pickup drums off for now).

STEP 12-R

Install the rear mounted bearing plates. Next lift the shaft assembly into place and slide the shaft through the bearing on the left end-bearing bracket and then over to the right and through the right end bearing bracket (see Figure 19R).

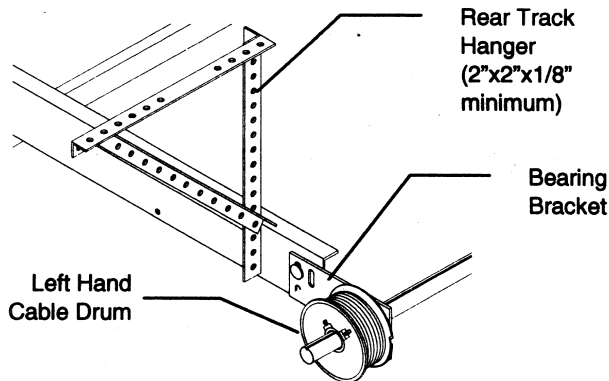


Support the shaft assembly while lifting into place. The shaft can be damaged by bending due to the weight of the springs and center bearing plate.

The right hand (black) cable drum is to be placed on the right hand side of the opening (inside looking out) and the left hand (red) cable drum is mounted on the opposite side. The cable

Residential Door and Counterbalance System Installation Manual

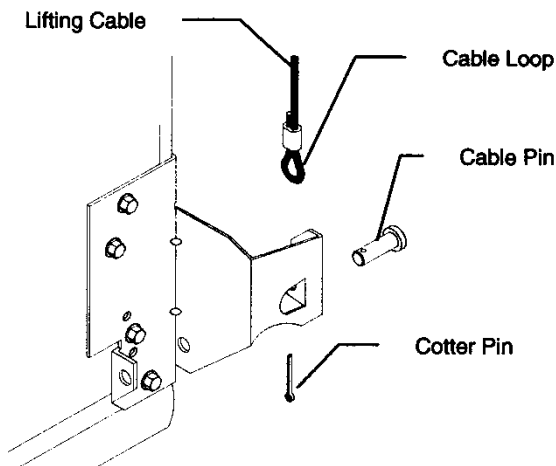
drum set screws should be facing out from the center of the opening. Adjust the cable drums so they are against the bearings in the bearing brackets. Lightly tighten the drums to hold them in place. **Do not fully tighten the setscrews at this time.**



(Figure 19R)

STEP 13-R

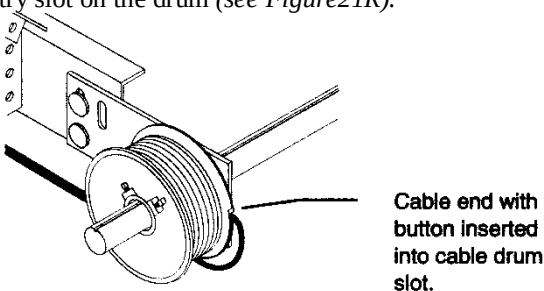
Attach the lift cables to the bottom brackets (see Figure 20R). Insert the cable pin through the bottom bracket and cable loop end and insert the cotter pin through the cable pin end. Crimp over the cotter pin and repeat process for other cable assembly.



(Figure 20R)

STEP 14-R

Lead the cable up along side the door (outside of the door) up to the left hand cable drum. Wrap the cable up from behind and over the sheave and back to the drum. Wrap the cable from underneath the drum and insert the end through the cable entry slot on the drum (see Figure 21R).



(Figure 21R)

Rotate the cable drum so that the slack is pulled out of the cable. Position the end of the shaft to allow for the correct amount of shaft extension beyond the end-bearing bracket. Slide the cable drum so that it is snug against the bearing on the end-bearing bracket.

Tighten down the setscrews on the left hand cable drum. While holding tension on the left hand cable, attach a pair of vise grips onto the torsion shaft and against the end of the horizontal track to hold tension.

Repeat the process attaching the right hand cable to the right hand bottom corner bracket and to the right hand cable drum. Using the vise grips on the shaft, rotate lightly counter-clockwise to tension the cables.

While holding this position, attach another pair of vise grips to the shaft with the end against the track in a manner that will prevent the shaft from rotating clock-wise.

Light, even tension is adequate.



Ensure that the cables are equally tensioned and are wrapped correctly onto the first cable groove of the drums before continuing.

Note: Leave the vise grips in place on the torsion shaft after you have finished installing both cables. Do not remove them until after you have wound the torsion spring(s).

STEP 15-R

You are now ready to wind the torsion springs.

You will need a pair of winding bars. The winding bars must be made from 1/2" diameter cold rolled steel and must be at least 18" long. These are not furnished with your door but are available at most hardware stores.



WARNING: NO OTHER SUBSTITUTE TOOL CAN BE USED.

The vise grips should still be on the torsion shaft and wedged against the track to prevent the shaft from turning. If you have removed the vise grips from the shaft and the cables have become loose, **YOU MUST RE-TIGHTEN AND SET BOTH CABLES PROPERLY ON THE DRUMS BEFORE PROCEEDING!**

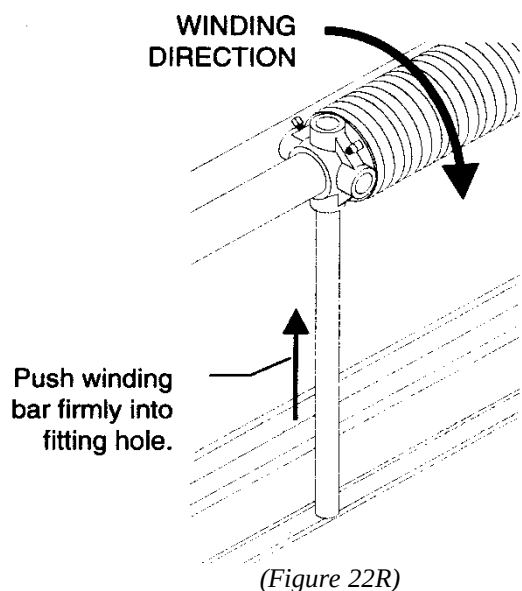


WARNING: NEVER STAND DIRECTLY IN FRONT OF THE WINDING BARS OR ALLOW ANYONE TO STAND IN LINE WITH THE WINDING BARS WHILE WINDING OR ADJUSTING SPRINGS.

Start winding the spring by drawing a chalk line horizontally across the spring(s). This will help you keep track of the number of turns you have wound the spring(s).

Now place the first winding bar in place, and hold firmly, **CAREFULLY** start to wind the spring in a **DOWNWARD** direction (see Figure 22R).

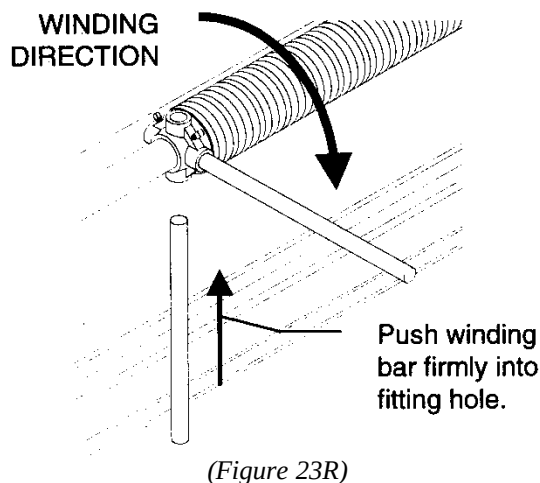
Residential Door and Counterbalance System Installation Manual



DANGER: ALWAYS MAINTAIN CONTROL OF THE WINDING BARS BY KEEPING STEADY PRESSURE ON THE WINDING CONE AT ALL TIMES.

Locate the tag attached to each spring, noting the number of “turns” that the spring requires. You will need to wind the spring according to this tag information. Next insert the second bar in the hole of the winding cone and while holding it firmly with a little back pressure (*see Figure 23R*), remove the upper winding bar and turn (wind) the spring up another $\frac{1}{4}$ turn. Repeat this step-by-step procedure until the spring has been wound the proper number of turns.

While holding the winding bar, carefully tighten the two setscrews on the torsion spring winding cone. The setscrews should be tightened four (4) additional $\frac{1}{4}$ turns after they have made initial contact with the torsion shaft.



After the spring(s) have been wound and the setscrews have been securely tightened remove the vise grips.



DANGER: As you lift the door for the first time, make sure that the top track rollers do not slip out of the horizontal tracks. (The track may spread if it has not been properly aligned). Do not stand beneath or under the door.

Try opening and closing the door. The effort to open and close the door should be the same. If the door seems “heavy” when you open it, but easy to close, you need to wind the spring an additional $\frac{1}{4}$ turn. If the door is very easy to open (will not stay on the floor) and is hard to close, you will need to unwind the springs $\frac{1}{4}$ turn. Do this following the same instructions in this step (Step 15-R).

Residential Door and Counterbalance System Installation Manual

Maintenance

Routine maintenance one annually will help assure long lasting, quiet, trouble free operations of your Haas 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.



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

Cleaning

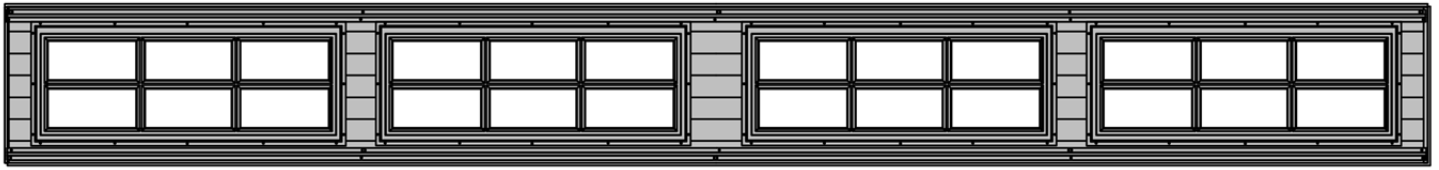
Dirt and mildew must be removed to maintain desired appearance. Use mild house hold cleaner and wipe down surface of the door. Rinse surface thoroughly to remove any cleaning agent.

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.



Supplemental and Decorative Hardware Installation Instructions For Models 246, 660, 663, 664, 760, 763, 764, 2060, 2063, and 2064



Window Sections

Window sections over 16' for stamped carriage house models 660, 663, 664, 760, 763, 764, 2060, 2063 and 2064 are packaged with two struts fastened to the section for stability during shipping. Remove the bottom strut from the section and attach to the top of the bottom section as described on page 4 of this manual. During installation be sure to fasten top strut to section with proper amount of 1/4" x 3/4" TEK screws provided.

Handles

Using a pencil, mark hole locations on the exterior skin of section by following the drawing on the back side of this sheet. Drill top holes through outer skin of section only using a 3/16" drill bit for model 246, and a 5/16" drill bit for models 660, 663, 664, 760, 763, 764, 2060, 2063 and 2064. On models 660, 663, 664, 760, 763, 764, 2060, 2063 and 2064 drill the 3/16" hole on the inside of the section using a 3/8" drill bit to allow room for the 3/8" spacer. **DO NOT DRILL THRU!!** Fasten top of handles using fasteners suggested in fastener chart. Align handles vertically and drill bottom holes using the same drill bits. Attach bottom of handles using the fasteners suggested in fastener chart located below.

Model	Handle Fasteners		
246	3/16" black rivets	-	-
660 663 664	3/16" black hex bolt	1-3/8" spacer	3/16" flanged nut
760 763 764	3/16" black hex bolt	1-3/4" spacer	3/16" flanged nut
2060 2063 2064	3/16" black hex bolt	2" spacer	3/16" flanged nut

HINGE STRAPS (optional)

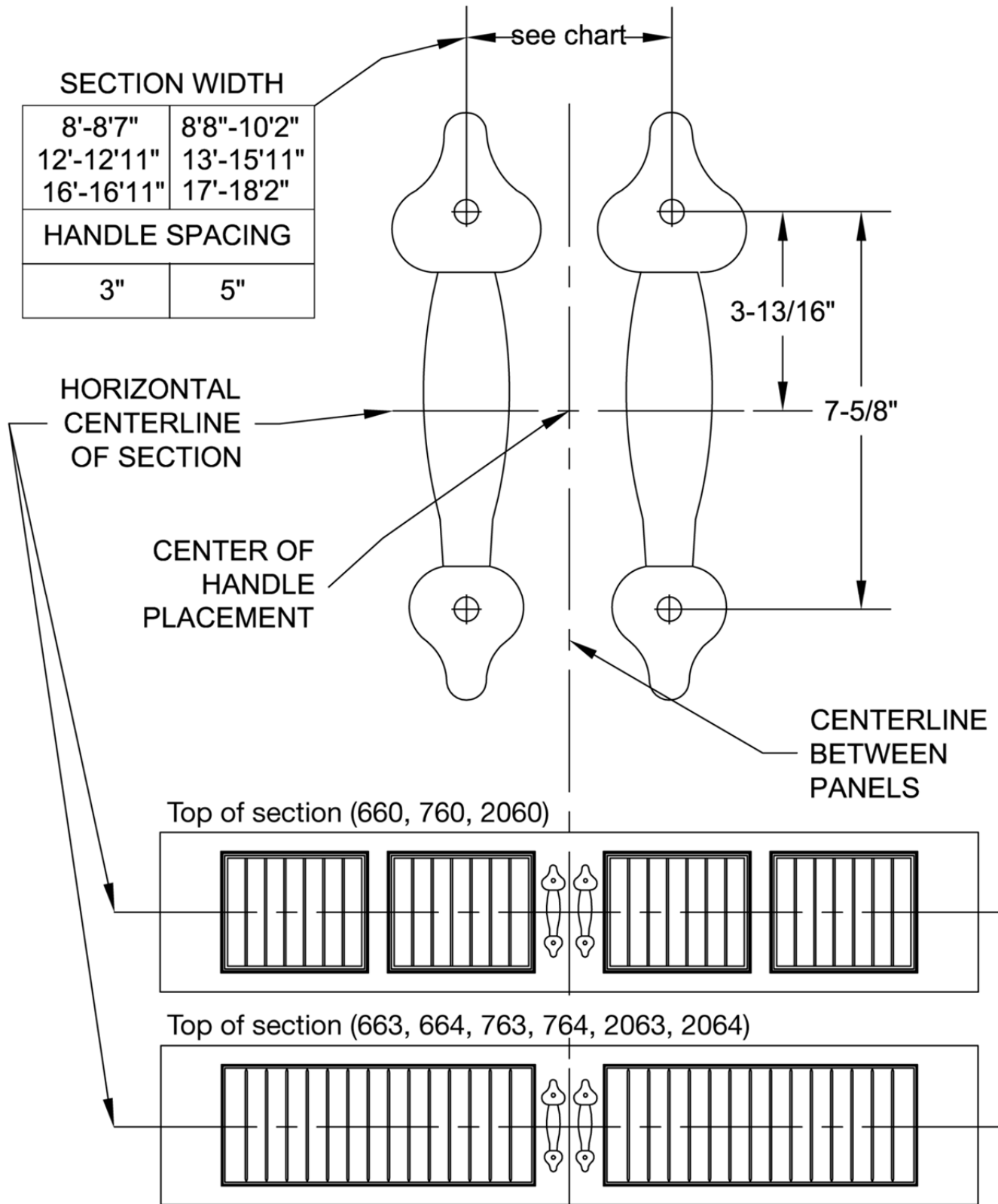
Attach decorative hinge straps to exterior of door by aligning hinge straps in desired location. Fasten hinge straps using the fasteners suggested in fastener chart located below. For model 246 installation a 5/32" hole is needed through the outside skin only of the section to fasten with rivets.

Model	Hinge Strap Fasteners
246	5/32" black rivets
660, 663, 664 760, 763, 764 2060, 2063, 2064	#8x1" black screws

Decorative Hardware Installation Instructions

Models 246, 660, 663, 664, 760, 763, 764, 2060, 2063, and 2064

DRAWING IS NOT TO SCALE





American Tradition Series™ Carriage House Door Supplemental Installation and Painting Instructions

This is a supplement to the standard Haas Door installation instructions for residential garage doors. This supplement will discuss important facts that are unique to the American Tradition Series™ carriage house door. Items that are included in this supplement include:

- Strut Requirements
- Section Stacking
- Decorative Strap Installation (optional)
- Cleaning
- Painting
- Warranty Information
- Lift Handle Installation (see attachment)

Strut Requirements

The table below shows the strut requirements for the American Tradition Series™ doors. Window sections over 16' with ½" glass are packaged with two struts fastened to the section for stability during shipping. Remove the bottom strut from the section and attach to the top of the bottom section as described in the residential installation instruction booklet provided in the hardware carton.

Model	Color	8'&9'	16'&18'
American Tradition Series™	White, Gray, Almond, Sandstone	1, 2" U-Bar on section 4	3, 2" U-Bars on Sections 1, 2 & 4

Decorative Strap Installation (option)

The following are the manufacturer's recommended installation instructions.

1. Place the straps in any desired location on the overlay of the door.
2. Attach the strap with (3) #8 X 1" long pan head screws that are provided through the (3) holes in the hinge. The screws will go completely through the overlay and one layer of steel.

Cleaning

Dirt, loose chalk and mildew must be removed to maintain a desired appearance. Clean mild build-up with a damp cloth. Heavier dirt accumulations may be addressed by the use of a dilute solution of Spic and Span® (1cup into 5 gallons of warm water). Always rinse the surface thoroughly to remove any of the cleaning agents afterward.

Painting Instructions

Any garage door surface to be painted, including the overlay pieces, must be properly prepared to assure the continued performance of the coating system. Refer to preparation and painting instructions on page 3 of this manual.

IMPORTANT

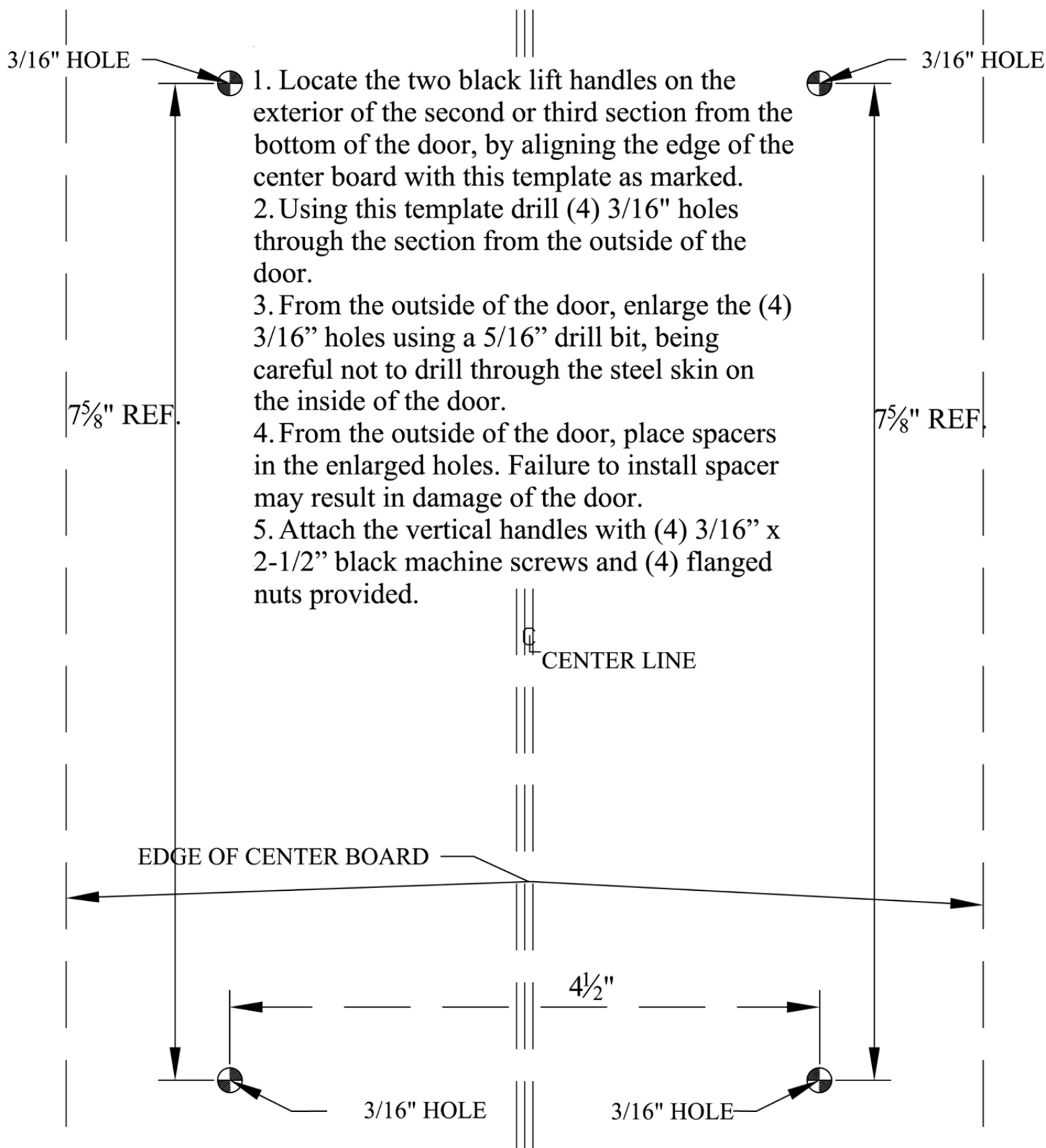
USE ONLY HIGH QUALITY LATEX EXTERIOR HOUSE PAINT. Use of paints containing linseed oil, lacquer or alkyd base solvents voids the warranty of this door. Refer to door installation manual for painting instructions. **DO NOT PAINT DOOR OR OVERLAY DARK COLORS.** Failure to follow these specifications will void the door's warranty. Dark colors absorb excessive amounts of heat from the sun, which can result in higher than designed surface temperatures, causing the adhesive system to fail or the overlay pieces to warp. Do not paint the steel section or the overlay with a paint that has a LRV (Light Reflective Value) of less than 35.

Stacking American Tradition Series™ Sections

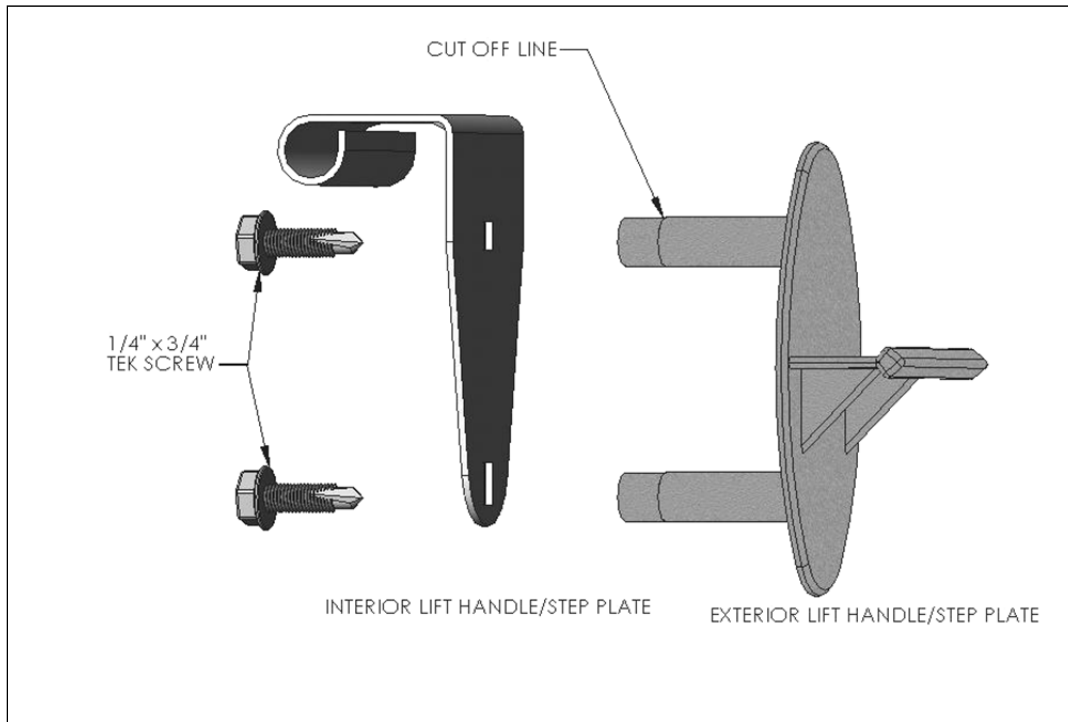
Since all American Tradition Series™ doors are handcrafted one door at a time, it is important that matching sections stay together and that the sections are stacked in the correct order. All sections are labeled on each end. The sections for each American Tradition Series™ door will have the same seven-digit order number on these labels. The first six numbers will reference the order number and the seventh number will reference the line item on the order. The order number and the line item must be the same for the entire door. Also on the end of the section will be the order in which the door should be stacked. The number (1) will correspond with the bottom section and number (4) with the top section. On the inside skin of the door there is a second label with an alignment line to assist in installation. To assure proper alignment this line must lineup between the joining sections.

To also assist in section alignment, it is recommended that a 3/16" TEK screw pilot hole be drilled through the inside section skin by using the slots in the top half of the hinge as a template. Center the pilot holes in the hinge slots. Following door installation use hinge shims provided to flush door overlay where needed.

American Tradition Series™ Carriage House Door Lift Handle Installation Instructions



Lift Handle/Step Plate Installation Instructions



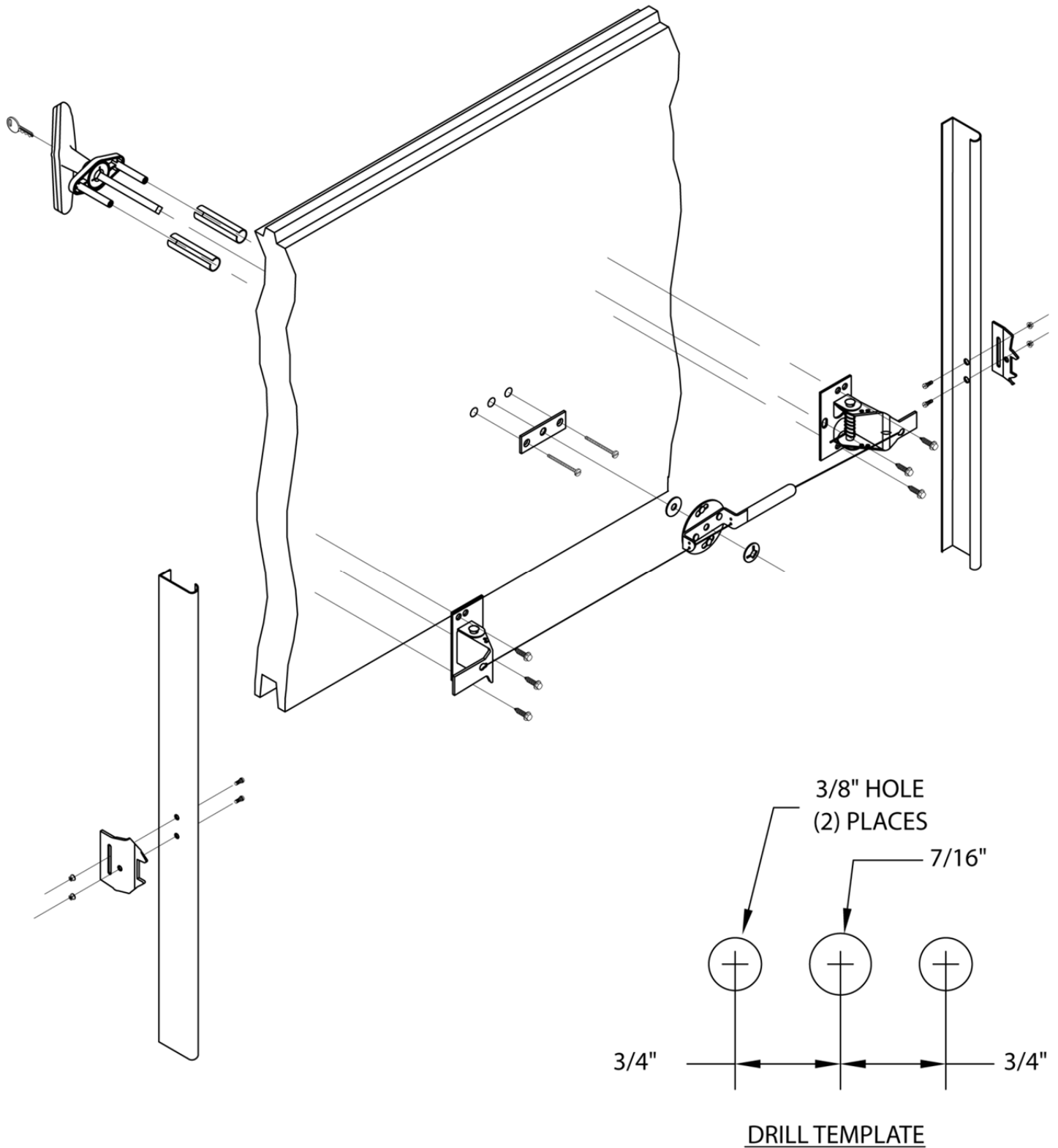
600, 700 & 2000 Series Instructions

1. Align step plate vertically with intermediate hinge.
2. On exterior of door opposite the selected intermediate hinge, measure up from bottom of section and make a mark at 1-1/2" and at 3-3/4". Be sure to center the marks between the raised panels if applicable.
3. Drill 2 - 7/16" holes on the marks from the outside of the section through interior skin of the section.
4. On 600 series doors the exterior step plate legs will need to be cut on the cut off line to accommodate the narrower section.
5. Insert exterior step plate into holes drilled on outside of the section and attach interior lift handle/step plate on the inside of the door to the exterior step plate using two 1/4"x 3/4" TEK screws.

200 Series Instructions

1. Align step plate vertically with intermediate hinge.
2. On the selected stile use the 2 - 3/16" diameter holes as a template. Drill 2 - 7/16" holes thru the 3/16" holes from inside of the section through the outside skin of the section.
3. Insert exterior step plate into holes drilled on outside of the section and attach interior lift handle/step plate on the inside of the door to the exterior step plate by using two 1/4"x 3/4" TEK screws.

Snap Latch Instructions & Template



Cylinder Lock Assembly

