The Genuine. The Original.

SERIES 190/290/490 SECTIONAL GARAGE DOOR INSTALLATION INSTRUCTIONS

READ THIS MANUAL CAREFULLY AND OBSERVE ALL WARNINGS WHEN INSTALLING, OPERATIING OR MAINTAINING YOUR GARAGE DOOR

Contents

407555-0001 TEMP
9/15/04

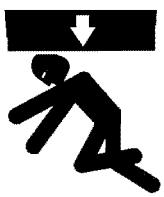
⚠ OVERVIEW OF POTENTIAL HAZARDS

Overhead doors are large, heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depend on you reading the information in this manual. If you have questions or do not understand the information presented, call your nearest service representative.

In this Section and those that follow, the words **Danger**, **Warning**, and **Caution** are used to emphasize important safety information. The word:

DANGER means that severe injury or death will result from failure to follow instructions.
WARNING means that severe injury or death can result from failure to follow instructions.
CAUTION means that property damage or injury can result from failure to follow instructions.

The word **NOTE** is used to indicate important steps to be followed or important considerations.

POTENTIAL HAZARD	EFFECT	PREVENTION
 MOVING DOOR	**WARNING:** Can Cause Serious Injury or Death	Get help or use support when removing old door and lifting new door into place. Keep people clear of opening while door is moving.
 HIGH SPRING TENSION	**WARNING:** Can Cause Serious Injury or Death	**Do Not** try to remove, repair or adjust springs or anything to which door spring parts are fastened, such as, wood blocks, steel brackets, cables or other like items. Installations, repairs and adjustments must be done by a trained trained technician using proper tools and instructions.

SAFETY INSTRUCTIONS

1. Read manual and warnings carefully.
2. Make sure support angles are strong enough to support door in horizontal position.
3. Check distance between horizontal tracks before raising door.

HOW TO USE THESE INSTRUCTIONS

WARNING

These installation instructions are designed for use by professional garage door installers ONLY. Certain operations necessary to correctly install this door rare EXTREMELY DANGEROUS and must be performed ONLY by qualified garage door professional. Failure to properly follow all installation instructions could result in server injury to the installer or users of the door.

IMPORTANT

It is very important to read and understand these instructions before beginning the installation. It is very important to stop and heed all "WARNING' and 'CAUTIONS' contained in these instructions at each step before proceeding.

1. These instructions show the step-by-step Procedures required to install the following:

   DOOR SECTIONS & HARDWARE

   2" RESIDENTIAL TRACK

   TORSION SPRING COUNTERBALANCE

   EXTENSION SPRING COUNTERBALANCE

   Use only those instructions applicable to your particular installation.

3. Each "STEP" will include:

   A. A brief statement of the procedure to be performed.
   B. Illustrations showing procedure in specific detail.
   C. Hardware and fasteners required.

DOOR OPENING REQUIREMENTS

1. Jambs should be plumb.
2. Floor should be flat and level.
3. Opening should be the same width as the length of the door section.
4. Minimum headroom - 12"
5. Minimum sideroom - 3-1/4"
6. MASONRY WALLS:
   HEADER - should be cased with a wood 2 x 4 or 2 x 6.
   JAMB - should be cased with wood 2 x 4's or 2 x 6' which extend 10" above header.

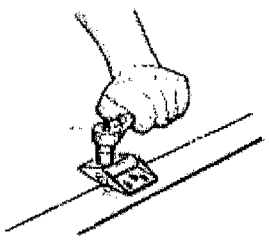
NOTE: Casings should be flush with openings and secured with masonry anchors.

GENERAL NOTES

CAUTION

Exercise extreme care when using electric Impact tool or hand socket wrench to avoid stripping the threads.

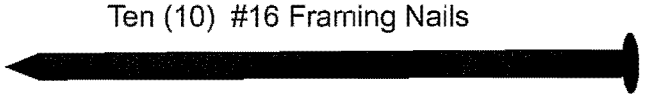
NOTE: If door is supplied with Self-Drilling screws, pilot holes are not necessary.



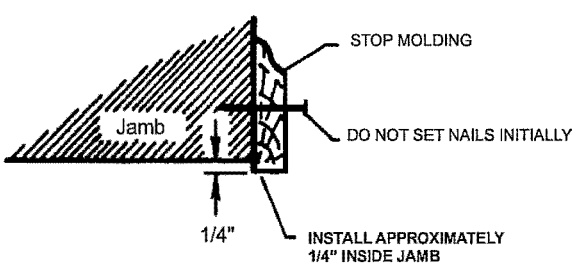
2. All required fasteners are furnished except those noted. Additionally you will need:

Two (2) #8 Double Set Nails

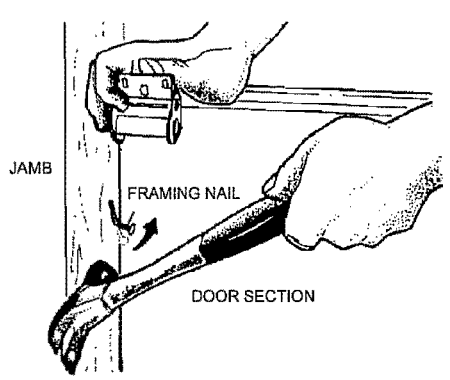
Ten (10) #16 Framing Nails



3. Stop molding (not furnished) is required to correctly install this door. It must be installed inside door opening on jambs and header.

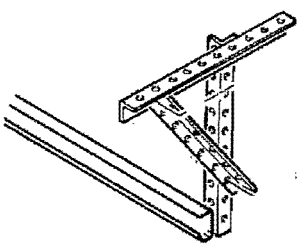


4. When stacking door sections in mounting position on door opening, temporarily "Clinch Nail" sections to jambs. Drive a #16 framing nail ½" into jamb. Carefully bend nail over end of section. Do not damage door section.



5. Hanging angle, shown on page 4 ,6, 7, 8, and 12 is not supplied with your door. You will need approximately 6 feet of hanging angle to complete this project.

1-1/4" x 1-1/4" x 16 gauge perforated angle is recommended.



TOOLS NEEDED

You will need the following tools to perform this installation

Tape Measure
Stud Finder

Electric Drill and Bits

Carpenter's Level

Step Ladder

Saw Horses (2)

Hack Saw

Locking Pliers (2)

Hammer

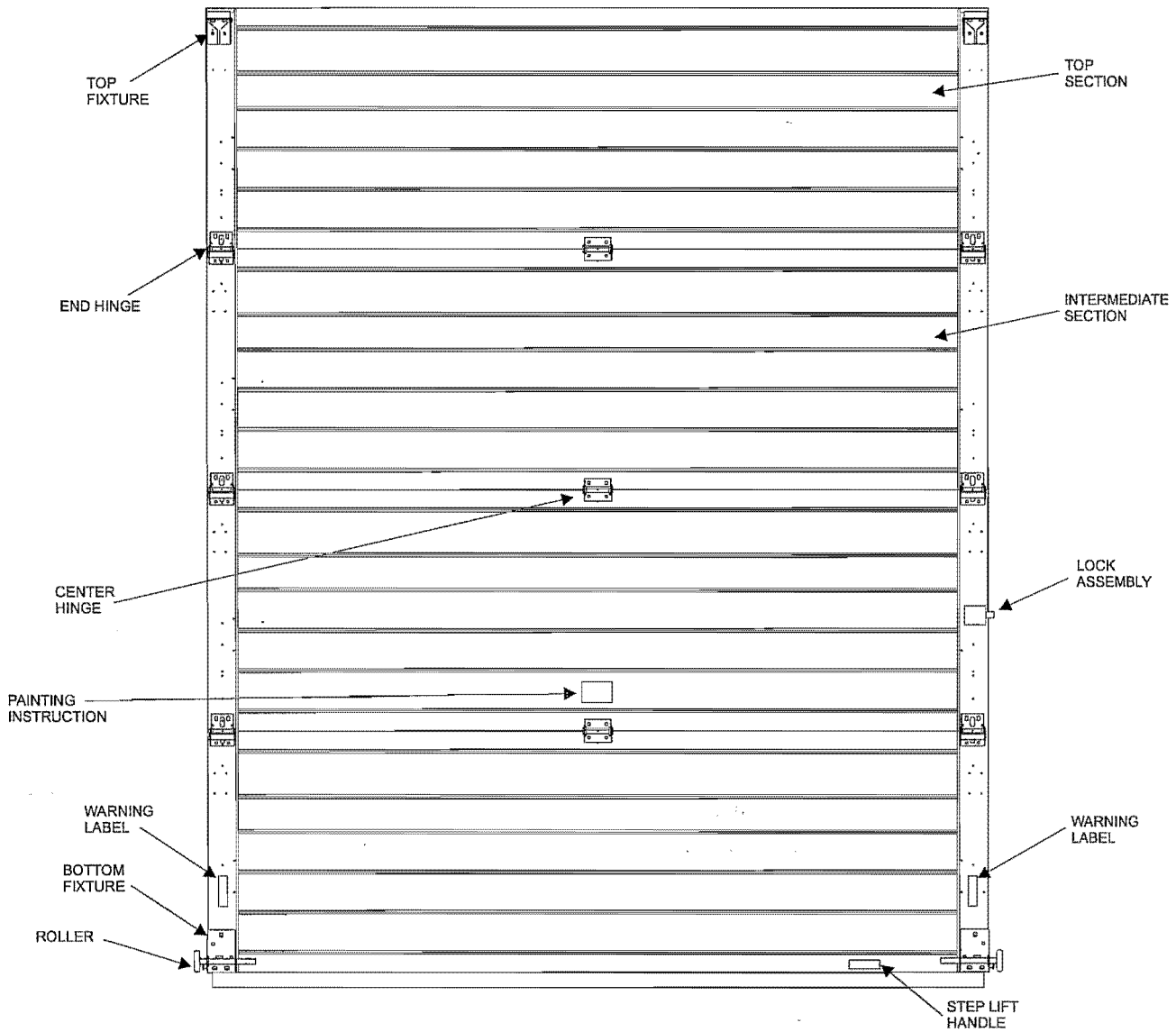
Slotted Screwdriver

Wrench

Winding Bar

Two ½" x 16" long cold drawn steel rods (Torsion Spring Counterbalance only).

KEY DRAWING



DEFINITION OF TERMS USED

HEADROOM - distance from top of door opening to ceiling.

SIDEROOM - distance from side of door opening to sidewall.

PLUMB - straight up or down. Measured with a plumb line.

CASE - Attachment of wood 2 x 4's or 2 x 6's around the inside face (header and jambs) of door opening on masonry walls.

CLINCH NAIL - #16 framing nail driven into door jambs and bent over ends of door sections to temporarily hold door sections in mounting position. See General Note 4.

TAP HOLE - drilled through or into material in which a self-extruding or self-drilling screw is used.

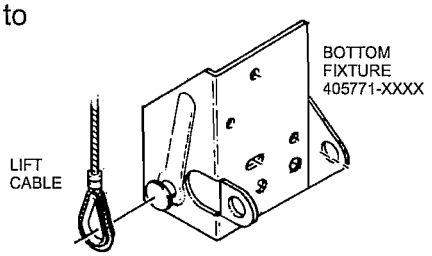
CLEARANCE HOLE - drilled through material and large enough to allow easy passage of a bolt or fastener being used.

PILOT HOLE - drilled into material in which a self-extruding screw is used. **DO NOT** drill through section.

BOTTOM SECTION ASSEMBLY

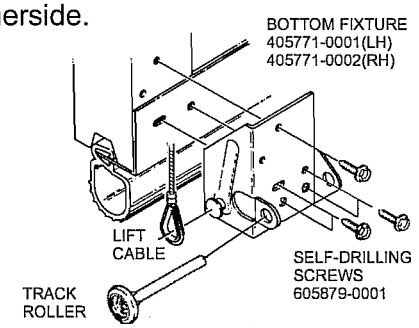
STEP 1

- Secure lift cables to bottom fixtures.



STEP 2

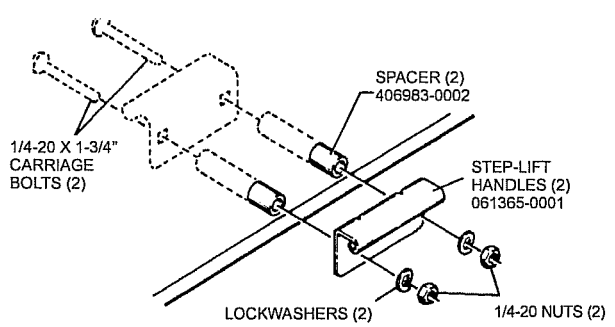
- Place bottom fixture on end stile.
- Install screws.
- Install tracker roller.
- Repeat for otherside.



STEP3

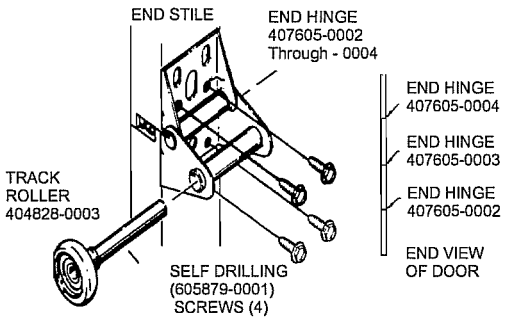
- Install step-lift handles (supplied when lock is furnished) according to instructions below.

A. Align step-lift handle with bottom edge of door (on the inside) so that it is under the lock. Make sure that it is no closer than six (6) inches from the edge of the door. Drill two 1/4" dia. holes through door using holes in step-lift handle as a guide.
B. Drill two (2) ½"dia. Holes through inside of door only, using 1/4" holes as pilot.
C. Insert carriage bolts through outside handle and door.
D. Slide spacers over carriage bolts from inside.
E. Secure handles to door with lockwashers and nuts.



STEP 4

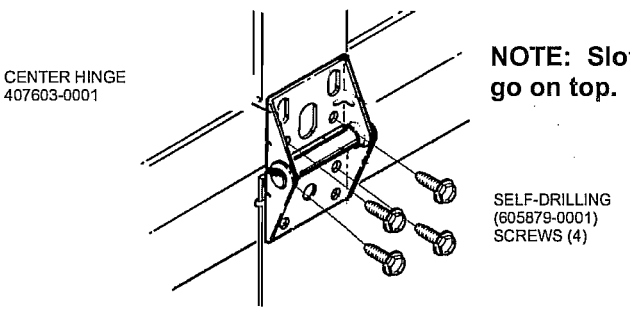
- Install end hinges at top of each end stile on each section. **DO NOT** secure fasteners completely.
- Install track rollers.



- After door sections have been installed in opening, secure upper hinge halves to next higher section and secure all fasteners.

STEP 5

- Install center hinges to the top of each panel at the holes provided on each section. **DO NOT** secure fasteners completely.



- After door sections have been installed in opening, secure upper hinge halves to next higher section and secure all fasteners.

STEP 6

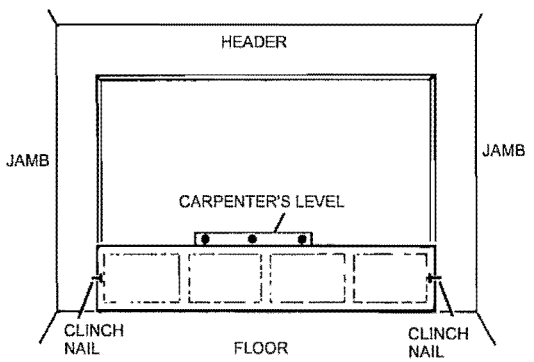
- Install lock (optional).

Refer to LOCK INSTALLATION INSTRUCTIONS on Page 19 and 20.

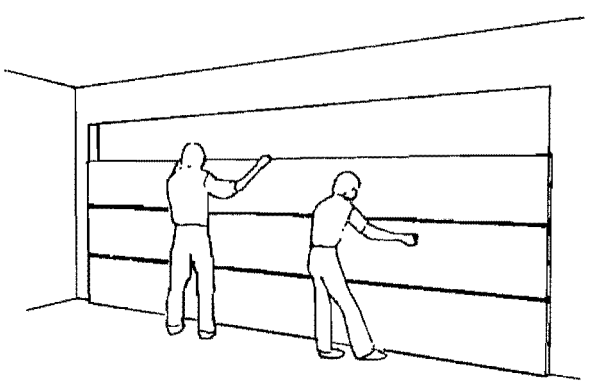
BOTTOM SECTION ASSEMBLY CONTINUED

STEP 7

- Install stop molding (not provided) with 1/4" offset as shown in General Notes 3. **DO NOT** set the nails completely at this time.
- Center and level bottom section in doorway.
- Clinch nail bottom section to jambs.



- Stack Lock and Intermediate Sections in doorway.
- Clinch nail all sections to jambs
- **DO NOT** install top section.

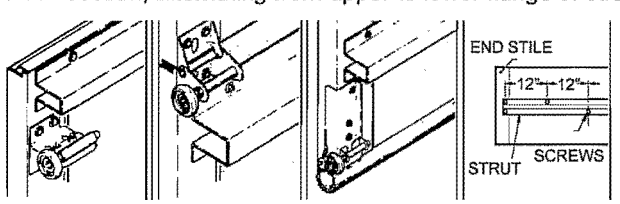


STEP 8

After door sections have been placed in the opening, install screws in upper hinge halves to the next higher section without tightening them. Secure the lower pair of screws in the hinges first, then the top pair.

STRUT INSTALLATION 14'3" - 18' WIDE

- Struts are attached after hardware is installed.
- Doors over 14'-3" are furnished with one or three struts.
- Series 194 raised panel embossed doors use (1) HSO strut on the top section for 14'-3" thru 16"-0" and (3) Hs1 struts over 16'-0". The Series 195 flush uses (1) HSO for 14'-3" thru 16'-0" and (1) HS1 for over 16'-0".
- When a single strut is furnished, that strut is attached to the top section. If three struts are supplied, those struts will be placed on the top, ~~lock~~ INTERMEDIATE, and bottom sections.
- The top section strut is horizontally centered so that the strut flange is flush with the top edge of the door.
- The lock section strut is horizontally centered just under the end hinges.
- The bottom section strut is horizontally centered just above the bottom fixtures.
- Struts are attached with Self-drilling Screws (605879-0001)
- Use two (2) screws at each end of strut, and then at 12" spacing across section, alternating from upper to lower flange of strut.



TRACK ASSEMBLY

STEP 1

•Attach jamb brackets to the vertical track using track bolts, lockwashers and nuts. (See Figure 1)

NOTE: Locate the shorter jamb bracket(-0001) on the second keyslot hole from the bottom of track and the longer jamb bracket(-0004 or -0005) on the third keyslot from the top.

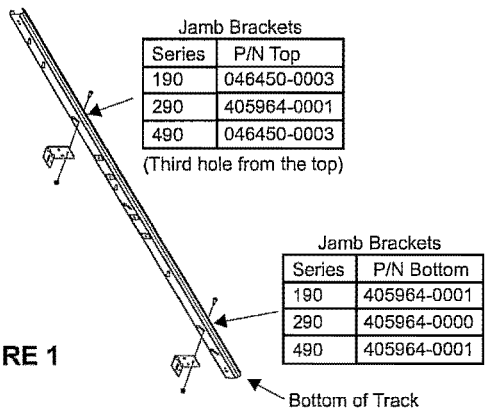


FIGURE 1

STEP 2

•Assemble the flag Bracket to the transition curve by engaging the rivets on the flag brackets into the keyhole slots. Secure the flag bracket to the curve loosely using a track bolt and a nut from the inside of the track and through a slot on the flag bracket.(See Figure 2)

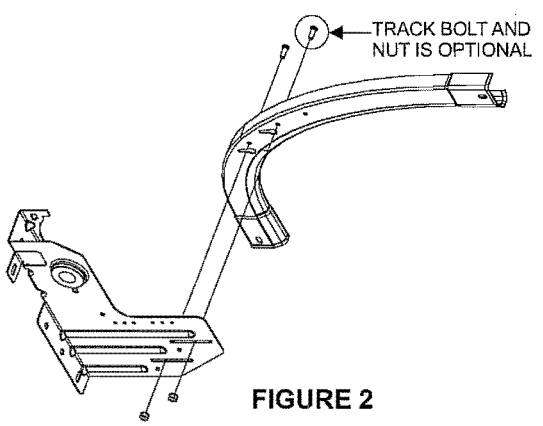


FIGURE 2

STEP 3

•Install the transitional curve and flag bracket assembly on the vertical track assembly by sliding the vertical track into the swedged end of the curve track.(See Figure 3) Secure the track and curve with track bolt and nut.

• Assemble the Vertical tracks for the other side the same way and then set the tracks to the side while you get the door in place.

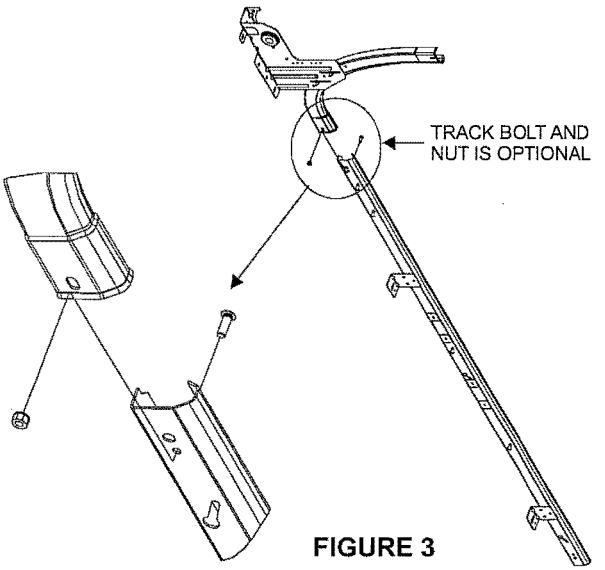


FIGURE 3

INSTALLING VERTICAL TRACK

STEP 1

•Identify the side of the door which has the bottom section touching the floor after leveling the bottom section.

•Position Vertical Track Assembly over the Rollers. **NOTE: When positioning vertical track over rollers, space the track approximately 1" away from the end of the door.(See Figure 4)**

•Adjust the flag bracket such that it rests against the jamb. Secure it to the wall with lag screws and tighten the track bolts and nuts on the flag bracket. Make sure the track and curve are aligned vertically.

•Adjust the position of the jamb brackets starting with the lowest one such that they are against the jamb and the track is touching the floor. Secure the jamb brackets to the jamb with the lag screws provided.

•Repeat Steps for the vertical track and flag bracket on the other side of the door.

NOTE: If the door was shimmed to level the section, then the track must be shimmed the same amount.

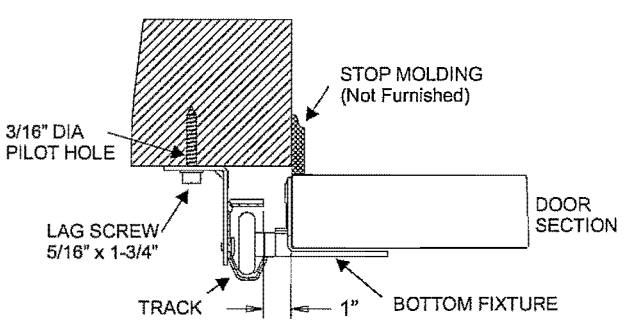
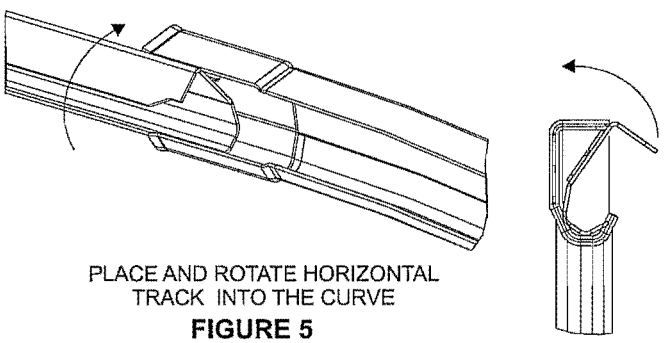


FIGURE 4

INSTALLING HORIZONTAL TRACK

STEP 1

•Take one of the straight tracks to use for a horizontal. Position the end of the track in the swedged end of the transition curve nesting the u shape side of the track with the curve swedged end.(See Figure 5)

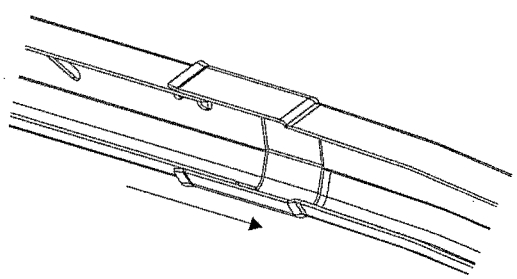


PLACE AND ROTATE HORIZONTAL TRACK INTO THE CURVE

FIGURE 5

STEP 2

•Rotate the Straight Track until the 1" leg snaps inside the swedged end of the curve(See Figure 6) or, simply slide the horizontal track into the back end of the radius.

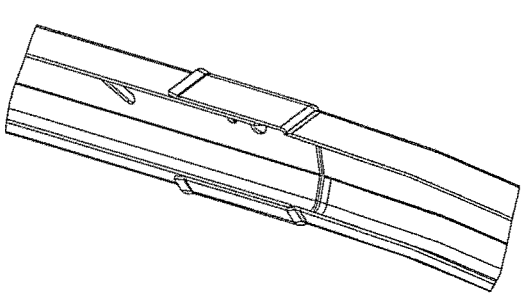


SLIDE HORIZONTAL TRACK INTO THE CURVE

FIGURE 6

STEP 3

•Push the track into the swedged end of the curve until the track is fully seated in the swedged end.(See Figure 7)



HORIZONTAL TRACK SHOULD BE FULLY SEATED

FIGURE 7

STEP 4

•Secure the track and the curve using a track bolt and nut. (See Figure 8)

•Repeat Steps for the horizontal track on the other side of the door.

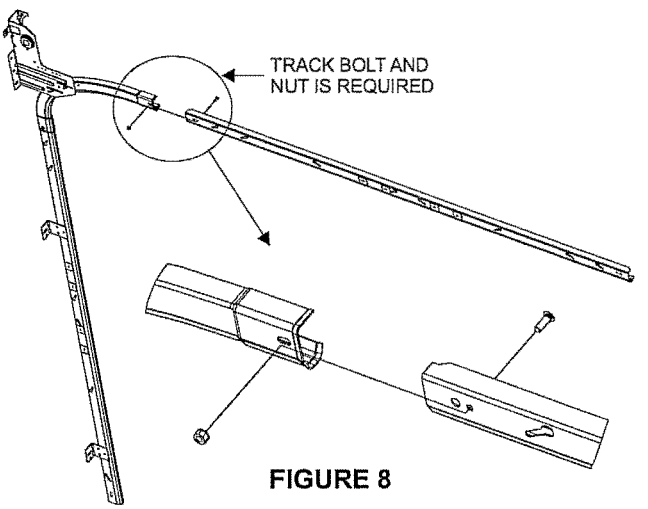


FIGURE 8

PULL ROPE INSTALLATION

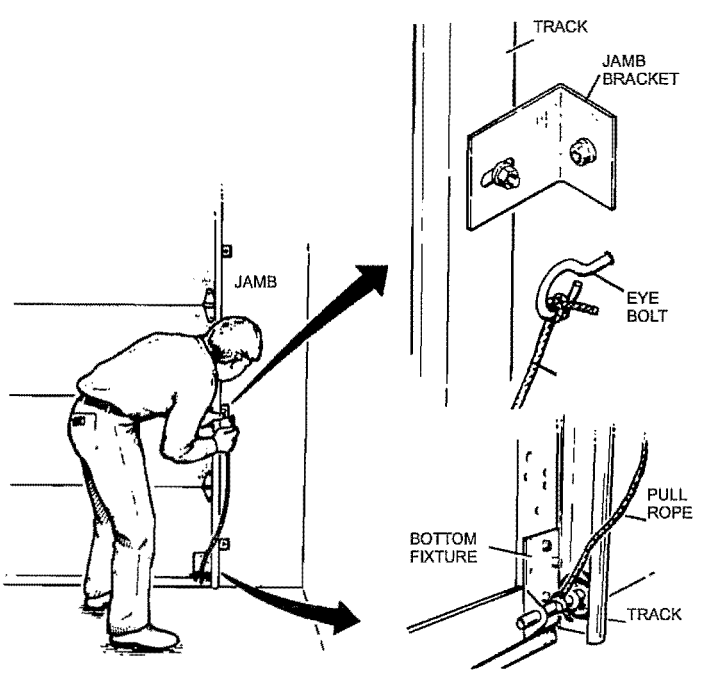
STEP 1

•Install eye bolt to jamb.

•Secure pull rope (if supplied to bottom fixture and eye bolt.

CAUTION

Remove Rope if Electric Operator is to be used.



BACKHANG INSTALLATION

STEP 1

WARNING

If horizontal tracks are set too far apart at rear, door may fall from tracks resulting in serious personal injury. Raise door slowly so that distance between tracks can be checked.

- Raise the Door slowly until it is halfway into the opening. Watch the top track rollers and horizontal tracks.
- Clamp the door in place using vise grips.
- Check the spacing between ends of door and tracks. Maintain a 1" clearance when setting the backhang.

INSTALLING CEILING ANGLE STEP 2

- Using a stud finder, locate ceiling joists nearest rear end of horizontal tracks. **NOTE: Figure 9 should help to locate ceiling joists.**
- Cut two lengths as appropriate of perforated angle for ceiling angles (not supplied).
- Secure ceiling angles to ceiling joists using lag screws (not supplied).

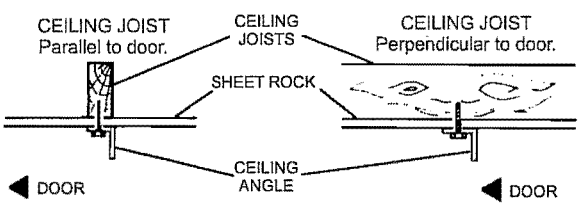
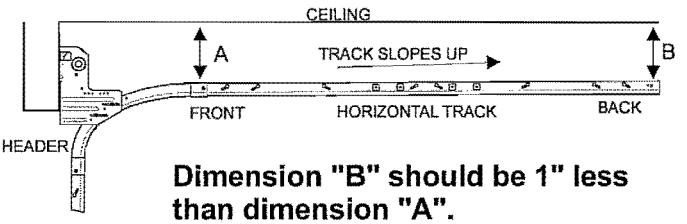


FIGURE 9

INSTALLING VERTICAL ANGLE STEP 3

- Measure distance from ceiling to horizontal tracks at front and rear.
- **NOTE: Rear of tracks should be elevated 1" higher than front. (See Figure 10)**
- Cut vertical hanging angles to length required from perforated angle (not supplied).
- Secure hanging angles to ceiling angles and track using hex head bolts (not supplied). (See Figure 11)
- **DO NOT** install sway braces at this time. Go to the next step first.



Dimension "B" should be 1" less than dimension "A".

FIGURE 10

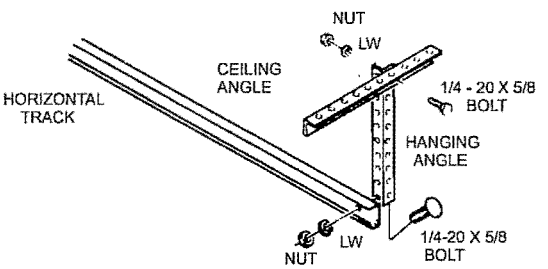


FIGURE 11

INSTALLING SWAY BRACES STEP 4

- Raise the door slowly to a half-open position.
- Check spacing between ends of door and tracks. Maintain 1" clearance.
- If tracks are set too far apart, lower door and make necessary adjustments.
- Cut sway braces from perforated angle (not supplied) and install using hex head bolts (not supplied). (See Figure 12)

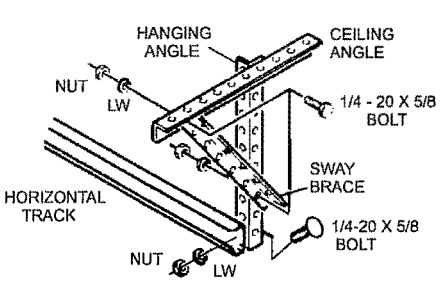


FIGURE 12

INSTALLING TRACK OPTIONS

TRACK ANGLE SUPPORT STEP 1

- Install angle to the side of the track with the short leg toward the outside and non-embosssed slot on the flag bracket.
- Secure the angle to the flag bracket and track using track bolts and nuts.

Angle Required	Door Weight Limits			
	7 foot high		8 foot high	
	Min	Max	Min	Max
None		190		162
short (1" x 1-3/4")	190	275	162	235
7 ft long (1" x 1-3/4")	275	400	-	-
8 ft long (1" x 1-3/4")	-	-	235	342
7 ft long (1-3/8" x 2-3/8")	400	500	-	-
8 ft long (1-3/8" x 2-3/8")	-	-	342	500

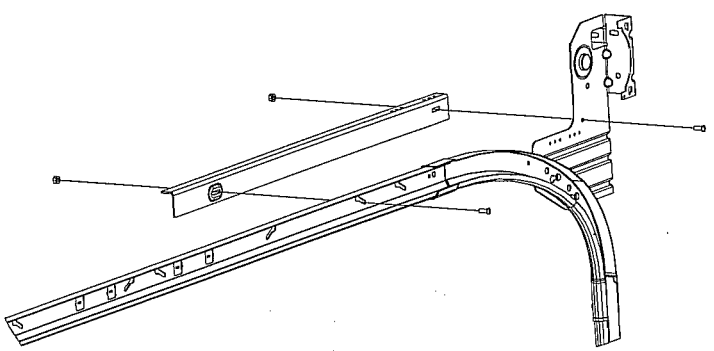


FIGURE 1

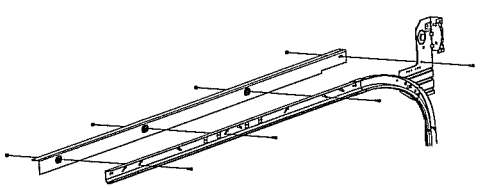


FIGURE 2

LOW HEADROOM TRACK STEP 2

- Vertical track, cut 2" from the top of the straight track pieces.
- Vertical track should be assembled the same as on Page 8.
- Assemble the low headroom headplate to the transition curve using two track bolts and nuts from the inside of the track through the top round holes on the curve(loosely tighten).(See Figure 4)
- Install the transitional curve and headplate assembly on the vertical track assembly by sliding the vertical track into the swedged end of the curve track.(See Figure 5)
- Secure the transitional curve and the vertical with a track bolt and nut from inside the track and through the swedged end of the curve.
- Install vertical track and headplate to the wall. Refer to Page 8 for Details.

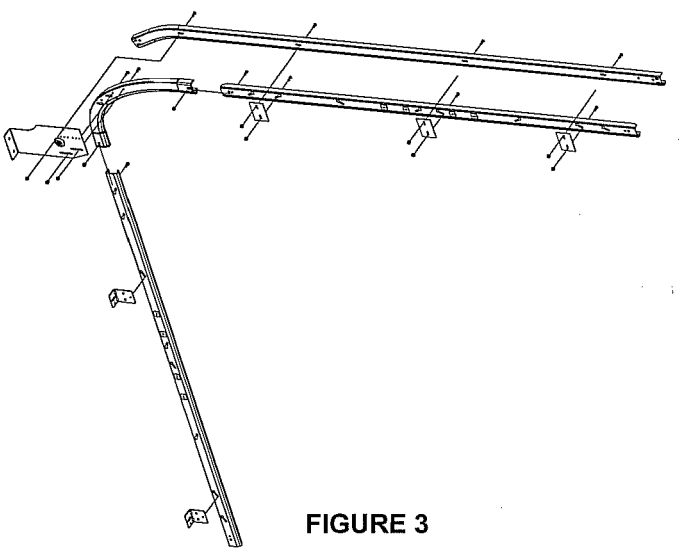


FIGURE 3

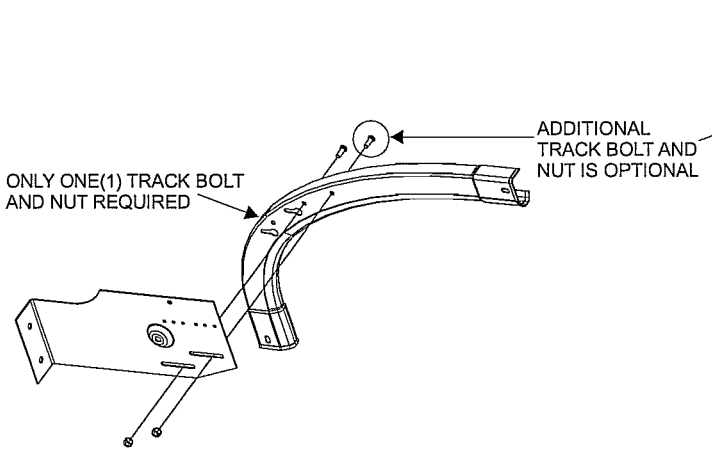


FIGURE 4

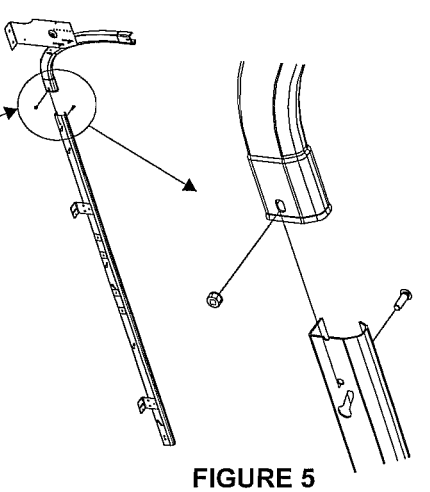


FIGURE 5

INSTALLING TRACK OPTIONS

UPPER HORIZONTAL TRACK

- Install Horizontal Track into the transitional curve. Refer to Page 9.
- **NOTE: Secure the track and curve using a track bolt and nut.**
- Position the upper horizontal track on top of the horizontal track previously installed.
- Secure the upper horizontal track to the headplate using a track bolt and nut from the inside of the track through the headplate.
- Secure the upper horizontal track to the horizontal track with scab brackets using track bolts and nuts through the slot on the upper horizontal track and the keyhole slots on the horizontal track and the holes on the scab bracket.(See Figure 6)

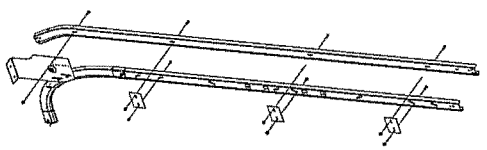


FIGURE 6

HEADPLATE INSTALLATION

LOW HEADROOM FRONT - STANDARD SPRING

- Install the headplate on the inside of the low headroom headplate with a 3/4" of overlap between the headplates. (Figure 7)
- Secure the headplate to the wall with two lag screws.

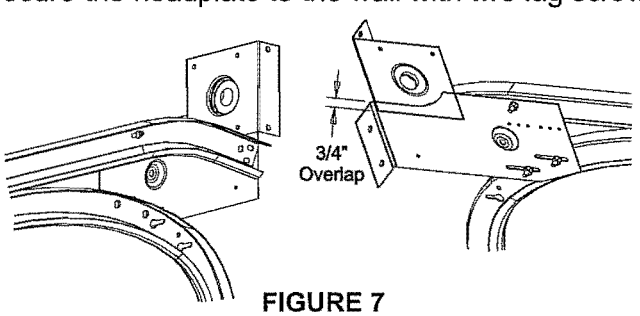


FIGURE 7

LOW HEADROOM FRONT - ARMORTITE SPRING

- Install the bracket assembly (header support)on top of the of the low headroom headplate. Make sure the leg for the winder attachment is flush with the low headroom headplate. (Figure 8)
- Secure the headplate to the wall with two lag screws.

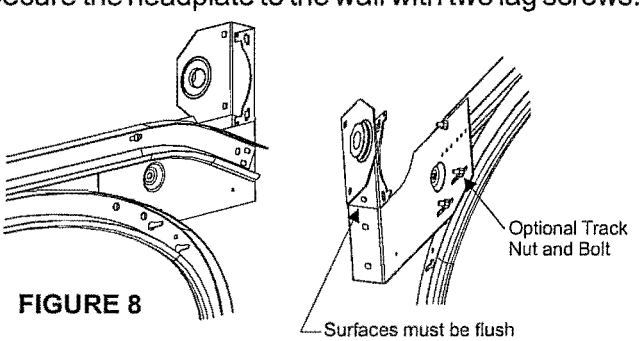


FIGURE 8

LOW HEADROOM REAR - ARMORTITE SPRING

- Install low headroom rear headplate to the upper horizontal using two bolts and nuts. Install the bracket assembly (header support) to the low headroom rear headplate using two bolts and nuts. (Figure 9)

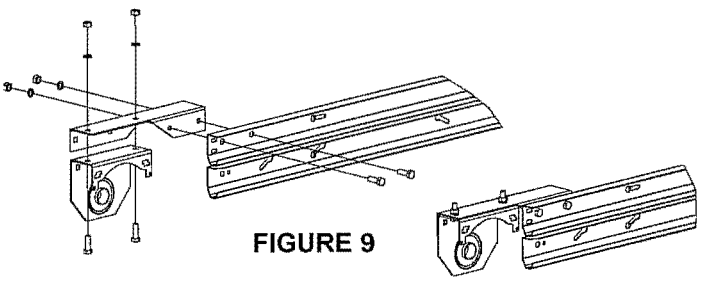


FIGURE 9

LOW HEADROOM REAR - STANDARD SPRING

- Horizontal track, cut 7-1/2" from the back of the straight track pieces. (Figure 10)
- Secure headplate bracket to the upper horizontal piece with two bolts.
- Secure headplate bracket to horizontal track with a self-drilling screw and flat washer.
- Use set collar as spacer between headplate bearing and drum.

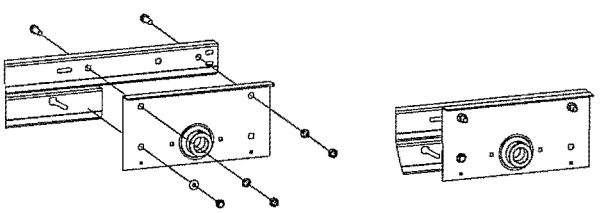


FIGURE 10

LOW HEADROOM EXTENSION SPRING

- Follow the Extension Spring installation instructions for standard track on pages 13-14. Hook one end of each extension spring into each sway brace or ceiling angle. Space the spring approximately 3 inches from the hanging angle in order to clear the track bolts on the horizontal tracks. (See Figure 11)

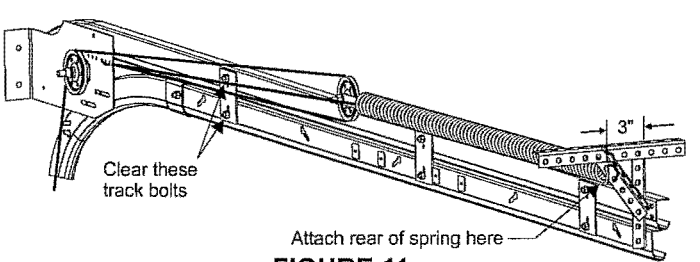


FIGURE 11

COUNTERBALANCE INSTALLATION

IMPORTANT

The following procedures cover the installation of Extension Spring and Torsion Spring counter-balance system.

Installation of the counterbalance system (especially the torsion spring system) is extremely dangerous and **MUST** be performed **ONLY** by qualified door professionals.
Failure follow **ALL** instructions could result in severe injury.

Follow only those instructions applicable to your specific installation.

If you are installing the Torsion Spring Counter-balance system, disregard Extension Spring Counterbalance and continue on Page 15.

EXTENSION SPRING COUNTERBALANCE ASSEMBLY

The drawing at right shows all components required to install left side extension springs. Right side will be similar.
Follow the step sequence for assembly, installation and adjustment.

The complete door must be raised into horizontal tracks before attaching lift cables to extension springs. Backhangs must be attached before raising the door. Refer to page 10 to attach the backhangs before installing the extension springs.

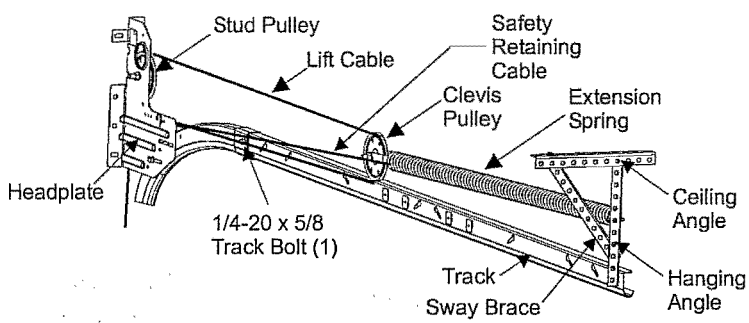


Figure 1. Single Spring Assembly

WARNING

Falling door can cause serious injury.
Before attempting to raise door:
Check distance between tracks. If tracks are too far apart, door could fall.
Put long track bolts through holes at end of each track to stop travel.
Get help to raise door. Door is very heavy.
Raise door slowly.

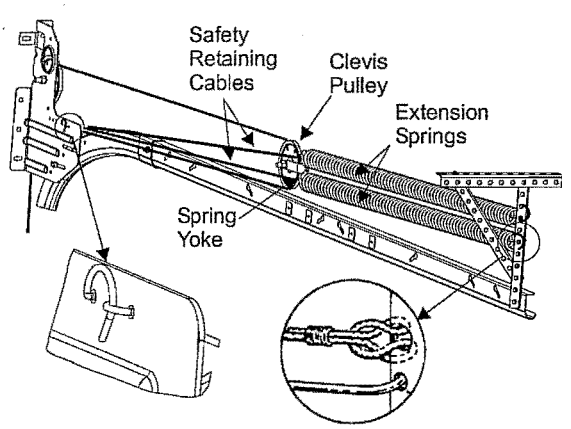


Figure 2. Double Spring Assembly

STEP 1. Stud Pulleys

- Install Stud pulleys on headplates. See Figure 3.

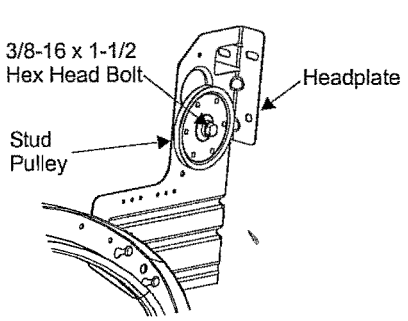
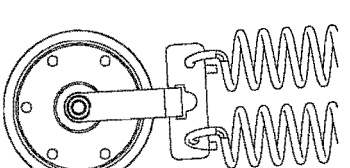


Figure 3. Stud Pulley Assembly



Double Spring Assembly With Yoke

STEP 2. Sway Brace Installation

- Raise door slowly. Watch top track rollers and horizontal tracks.
- Check spacing between ends of door and tracks. Maintain approximately 1" clearance.
- If tracks are set too far apart, lower door and make necessary adjustments.
- Cut sway braces from perforated angle (not supplied) and install using hex head bolts (not supplied).

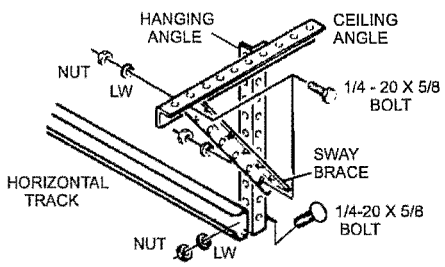


Figure 4

STEP 3. Raise door

- Raise door and install locking pliers to flat portion of track just below door to prevent door from accidentally closing.

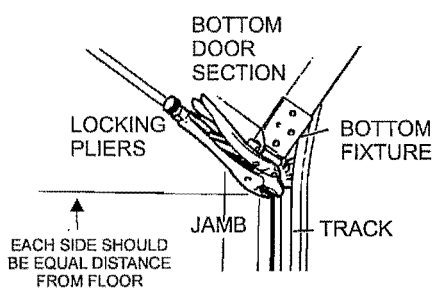


Figure 5

STEP 4. Attaching the Spring

- Hook one end of each extension spring into each hanging angle.
- Install clevis pulleys on opposite ends of springs.
- For double extension spring installation, refer to Extension Spring Counterbalance Assembly Drawing (page 13).

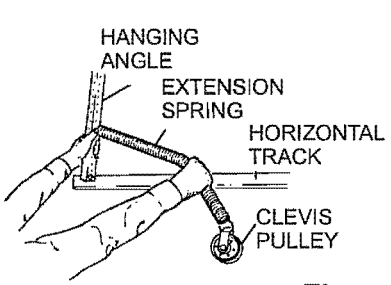


Figure 6

STEP 5. Retainer Cable Installation

NOTE: Proper installation of safety retainer cables is important. These cables help prevent personal injury or property damage by retaining the broken piece of the spring in cases of extension spring failure.

- Attach looped end of safety retainer cables to hanging angles and thread cables thru springs.
- Remove slack from retainer cables and secure to appropriate holes in headplate.
- See Extension Spring Counterbalance Assembly Drawing, page 13.

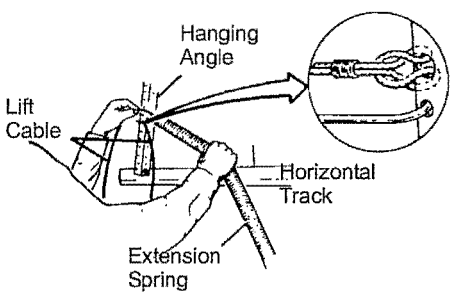


Figure 7

Step 6. Cable Installation

- Route lift cables over stud pulleys, around clevis pulleys to holes in headplates.
- Pull equal tension on both springs and secure lift cables to headplates.
- See Extension Spring Counterbalance Assembly Drawing, page 13.

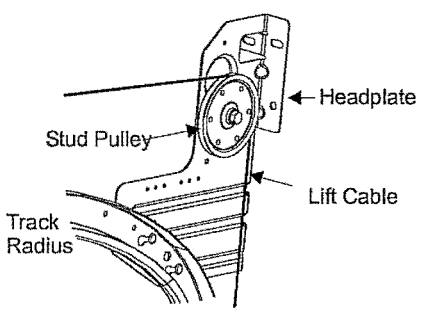
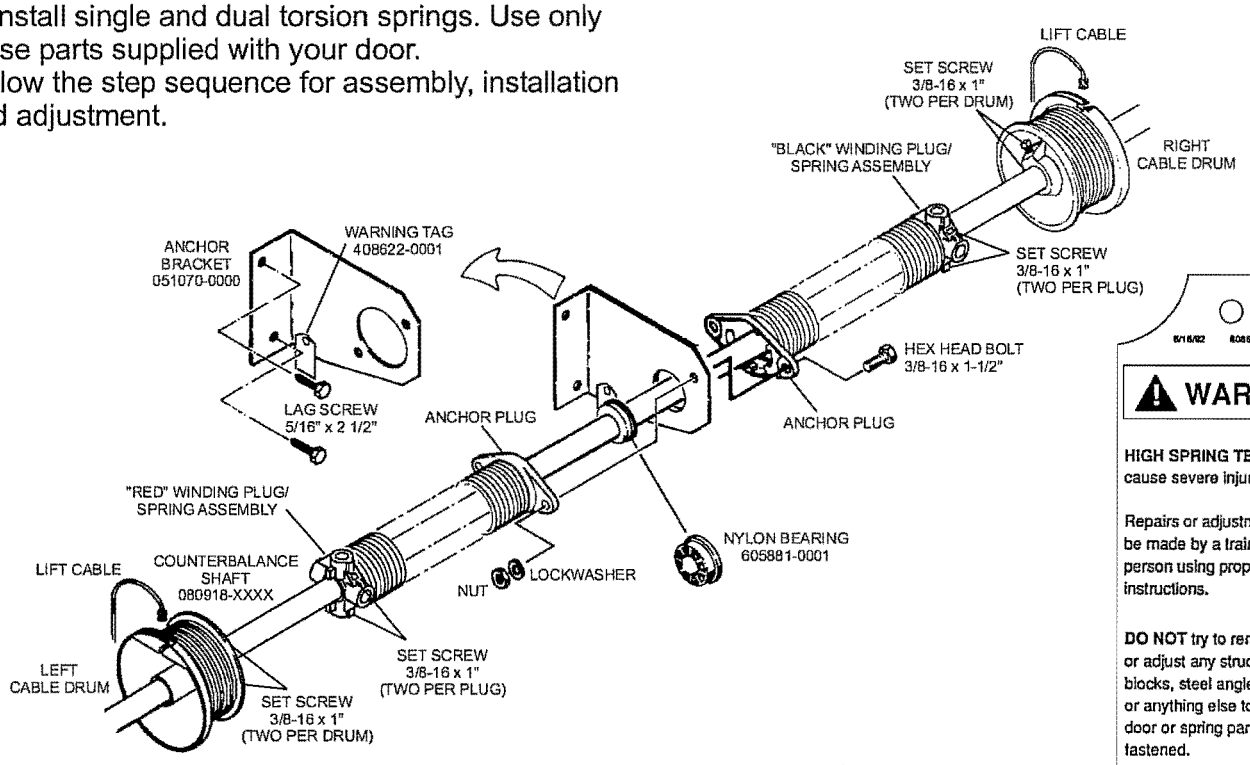


Figure 8

- Remove Locking pliers from tracks.
- Test door operation and re-adjust spring tension if necessary.
- Too much spring tension will not allow door to stay on floor when closed.
- Insufficient spring tension will make the door hard to open.
- Lightly lift cables using 30 wt. Oil. Wipe off excess oil.
- If door is painted after installation, extension springs will have to be readjusted to compensate for the added weight.

TORSION SPRING COUNTERBALANCE ASSEMBLY

- The drawing below shows all components required to install single and dual torsion springs. Use only those parts supplied with your door.
- Follow the step sequence for assembly, installation and adjustment.



⚠ WARNING

HIGH SPRING TENSION can cause severe injury or death.

Repairs or adjustments must be made by a trained service person using proper tools and instructions.

DO NOT try to remove, repair, or adjust any structure, wood blocks, steel angle brackets, or anything else to which any door or spring parts are fastened.

DO NOT remove, cover, or paint over this label.

STEP 1. Torsion Spring Pre-assembly

- Secure anchor plug(s) to anchor bracket.

NOTE:

- Single torsion spring: If spring is "Left" wound it should be located on the right side of the anchor bracket. If spring is "Right" wound it should be located on the left side of the anchor bracket. See Figure 1 To determine if you have a right wound or left wound spring.
- Dual torsion springs: "Left" wound spring on right side of bracket and "Right" wound spring on left side.

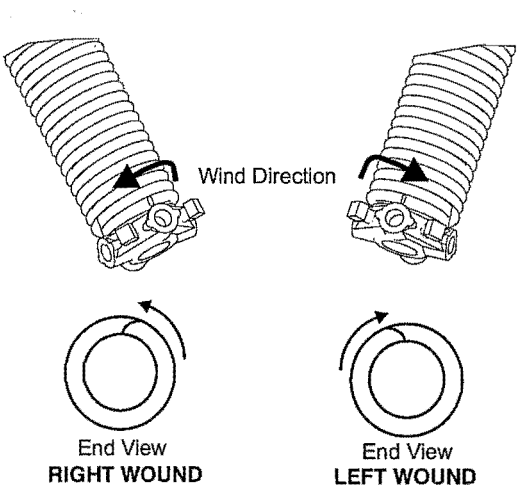
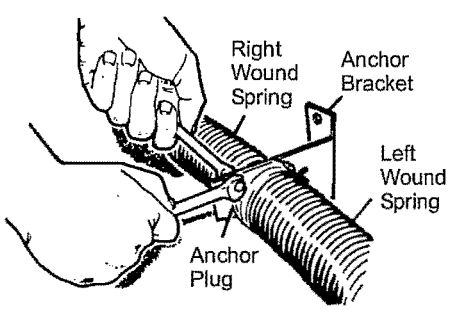


Figure 1



STEP 2. Installing Torsion Shaft

- Slide torsion spring assembly onto counterbalance shaft.
- Install cable drums on shaft. Make sure left and right drums are on correct ends.

NOTE: Drums are marked "R" for right and "L" for left.

- **DO NOT** secure setscrews at this time.
- Lay counterbalance shaft assembly on the top edge of the headplate, then insert one end thru the headplate with largest amount of sideroom.

CAUTION

Do not insert shaft far enough to pull opposite end off its horizontal angle. Go to opposite end and insert shaft thru remaining headplate. For double wide doors two people are recommended.

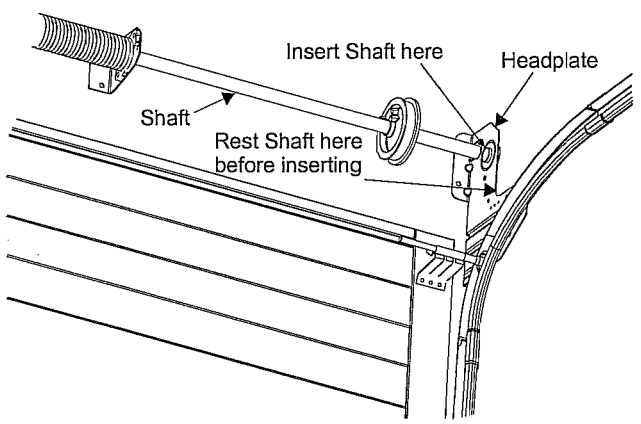


Figure 2

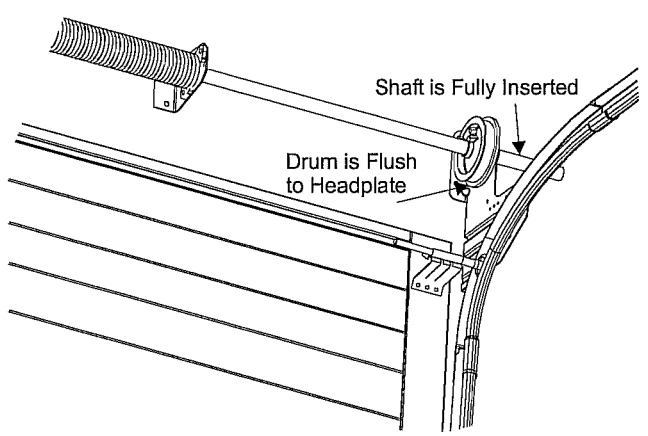
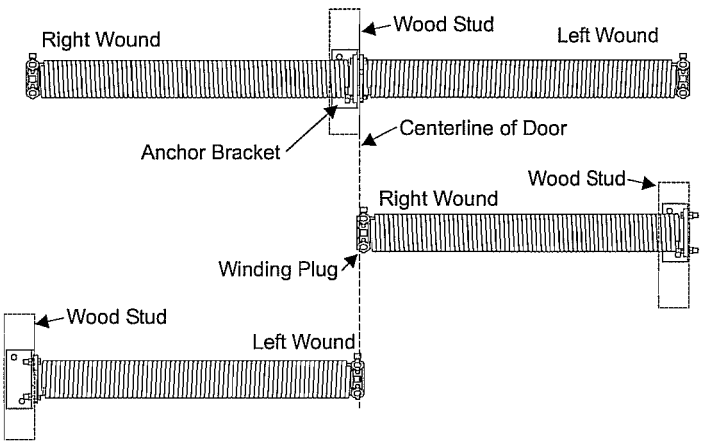


Figure 3

STEP 3. AnchorBracket Installation

- Raise anchor bracket up to header until counter-balance shaft is level or slightly above.
- **NOTE: Anchor bracket must be mounted so that center of shaft does not sag below level.**
- SINGLE SPRINGS - Locate winding plug near centerline of door.
- DUAL SPRINGS - Locate anchor bracket near centerline of door.



- Secure anchor bracket to stud using 5/16 x 1-3/4" screws in 3/16" piolet holes.

WARNING

If the spring anchor bracket is not securely fast-ened to a structurally sound wood member, the bracket can suddenly break loose and cause extreme bodily injury.

CAUTION

Anchor into wood stud or structurally sound member. If you have ½"drywall between anchor bracket and wood studs, 2" lag screws should be used.

STEP 4

- Route left side lift cable up to cable drum and insert into cable slot.
- Wind lift cable onto cable drum until all slack is removed.
- Position left cable drum against left headplate.
- Tighten set screws on drum into shaft and install locking pliers on shaft with handles against ceiling or header.

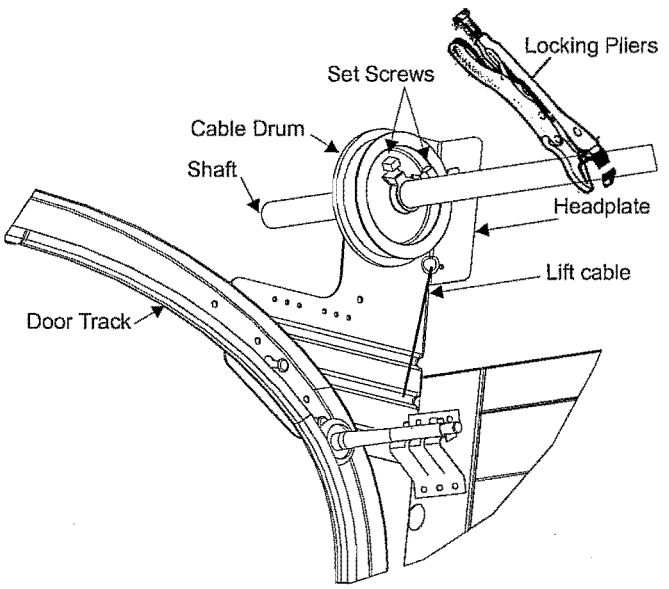


Figure 4

STEP 5

- Route right side lift cable up to cable drum and insert into cable slot.
- Wind lift cable onto cable drum until all slack is removed.
- Position right cable drum against right headplate.
- Tighten set screws on drum into shaft.

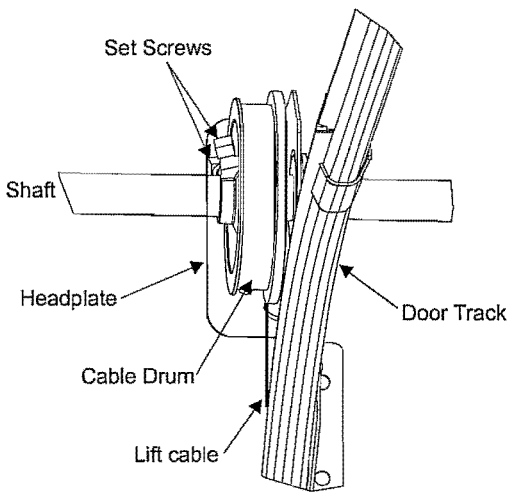


Figure 5

STEP 6

- Check the following before attempting to wind torsion springs:

☐ Lift cables secure at bottom fixtures.
☐ Lift cables routed unobstructed to cable drums.
☐ Lift cables correctly installed and wound onto cable drums.
☐ Lift cables are taut.
☐ Cable drums are against headplates and setscrews are tight.
☐ Torsion spring(s) are installed correctly.
☐ Spring keepers installed and secure.

WARNING

WINDING TORSION SPRINGS IS AN EXTREMELY DANGEROUS PROCEDURE AND MUST BE PERFORMED BY QUALIFIED DOOR SERVICE PEOPLE.

Before installation you Must:

1. Read winding instructions thoroughly.
2. Make sure you understand procedure.
3. Follow the instructions carefully.

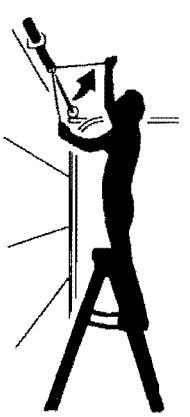
WARNING

Use only the winding bars described in the "Tools Needed" section. DO NOT SUBSTITUTE with screwdrivers, pipe, etc. Other tools may fail and cause serious personal injury.

IMPORTANT

Door must be closed when winding or making any adjustments to torsion spring(s).

Before attempting to wind torsion spring(s) make sure stepladder is sturdy and positioned correctly.
Sound footing is required.

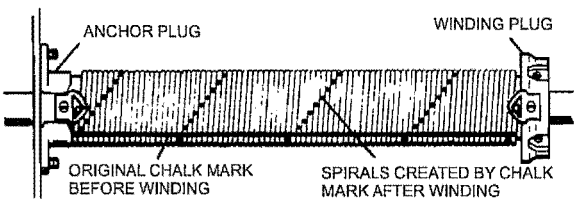


NOTE

Clamp locking pliers to flat position of door track just above door. This will prevent door from rising quickly once torsion spring winding is complete.

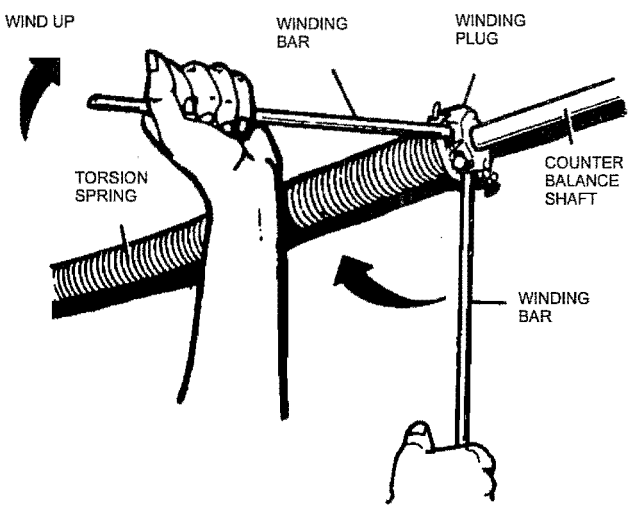
STEP 7

- Draw a chalk line horizontally along the center of the spring coil. As spring is wound, chalk mark will create a spiral. These can be counted to determine the number of turns on the spring.



STEP 8

- Inset a winding bar into winding plug and rotate plug 1/4 turn in the direction shown.
- Insert second winding bar into plug, take up torque load and remove first winding bar.



WARNING

DO NOT remove a winding bar from winding Plug until a second bar has been fully seated In plug and torque load has been assumed.

- Continue winding torsion spring until spring is wound the required number of turns.

7 Foot high doors - 7-3/4 turns
8 Foot high doors - 8-5/8 turns

NOTE

If door starts to rise before required number of turns is reached, stoping winding and proceed with Step 10.

STEP 9

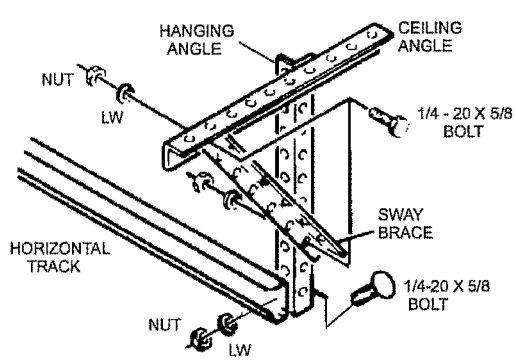
- After winding spring, keep winding bar fully seated in plug.
- Secure winding plug setscrews and remove winding bar.
- Remove locking pliers from counterbalance shaft.
- If duo torsion springs are used, wind remaining spring the same as the first.
- Remove locking pliers from door track.

STEP 10

WARNING

If horizontal tracks are set too far apart at rear, door may fall from tracks resulting in personal injury. Raise door slowly so that distance between tracks can be checked.

- Raise door slowly. Watch top track rollers and horizontal tracks.
- Check spacing between ends of door and tracks. Maintain ½"clearance.
- If tracks are set too far apart, lower door and make necessary adjustments.
- Cut sway braces from perforated angle (not supplied) and install using hex head bolts (not supplied).



TORSION SPRING COUNTERBALANCE

STEP 11

- Raise door to check spring tension.
  - Too much spring tension will not allow door to stay on floor when closed.
  - Insufficient spring tension will make door hard to open.
- Readjust spring tension as required. If tension has to be readjusted, be sure to insert a winding bar into winding plug and assume radial torque load before loosening set-screws.
- Observe all previous **Cautions** and **Warnings**.
- Adjust spring tension in 1/4 turn increments.

STEP 12

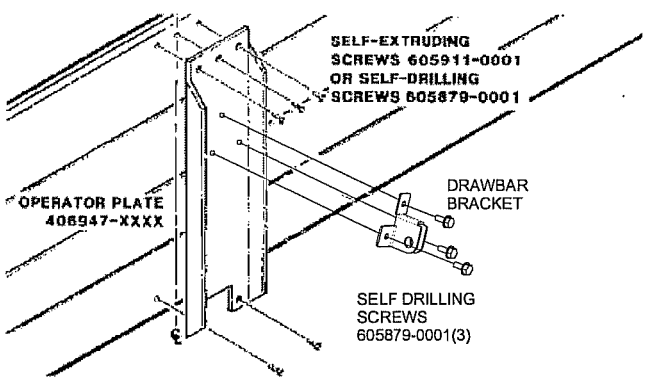
- Lightly oil springs, hinges and lift cables using 30 wt. Oil. Wipe off excess oil.
- If door is painted after installation, torsion springs will have to be readjusted to compensate for the added weight.

DRAWBAR PLATE ATTACHMENT

- Attach Operator Plate at Top Section center-line when Drawbar Operator is to be used. Using holes in Plate as a guide, drill five 1/8" diameter pilot holes in Panel (Self-Extrduing Screws). Attach Plate with Self-Extrduing or Self-Drilling Screws.

WARNING

FAILURE TO COMPLY WITH THESE INSTRUCTIONS WILL VOID THE DOOR'S WARRANTY. Obtain Drawbar Bracket and Mounting Screws from your local Overhead Door Dealer



FINAL ADJUSTMENTS

- With door closed, loosen center and bottom jamb bracket track bolts.
- At bottom of door push vertical track forward to snug door to seal or jamb (**DO NOT** forcibly wedge and impede lifting the door); then secure track bolt at bottom jamb bracket.
- Resecure track bolt at center jamb bracket.
- Adjust stop molding against outside face of door and secure.
- Adjust top fixtures until top section is flush against jambs and track rollers are against rear flange of track.

IMPORTANT

- Attach Safety Decal, P/N 409846-0002 and 409846-0003, to door.(See Page 18)
- Counterbalance Caution Tag P/N 408622-0001, is attached to Spring Anchor Bracket, P/N 051077-0001. **DO NOT REMOVE!**
- Mount Operator Attachment Decal P/N 409251-0001 decal on top of the Top Door Section.
- When the installation is complete, tie the Home Owner's Garage Door Manual envelope through a center hinge or tube, or behind the tube at the 3rd or 4th section joint.
- If your builder or contractors practice includes collecting all appliance warranties and manuals to present to the homeowner, you may want to issue the Manual to him.

SEE SAFETY WARNINGS, DECALS AND TAGS ON PAGE 18

IMPORTANT

MOUNT THIS LABEL ON THE TOP DOOR SECTION

IF THIS DOOR IS TO BE EQUIPPED WITH AN AUTOMATIC GARAGE DOOR OPENER, AN OVERHEAD DOOR CORP. DRAWBAR PLATE MUST BE USED. DAMAGE TO THE DOOR MAY RESULT IF THE PROPER DRAWBAR PLATE IS NOT INSTALLED.

IF THE DOOR IS 14 FT. OR WIDER, A STRUT MUST BE MOUNTED AT THE TOP OF THE UPPER SECTION.

THE PROPER KIT FOR YOUR DOOR MAY BE OBTAINED FROM

4/3/02 409257-0001

OPERATOR ATTACHMENT DECAL
409257-0001

9/19/95 408622-0001

⚠ WARNING

HIGH SPRING TENSION can cause serious injury or death.

Do Not try to remove, repair or adjust springs or anything to which door spring parts are fastened, such as, wood blocks, steel brackets, cables or other like items.

Repairs and adjustments must be made by a trained technician using proper tools and instructions.

Do Not remove, cover, or paint over this label.

COUNTERBALANCE CAUTION
TAG 408622-0001

PAINTING INSTRUCTIONS
WOOD

Do Not allow door to absorb moisture
before painting. Protection of the door
is your responsibility - Not the responsibility of the supplier. Prior to,
or immediately after installation, this door should be primed inside, outside, and on all edges. If a latex primer is applied, a latex topcoat should also be applied. If an oil based primer is applied, an oil based topcoat should also be applied. Read paint manufacturer's instructions.
NOTE: If door was supplied from factory primed, a latex topcoat

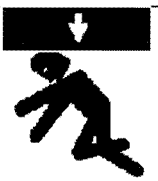
STEEL DOORS

Clean surface with mild detergent solution. Rinse with clear water and allow to dry completely. Prepare surface with a liquid sander/deglosser according to manufacturers' instructions. Finish with a premium **ACRYLIC LATEX** paint. Read paint manufacturers' instructions.
NOTE: Oil based paints are not to be used and void manufacturer's

5/14/04 409846-0003

PAINTING INSTRUCTION AND SAFETY NOTICE
409846-0002 AND -409846-0003

⚠ WARNING



MOVING DOOR can cause serious injury or death. Keep people clear of opening

SAFETY INSTRUCTIONS

An overhead door is a large heavy object that moves with help of a spring that is under high tension. Since moving objects and springs under tension can cause injuries, your safety and the proper operation of the door depend on you doing the following:

1. Keep door in full view and free of obstructions while operating.
2. Do not allow children to operate the door or electric door controls.
3. Do not stand under door or walk through doorway while door is moving.
4. Remove pull down rope from electrically operated doors and disable the lock.
5. Do not place fingers or hands between sections. Use handles and step plates for manual operation.
6. Check automatic reversing feature monthly on doors with electric openers following manufacturer's instructions.
7. Check the door and its hardware monthly for worn or broken parts, adjustment and balance. The door should not bind when moved and should not move when opened halfway. **Do not** operate door with broken springs or cables. (See Owner's Manual.)
8. Repairs and adjustments must be made by a trained service person using proper tools and Instructions.

OVERHEAD DOOR®
the original since 1921

3/2/01 409846-0002

LOCK INSTALLATION

NOTE: If electric operator is installed later, lock case assembly should be removed.

Lock Kits are pre-packaged with the specific hardware and fasteners required for different lock mounting locations. **NOTE: Lockrod engagement in both door tracks is required when installing doors with extension spring counterbalance.**

The following drawings show the different lock mounting locations for various types of door mounting installations. Select the drawing most applicable to your situation. Lock should always be installed with bolt and attached bars horizontal and in line with lock slots in track, usually on the second section.

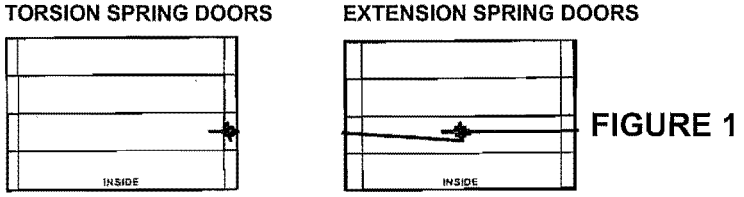


FIGURE 1

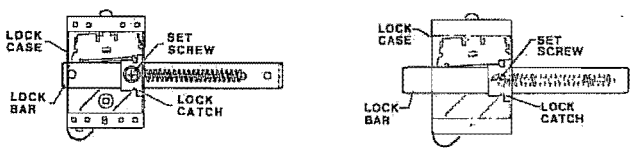


FIGURE 2

LOCK INSTALLATION

Figure 3 shows the assembly of lockcase and outside handle.

1. Determine correct position to mount lock by using Figure 1. **NOTE: On side mount installations, lock bar (unlocked) Position) should not extend beyond edge of door and must Align with track slot. See Figure 2 for correct positioning Of lock bar in lockcase.**

2. Pattern should be cut out and taped to outside of section For use as a template. Use a center punch for drill Accuracy.

3. Drill the specified holes on the template thru the door panel. **NOTE: Drill 1-1/8" hole thru section with a hole saw.** Drill out top and bottom holes with a 7/16" bit, thru inside face. ONLY. **NOTE: Make sure that insulation is cleaned from all holes.** Install lock handle per Step 4, Figure 3 using appropriate hardware. Spacers have to be installed into the 7/16" holes in the panel. Attach lockcase per Figure 3. Install appropriate hardware. **DO NOT OVERTIGHTEN. NOTE: Masking tape may be helpful to hold handle, screws and lock escutcheon to section while attaching lockcase.**

4. Lock handle assembly may be mounted in one of two ways:

   A. Handle assembly positioned as shown in Figure 3 Where lockcase bar will have to be moved to Right (locked).
   B. Handle assembly mounted with handle up in Unlocked position.

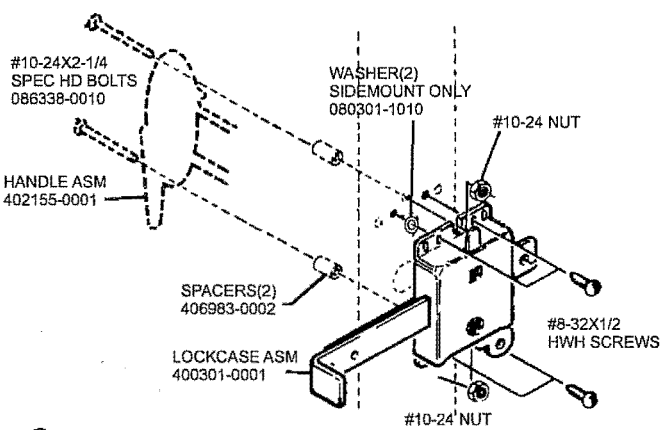
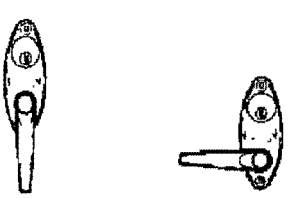


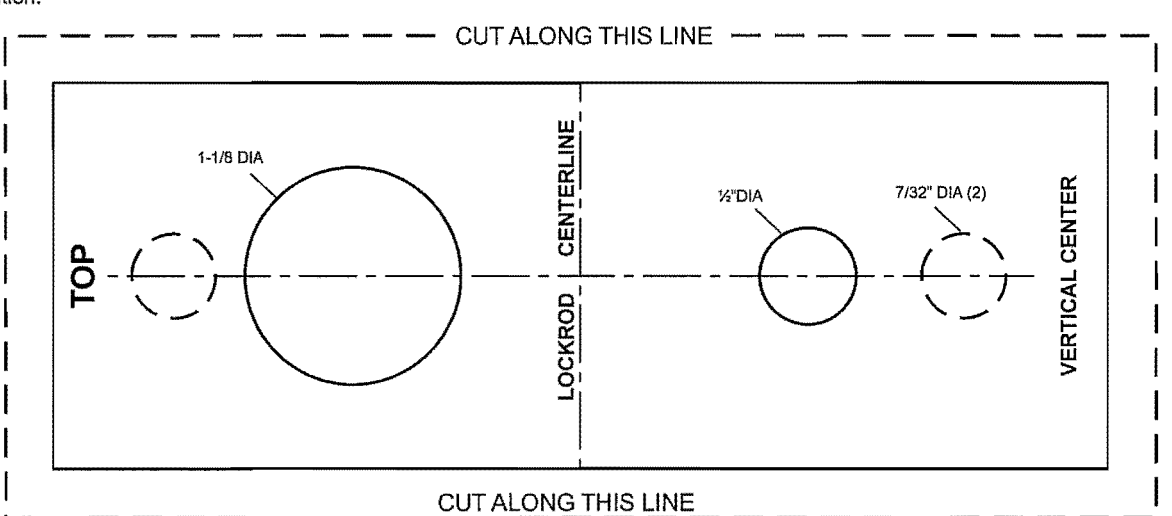
FIGURE 3



MOUNTING POSITION (A)

MOUNTING POSITION (B)

SECTION HOLE PATTERN TEMPLATE



LOCK INSTALLATION CONTINUED

Refer to Figure 4 for the following instructions.

1. Secure lockrods to lockcase assembly.
2. Install end guides on lockrods.
3. Position end guides on end stiles. Align with slots in track.
4. Drill 1/8" mounting holes in end stiles.
5. Secure end guides to end stiles.
6. Install lockrod keepers on slots in tracks.
7. Install lock spring. Locate as shown.

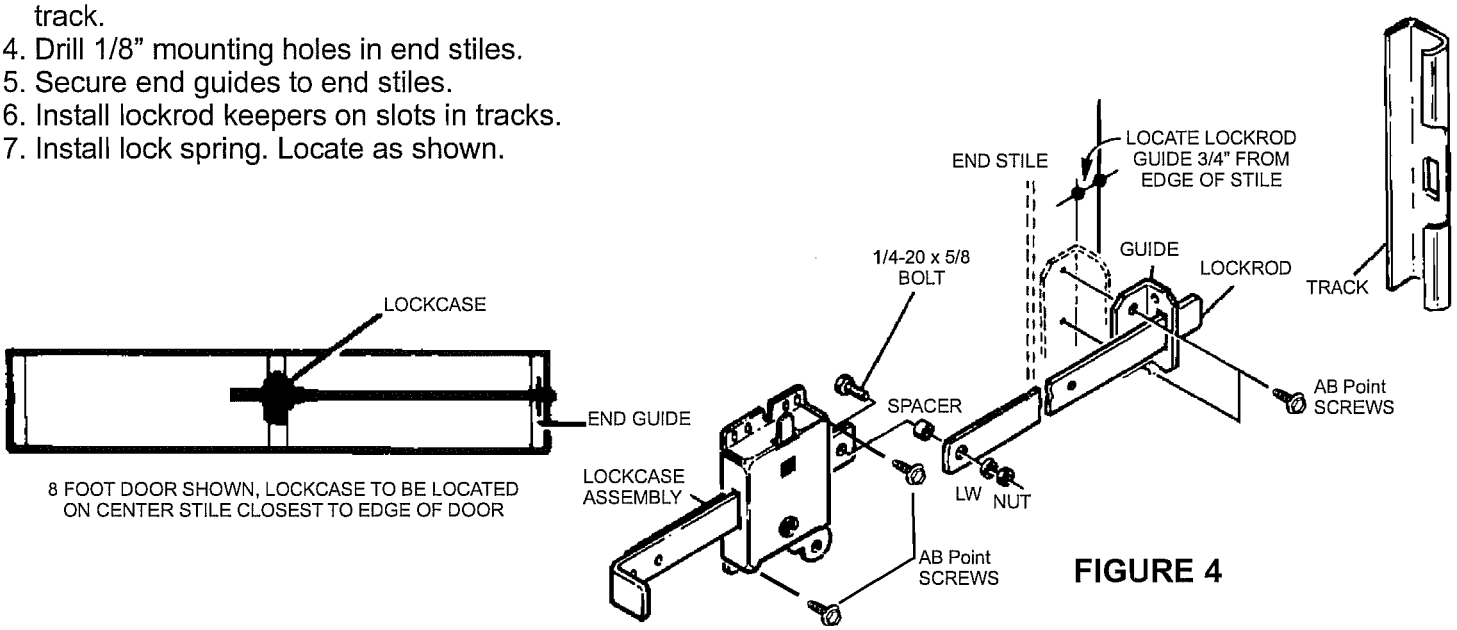
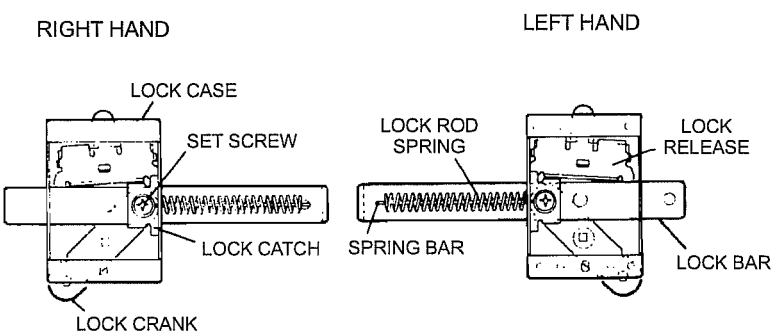


FIGURE 4

LEFT HAND LOCKS

All locks are shipped for "Right Hand" installation. If "Left Hand" installation is required, use the following procedures.

1. Remove Set Screw.
2. Remove Lock Catch.
3. Remove Lock Bar and Lock Bar Spring.
4. Pivot Lock Crank to opposite side of Lock Catch.
5. Reinstall Lock Bar in opposite side of case. Align Spring Bar with slot in case and push Lock Release out of path of Lock Bar.
6. Reinstall Lock Catch. Push Lock Release out of way allowing tab of Lock Catch to fit between Lock Bar and Lock Release.
7. Align hole in Lock Catch with hole in Lock Bar and reinstall Set Screw.
8. Test for operation before installing.



NOTES

LIMITED WARRANTY

The authorized distributor of OVERHEAD DOOR CORPORATION products whose name appears below ("Seller") warrants the product sold under this warranty to be free from defects in material and workmanship under normal use and service. This warranty extends only to the original consumer ("Buyer"), and expires one year after the date of installation.

Seller's sole obligation under this warranty is limited to repairing or replacing any parts which shall be determined by Seller to be defective, and is conditioned upon Buyer giving notice of any such defect to Seller within the warranty period. If Seller concludes that repair or replacement is necessary, Seller will commence work within a reasonable time after the decision to repair or replace is made.

This warranty does not apply to any product which has been altered or repaired by any person not authorized by the Seller, or which has been subjected to misuse, neglect or accident.

THERE IS NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER IMPLIED WARRANTY BEYOND THE ONE-YEAR PERIOD DESCRIBED ABOVE. SELLER SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES NOR FOR ANY FURTHER LOSS WHICH MAY ARISE IN CONNECTION WITH ANY CLAIM.

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

Seller has not established any informal dispute settlement procedure of the type described in the Magnuson-Moss Warranty Act. Claims under this warranty must be made in writing to the Selling Distributor whose name and address appears below within the applicable warranty period. (Proof of purchase and identification as the original purchaser may be required.)

Inquiries to the Seller concerning this warranty should be directed to:

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