

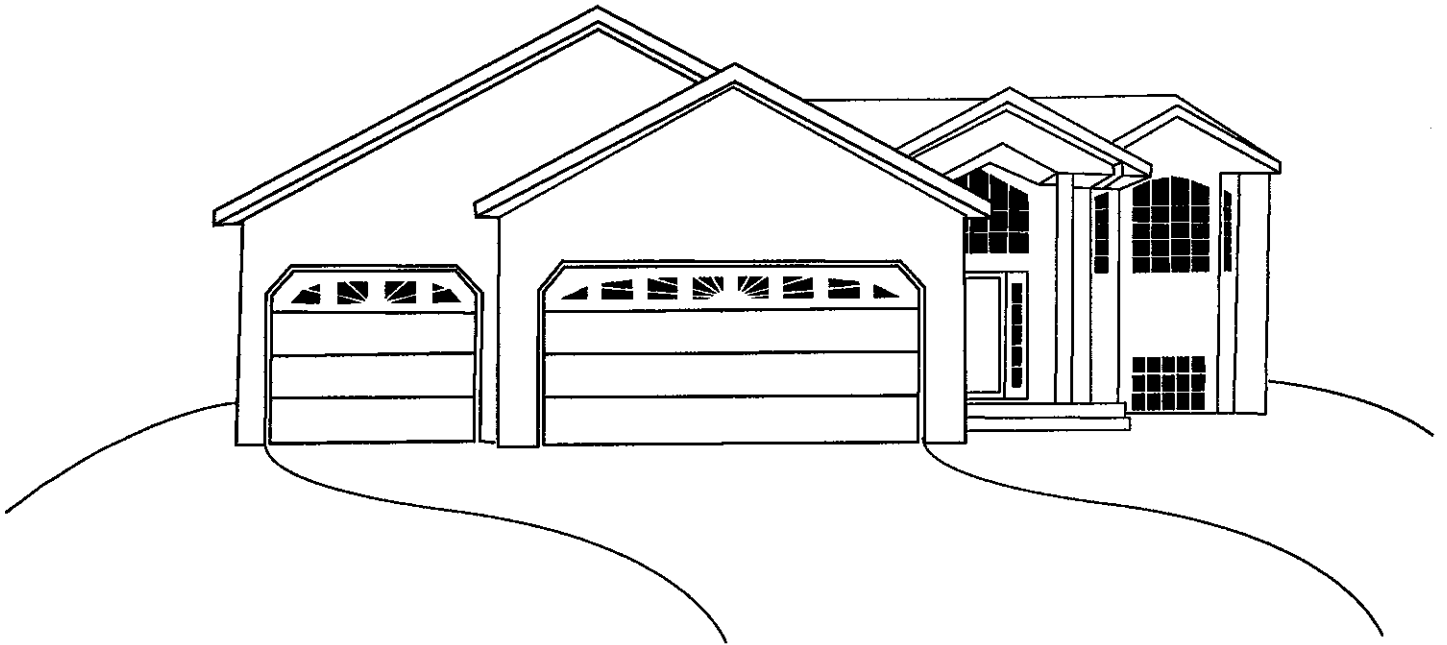
OWNERS MANUAL

**INSTALLATION & MAINTENANCE INSTRUCTIONS
RESIDENTIAL STEEL GARAGE DOORS**

MIDLAND

GARAGE DOOR MFG. CO.

"The Builder's Choice"



Installed By
Date

[illegible]

IMPORTANT SAFETY INFORMATION

Springs, cables, and bottom fixtures are under extreme spring tension. NEVER ATTEMPT TO REMOVE FASTENERS ON THESE COMPONENTS UNLESS THE SPRINGS ARE COMPLETELY UNWOUND.

NOTE-All fasteners that are colored in RED are under extreme tension and must never be removed unless the springs are unwound and all spring tension is released.

CAUTION- Due to the extreme spring tension, never wind or unwind without the proper winding bars. Cold rolled steel bars ½" in diameter 18" to 22" in length are recommended.

Your door has been furnished with GRIPPING POINTS to allow safe manual operation. See the "Grip Point Compliance" inset on page 10 for a description and installation instructions.

Never install door components directly on sheetrock.

Do not permit children to play underneath the garage door or with any garage door operating controls.

Always have the door in view to ensure its travel is free and clear before operating the electric garage door opener.

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BEFORE YOU BEGIN:

- Study the installation instructions before you begin your installation to understand what the various components are and the sequence of assembly. The illustrations on pages 6 and 13 show typical door installations.
- Note that the RED FASTENERS are used on all components that are under spring tension. This serves as a warning that serious harm could occur if the fastener is removed while under spring tension. NOTE: The Safety Bolt Bag in the hardware box contains red lags, red hinge screws, and red flange nuts.
- Verify your type of door and track so you can refer to the proper illustrations and sections of this manual. (Found on the front cover of this booklet)
- It is recommended to pre-drill ¼" holes for **ALL** ⅝" x 1¾" wood lags... **ESPECIALLY THE CENTER BEARING PLATE** that attaches the spring(s) to the wall. This prevents the wood from splitting out and gives the most secure attachment.
- Remove the PROTECTIVE FILM from the sections upon installation. **If the film is allowed to get wet or if the sections get too hot by exposing them to direct sunlight, the adhesive may transfer from the film to the section.**

TOOLS REQUIRED








































HAMMER
ELECTRIC IMPACT OR
SCREW GUN
SCREW DRIVERS
SAW HORSES
SOCKET SET

ROPE
 $\frac{3}{8}$ " TO $\frac{1}{2}$ " WRENCH SET
QUALITY STEP LADDER
VISE GRIPS
TWO $\frac{1}{2}$ " WINDING BARS
18" TO 22"
TAPE MEASURE

LEVEL
PLIERS
DRILL
DRILL BITS: $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ ", $\frac{7}{16}$ "
EXTENSION CORD
HACK SAW

NOTE: A $\frac{1}{16}$ " DEEP WELL 12 POINT SOCKET ON A $\frac{3}{8}$ " DRIVE RATCHET IS RECOMMENDED. IT CAN BE USED FOR CABLE DRUM AND SPRING SET SCREWS AND ANY $\frac{1}{16}$ " FASTENER.

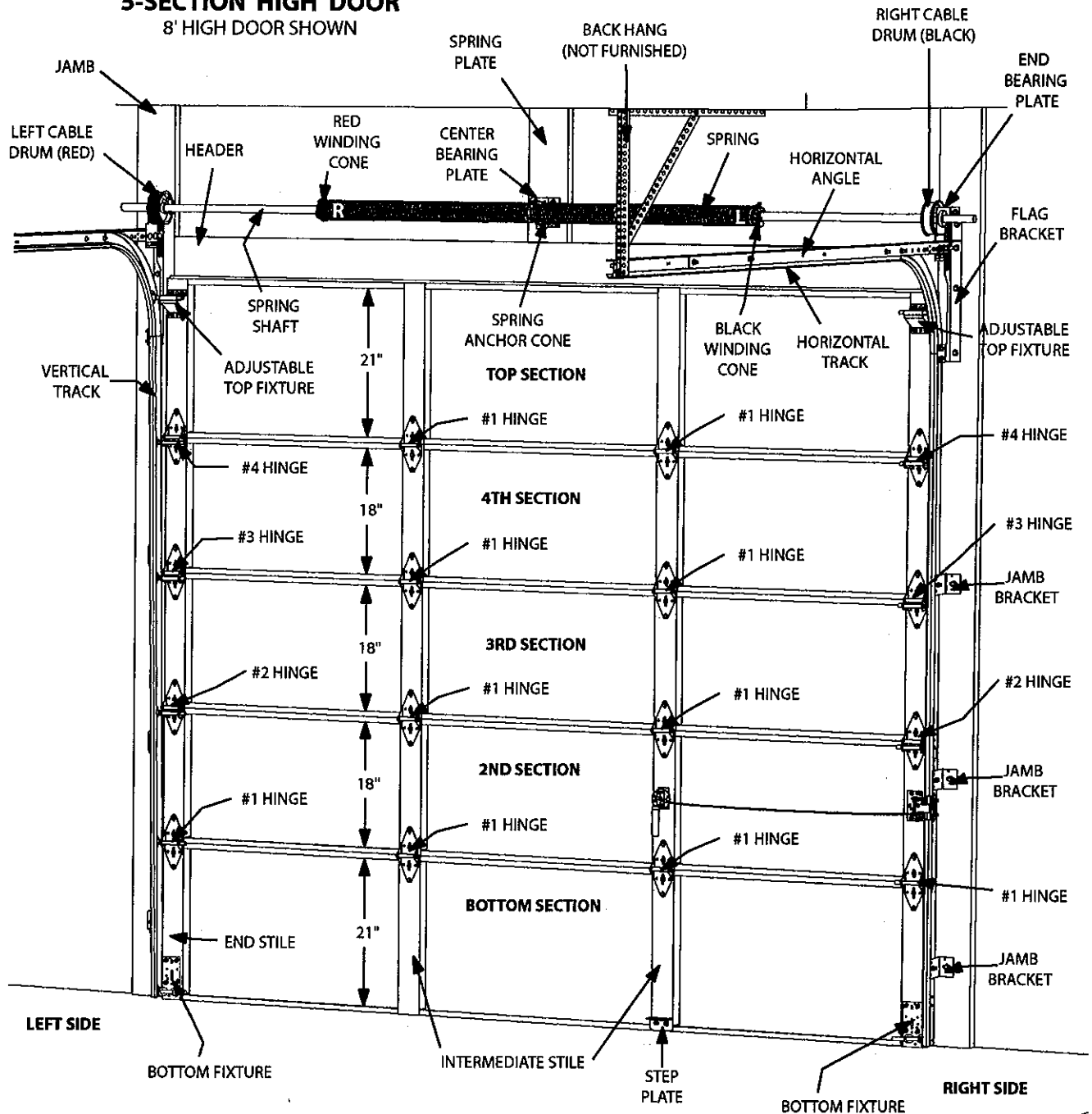
HARDWARE COMPONENTS

$\frac{3}{8}$ x $\frac{3}{8}$ Carriage Bolt 	$\frac{3}{8}$ x 1 $\frac{1}{2}$ Bolt 	Top Fixture Double Slotted 
$\frac{5}{16}$ x 1 $\frac{1}{2}$ Wood Lag 	$\frac{3}{8}$ Flange Nut 	Bottom Fixture (1 pair) 
$\frac{1}{4}$ x $\frac{3}{4}$ Self Tapper 	Jamb Bracket 	Horizontal Angle 
$\frac{1}{4}$ x $\frac{5}{8}$ Hinge Screw 	Torsion Spring 	Flag Bracket (1 pair) 
$\frac{1}{4}$ x $\frac{5}{8}$ Track Bolt 	End Bearing Plate (1 pair) 	Curved Horizontal Track (1 pair) 
$\frac{1}{4}$ Carriage Bolt 	Spring Shaft 	Vertical Track (1 pair) 
$\frac{1}{4}$ x $\frac{5}{8}$ Carriage Bolt 	Center Bearing Plate 	Cable Assembly 
$\frac{1}{4}$ Keps Nut 	Cable Drums (1 pair) 	Lock Components 
$\frac{5}{16}$ x 1 $\frac{1}{2}$ Red Head Wood Lag 	Nylon Center Bearing 	Roller 
$\frac{1}{4}$ x $\frac{5}{8}$ Red Head Hinge Screw 	Strut 	Inside Lock 
$\frac{3}{8}$ Flange Red Nut 	Step Plate 	Lift Handle  Hinge #1 
Rope 	Vinyl Weatherstrip 	Hinges #2  #3  #4 

DOUBLE TORSION SPRING

5-SECTION HIGH DOOR

8' HIGH DOOR SHOWN



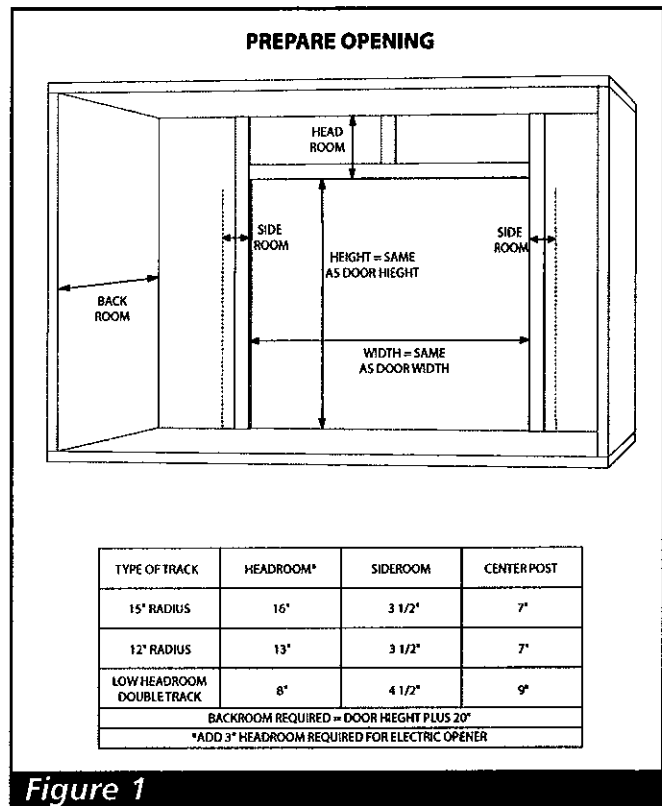
NOTE: INSTRUCTIONS REFER TO RIGHT AND LEFT HAND PARTS AS THOUGH FACING THE DOOR OPENING FROM THE INSIDE OF THE GARAGE.

STEP 1

PREPARE OPENING

Check that the opening is ready. Check that the rough opening equals the door size. Check that you have the required headroom, side room, and back room according to Figure 1. The jambs need to be plumb and the header level to have a square opening. The vertical jambs and the "header jamb" should be flush with each other. The inside surfaces of the jambs where the door will mount should be free of any protruding objects, (nails, bolts, screws), that may interfere with the door. The jambs should be a substantial high quality 2 x 6 material.

NEVER INSTALL DOOR COMPONENTS DIRECTLY ON SHEETROCK.



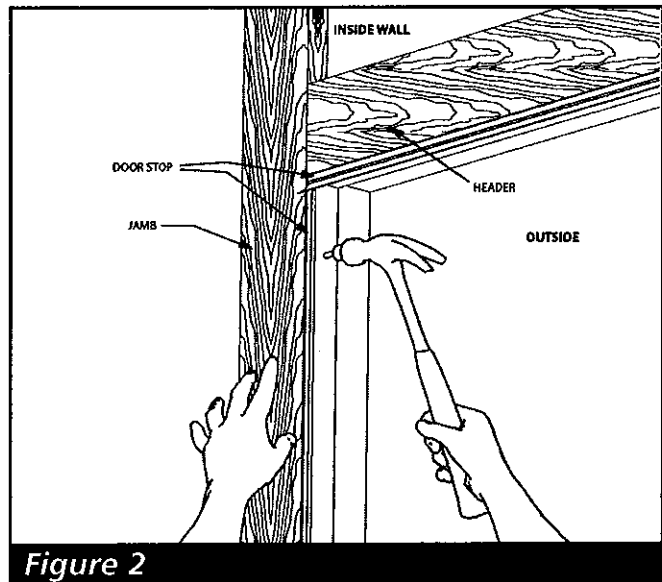
STEP 2

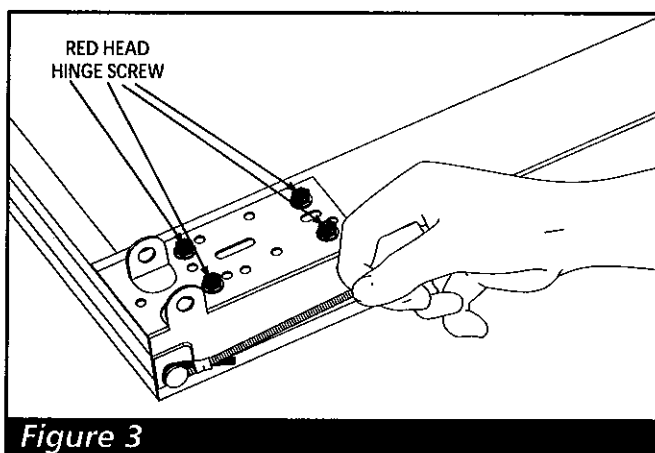
DOOR STOP Temporarily tack Door Stop in place with the flat edge placed $\frac{1}{8}$ " from the inside edge of the door jambs and header (Fig 2). Six or seven penny galvanized nails work well. It is typical to install the top piece first and the vertical pieces second.

NOTE: DOOR STOP IS AN OPTION WHICH MUST BE ORDERED IN ADDITION TO THE DOOR PACKAGE.

STEP 3

ORGANIZE Set your saw horses up in a clear convenient area. Be sure there is nothing on the sawhorses that will dent or mar the paint of the sections. Spread the hardware out on the floor near the saw horses. Organize it into groups so you can easily find the parts as you go. Organize the fasteners in the hardware box in the same manner.

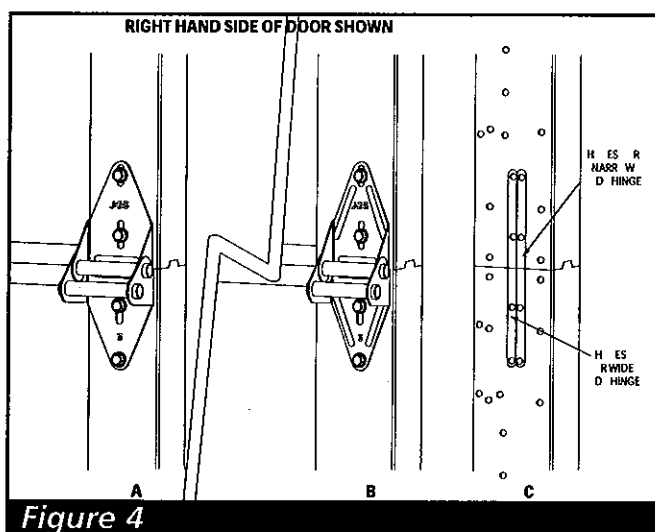




STEP 4

BOTTOM SECTION

ATTACHING PARTS Lay bottom section across saw horses. The left and right bottom fixtures are attached together. Bend them back and forth at the joining tabs until they separate. Position bottom fixtures along bottom edge of end stiles. Locate the Safety Bolt Bag which contains the red head fasteners. Use the $\frac{1}{4}$ " x $\frac{5}{8}$ " RED HEAD hinge screws to fasten the bottom fixtures to the door. (Fig. 3) Attach looped ends of cables to each bottom fixture.



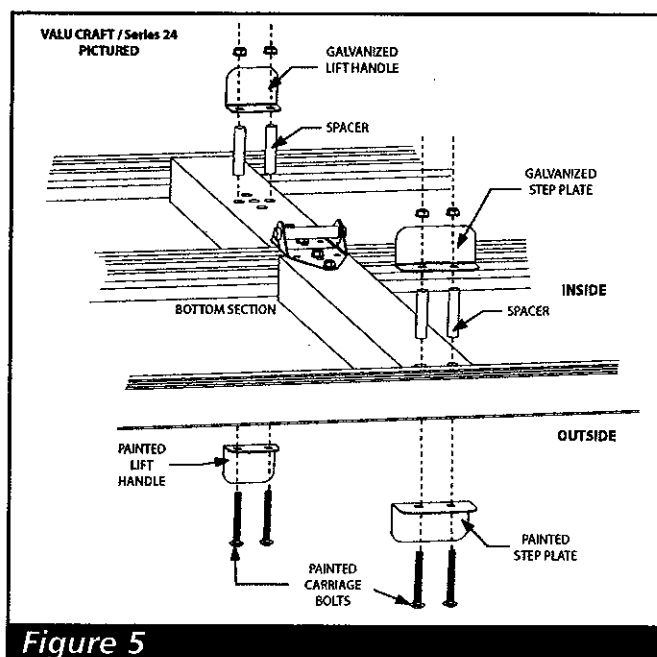
HINGES: Different model doors use different hinges. Use the appropriate instruction below for your door model:

Series 24 RSP: Wide body hinges on end stiles and intermediate stiles.

Valu Craft Plus: Wide body hinges on end stiles and Narrow body hinges on intermediate stiles.

Valu Craft: Narrow body hinges on end stiles and intermediate stiles.

All TS Doors: All TS doors use only Wide body hinges.



Reference Figure 4 a, b and c to properly locate and orient the hinges on the end stiles. (A #3 hinge is shown, which is typical of all hinges.) NOTE: There are two sets of hinge holes in each end stile. One is for Wide body hinges and one for Narrow body hinges (Figure 4c). You always want the hinge mounted flush to the end of the section.

Position a #1 hinge over the pre-punched holes at the top of the section on each intermediate stile and end stile. Fasten hinges with $\frac{1}{4}$ " x $\frac{5}{8}$ " hinge screws.

NOTE: FOR LOW HEADROOM APPLICATIONS, REFER TO PAGE 28

STEP 5

BOTTOM SECTION

STEP PLATE Two step plates are provided with your door. If one of your step plates is painted, it will go on the outside and the galvanized step plate on the inside. (Fig. 5)

NOTE: DETERMINE IF YOUR DOOR HAS LIFT HANDLES FOR THE SECOND SECTION INSTEAD OF THE KEYED LOCK. IF YOU HAVE LIFT HANDLES NOTE THAT THEY ARE A SMALLER VERSION OF THE STEP PLATE. USE CARE TO PUT THE STEP PLATES ON THE BOTTOM SECTION AND THE LIFT HANDLES ON THE SECOND SECTION.

The step plates should be attached to the stile directly under the lift handle/lock and positioned at the bottom edge of the bottom section.

SEE THE "GRIP POINT COMPLIANCE" INSET (PAGE 10) TO HELP DETERMINE PROPER PLACEMENT OF THE STEP PLATE AND KEYED LOCK/LIFT HANDLE.

If you have a Series R26, VALU CRAFT, Series 24 Flush or Series 24 RSP door, use holes in the stile as the template to locate holes. Drill two $\frac{5}{8}$ " holes in the face of the door.

If you have a TS 138 RSP, TS 138 Flush, RSP-TS or FLUSH-TS door, use the step plate as a template to locate holes in the proper position. Drill two $\frac{5}{8}$ " holes through the door.

NOTE: When drilling holes use care to drill straight and true. The other end of the hole you drill will locate the step plate on the outside of the door. Insert the spacers. Fasten step plates to inside and outside of section using the two painted carriage bolts and $\frac{1}{4}$ " kep nuts provided. **NOTE:** If your step plate and lift handles are un-painted, the carriage bolts will be un-painted as well.

CAUTION: DO NOT OVERTIGHTEN BOLTS ON STEP PLATE.

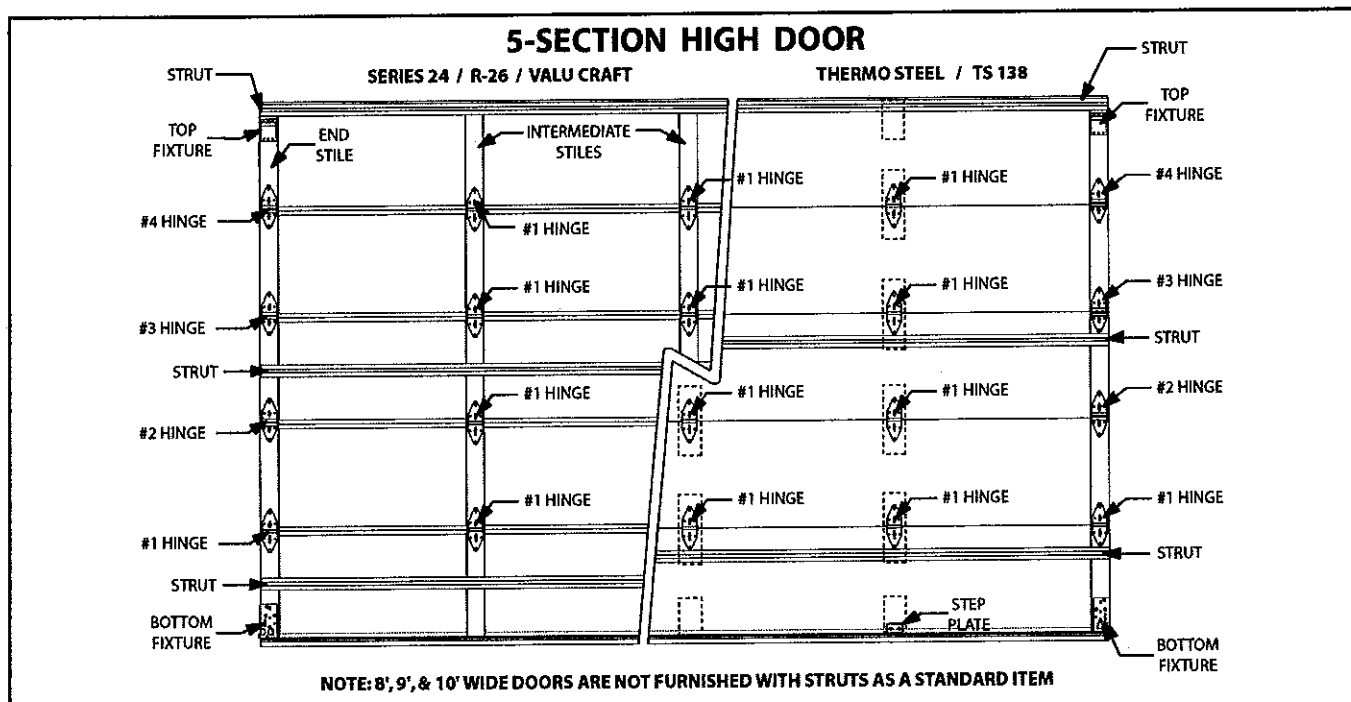
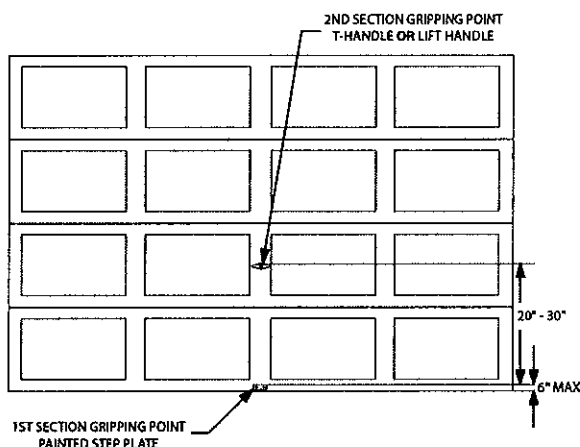


Figure 6

GRIP POINT COMPLIANCE



DASMA, at the urging of CPSC, adopted a voluntary industry standard to reduce or eliminate the possibility of injuries due to fingers becoming trapped between garage door sections. That standard, DASMA/ANSI 116 became effective on July 1, 2001.

Midland Garage Door Manufacturing Company will comply with the standard by furnishing the hardware for four gripping points to be installed on all residential doors. Two gripping points must be installed on the outside of the door and two gripping points must be installed on the inside of the door.

On the bottom section the gripping point must be located within 6 inches of the bottom of the door. On the second or third sections from the bottom of the door the gripping point must be in line with the lower gripping point and at least 20 inches above and no more than 30 inches above the lower gripping point. If a gripping point is installed within 4 inches of a section joint it must be installed so as to promote vertical orientation of the hand.

STEP 6

BOTTOM SECTION

STRUTS If one strut is furnished with the door, it will be fastened above the top fixture on the top section (Fig. 6). If two struts are furnished with the door, one will be for the top section as described above, and the second strut will be located on the section above the bottom section. If three struts are furnished, they should be located on the top, bottom and third section up from the bottom (Fig. 6).

NOTE: If one strut is a 3" strut (ie: 3" tall vs 2" tall), that strut will be used at the top of the top section.

IMPORTANT!

STRUT LOCATION ON THE SECTIONS

Struts go in different places on different types of doors. IDENTIFY YOUR DOOR ON Figure 6 (page 9) AND IN THE FOLLOWING TEXT. PLACE THE STRUTS ACCORDINGLY.

- **Series 24 RSP or Series 24 Flush, VALU CRAFT, Series R-26**
THE STRUTS (EXCEPT TOP AND WINDOW SECTIONS) SHOULD BE POSITIONED IN THE MIDDLE OF THE SECTION. TOP AND WINDOW SECTION STRUTS SHOULD BE PLACED AS CLOSE TO THE TOP OF THE SECTION AS POSSIBLE.

OR

- **TS 138 RSP, TS 138 Flush, RSP-TS or FLUSH-TS**
CAUTION: RSP-TS AND FLUSH-TS DOORS HAVE A STEEL PLATE LOCATED UNDER THE SKIN TO WHICH HINGES, STRUTS AND OPERATOR ARMS **"MUST BE FASTENED."** THE PLATE IS APPROXIMATELY 2½" WIDE AND EXTENDS DOWN 7" FROM TOP OF

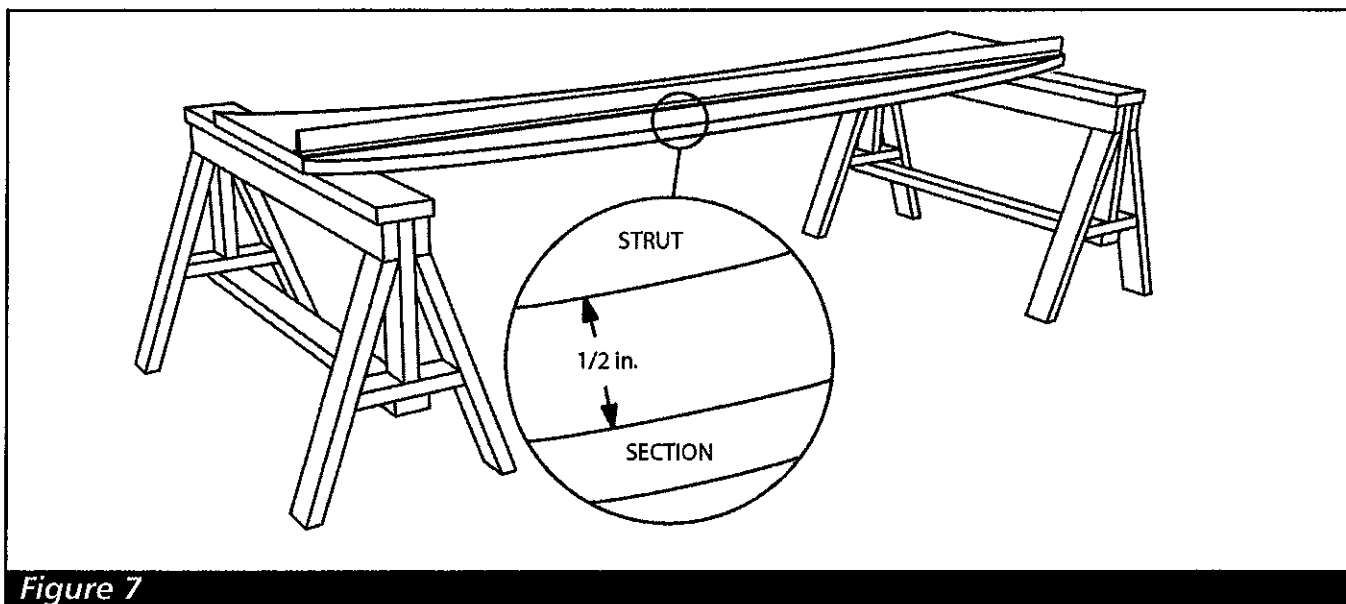


Figure 7

SECTION AND UP 7" FROM BOTTOM. YOU MUST STAY WITHIN THIS AREA WHEN FASTENING HINGES, STRUTS AND OPERATOR ARM TO THE DOOR. PLEASE REFER TO FIGURE 6 FOR THE STRUT LOCATION ON YOUR MODEL DOOR.

INSTALL THE STRUT To install a strut on a section, place the section on saw horses and place the strut in position on the section. Adjust the sawhorses in or out so the section sags $\frac{1}{2}$ " or so under the strut. (Fig. 7). First fasten strut to end stiles on both ends with $\frac{1}{4}$ " x $\frac{3}{4}$ " self tappers. Then fasten strut to center stile with $\frac{1}{4}$ " x $\frac{3}{4}$ " self tappers. Finally fasten strut to any remaining intermediate stiles.

NOTE: PRE-PUNCHED HOLES IN STRUTS DO NOT ALWAYS ALIGN WITH THE STILES.

STEP 7

BOTTOM SECTION REMOVE THE PROTECTIVE FILM FROM THE OUTSIDE FACE OF THE SECTION. To aid removal use a knife to LIGHTLY scribe a line where the film runs under the end stiles and the aluminum bottom astragal retainer.

STEP 8

BOTTOM SECTION Position bottom section inside opening and against door stops. The bottom section MUST be leveled by temporarily shimming low side. Once the bottom section is level and centered in the opening, secure it in place by driving a nail slightly into the jamb and bending it over section. Do this on each end. (Fig. 8).

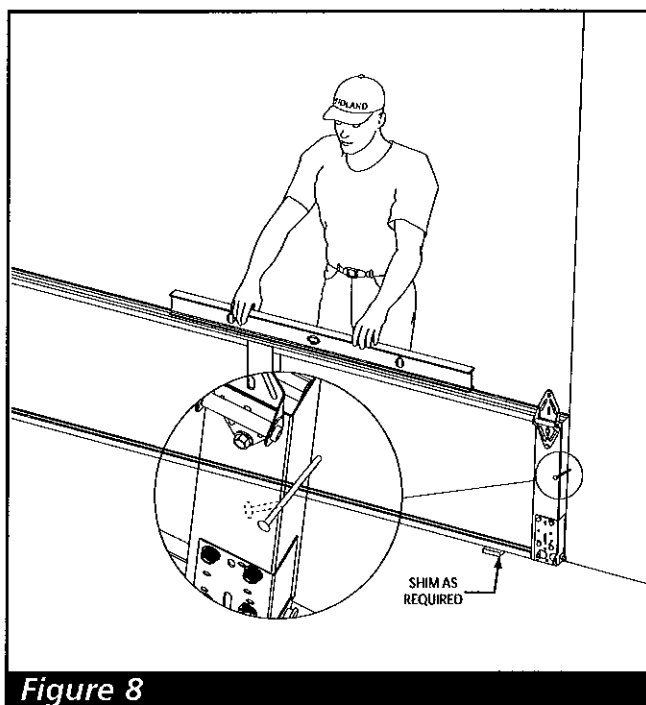


Figure 8

Series 24 RSP or FLUSH, VALU CRAFT, TS-138, RSP-TS or FLUSH-TS

DOOR HEIGHT	6'	6'3"	6'6"	6'9"	7'	7'3"	7'6"	7'9"	8'
TOP SECTION (5 HIGH)	—	—	—	—	—	—	18"	21"	21"
TOP SECTION (4 HIGH)	18"	21"	21"	21"	21"	NA	18"	18"	18"
3rd SECTION	18"	18"	18"	18"	21"	NA	18"	18"	18"
2nd SECTION (Lock)	18"	18"	18"	21"	21"	NA	18"	18"	18"
BOTTOM SECTION	18"	18"	21"	21"	21"	NA	18"	18"	21"

Series R-26

DOOR HEIGHT	6'	6'3"	6'6"	6'9"	7'	7'3"	7'6"	7'9"	8'
TOP SECTION	18"	18"	21"	21"	21"	21"	24"	24"	24"
3rd SECTION	18"	18"	18"	18"	21"	21"	21"	21"	24"
2nd SECTION (Lock)	18"	18"	18"	21"	21"	21"	21"	24"	24"
BOTTOM SECTION	18"	21"	21"	21"	21"	24"	24"	24"	24"

STEP 9

If your new door has a combination of 18" and 21" tall sections or 21" and 24" tall sections (R-26 only), use the chart above to determine which sections will be placed where in the door.

STEP 10

SECOND SECTION Remove the film from the section. Position the proper hinges at the top of the section in the same manner as the bottom section. Use #2 hinges on the end stiles and #1 hinges on the intermediate stiles as required. See Figure 9. Fasten hinges with $\frac{1}{4}$ " x $\frac{5}{8}$ " hinge screws.

STEP 11

SECOND SECTION

The Second section will have a T-Handle or a Lift Handle depending on the option chosen. This serves as the second grip point for the door. Use the appropriate instruction below:

- **LIFT HANDLE** Two lift handles are provided with your door. The painted lift handle will go on the outside and the galvanized lift handle on the inside. (Fig. 5, page 8)

The lift handles should be attached to the stile directly above the step plates positioned at the bottom edge of the bottom section.

DRILL THE HOLES:

If you have a **Series R26, VALU CRAFT, Series 24 Flush** or **Series 24 RSP** door, use holes in the stile as template. Drill two $\frac{5}{16}$ " holes in the face of the door. See Figure 10.

4-SECTION HIGH DOOR

7' HIGH DOOR SHOWN

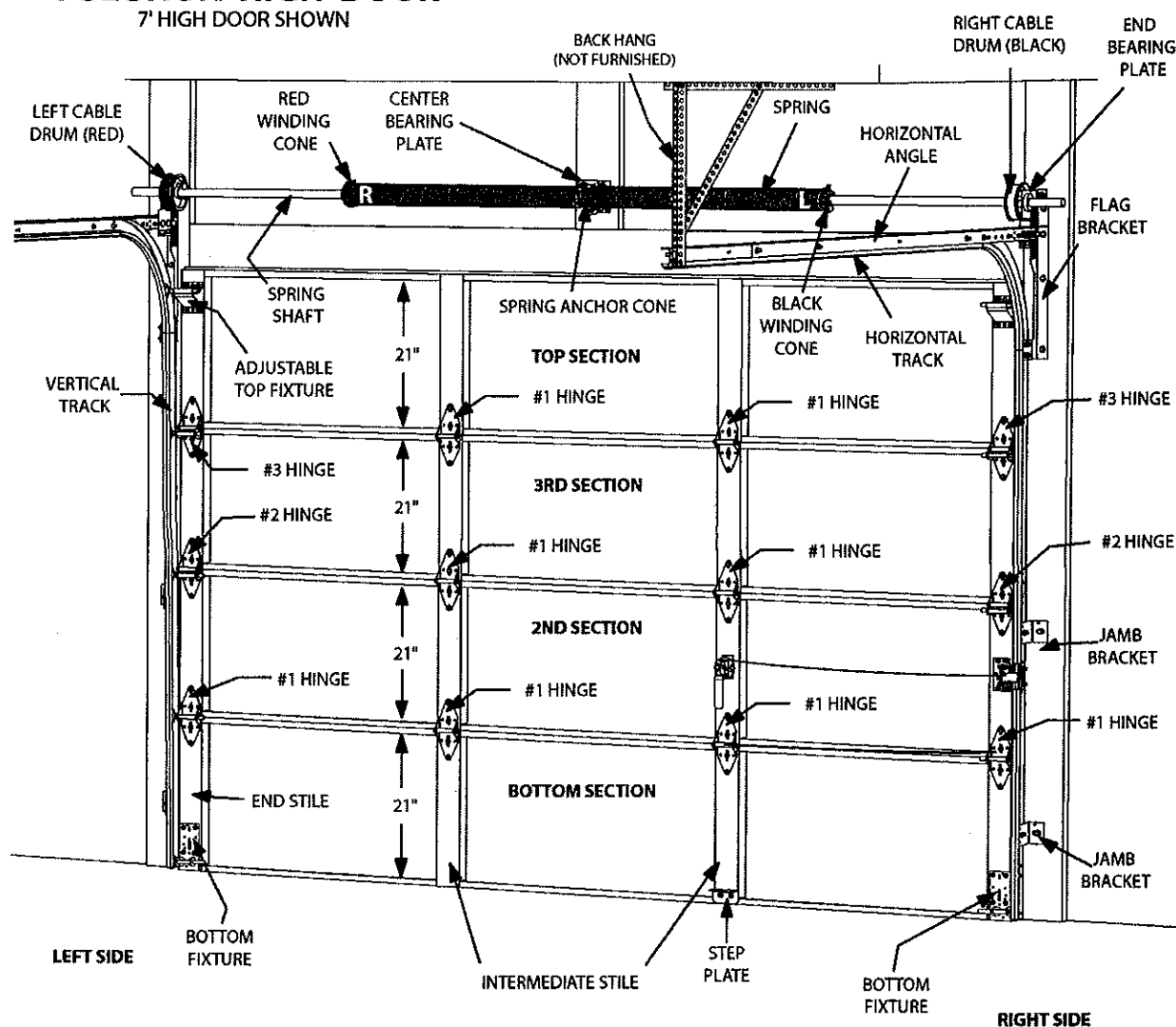


Figure 9

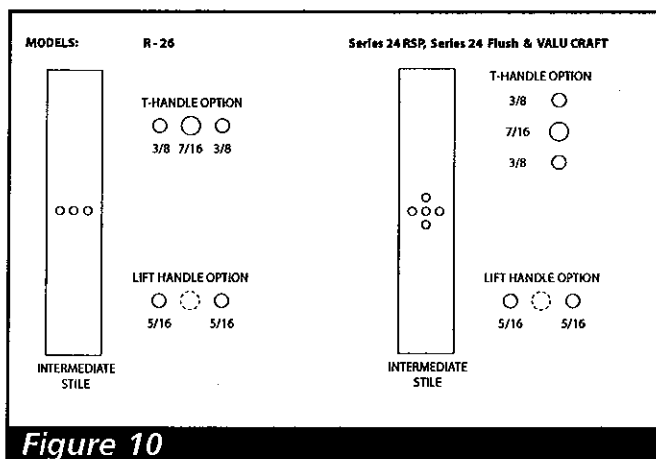


Figure 10

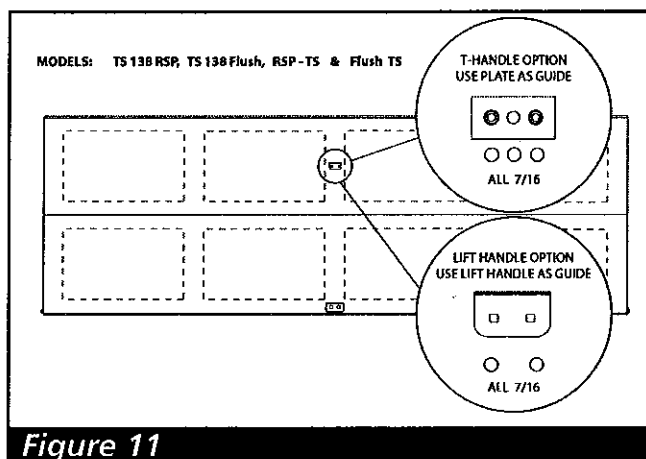


Figure 11

If you have a TS 138 RSP, TS 138 Flush, RSP-TS or FLUSH-TS door, use the lift handle as a template to locate holes in proper position. Reference the "Grip Point Compliance" inset (page 10) and Figure 11 (page 13) to assure proper location. Drill two $\frac{3}{8}$ " holes through the door.

NOTE: When drilling use care to drill straight and true. The other end of the hole you drill will locate the lift handle on the outside of the door. Insert the spacers. Fasten lift handles to inside and outside of section using the two carriage bolts and $\frac{1}{4}$ " keps provided.

DO NOT OVERTIGHTEN BOLTS ON LIFT HANDLE

- **T-HANDLE** Install the locking T-Handle as follows:

The T-Handle should be attached to the stile directly above the step plate positioned at the bottom edge of the bottom section.

DRILL THE HOLES:

If you have a Series R26, VALU CRAFT, Series 24 Flush or Series 24 RSP door, using holes in stile as template. Drill two $\frac{3}{8}$ " holes and one $\frac{1}{2}$ " hole in the face of the door as shown in Figure 10 (page 13).

If you have a TS 138 RSP, TS 138 Flush, RSP-TS or FLUSH-TS door, use the back plate, (Fig 12 a item 8 and Fig 11) as a template to locate holes in proper position. **NOTE:** On the RSP series doors you are locating the T-Handle between the exterior Raised

Steel Panels on the face of the door. Reference the "Grip Point Compliance" inset (page 10) to assure proper location. Drill three $\frac{3}{8}$ " holes through the door as shown.

ASSEMBLY

Slide spacers (Fig. 12 a item 5) over studs on T-handle (Fig. 12. g). TS-138 doors will not use the tube spacers. Insert T-Handle in face of door. Using two bolts provided (Fig. 12. a. 2), fasten plate (Fig. 12. g) to T-handle to hold in place. Slide handle (Fig. 12. g) over square shaft with handle in down position using tinnerman washer nut (Fig. 12. a. 1) to hold handle in place. Fasten latch (Fig. 12.c) to track on left or right hand side with track bolts and nut (Fig. 12. a. 4). Fasten spring latch (Fig. 12. e) to end of section using speed teks (Fig. 12. a. 3). Slide cable through handle and then through spring latch. Fasten cable to spring latch by inserting track bolt (Fig. 12. i) and tighten cable. Cut off excess cable.

STEP 12

SECOND SECTION Stack the section in the opening. Maintain in position by driving a nail slightly into the jamb and bending it over the section as with the bottom section. Fasten hinges between the stacked sections with $\frac{1}{4}$ " x $\frac{3}{8}$ " hinge screws.

STEP 13

REMAINING INTERMEDIATE SECTIONS

Install the required hinges and struts on the remaining intermediate sections and stack them in the opening. Be sure to remove the protective film.

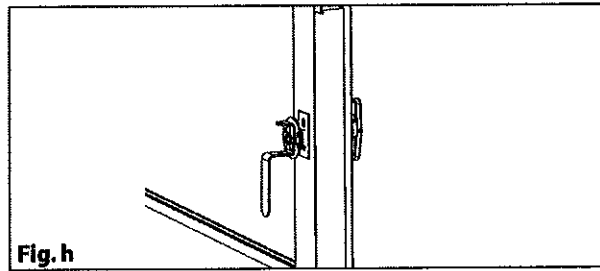
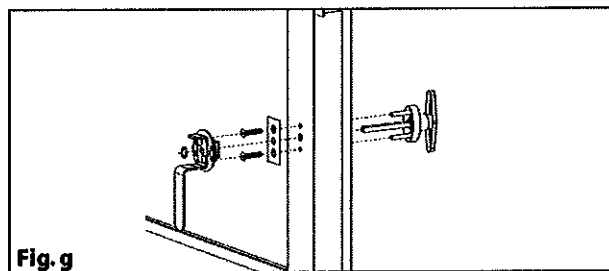
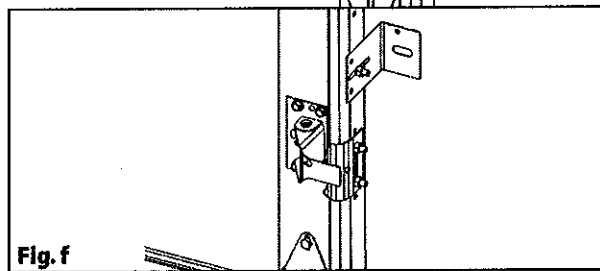
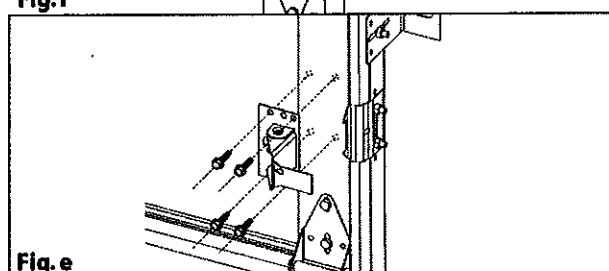
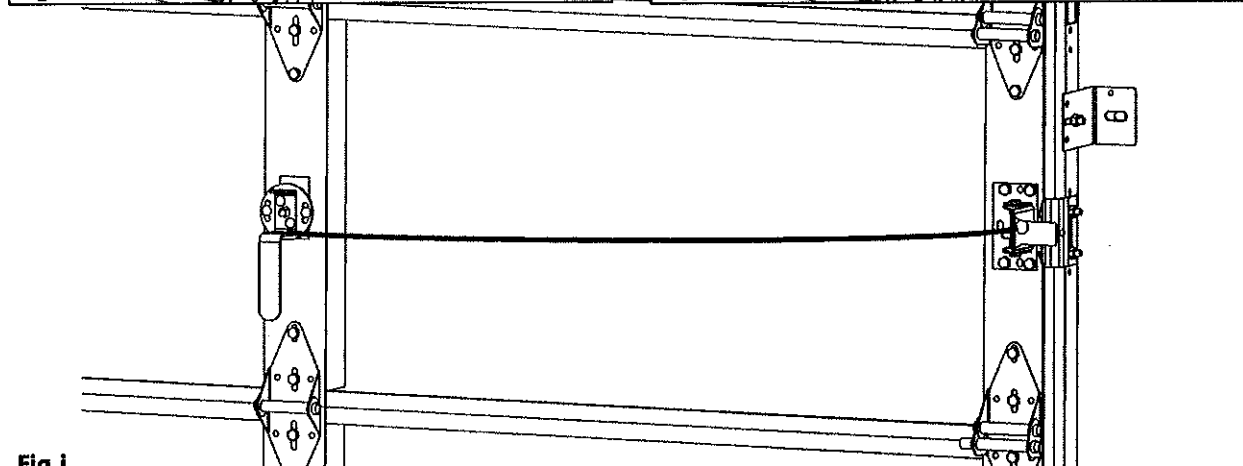
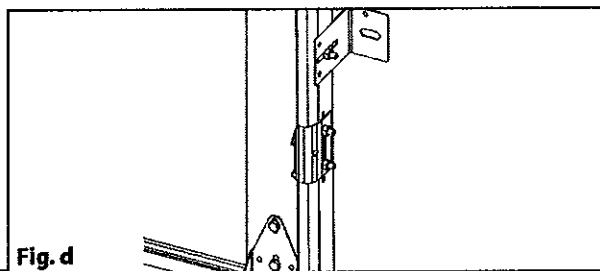
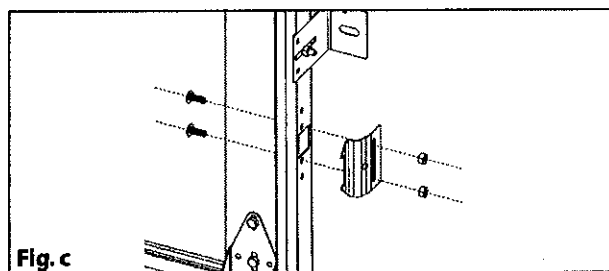
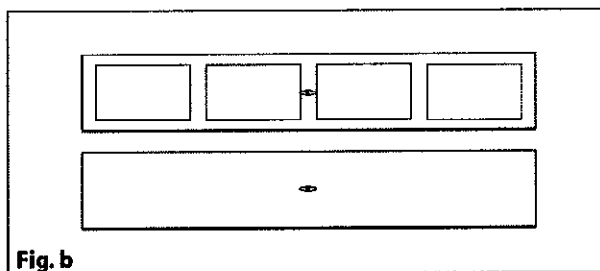
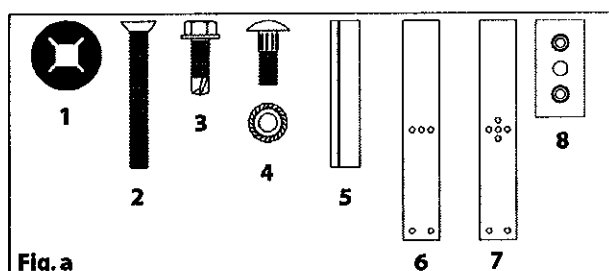


Figure 12 a – h

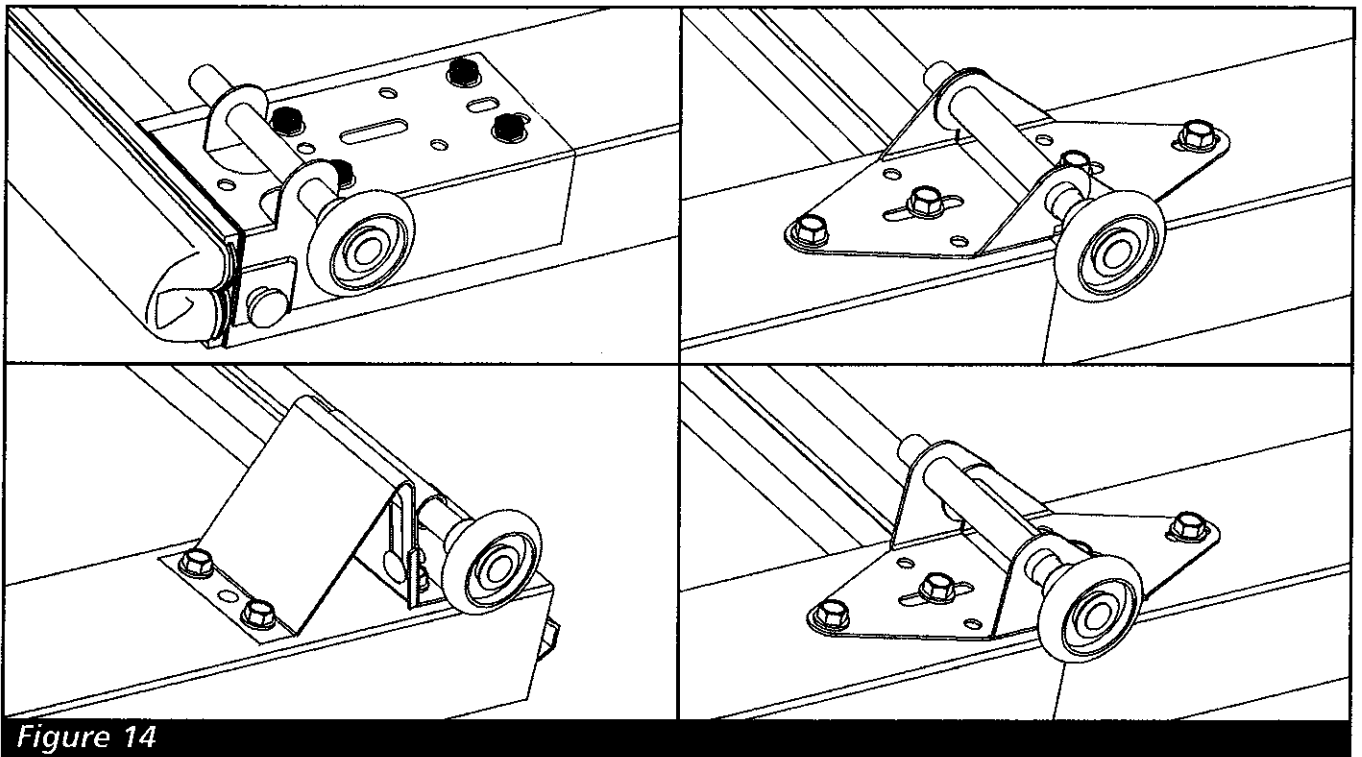


Figure 14

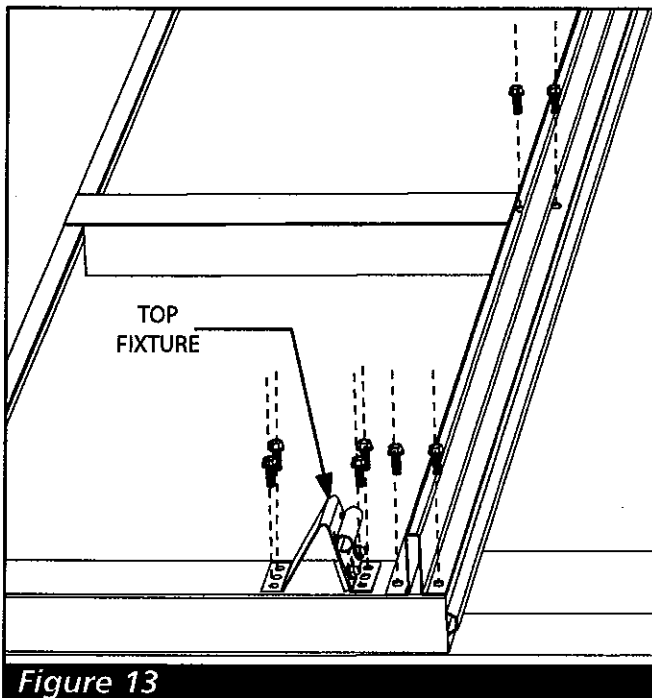


Figure 13

STEP 14

TOP SECTION Lay top section across saw horses and remove the protective film. If strut is required, position it at the very top of the section and fasten according to instructions in step 6. (Fig. 13) Position top fixture directly below strut with the adjusting bolts facing up. Attach to section with $\frac{1}{4}$ " x $\frac{3}{4}$ " self tappers. Loosen the two $\frac{1}{4}$ " nuts on each top fixture so that the roller carrier can slide in and out for later adjustment.

FOR LOW HEADROOM APPLICATIONS, REFER TO PAGE 28.

NOTE: IF AN ELECTRIC OPENER IS TO BE ATTACHED TO THIS DOOR, THE TOP SECTION **MUST BE** REINFORCED WITH A STRUT AND THE OPERATOR ARM **MUST BE** ATTACHED SO THAT IT IS APPROXIMATELY IN LINE WITH THE TOP ROLLERS, IF THESE INSTRUCTIONS ARE NOT FOLLOWED THE WARRANTY WILL BE INVALID.

Stack top section in opening. Maintain position by driving a nail slightly into the jamb and bending it over the section. Fasten hinges from section below to the top section with $\frac{1}{4}$ " x $\frac{5}{8}$ " hinge screws.

STEP 15

Insert rollers in all outside hinges in lowest holes and in bottom fixture (Fig. 14). When hinges have more than one tube, the roller will always go in the tube that's the farthest from the face of the door.

STEP 16

VERTICAL TRACK

NOTE: IF YOU HAVE A **LOW HEAD ROOM TRACK ASSEMBLY**, THE **FLAG BRACKETS** ARE PRE-ASSEMBLED WITH THE **HORIZONTAL TRACKS**. SEE FIG D (page 29). **DISREGARD THE STEPS FOR FLAG BRACKETS IN THE FOLLOWING.**

FLAG BRACKETS Fasten flag bracket to vertical track with $\frac{1}{4}$ " x $\frac{5}{8}$ " track bolts and $\frac{1}{4}$ " keps (Fig. 15). **FINGER TIGHTEN ONLY.**

NOTE: **ALL TRACK BOLTS SHOULD BE INSTALLED WITH THE NUTS ON THE OUTSIDE OF TRACK.**

STEP 17

JAMB BRACKETS Position jamb brackets on vertical track by matching lowest numbered jamb bracket with lowest **ADJUSTABLE SLOT**. Match remaining jamb brackets in ascending order with additional **ADJUSTABLE SLOTS** (Fig 16). Fasten jamb brackets to vertical track with $\frac{1}{4}$ " x $\frac{5}{8}$ " carriage bolts and $\frac{1}{4}$ " keps. **FINGER TIGHTEN ONLY.**

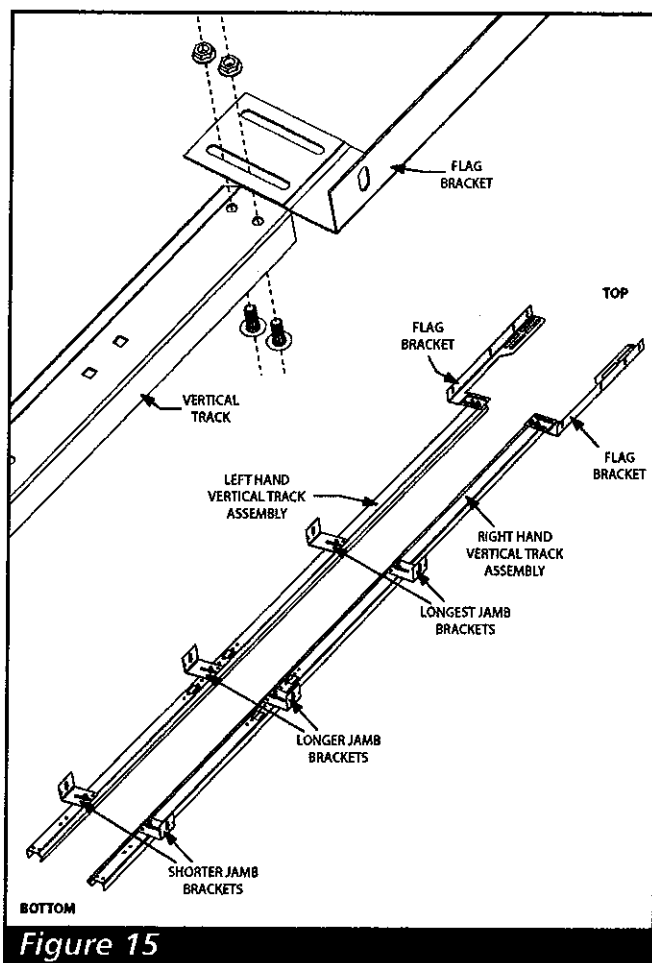


Figure 15

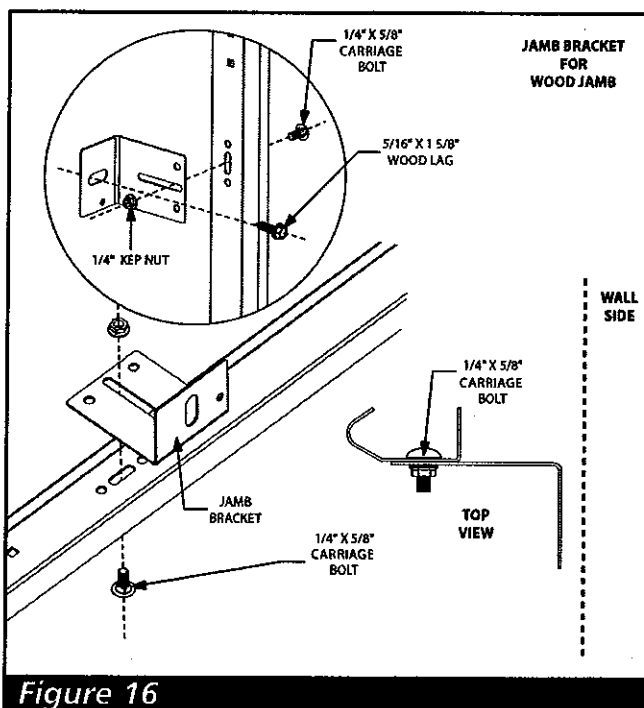


Figure 16

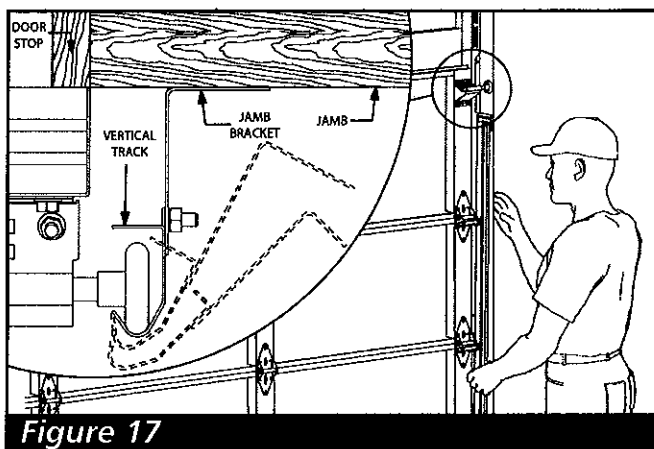


Figure 17

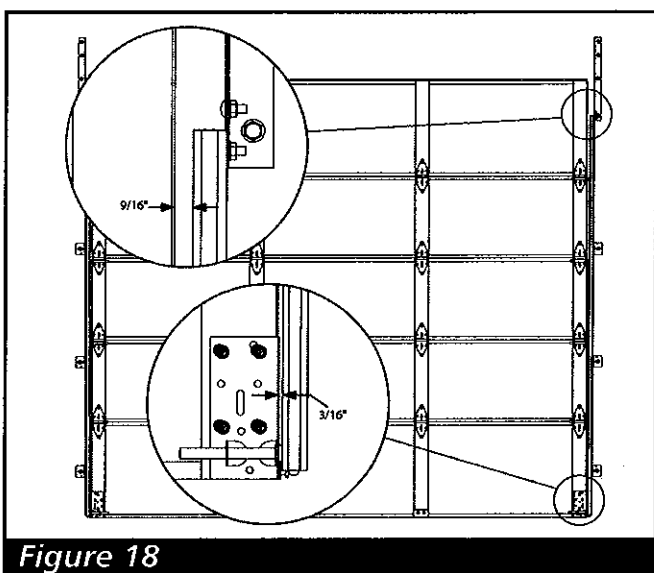


Figure 18

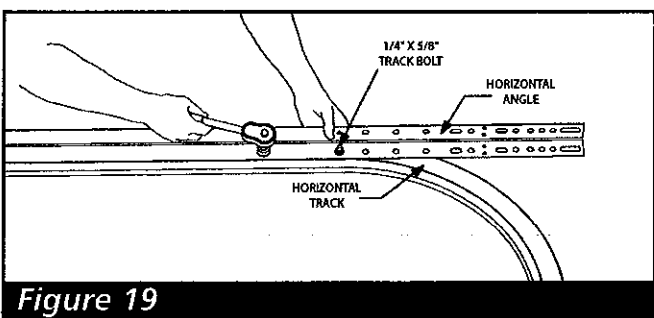


Figure 19

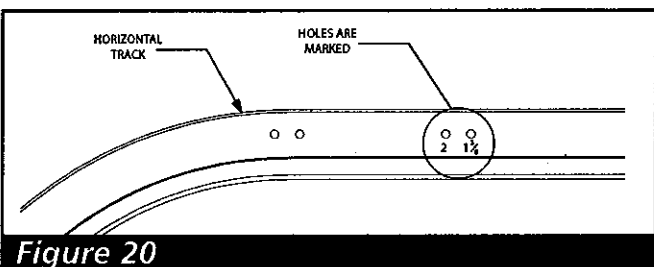


Figure 20

STEP 18

VERTICAL TRACK

INSTALL Hook vertical track over rollers and swing into place against jamb (Fig 17). Position bottom of track $\frac{3}{8}$ " or so above floor. (It works well to use a block of wood to set the track on to hold it at the proper height.) Raising the tracks allows adjustment in and out and will reduce corrosion.

Position vertical track so that the tops of both sides are level with the each other. Since the bottom section is level, you may level the top of the vertical track by measuring from the top of the vertical track to the top of the bottom section and setting both vertical tracks at the same distance.

Also the two vertical tracks will be installed in a "wedge" shape compared to the door. Space the bottoms of the tracks $\frac{3}{16}$ " from the door and space the tops of the tracks $\frac{3}{16}$ " from the door. This has the effect of centering the door every time it goes up and down. (Fig. 18). Fasten the jamb brackets and the flag bracket to the jamb with $\frac{5}{16}$ " x $1 \frac{5}{8}$ " wood lags. Use four lag screws in the flag bracket. Ensure the flag brackets final installed position is straight up and down. Pre drill with a $\frac{1}{4}$ " bit to prevent the jamb from splitting.

STEP 19

VERTICAL TRACK

Snug the top of the vertical track toward the jamb against the highest roller. Tighten the track bolts in the flag bracket to hold it in position. This enables you to properly locate the horizontal track. Do not tighten the other jamb brackets at this time. That will be done later.

STEP 20

HORIZONTAL TRACK

To fasten the horizontal angle to the horizontal track (Fig. 19), first determine whether your door is 1 $\frac{3}{8}$ " or 2" thick. Then note the proper set of holes to use as stamped in the horizontal track. (Fig. 20)

Fasten horizontal angles to horizontal tracks with $\frac{1}{4}$ " x $\frac{5}{8}$ " track bolts and $\frac{1}{4}$ " keps nuts.

NOTE: DOORS THROUGH TEN FEET WIDE AND THE VALU CRAFT DOOR WILL INCLUDE (1 $\frac{1}{2}$ " X 1 $\frac{1}{2}$ " X 22") HORIZONTAL ANGLE IN THE HARDWARE BOX.

DOORS WIDER THAN 10 FEET INCLUDE (1 $\frac{1}{2}$ " X 1 $\frac{1}{2}$ " X 82") HORIZONTAL ANGLE BANDED WITH THE TRACK.

THE EXCEPTION TO THIS IS THE 10 X 7'6", 10 X 7'9", AND 10 X 8 RSP-TS AND FLUSH-TS, WILL USE THE 82" ANGLE.

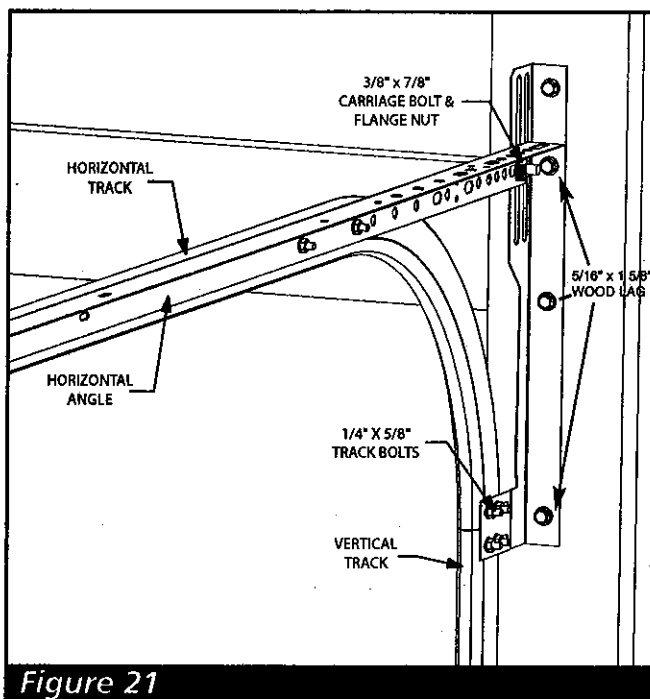


Figure 21

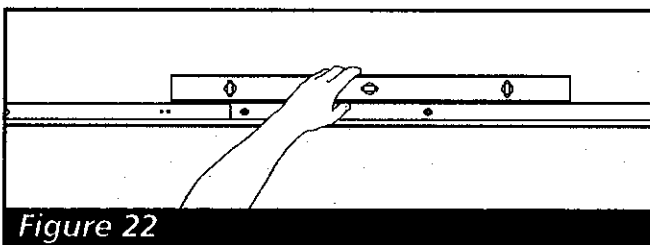


Figure 22

STEP 21

HORIZONTAL TRACK ASSEMBLY

INSTALL Fasten horizontal angle to flag brackets with $\frac{3}{8}$ " x $\frac{7}{8}$ " carriage bolt and $\frac{3}{8}$ " red flange nut, fasten horizontal track to vertical track with $\frac{1}{4}$ " x $\frac{5}{8}$ " track bolts and $\frac{1}{4}$ " keps nut (Fig. 21). Level each horizontal track (Fig. 22) and temporarily tie rear end of horizontal track to ceiling (Fig. 23). Tighten all bolts on horizontal track.

STEP 22

Remove the nails that were used to temporarily hold the sections in position.

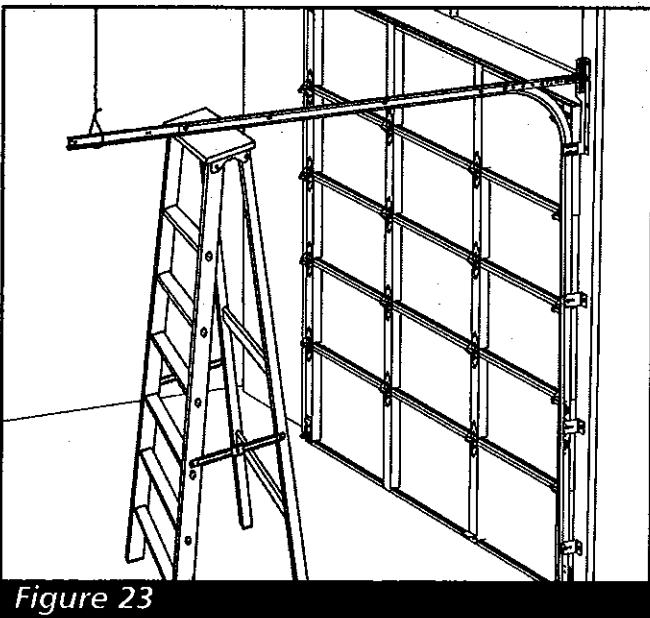


Figure 23

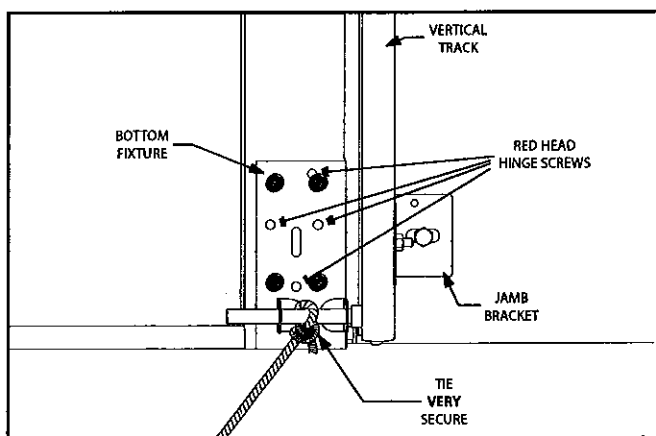


Figure 24

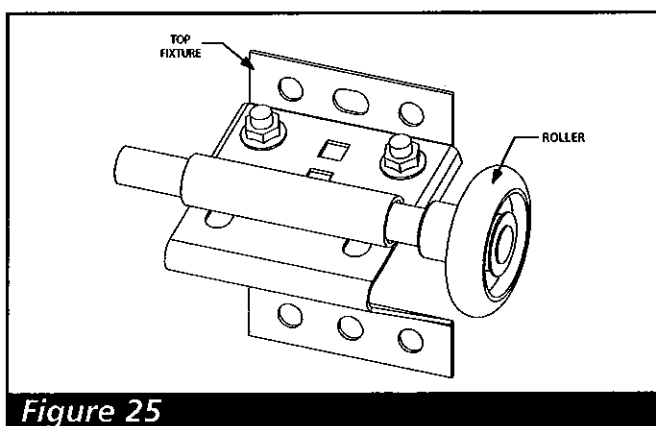


Figure 25

STEP 23

PULL ROPE Install pull rope **ONLY IF** DOOR WILL NOT BE OPERATED BY AN ELECTRIC OPENER. Tie one end of rope to the bottom roller shaft (Fig. 24). Let opposite end of rope hang loose.

NOTE:

1) IF YOU HAVE AN EXTENSION SPRING DOOR REFER TO THE SEPARATE INSTRUCTIONS INCLUDED IN THE HARDWARE BOX.

2) IF YOU HAVE A LOW HEADROOM TORSION SPRING ASSEMBLY REFER TO PAGE 28.

3) IF YOU HAVE THE STANDARD TORSION SPRING SYSTEM PROCEED WITH STEP 24.

STEP 24

END BEARING PLATES Slide adjustable bracket on top fixtures (Fig. 25) away from door until the top section is tight against the door stop and tighten the adjusting bolts. Fasten end bearing plates to the horizontal angle with two $\frac{3}{8}$ " x $\frac{7}{8}$ " carriage bolts and $\frac{3}{4}$ " red flange nuts. Fasten the end bearing plates to the header with $\frac{5}{8}$ " x 1 $\frac{3}{4}$ " red head wood lags (See Figs. 26-10, 26-12, or 26-15, depending on the radius of your track).

STEP 25

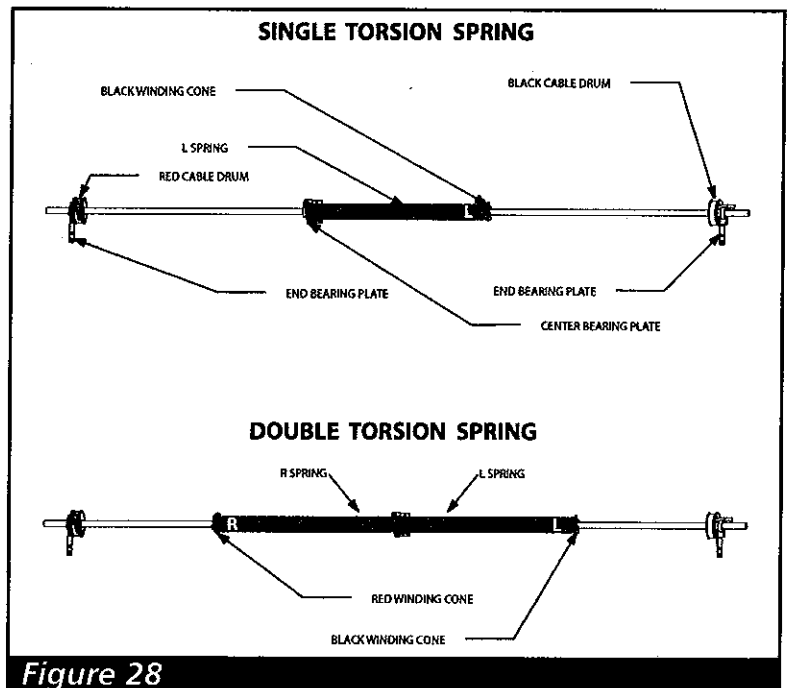
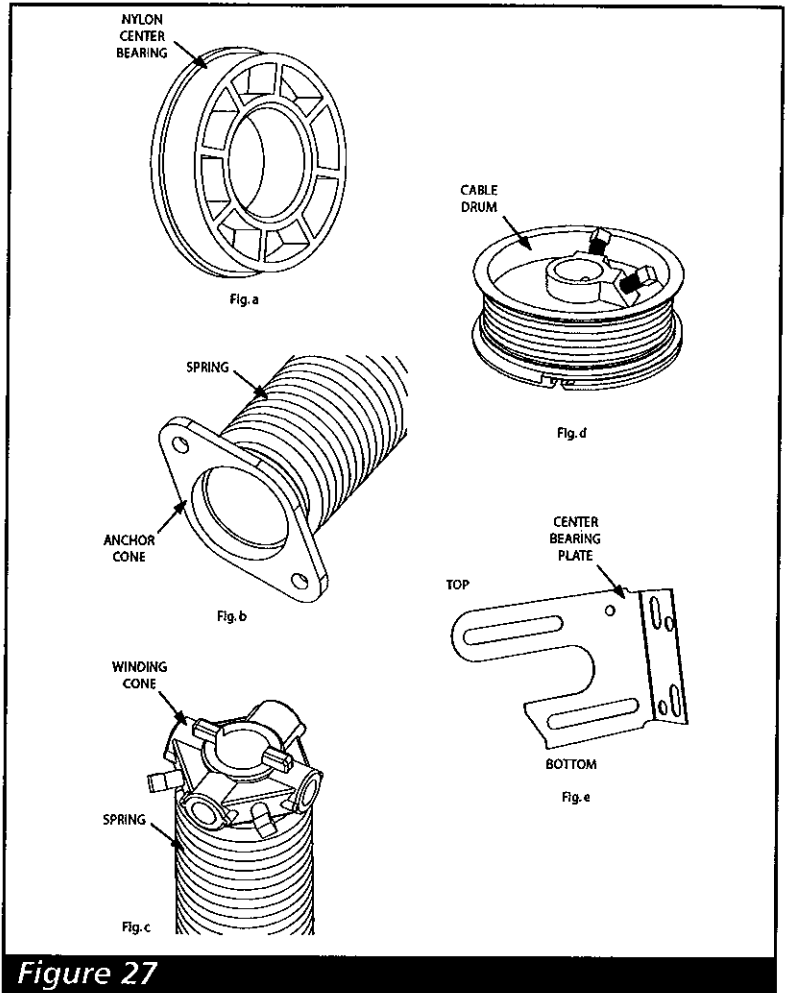
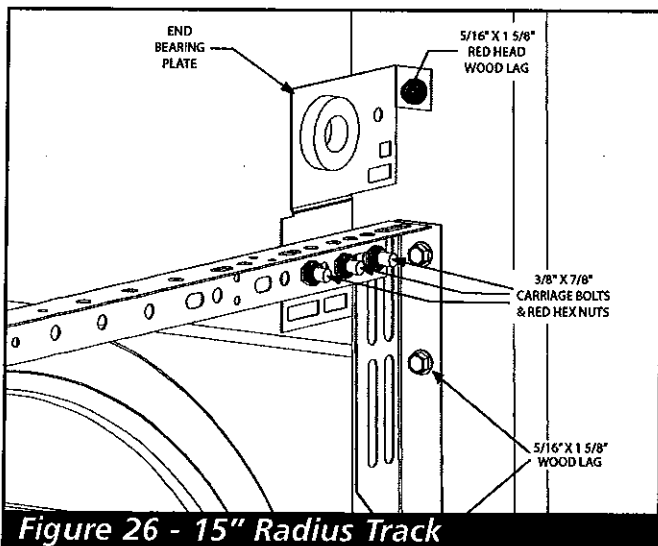
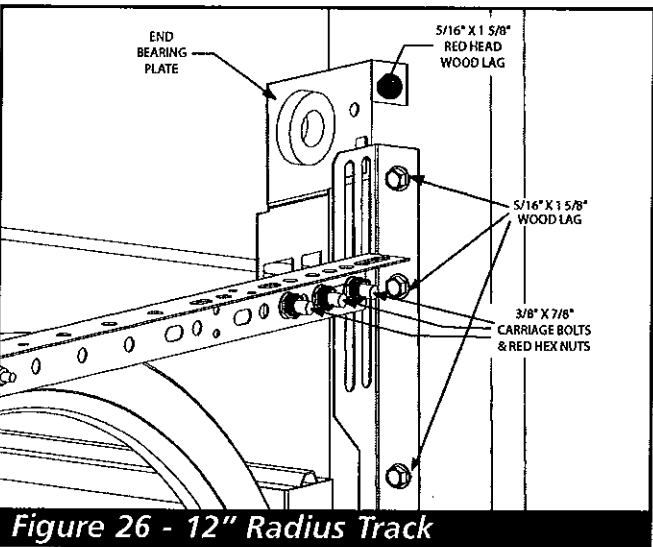
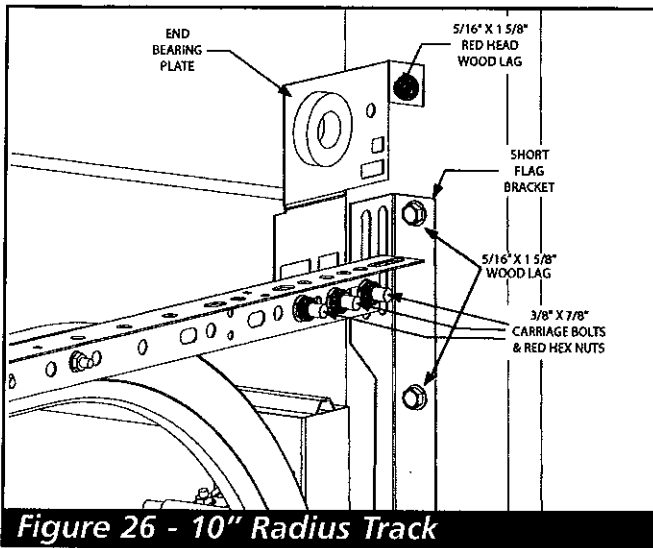
SPRING SHAFT ASSEMBLY

VALUE CRAFT: Your springs and spring cones are in the hardware box. The cones are universal, they can be used on either the Left (L), or Right (R) wound springs. The cones are NOT PAINTED. Proceed with Step 25 by orienting the L and R spring shaft as shown in Figures 28 and 31.

ALL OTHER MODELS: Place spring shaft on saw horses. Insert nylon center bearing (Fig. 27. a) into spring anchor cone (Fig. 27. b). Then slide spring(s) on spring shaft. **INSIDE THE BUILDING LOOKING OUT** place the spring with the RED WINDING CONE (R Spring), (Fig. 27. c) to the left side of door and the spring with the BLACK winding cone (L Spring), to the right side of door. Place cable drums (Fig. 27. d) on spring shaft, RED CABLE DRUM on the left side of shaft and the BLACK CABLE DRUM on the right side of shaft. BE SURE that the set screws of the cable drums are to the door side and the cable will wrap to the jamb side of cable drum. Figure 28 shows a proper assembly.

NOTE: ONLY 1 NYLON CENTER BEARING IS REQUIRED WHETHER THE DOOR IS SUPPLIED WITH ONE SPRING OR TWO.

NOTE: FOR LOW HEADROOM FRONT APPLICATIONS, REFER TO PAGE 28.



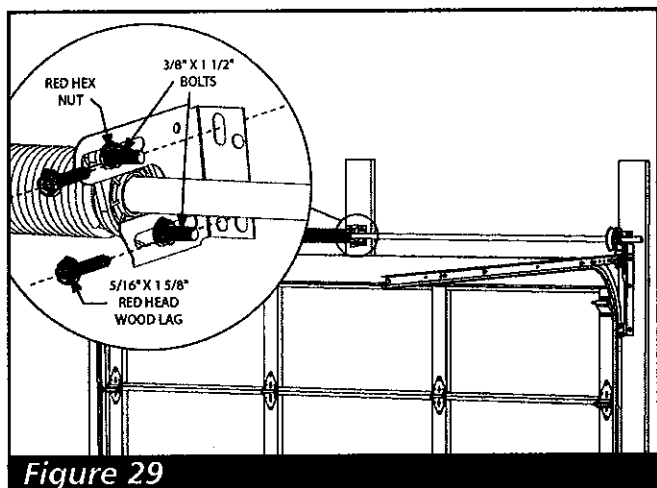


Figure 29

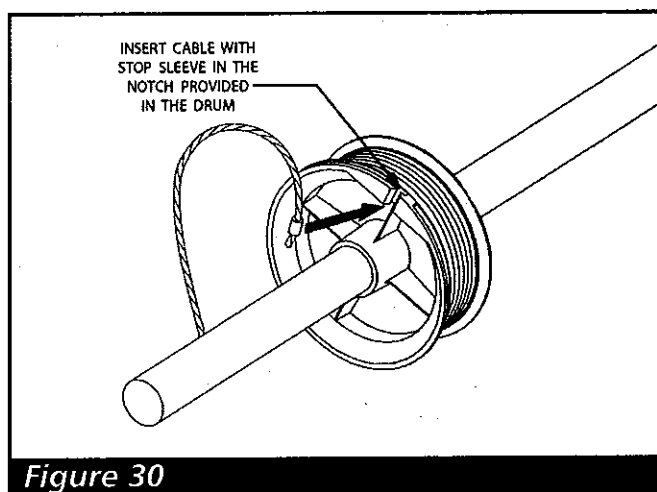


Figure 30

STEP 26

CENTER BEARING PLATE Attach center bearing plate (Fig. 27. e, page 21) to the header using two $\frac{5}{16}$ " x $1\frac{1}{2}$ " RED head wood lags in bottom slot and one RED headed wood lag in top slot. (Fig. 29) Pre-drill holes with $\frac{1}{8}$ " bit to prevent wood from splitting. (SEE CAUTION). Center bearing plate must be in line with end bearing plates so the shaft line is straight. This may be accomplished by measuring from the top of the door to the center of the shaft line at the end bearing plate. Use that measurement to locate the Center Bearing Plate above the door. BE SURE THE CENTER BEARING PLATE IS RIGHT SIDE UP! The SHORTER "arm" must be on the BOTTOM.

NOTE: FOR DOORS FURNISHED WITH ONLY ONE SPRING, THE CENTER BEARING PLATE SHOULD BE LOCATED SO THE **SPRING** WILL BE APPROXIMATELY CENTERED ON THE DOOR. FOR DOORS FURNISHED WITH TWO SPRINGS, THE **CENTER BEARING PLATE** SHOULD BE LOCATED SO IT IS APPROXIMATELY CENTERED ON THE DOOR (Fig. 28).

CAUTION

The center bearing plate anchors the springs and must be fastened securely to the wall. It is critical the center bearing plate is mounted directly to the wood pad. Never mount it on top of sheetrock.

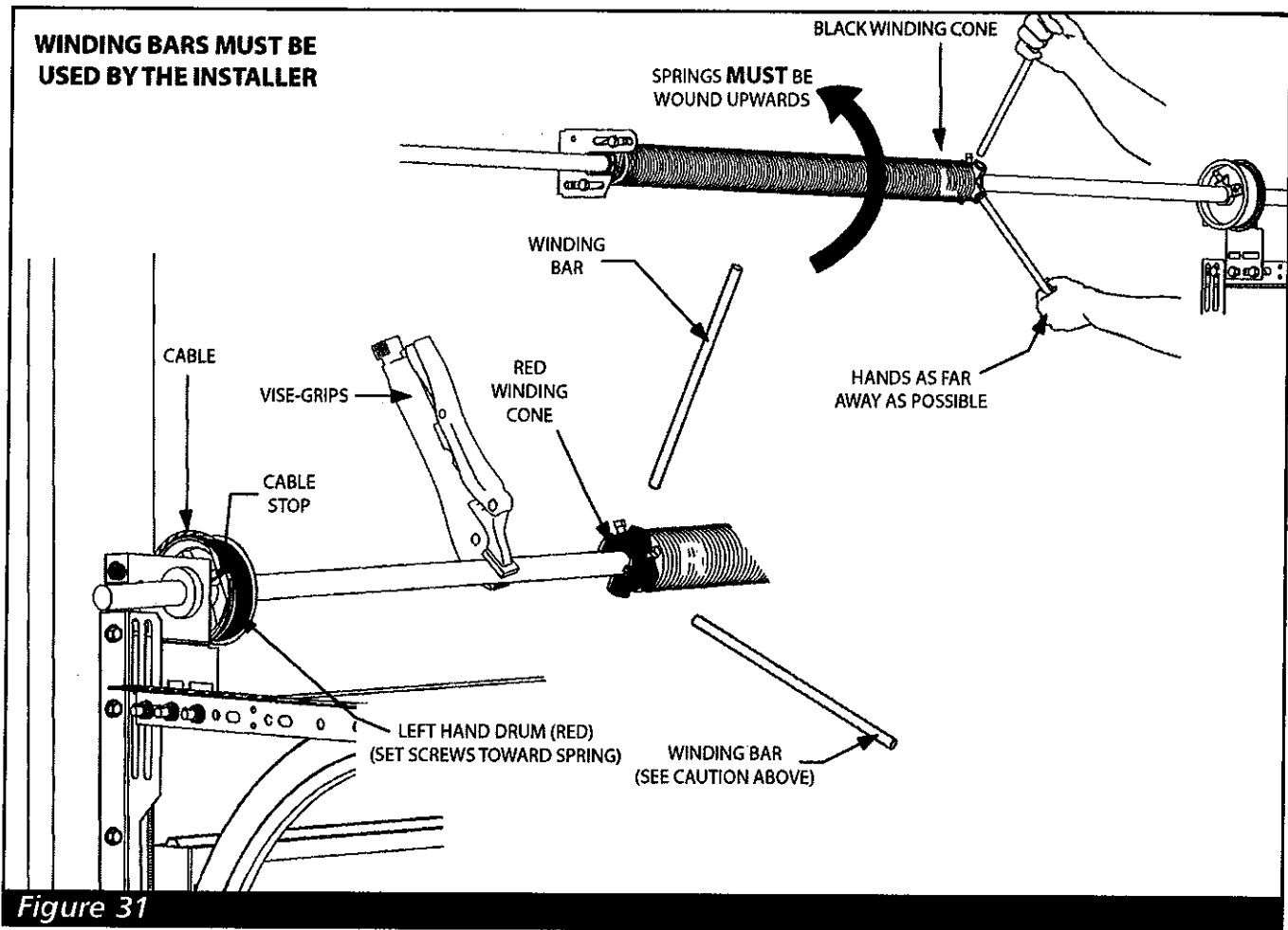
NEVER ATTEMPT TO REMOVE THE CENTER BEARING PLATE IF THE SPRINGS ARE WOUND.

STEP 27

INSTALL SPRING ASSEMBLY

Lift the spring assembly up into position. Slide left end of shaft through left end bearing plate and slide back through right end bearing plate. (It may be helpful to slightly tighten the spring set screws on the shaft to prevent the springs from moving during this process.) **SPRINGS WITH RED CONES (R Spring), MUST BE FACING THE LEFT SIDE OF THE DOOR AND SPRINGS WITH BLACK CONES (L Spring), MUST BE FACING THE RIGHT SIDE OF THE DOOR.** Fasten the anchor cones to center bearing plate with $\frac{3}{8}$ " x $1\frac{1}{2}$ " bolts and the RED $\frac{3}{8}$ " nuts and tighten (Fig. 29). Be sure the shaft line is straight both up and down and in and out from the wall.

NOTE: THE SPRING ANCHOR CONES MUST FIT SNUGLY AND EVENLY AGAINST THE CENTER BEARING PLATE.

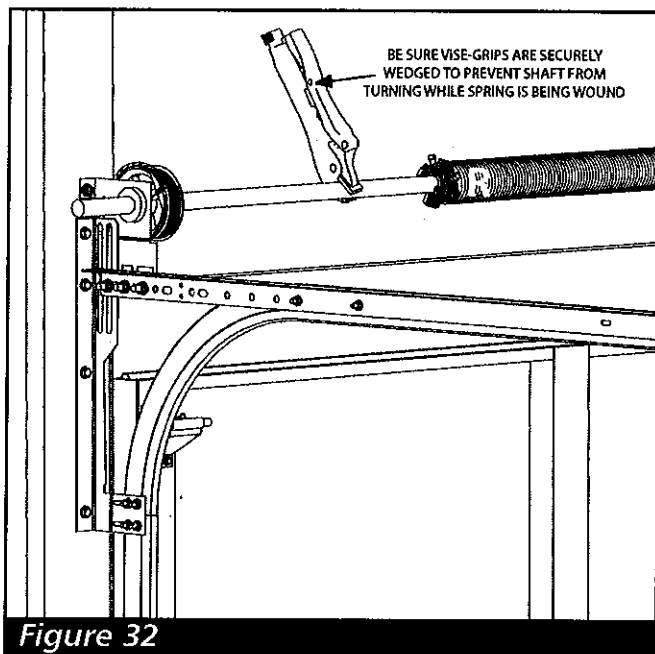


STEP 28

SET THE CABLE DRUMS

Center the shaft so there is an equal amount extending through the left and right end bearing plates.

Position the left (RED) cable drum tightly against the left end bearing plate and tighten the set screws. Bring cable up between wall and roller stem, behind cable drum and position cable stop into the notch on the outside edge of cable drum (Fig. 30 & 31). ROTATE THE CABLE DRUM AND THE SHAFT UNTIL CABLE IS TIGHT. Check to be certain the cable stop is seated against the cable drum.



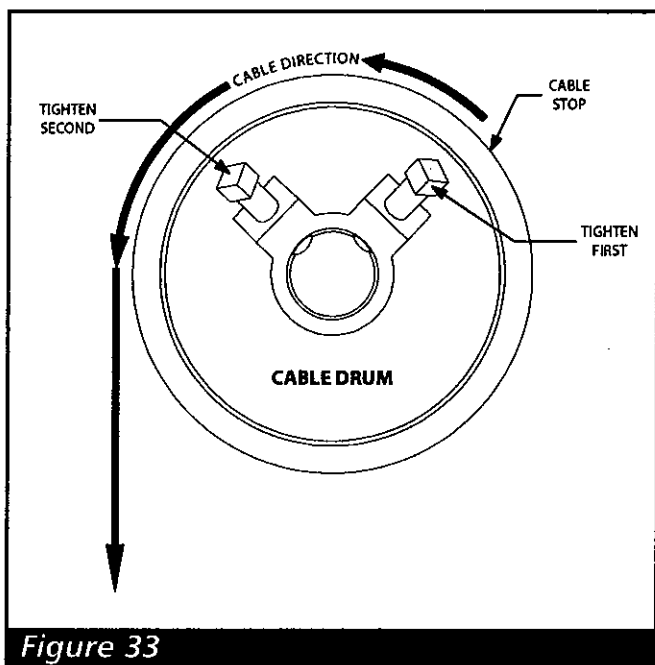


Figure 33

DOOR HEIGHT	TURNS REQUIRED
6'	6.7
6'6"	7.2
7'	7.6
7'6"	8.1
8'	8.5

Figure 34

Clamp a vise grip on top of the shaft and against the header to maintain cable tension (Fig. 32, page 23). Take note of the cable tension you have. You will want to duplicate that on the right side.

NOTE: DO NOT SEVERELY OVERTIGHTEN SET SCREWS ON DRUMS OR SPRINGS. This would distort and weaken the shaft. RECOMMENDED TORQUE = 240 to 300 inch pounds. The goal is to dimple the spring shaft with the set screws.

Position the right (BLACK) cable drum tightly against the right end bearing plate and bring cable up as before and fasten to cable drum. Rotate the cable drum until this cable has the same tension as the left cable. Tighten the set screws in the sequence shown in Fig 33.

NOTE: CABLE TENSION ON EACH SIDE MUST BE EQUAL SO THE DOOR WILL BE LEVEL AND OPERATE PROPERLY.

STEP 29 WINDING SPRINGS

Clamp the door down.

CAUTION

CLAMP DOOR SECURELY CLOSED USING VISE GRIPS BEFORE WINDING ANY TENSION ONTO SPRINGS. **SPRING TENSION IS DANGEROUS.** ONLY USE PROPER SIZED WINDING BARS. NEVER USE SCREWDRIVERS OR OTHER TOOLS TO WIND SPRINGS. ENSURE YOUR LADDER IS STURDY AND STABLE AND IN THE BEST POSITION. CLEAR OTHER PERSONNEL FROM THE IMMEDIATE VICINITY.

COUNT THE TURNS. You will need to count the turns as you wind the springs. You can either 1) count as you wind OR 2) before winding make a line across the full length of the spring(s). This will indicate the number of turns as you wind the spring. A grease pencil, chalk, or spray paint works well. Use two ½" x 18" cold rolled steel winding bars to wind springs the number of turns (COMPLETE REVOLUTIONS) specified on the spring tag. If turns are not specified on the spring tag refer to Fig. 34. ALWAYS WIND IN THE DIRECTION INDICATED BY THE CUT OFF END OF THE SPRING WIRE

(Fig. 35). BE SURE AND COMPLETELY INSERT WINDING BAR IN THE SPRING CONE. Wind springs carefully, keeping hands as far away from springs as possible for leverage. (Fig 31, page 23) Ensure that the spring is able to stretch as you wind it. Upon completing the number of turns specified, tighten set screws on spring winding cone while maintaining spring tension. Tighten set screws in accordance with the instructions in Step 28.

LEAVE THE WARNING TAG ATTACHED TO THE SPRING!!

IF YOU MUST REDUCE SPRING TENSION OR UNWIND COMPLETELY: Follow all precautions for winding springs. If there is only one spring on the door, clamp a vise grip on the spring shaft to hold the cable drums in place (Step 28). Insert winding bar in the spring cone and hold tension against the spring. Carefully loosen the set screws and hold the full spring tension. Unwind the spring the desired amount. Reset set screws as required.

STEP 30

BACK HANG Remove the vise grip from the shaft. While keeping a good hold on the door, (in case the springs are over wound), remove the clamps holding the door down. Raise the door approximately half way up and clamp in position. Fasten back hang material to rear of the horizontal tracks so that the tracks are securely held in place. Ensure that the tracks are level or slightly up and run parallel with the door. (Fig. 36).

NOTE: PUNCHED ANGLE IS AN OPTION FOR BACK HANG WHICH MUST BE ORDERED IN ADDITION TO THE DOOR PACKAGE.

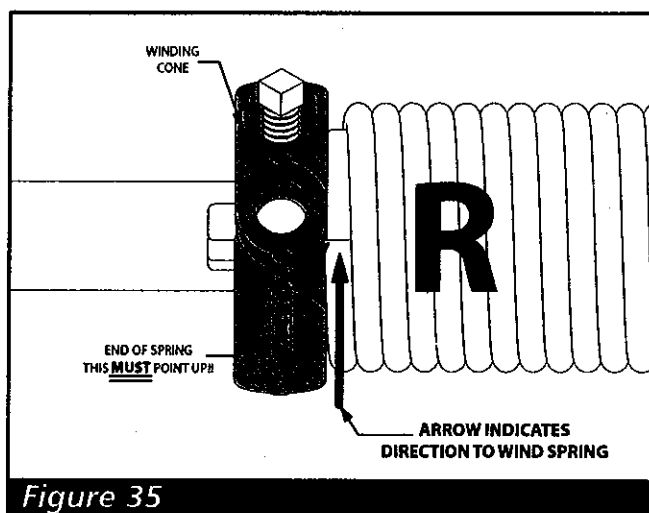


Figure 35

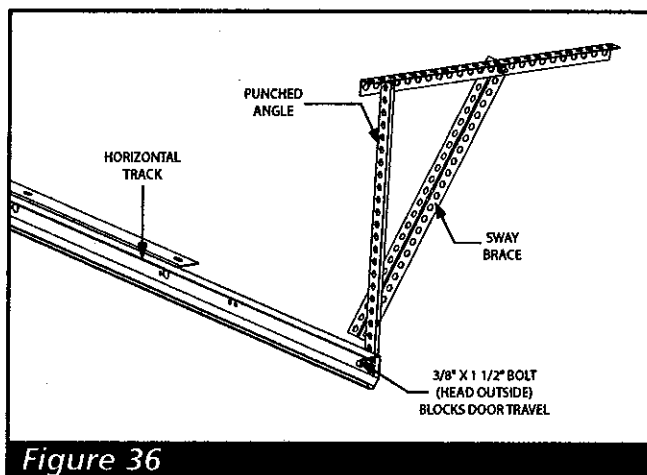


Figure 36

STEP 31

FINAL ADJUSTMENTS The door should work smoothly and easily throughout its range of operation. Adjust spring tension in $\frac{1}{4}$ turn increments as required. Ideally the door should be able to rest on the floor, stop half way up, and pull reasonably well down out of the opening.

With door closed, push the lower portion of vertical track towards jamb until door fits lightly against door stop and tighten nuts on jamb brackets.

MIDLAND LIMITED WARRANTY

Midland warrants its products to be free from defects in materials and workmanship as follows:

RESIDENTIAL

RSP & Flush 24ga & 2" TS Series

- Midland warrants these steel garage door sections against rust through, paint finish cracking or peeling to the original purchaser for as long as they own the building in which the doors were installed. All other components except springs are warranted for 5 years.

VALUCRAFT PLUS, TS 138 & R-26

- Midland warrants these steel garage door sections against rust through, paint finish cracking or peeling to the original purchaser for 15 years. All other components except springs are warranted for 2 years.

VALUCRAFT

- Midland warrants these steel garage door sections against rust through, paint finish cracking or peeling to the original purchaser for 15 years. All other components except springs are warranted for 1 year.

CUSTOM DESIGN SERIES

- Midland warrants all components except the sections for 1 year.
- The sections are manufactured by Jeld-Wen. Please ask your dealer for a copy of Jeld-Wen's Composite Garage Door Sections Warranty.

COMMERCIAL

- Midland warrants its steel garage door sections used in commercial applications against rust through, paint finish cracking or peeling to the original purchaser for 10 years.
- All other components except springs are warranted for 2 years.
- Midland warrants components in a high cycle application for 1 year.

HARSH ENVIRONMENT

- Midland warrants its 3" ES sections that are used in harsh environments for 1 year. No other section models are warranted when used in a harsh environment application.
- Midland warrants its harsh environment package for 1 year.

Midland warrants springs in all applications for 1 year to the original purchaser.

Midland warrants all its laminated sections against delamination for a period of 10 years to the original purchaser.

This warranty excludes the following:

- 1) Deterioration due to rust resulting from damage to the garage door section caused by fire, other accident or casualty, vandalism, harmful fumes or chemicals, condensation, or occurring as a result of any physical damage.
- 2) Failure of paint if any top coatings are applied to factory paint.
- 3) Onsite labor.
- 4) Freight charges.
- 5) Scratches or dents occurring after pick up or delivery from Midland.
- 6) Damage caused by improper installation, maintenance or product alteration.
- 7) Damage caused by misuse, abuse or accident.
- 8) Delamination as a result of a heat source too close to the garage door sections (eg heaters, lights etc).
- 9) Wear from normal operation.

The warranty of the manufacturer shall be limited to the repair or replacement only for such parts which may be acknowledged by the manufacturer to be defective.

To make a claim under this warranty contact your Midland dealer. A written claim accompanied by proof of purchase must be submitted within 30 days of discovery of the suspected defect. Midland may at its discretion send a representative to inspect the defective part and/or may request that the defective part be returned to the factory freight pre paid. No warranty extends to consequential or incidental damages. All other express or implied warranties including any implied warranty of merchantability or implied warranty of fitness for purpose are hereby expressly excluded.

This warranty applies to doors purchased after August 1, 2007.

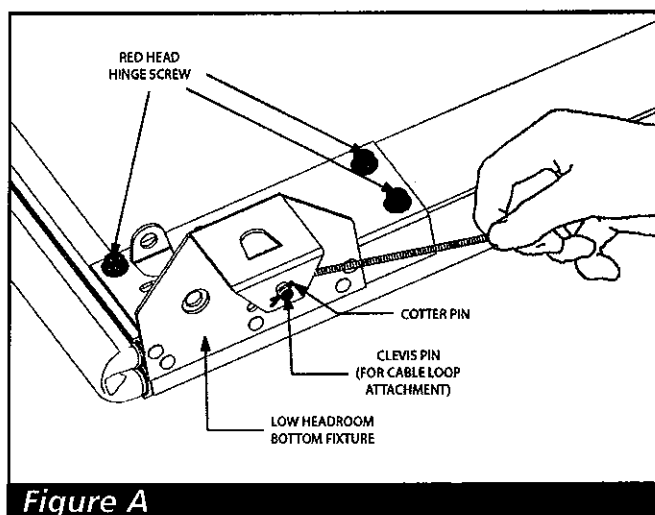


Figure A

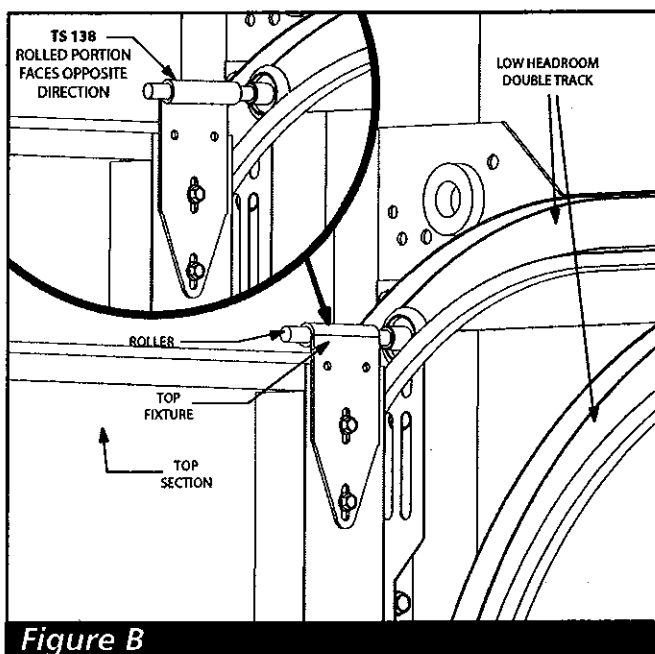


Figure B

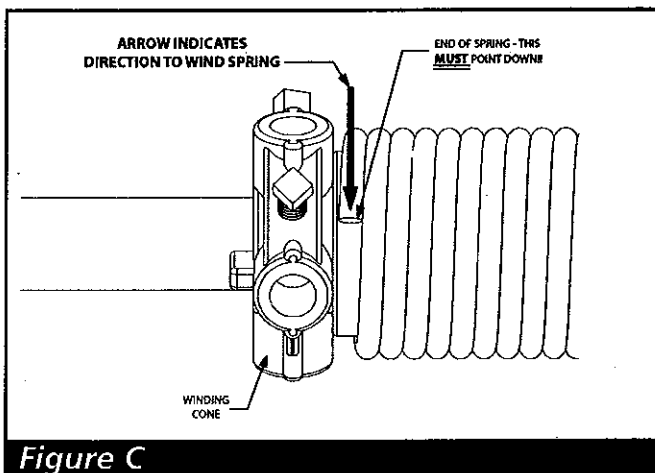


Figure C

INSTALLATION INSTRUCTIONS LOW HEADROOM-TORSION SPRINGS-FRONT

8" MINIMUM HEADROOM

The sequence of installing Low Headroom-Springs Front is the same as outlined in the standard installation instruction with the exception of the following:

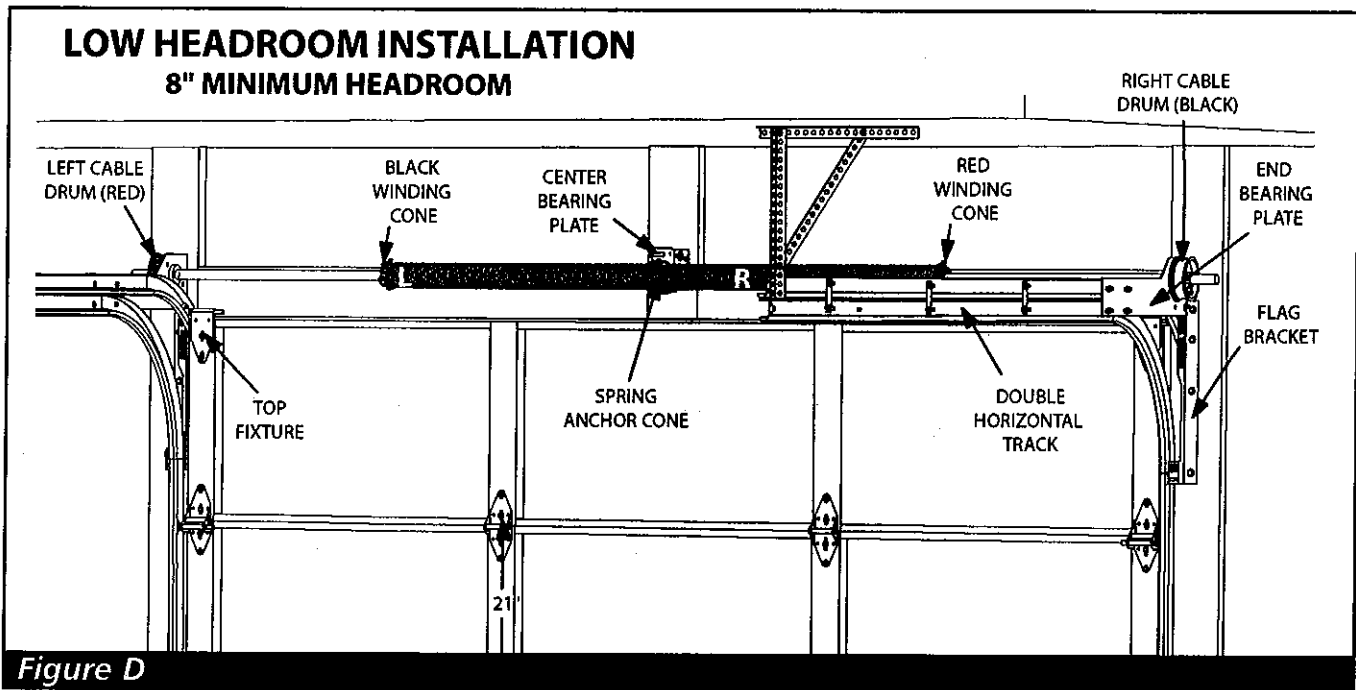
BOTTOM FIXTURE [STEP 4]

The Low Headroom Bottom Fixture (Fig. A), is attached to the bottom section. Drill pilot holes with a 3/16" bit and fasten to section with 1/4" x 5/8" RED Head Hinge Screws. Fasteners are as shown in the standard instructions.

NOTE: BOTTOM FIXTURES MUST BE LOCATED THE SAME DISTANCE FROM THE TOP OF THE SECTION ON BOTH SIDES.

TOP FIXTURE [STEP 14]

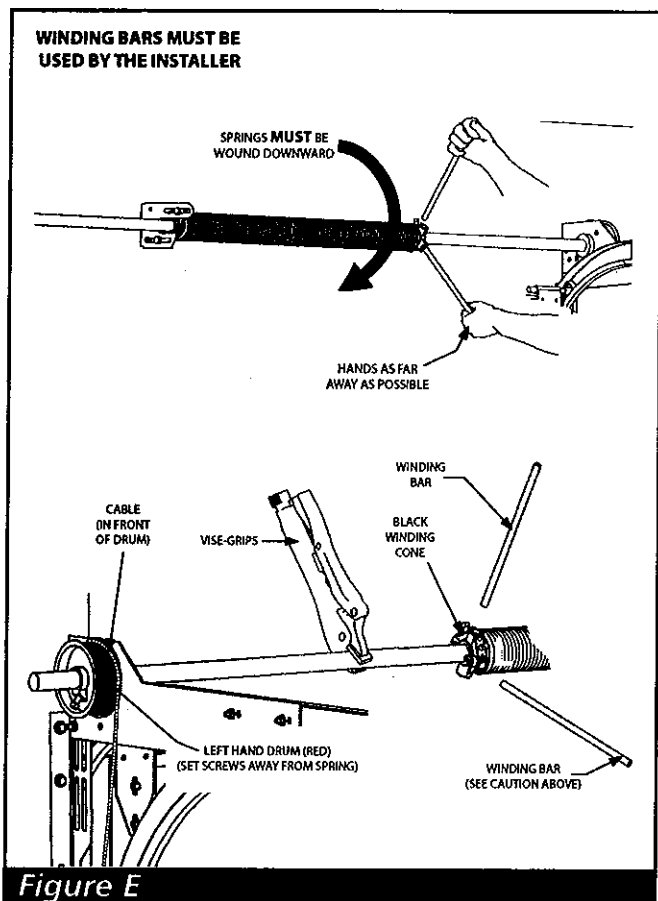
When the top section has been stacked in the opening, insert the roller in the sleeve of the top fixture (Fig. B). Engage the roller in the upper track. **MAKE SURE THE TOP FIXTURE IS ORIENTED AS SHOWN FOR 2" THICK DOORS. ORIENT THE TOP FIXTURE FOR THE TS 138 DOOR AS SHOWN IN THE INSET.** Locate the Top Fixtures so that the top section is plumb with lower sections. Fasten to the section with 1/4" x 3/4" self tappers.



SPRING SHAFT ASSEMBLY [STEP 25]

The spring(s) will be mounted **OPPOSITE** of the standard radius track configuration. The spring with the **BLACK CONE (L Spring)**, is to the **LEFT** side of door. The spring with the **RED CONE (R Spring)**, to the **RIGHT** side of door. The **RIGHT HAND** cable drum (**BLACK**) will remain on the **RIGHT SIDE** of door, the **LEFT HAND** cable drum (**RED**) will remain on the **LEFT SIDE** of door. THE DRUMS WILL BE MOUNTED ON THE **OUTSIDE** OF THE TRACK, AND THE SET SCREWS WILL FACE AWAY FROM THE CENTER OF THE DOOR. REFER TO FIGURES D AND E.

WHEN WINDING LOW HEADROOM TORSION SPRING(S) YOU **PULL DOWN** ON THE WINDING BARS! SEE FIGURES C & E



MAINTENANCE

CLEANING

From time to time your garage door will require cleaning.

- For general accumulations of dust and dirt wash with a mild detergent and rinse with clear water.
- For accumulations causing rusting we recommend the following:
 - "Orange Clean" paste cleaner for rust stains
 - "Bar Keeper Friend"
 - "Turtle Wax" Rubbing Compound (white)
 - "Turtle Wax" Chrome Polish and Rust Remover
 - "Rusty Exterior" rust stain remover
 - "Iron Out" stain remover
- If adhesive transfer has occurred from the protective film to the face of the door:
 - Very hot soapy water
 - Very hot soapy water with denatured alcohol
 - Straight denatured alcohol
 - "Goo Gone"
 - "3m Adhesive Remover"
- To restore the luster of the paint:
 - "Turtle Wax" Car Wash and Cleaner
 - "Turtle Wax" Rubbing Compound
 - "Orange Clean" cleaner

CAUTION: SOME OF THESE PRODUCTS ARE AGGRESSIVE. USE CARE NOT TO RUB THROUGH THE PAINT.

INSPECTION

Inspect your garage door once a year. More often if it has high cycles or operates in a harsh environment. CHECK FOR THE FOLLOWING:

- **Door:** General condition, seals the floor, square in the opening, smooth operation, rope (if installed) not frayed, spring tension-door balances okay
- **Weather strip:** General condition, seals the door
- **Fasteners:** General tightness and security of all fasteners and parts
- **Hinges:** Broken, general wear, loose
- **Rollers:** General wear
- **Cables:** Fraying, attachment to bottom fixture, wrapping properly on the drums
- **Springs:** General condition, mounting hardware all secure, condition of shaft, bearings, drums, and center bearing plate
- **Track:** Bent, loose, alignment
- **Back hang:** Secure
- **Operator:** Check the reversing functions of the operator according to the manufacturers instructions

LUBRICATION

Use a light weight oil like WD 40 or Three in One Light Oil to lubricate the following:

- Hinges
- Steel rollers: Roller shaft in the hinge and ball bearings in the roller.
- Nylon rollers: Roller shaft in the hinge and roller shaft where the nylon tire turns. Do NOT lube the outside of the nylon tire as that may cause it to slip and create flat spots.
- Roller shafts
- Bearings
- Springs: Be sure and wipe off any excess oil so it will not drip on the face of your door.
- Lock T Handle and moving parts
- DO NOT GREASE THE TRACKS

SERVICE

If service is needed:

- If you are not well experienced at working with garage doors please contact your nearest Midland dealer.
 - Components related to the torsion springs:
 - springs
 - end bearing plate
 - cables
 - bottom fixtures
 - drums
 - center bearing plate
 - spring shaft
 - wood spring anchor pad
- should only be repaired or replaced by a professional door technician.

PAINTING

Should you decide to repaint your garage door we would recommend:

- Clean the surface thoroughly with Tri-Sodium Phosphate, Soilax, Spic & Span, or a similar product.

CAUTION: DO NOT USE HARSH SOLVENTS SUCH AS LACQUER THINNERS OR MINERAL SPIRITS. THESE MAY CAUSE PAINT PEELING AFTER THE NEW TOPCOAT IS APPLIED.

- Scrub surface with a brush and sponge. Rinse with clear water and allow to dry.
- If the door has ever been waxed it is imperative that all wax is removed.
- If damage has occurred and the galvanized substrate has been compromised it will be necessary to treat these localized areas with a rust inhibiting primer. See your paint store professional for a suitable product.
- Scuff the door surface with a Scotch-Brite pad. Clean the door again as required.
- Top coat with a quality acrylic latex exterior paint. Apply per manufacturers instructions.

Be aware that re-painting your door does affect your warranty. See the warranty for details.