

RESIDENTIAL GARAGE DOOR INSTALLATION INSTRUCTIONS

UNITED

THIS GENERAL INSTRUCTION MANUAL IS INTENDED FOR THE INSTALLATION OF RESIDENTIAL GARAGE DOORS AND GENERAL INFORMATION FOR COMMERCIAL DOORS. DOORS WITH DOUBLE LOW TRACK, HIGH LIFT OR VERTICAL LIFT APPLICATION WILL HAVE ADDITIONAL INSTRUCTIONS FOR THOSE APPLICATIONS.

PLEASE READ THESE INSTRUCTIONS FULLY BEFORE STARTING THE INSTALLATION OF THE DOOR. IF THERE ARE ANY QUESTIONS, CALL FOR ASSISTANCE FROM THE DEALER WHERE THE DOOR WAS PURCHASED.

PAINTING INSTRUCTIONS:

WARNING TO HOME OWNER - ON WOOD DOORS ALL GUARANTEES ARE NULL AND VOID UNLESS THE INSTRUCTIONS ARE FOLLOWED COMPLETELY. PAINTING OF WOOD-TYPE DOOR REQUIRES AT LEAST ONE COAT OF PRIME PAINT AND AT LEAST TWO COATS OF TOP QUALITY EXTERIOR PAINT ON ALL SURFACES, (THE INSIDE AND OUTSIDE OF DOOR), IMMEDIATELY AFTER PURCHASING OR INSTALLATION.

ALL DARK COLOR PAINT TENDS TO WARP WOOD OR SECTIONS FROM THE HEAT THAT THE SUN GENERATES. CHOOSING A DARK COLOR FOR WOOD DOORS COULD VOID THE WARRANTY.

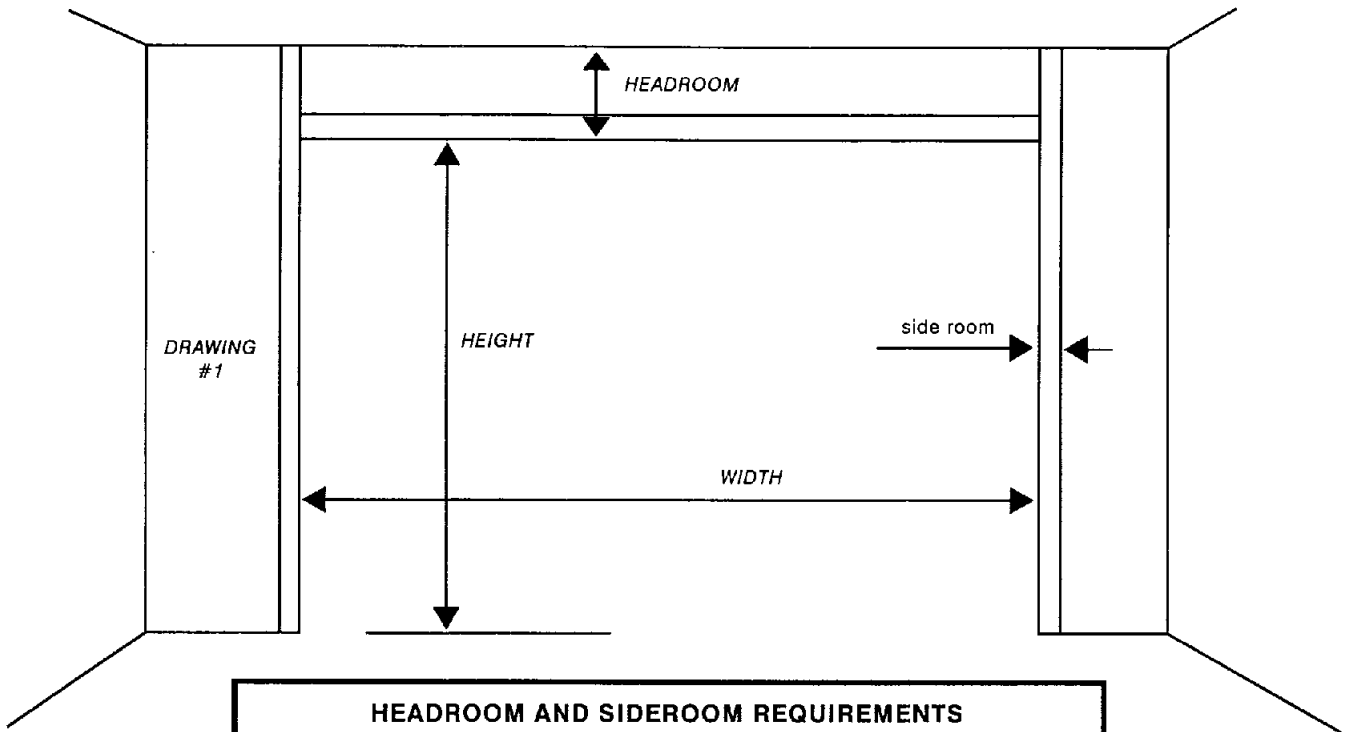
STEEL DOORS: FIRST WASH DOOR WITH A MILD DETERGENT AND RINSE THOROUGHLY. USE A GOOD QUALITY EXTERIOR LATEX PAINT. IF IN DOUBT OF THE CORRECT PAINTING PROCEDURE PLEASE CONTACT THE FACTORY. MINOR SCRATCHES ON PANTED STEEL DOORS ARE NOT CONSIDERED A DEFECT.

IMPORTANT NOTE:

READ THESE INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION. IF YOU FEEL APPREHENSIVE ABOUT DOING THIS INSTALLATION YOURSELF, PARTICULARLY IN REFERENCE TO TENSIONING THE SPRINGS, WE **STRONGLY URGE** YOU TO SEEK THE ASSISTANCE OF A PROFESSIONAL INSTALLER.

UNITED GARAGE DOOR IS NOT RESPONSIBLE FOR ANY LIABILITY FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. IN THE CASE OF A WARRANTY PROBLEM UNITED GARAGE DOOR WILL REFUND, REPAIR OR REPLACE DAMAGED PARTS. UNITED GARAGE DOOR IS NOT RESPONSIBLE FOR ANY LABOR TO REPAINT, REPLACE, DELIVER, OR REASSEMBLE ANY DOOR.

STEP BY STEP INSTALLATIONS



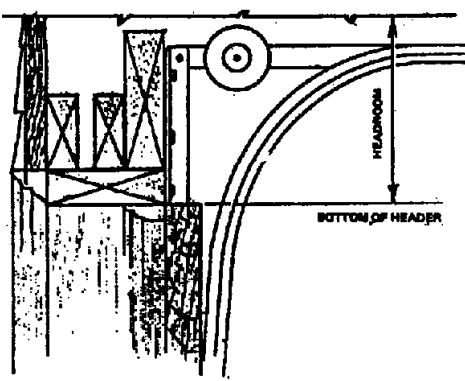
HEADROOM AND SIDEROOM REQUIREMENTS ABSOLUTE MINIMUMS			
RADIUS	STRETCH	TORSION	SIDEROOM
15"	13"	14"	3 1/2"
12"	10"	11 1/2"	3 1/2"
10"	8"	9 1/2"	3 1/2"
LHR Double Track	5"	7" Front Mount 5" Rear Mount	4 1/2"
*Note: Bottom section of door will hang down into opening 3" or 4" on LHR track.			
*Note: Commercial doors add 1" to all dimensions.			

***OPERATOR NOTE:**
IF YOU PLAN TO INSTALL AN ELECTRIC OPERATOR, AN ADDITIONAL 2" TO 3" OF HEADROOM WILL BE REQUIRED.

- STEP 1 CHECK DOOR WIDTH WITH DOOR OPENING WIDTH
- STEP 2 CHECK DOOR HEIGHT WITH DOOR OPENING HEIGHT
- STEP 3 CHECK HEADROOM ABOVE DOOR HEIGHT AND 8 FEET BACK
- STEP 4 CHECK SIDE ROOM FOR HARDWARE SPACING (see chart)

TOOLS REQUIRED

- Hammer
- Level
- Assortment of screwdrivers
- Small hand ratchet and 7/16", 1/2" & 9/16" 12-pt. sockets
- Locking pliers (vise-grips)
- Electric drill with 3/16", 1/4" & 7/16" drill bits
- 7/8" hole saw (if using lock for wood doors)
- 7/16", 1/2" and 9/16" open-end wrenches
- Small 6' step ladder
- 2 cold-rolled 1/2" steel winding bars (available for your supplier)
- Knife, tape measure, saw & hacksaw



STEP 5 CUT AND FIT DOOR STOP MOLDING TO OPENING AND TEMPORARILY NAIL IN PLACE.

STEP 6 CENTER BOTTOM SECTION IN OPENING, MAKE SURE THE SECTION IS LEVEL. A LEVEL BOTTOM SECTION IS THE FIRST STEP TO A WELL WORKING DOOR

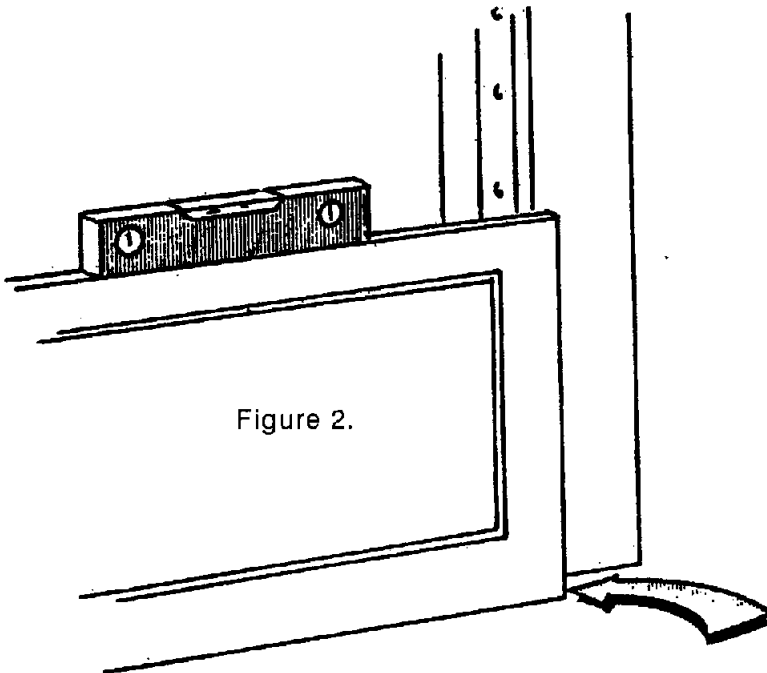
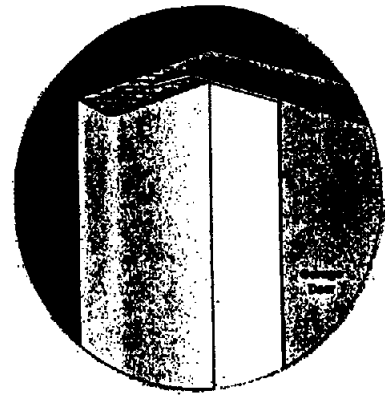


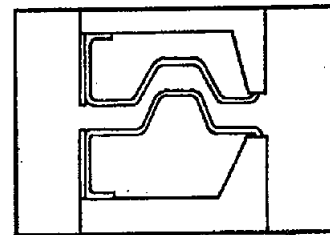
Figure 2.

(NOTE: ON WOOD DOORS IF YOUR GARAGE FLOOR IS 1/2" OR MORE OUT OF PLUMB YOU SHOULD CONSIDER SCRIBING & CUTTING THE BOTTOM RAIL. FOR STEEL DOORS LEVEL ONLY.

For excessive gaps, larger loop seals and brush seals are available, contact your supplier.

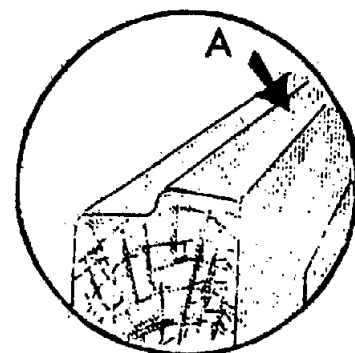
IF NECESSARY, SHIM AT LOWEST SIDE WITH WOOD SHIM TO MAKE THE SECTION LEVEL. ALSO SHIM BOTTOM OF VERTICAL TRACK THE SAME AMOUNT AND ON THE SAME SIDE BEFORE COMPLETING #21.

FOR SHIPLAP DOORS MAKE SURE THAT POINT "A" IS ON THE INSIDE OF GARAGE. FOR TONGUE & GROOVE SECTIONS MAKE SURE THE TONGUE IS UP.



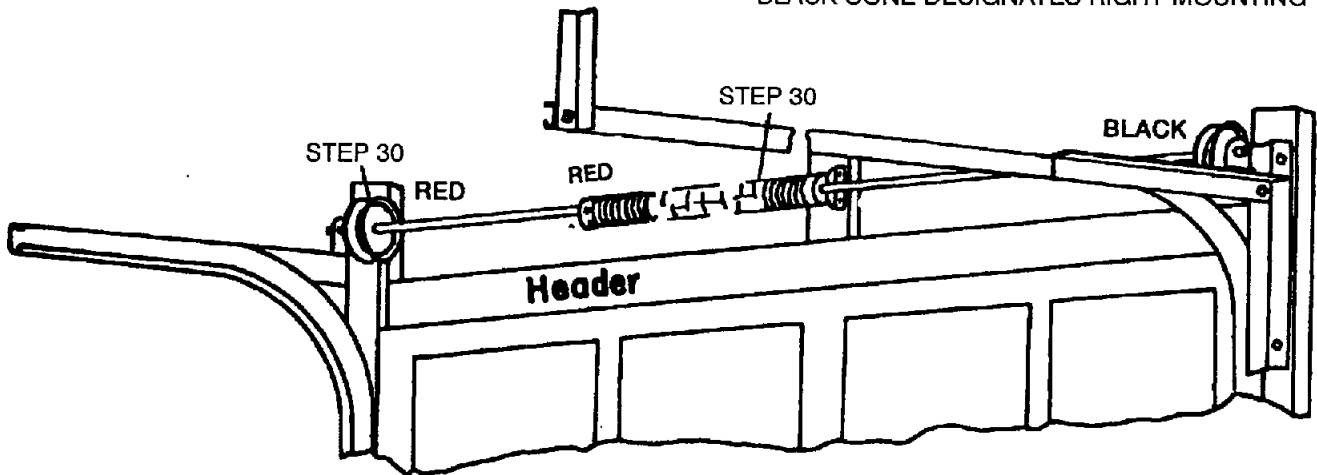
Tongue & Groove

(NOTE: IF YOUR DOOR IS A WOOD PANEL DOOR, AND IS FURNISHED WITH AN ANTI-SAG STRUT, SEE STEP #10 (FIG. 10B) FOR ATTACHING THE STIFFENER TO THE BOTTOM BRACKET. SEE STEP #10 FOR ATTACHING STIFFENERS TO SECTIONS AND CHART FOR STIFFENERS LOCATION.)

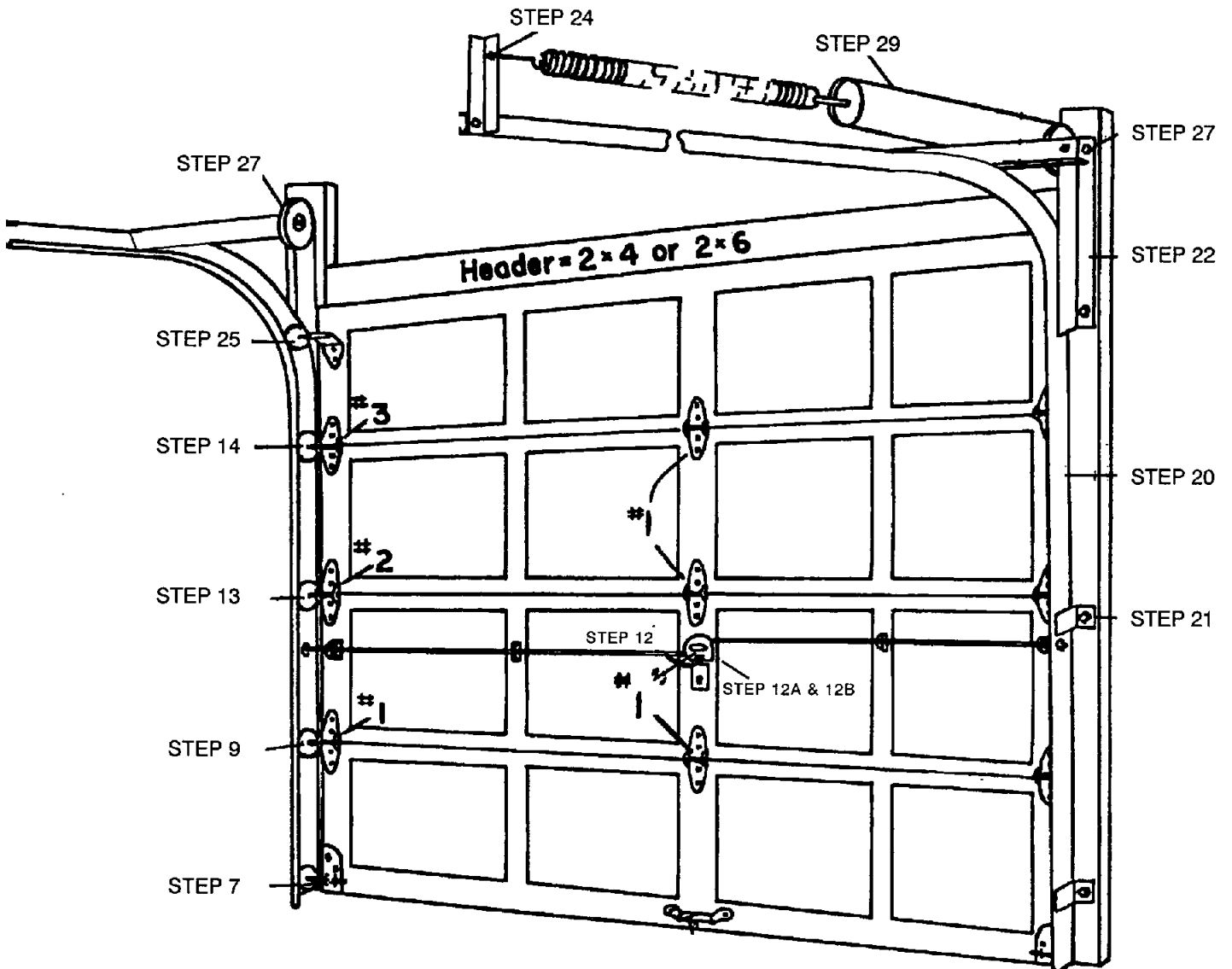


Shiplap

NOTE: RED CONE DESIGNATES LEFT MOUNTING
BLACK CONE DESIGNATES RIGHT MOUNTING



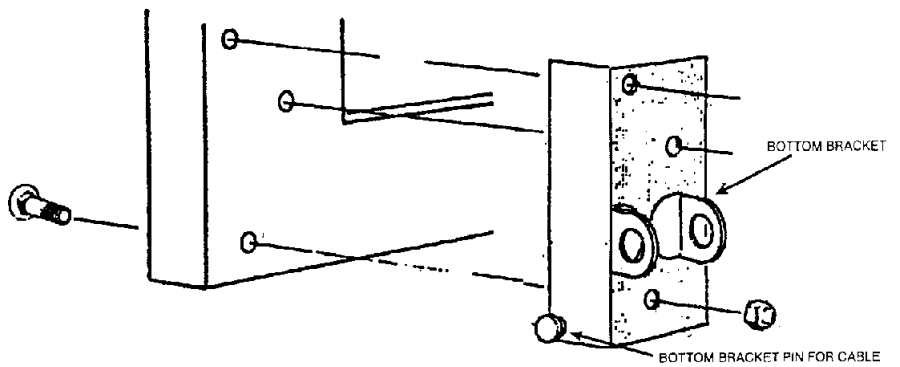
STEP-BY-STEP REFERENCE ONLY



STEP 7 BOTTOM BRACKETS

A. FOR WOOD DOORS:

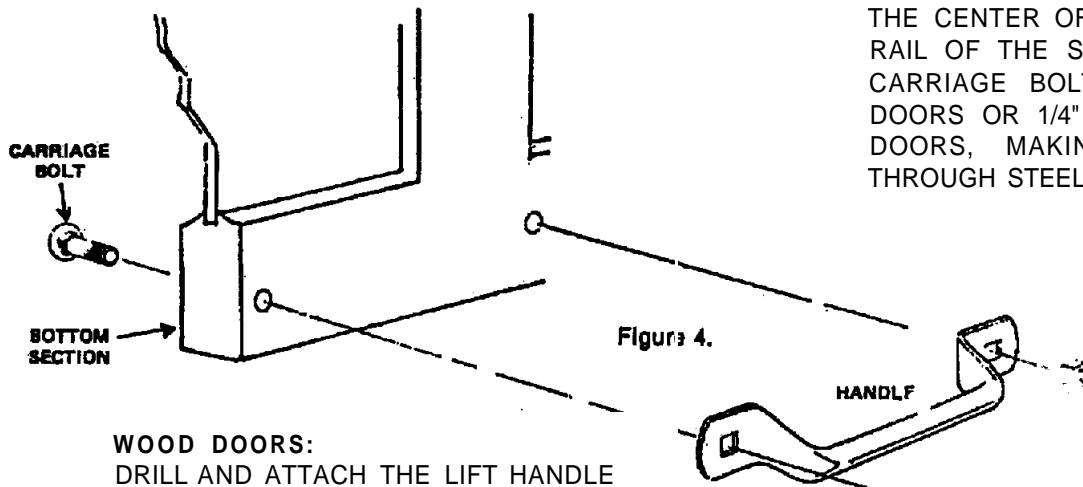
ATTACH LEFT HAND AND RIGHT HAND BOTTOM BRACKET TO BOTTOM SECTION MARKED #1, DRILL 1/4" HOLES AND FASTEN WITH 1/4" CARRIAGE BOLTS AND NUTS.



B. FOR STEEL DOORS:

DRILL PILOT HOLES & USE 1/4" SELF TAPPING SCREWS OR TEC SCREWS AS SUPPLIED.

STEP 8 DRILL AND ATTACH THE LIFT HANDLE TO THE CENTER OF SECTION ON THE BOTTOM RAIL OF THE SECTION. FASTEN WITH 1/4" CARRIAGE BOLTS AND NUTS FOR WOOD DOORS OR 1/4" SELF TAPPERS FOR STEEL DOORS, MAKING SURE FASTENERS GO THROUGH STEEL HARDWARE SUPPORT.



WOOD DOORS:

DRILL AND ATTACH THE LIFT HANDLE TO THE CENTER OF SECTION ON THE BOTTOM RAIL OF SECTION. FASTEN WITH 1/4" CARRIAGE BOLTS AND NUTS OR 1/4" SELF TAPPERS FOR STEEL DOORS.

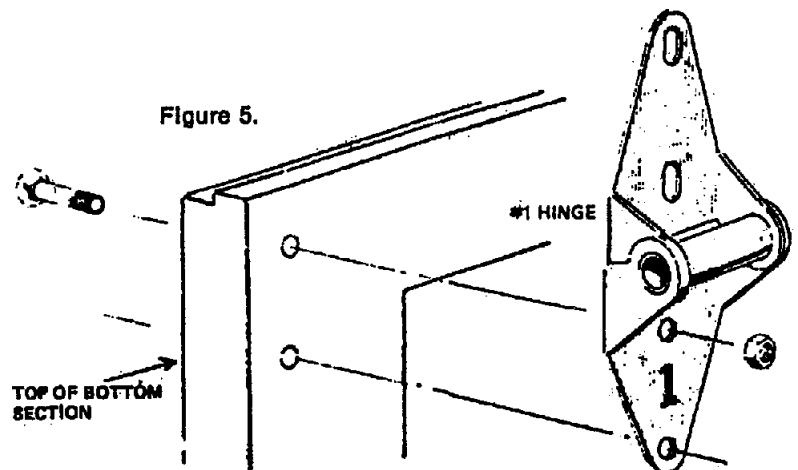
STEEL DOORS:

MAY HAVE TO MOUNT HANDLES VERTICALLY TO ALIGN WITH METAL STILE.

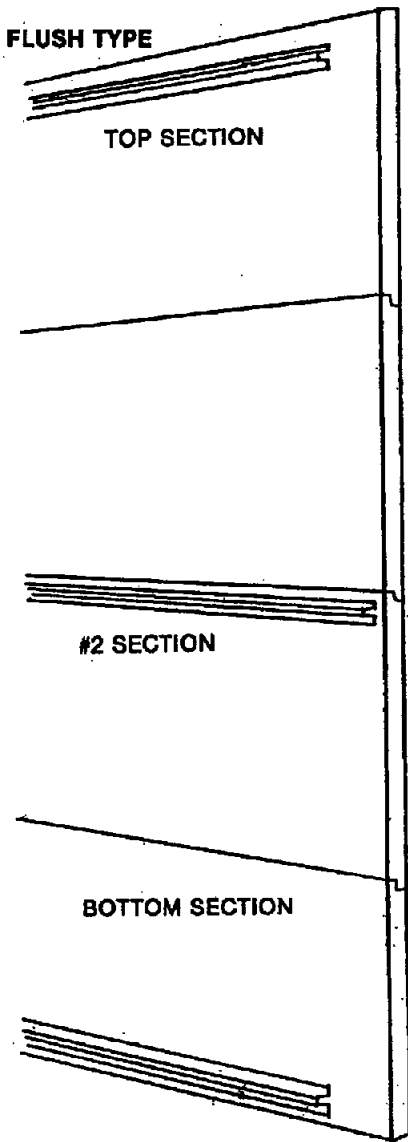
CAUTION: WHEN INSTALLING A FLUSH WOOD DOOR, ALL LOCKS AND LIFT HANDLES MUST BE MOUNTED TO THE INTERIOR WOOD FRAME.

STEP 9 ATTACH TO ALL PRE-DRILLED HOLES. AT TOP OF SECTION. THE #1 HINGES WITH 1/4" CARRIAGE BOLTS OR 1/4" SELF TAPPERS.

(NOTE: MAKE SURE THE BOTTOM LEAF OF HINGE IS STAMPED # 1). MAKE SURE THE HIGH SIDE OF SHIPLAP IS ON THE INSIDE OF GARAGE.



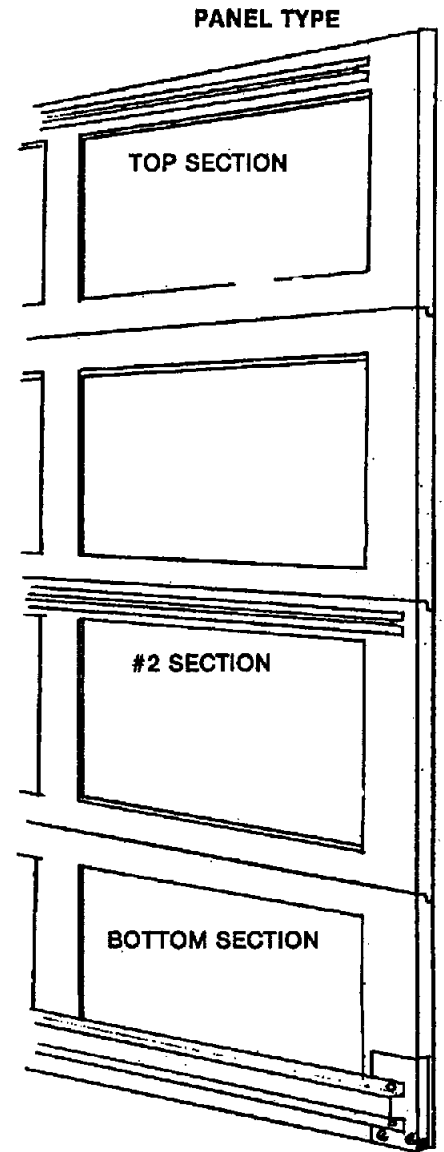
STEP 10 INSTALLING STIFFENERS



STRUT SCHEDULE

4 SECTION 7" HIGH DOORS			
WIDTH	8' - 10'	12' - 16'	17' - 18'
WOOD PANEL	0	1-Anti sag 2-2-1/4	1-Anti sag 2-2-1/4
ELITE & WOOD FLUSH	2-2-1/4	3-2-1/4	4-2-1/4
STEEL			
MODEL 2260 & UNISTEEL II NON-INSULATED	0	2-2-1/4	3-2-1/4
MODEL 2260 & UNISTEEL II INSULATED	0	3-2-1/4	4-2-1/4
TAYLOR 4800	0	0	1-2-1/4
PREMIUM	0	2-2-1/4	4-2-1/4

FOR FIVE SECTION HIGH DOORS THERE WILL BE AN ADDITIONAL STRUT FOR THAT SECTION



A. WOOD DOORS

1. FLUSH AND ELITE

TOP STIFFENER WILL BE SHORTER THAN SECTION LENGTH AND IS MOUNTED BETWEEN TOP ROLLER BRACKETS USING 1/4" WOOD LAGS. BOTTOM STIFFENER FOR THE FLUSH AND ELITE DOORS ARE MOUNTED ON THE BOTTOM OF THE SECTION BETWEEN THE BOTTOM BRACKETS WITH 1/4" LAGS. INTERMEDIATE STIFFENERS ARE LONGER AND ARE CLIPPED TO THE BOTTOM OF THEIR RESPECTIVE HINGES (fig. #10A).

2. WOOD PANEL DOORS

TOP STIFFENER TO BE MOUNTED BETWEEN TOP BRACKETS WITH 1/4" LAGS. BOTTOM STIFFENER IS AN ANTI-SAG STRUT WHICH ARE FASTENED TO BOTTOM FIXTURES WITH 1/4" NUTS AND LAGGED TO BOTTOM RAIL AND STILES WITH 1/4" LAGS (fig. #10B). INTERMEDIATE STIFFENERS ARE LONGER AND ARE CLIPPED TO THE BOTTOM OF THEIR RESPECTIVE HINGES (fig. #10A).

Figure 10A

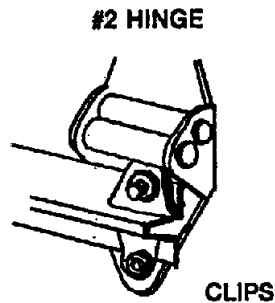
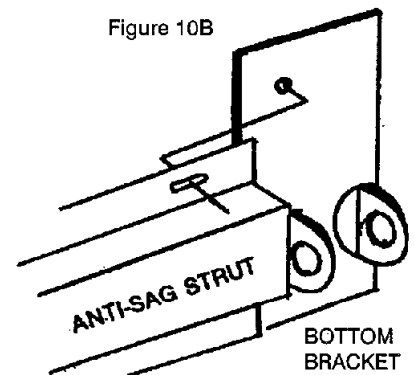


Figure 10B



B. STEEL DOORS

THE DIFFERENT MODEL STEEL DOORS WILL HAVE STRUTS BASED ON THEIR INDIVIDUAL REQUIREMENTS. SEE CHART TO DETERMINE NUMBER OF STRUTS & THEIR LOCATION ON THE DOOR.

REMEMBER THAT ALL STEEL DOORS MUST HAVE ADDITIONAL TOP SECTION REINFORCEMENT WHEN AN ELECTRIC OPERATOR IS USED.

STEP 11 AFTER MOUNTING HARDWARE & APPLYING BOTTOM SEAL PLACE BOTTOM SECTION IN OPENING, HOLD IN PLACE BY DRIVING A NAIL IN THE JAMB AND BENDING OVER THE SECTION. REMEMBER TO LEVEL THIS SECTION.

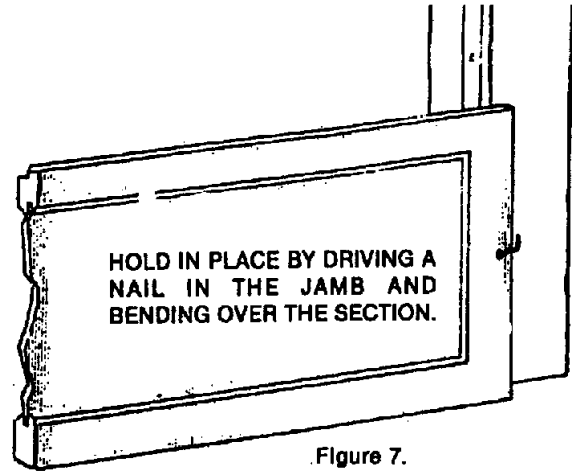
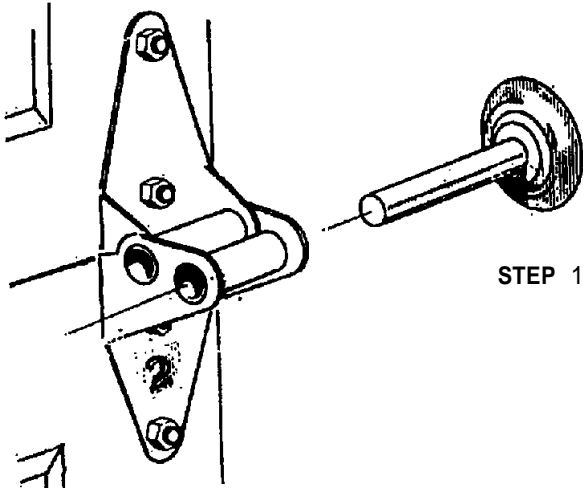


Figure 7.

STEP 12 HARDWARING THE SECOND SECTION: SEE STEP 12A, 12B FOR LOCK HOLE DRILLING, SPACING AND SIZE.

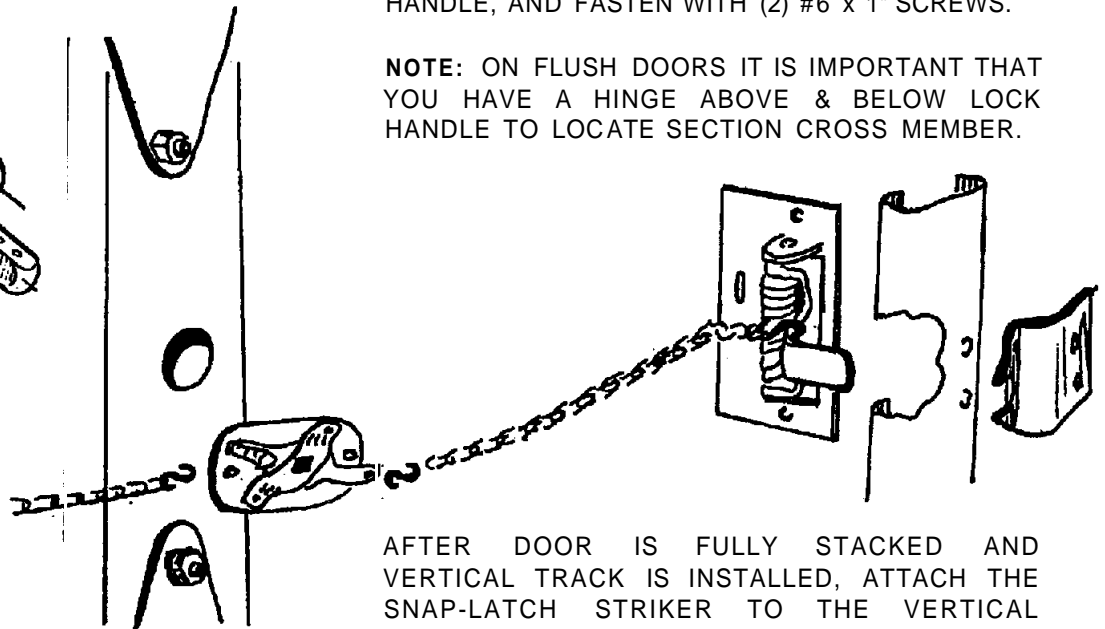
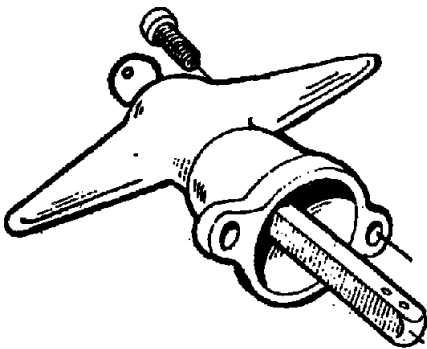


STEP 12A THE LOCKING DEVICE SHOULD NOW BE APPLIED TO THE #2 SECTION, BEFORE STACKING SECTION. YOU MAY HAVE EITHER OF TWO TYPES OF LOCKING DEVICES.

TYPE 1. WOOD DOORS:

A KEY-IN-HANDLE LOCK REQUIRES A 7/8" HOLE IN THE CENTER OF SECTION BETWEEN THE UPPER AND LOWER INTERMEDIATE #1 HINGES. SECURE THE OUTSIDE HANDLE WITH #8 x 1" SCREWS. INSIDE SWIVEL FIT OVER THE SHAFT OF LOCK HANDLE, AND FASTEN WITH (2) #6 x 1" SCREWS.

NOTE: ON FLUSH DOORS IT IS IMPORTANT THAT YOU HAVE A HINGE ABOVE & BELOW LOCK HANDLE TO LOCATE SECTION CROSS MEMBER.



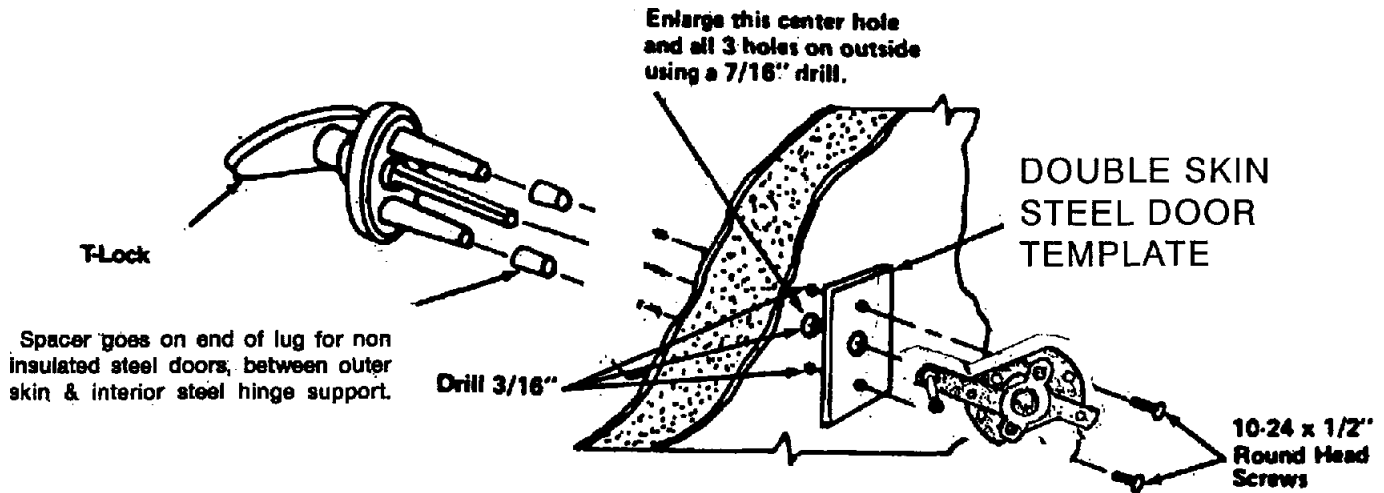
AFTER DOOR IS FULLY STACKED AND VERTICAL TRACK IS INSTALLED, ATTACH THE SNAP-LATCH STRIKER TO THE VERTICAL TRACK WITH (2) 1/4" x 5/8" BOLTS AND NUTS IN HOLES IN VERTICAL TRACK. THEN ATTACH THE SPRING-LOADED SNAP-LATCH TO THE SECTION END WITH 1/4" x 1" LAGS OR SHEET METAL SCREWS. FASTEN THE SASH CHAIN TO THE SNAP-LATCH AND INSIDE SWIVEL WITH SMALL "S" HOOKS.

STEP 12B TYPE 2. STEEL DOORS:

THE KEY-IN-HANDLE LOCK REQUIRES 3 HOLES, 7/16" IN DIAMETER. USE TEMPLATE ON BACK COVER OF MANUAL FOR HOLE LOCATION.

FOR SINGLE SKIN STEEL DOORS, MAKE SURE YOUR HOLES ALIGN WITH INTERIOR SUPPORT FRAME.

FOR DOUBLE SKIN DOORS, DRILL THE TOP & BOTTOM HOLES WITH A 3/16" DRILL FIRST. THEN DRILL WITH THE 7/16" DRILL ONLY TO THE INSIDE SURFACE OF THE INTERIOR SKIN.



STEEL DOORS

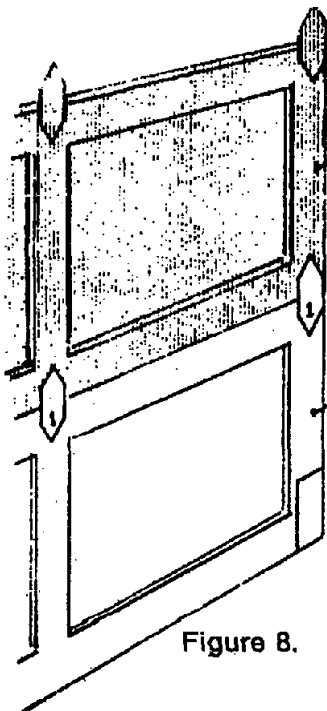


Figure 8.

STEP 13 HARDWAREING THE SECOND SECTION:

AFTER DRILLING LOCK HOLES AND MOUNTING LOCK HANDLES PLACE #2 SECTION ON TOP OF #1 SECTION MAKING SURE THAT THE SECTION JOINTS MEET PROPERLY. DRIVE NAIL IN JAMB AND BEND OVER TO HOLD IN PLACE.

NOW PLACE THE #2 HINGE, STAMPED ON THE LOWER LEAF OF HINGE, ON THE TOP CORNER OF SECTION. ALL THE CENTER HINGES WILL BE #1 HINGES. FASTEN THE HINGES ON TOP OF #1 SECTION TO THE CARRIAGE BOLTS ON THE BOTTOM OF #2 SECTION OR USE SHEET METAL SCREWS FOR STEEL DOORS.

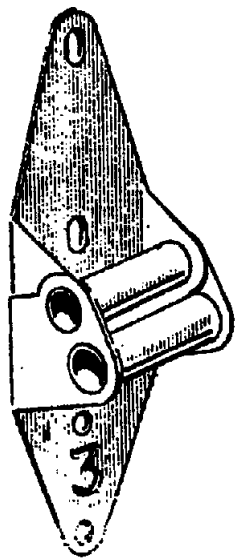
STEP 14 HARDWARE THE THIRD SECTION:

A. WOOD DOORS:

TAKE THE SECTION MARKED #3, APPLY THE 1/4" CARRIAGE BOLTS IN ALL PRE-DRILLED HOLES FOR THE HINGES, MAKING SURE THE HIGH SIDE OF SHIPLAP IS ON THE INSIDE OF GARAGE AND IS THE TOP OF SECTION.

A. STEEL DOORS:

SKIP STEP #14 & GO ON TO #15.



STEP 15 NOW PLACE THE #3 SECTION ON TOP OF #2 SECTION, MAKING SURE THE SECTION JOINTS ARE CENTERED. DRIVE A NAIL IN JAMB AND BEND OVER TO HOLD SECTION IN PLACE.

STEP 16 NOW PLACE THE #3 HINGES ON TOP CORNERS OF THE THIRD SECTION AND #1 HINGES ON ALL INTERMEDIATE LOCATIONS. FASTEN THE TOP OF THE SECOND SECTION TO THE BOTTOM OF THE THIRD SECTION WITH 1/4" NUTS OR SHEET METAL SCREWS.

STEP 17 A. FOR FOUR SECTION HIGH DOORS: PLACE TOP SECTION ON THE THIRD SECTION MAKING SURE THE SECTION JOINTS ARE CENTERED. DRIVE NAILS INTO JAMB AND BEND OVER THE SECTION ENDS TO HOLD IN PLACE.

B. FOR FIVE SECTION HIGH DOORS:

APPLY THE #4 HINGES TO THE TOP CORNERS OF THE FOURTH SECTION AND #1 HINGES ON ALL INTERMEDIATE LOCATIONS. PLACE THE FOURTH SECTION ON TOP OF THE THIRD SECTION MAKING SURE SECTION JOINTS ARE CENTERED. DRIVE NAILS INTO JAMBS AND BEND OVER ENDS OF SECTION TO HOLD IN PLACE.

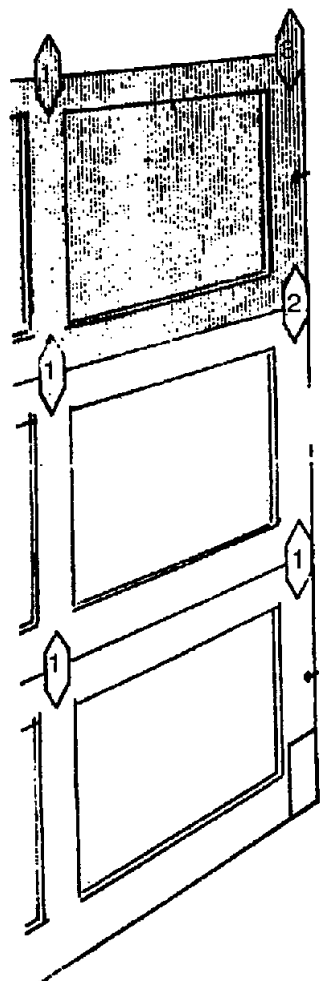


Figure 9

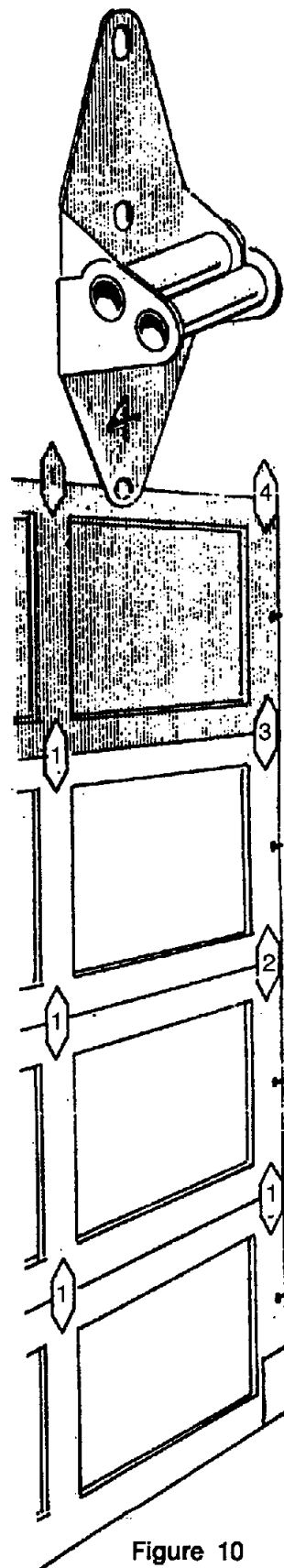


Figure 10

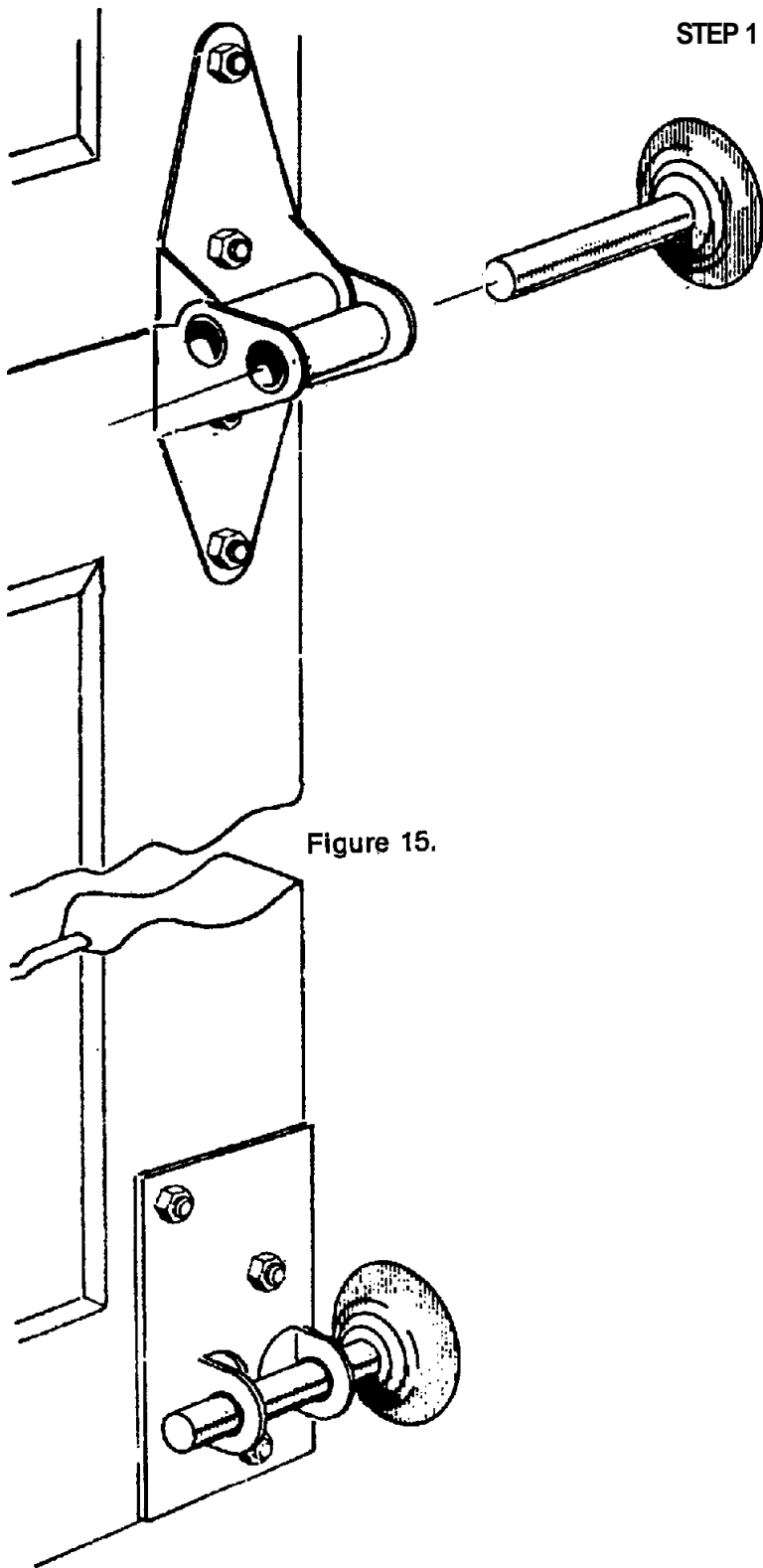


Figure 15.

STEP 18 CHECK TO SEE THAT ALL NUTS ON THE BOTTOM BRACKET AND HINGES ARE TIGHT.

INSERT THE ROLLERS IN THE BOTTOM BRACKET AND IN THE END HINGES OF ALL SECTIONS. MAKE SURE THE ROLLERS ARE IN THE FARTHEST HOLE IN THE BRACKET FROM THE DOOR.

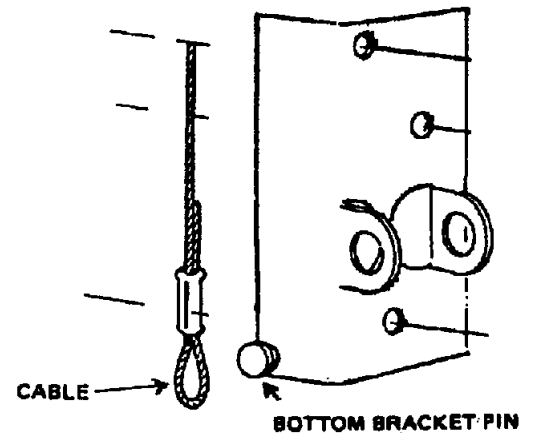


Figure 16.

STEP 19 PLACE THE LOOP OF THE CABLE ASSEMBLY OVER THE BOTTOM BRACKET PIN AND RAISE CABLE UP OVER THE -#3, (4) HINGE ROLLER ON BOTH SIDES.

STEP 20 TAKE THE STRAIGHT VERTICAL TRACK AND PLACE OVER ROLLERS ON BOTH SIDES.
NOTE: REFER TO STEP 12 FOR MOUNTING LOCKCATCHES.

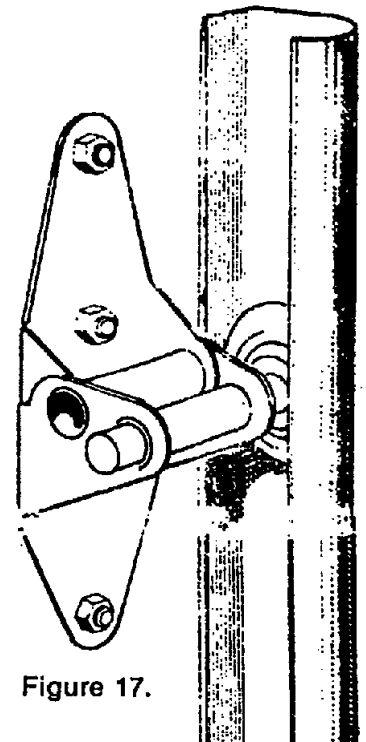


Figure 17.

STEP 21 MAINTAIN A 1/2" GAP BETWEEN THE VERTICAL TRACK AND THE EDGE OF THE SECTION AND FASTEN WITH 5/16" LAG BOLTS TO WOODEN JAMB. YOU MAY WANT TO USE A SMALL PILOT DRILL TO PREVENT SPLITTING. IF THE JAMBS HAVE BEEN COVERED WITH DRYWALL YOU WILL NEED LONGER 5/16" LAGS (NOT SUPPLIED).

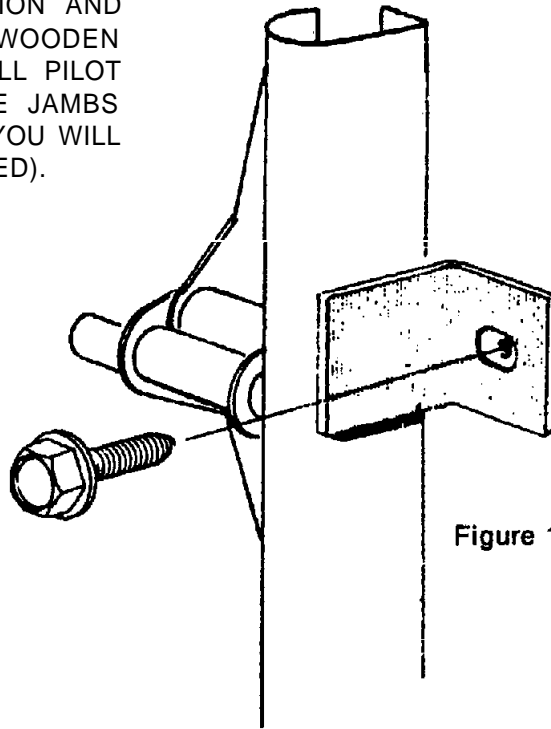


Figure 18.

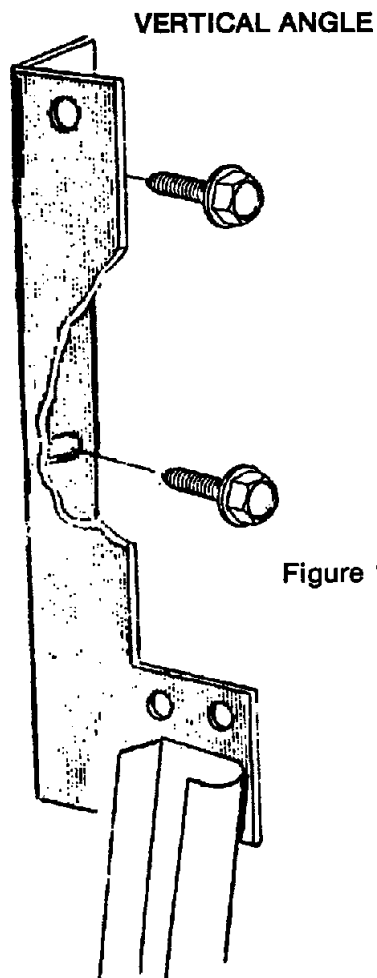


Figure 19.

STEP 22 FASTEN THE TOP VERTICAL ANGLE WITH 5/16" LAG BOLTS, MAKING SURE IT IS PLUMB AND SQUARE WITH TOP OF LEVEL DOOR.

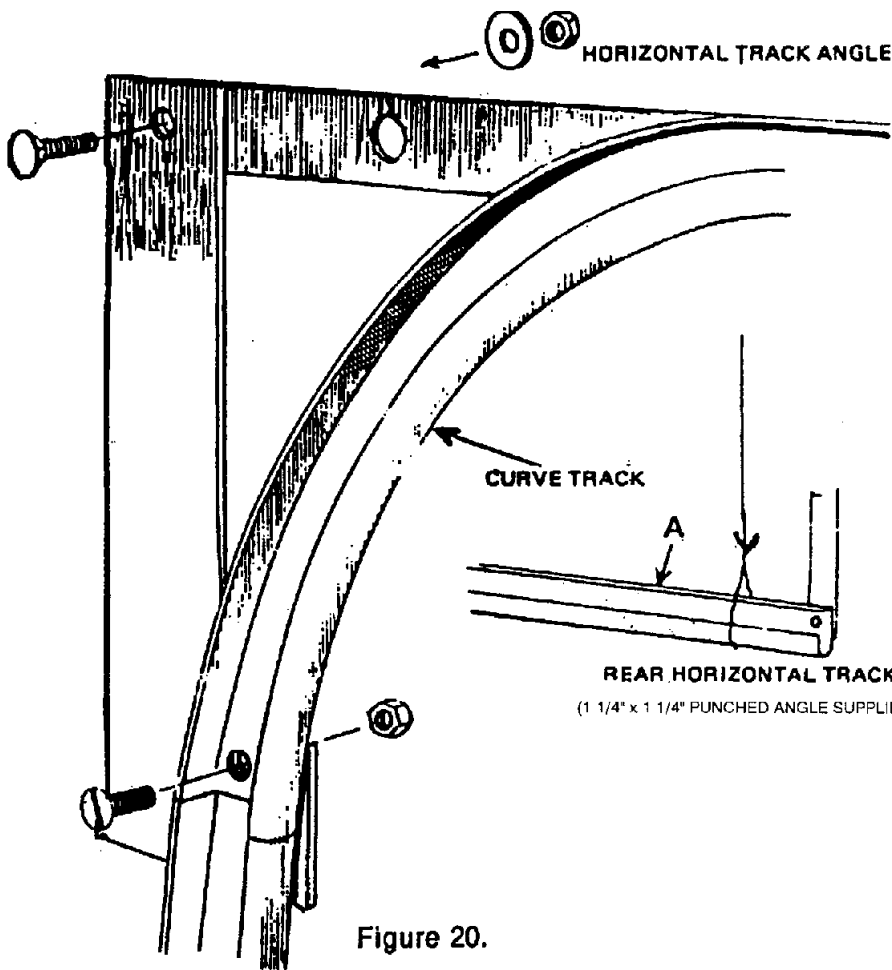


Figure 20.

STEP 23 TEMPORARILY SUSPEND THE REAR OF HORIZONTAL TRACK TO RAFTERS, SECURE HORIZONTAL ANGLE TO VERTICAL ANGLE WITH 5/16" x 1 BOLT, NUT AND WASHER.

ATTACH THE LOWER CURVE OF HORIZONTAL TRACK TOO THE VERTICAL ANGLE BRACKET WITH TWO 1/4" x 5/8" BOLTS, NUTS AND WASHERS.

STEP 24 ASSEMBLE REAR HANGS TO RAFTERS FROM THE END OF HORIZONTAL TRACKS, MAKING SURE THEY ARE LEVEL AND SQUARE TO THE FRONT WALL, AND THAT THERE IS A KICKBRACE TO PREVENT SIDE MOVEMENT.

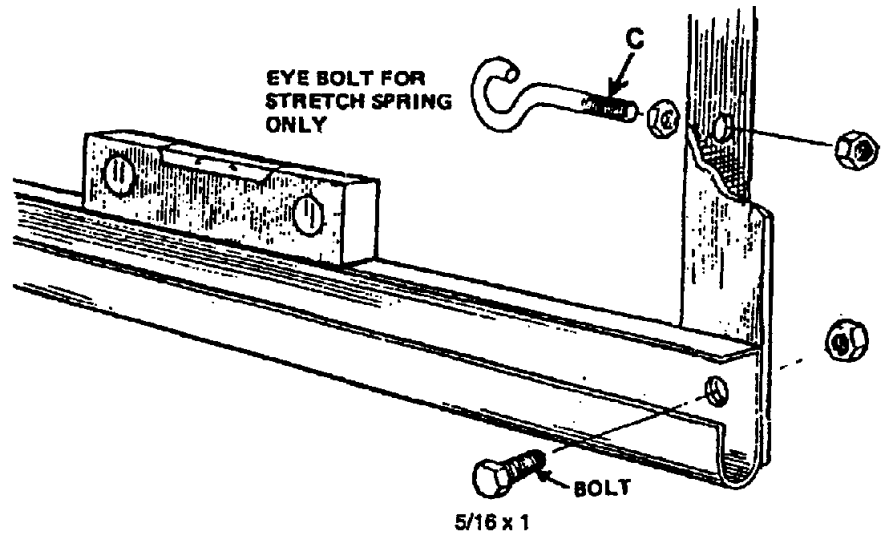
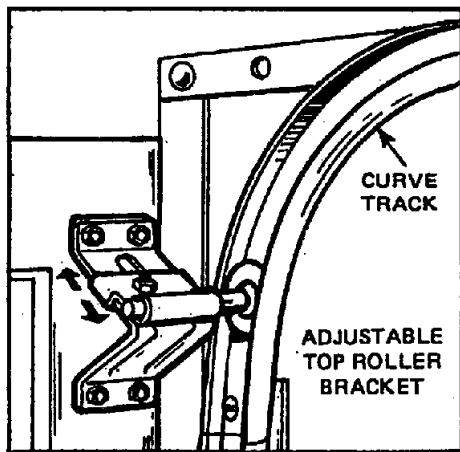


Figure 21.

STEP 25 ATTACH THE TOP ROLLER CARRIER TO TOP CORNER OF TOP SECTION BY PLACING ROLLER IN TUBE AND PUTTING ROLLER IN TRACK. POSITION BRACKET SO THAT TOP SECTION STAYS AGAINST THE DOOR STOP OR FRAME. LOCATE HOLE TO BE DRILLED WITH 1/4" DRILL, AND FASTEN WITH 1/4" CARRIAGE BOLTS AND NUTS OR WITH SHEET METAL SCREWS FOR STEEL DOORS.

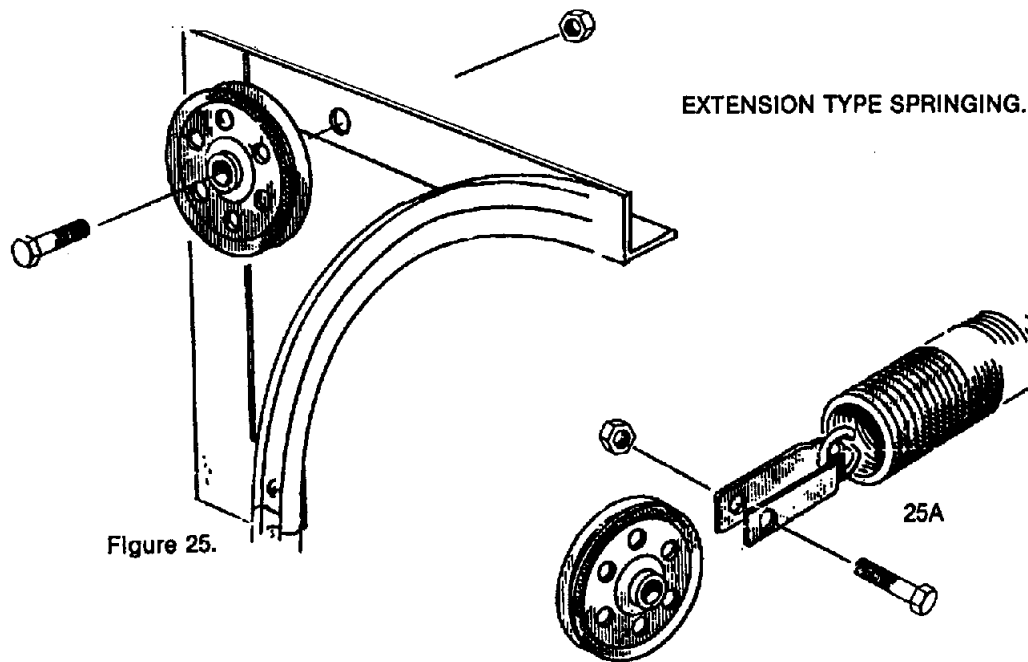
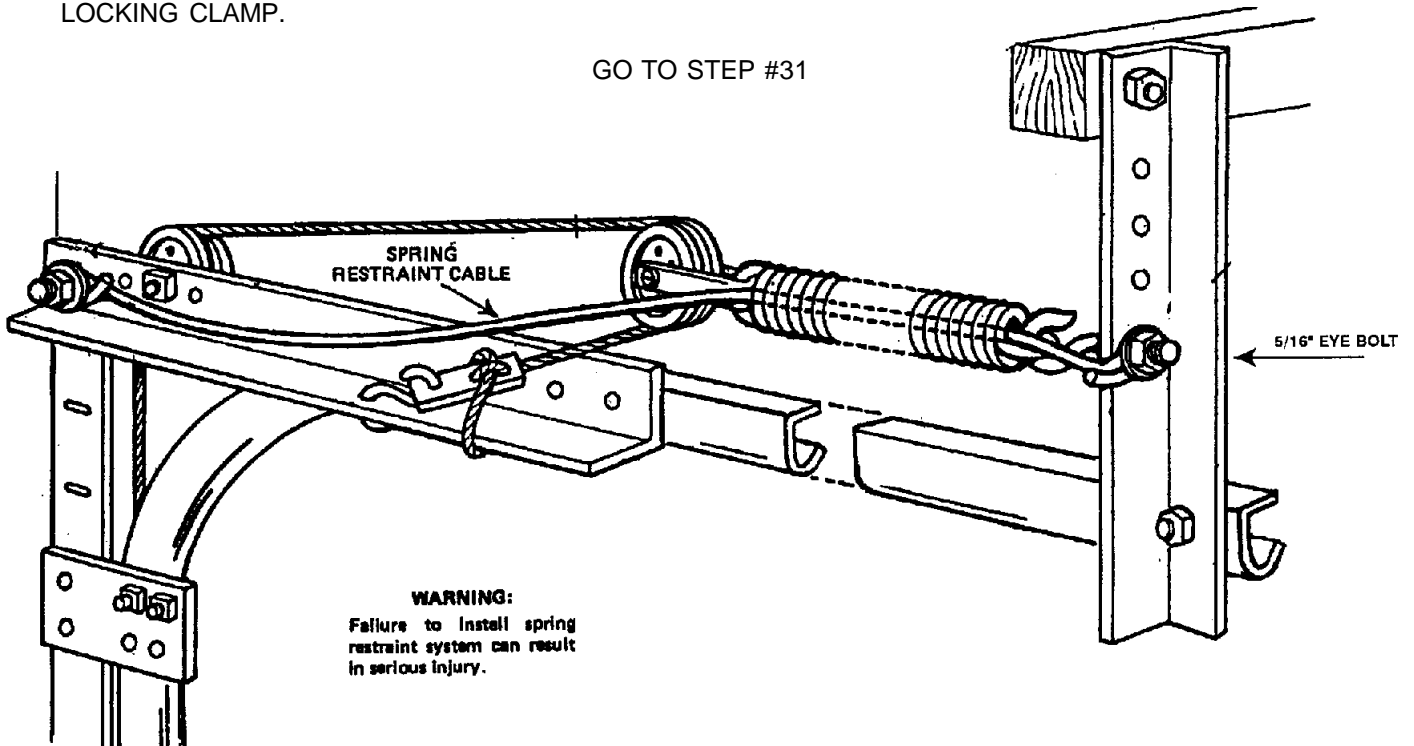


Figure 25.

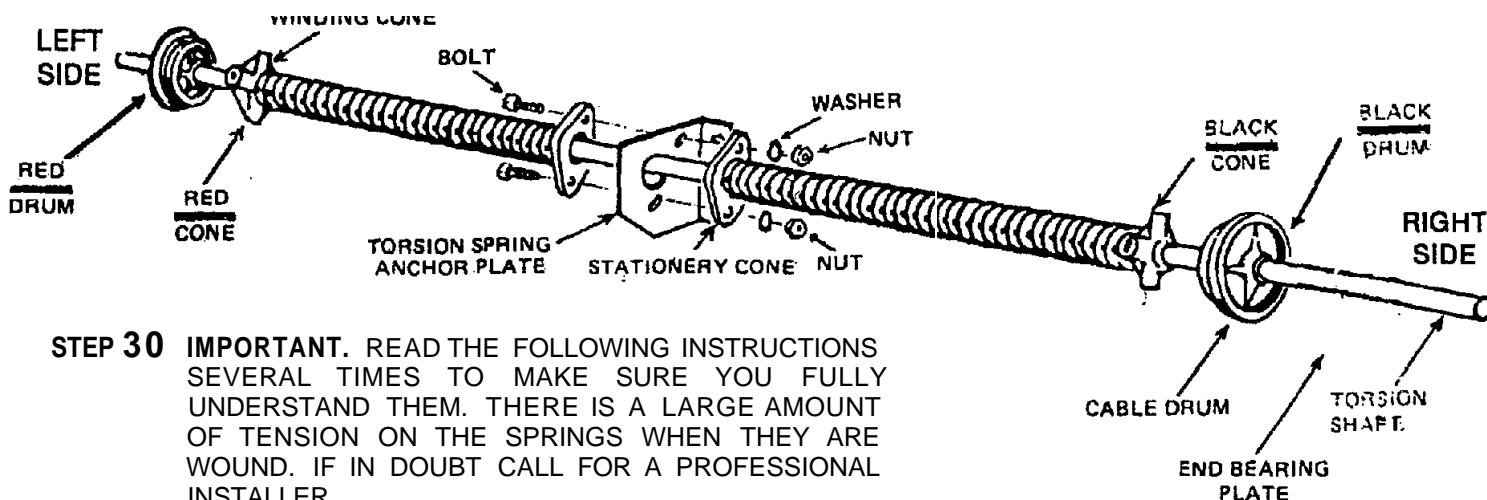
- STEP 26** ON EXTENSION TYPE SPRING, ASSEMBLE THE SHEAVE PULLEY YOKE THRU THE LOOP OF THE EXTENSION SPRING, THEN FASTEN THE SHEAVE PULLEY TO THE YOKE WITH 3/8" x 1-1/2" BOLT AND NUT (DRAWING #25A). FASTEN THE 5/16" EYE BOLT TO THE HORIZONTAL HANGS (DRAWING #21) WITH (2) 5/16" NUTS. PUT THE SPRING LOOP IN THE EYE BOLT AND CLOSE THE EYE BOLT WITH VICE GRIPS.
- STEP 27** FASTEN THE STATIONARY SHEAVE PULLEY TO THE HORIZONTAL TRACK ANGLE WITH A 3/8" x 1-1/2" BOLT IN THE HORIZONTAL ANGLE HOLE CLOSEST TO HEADER, MAKING SURE PULLEY TURNS FREE.
- STEP 28** REMOVE NAILS THAT ARE HOLDING SECTION IN PLACE, UNLOCK DOOR AND RAISE DOOR TO THE FULL OPEN POSITION. PROP DOOR IN OPEN POSITION WITH LOCKING PLIERS.
- STEP 29** RUN LOOSE CABLE END OVER THE STATIONARY PULLEY THEN THRU THE SPRING PULLEY. THREAD CABLE END INTO THE THREE-HOLE ADJUSTABLE CLIP AS SHOWN, AND TO HORIZONTAL ANGLE WITH LARGE "S" HOOKS. MAKE SURE BOTH CABLES HAVE EQUAL TENSION ON BOTH SIDES. RESTRAINING CABLE TO RUN THROUGH LENGTH OF EXTENSION SPRING. THE RESTRAINING CABLE ENDS TO BACK HANG & HEADER OR TOP OF TRACK. REMOVE PROPS AND LOCKING CLAMP.

GO TO STEP #31



WARNING:
Failure to install spring restraint system can result in serious injury.

INSTALLATION INSTRUCTIONS FOR TORSION ASSEMBLY



STEP 30 IMPORTANT. READ THE FOLLOWING INSTRUCTIONS SEVERAL TIMES TO MAKE SURE YOU FULLY UNDERSTAND THEM. THERE IS A LARGE AMOUNT OF TENSION ON THE SPRINGS WHEN THEY ARE WOUND. IF IN DOUBT CALL FOR A PROFESSIONAL INSTALLER.

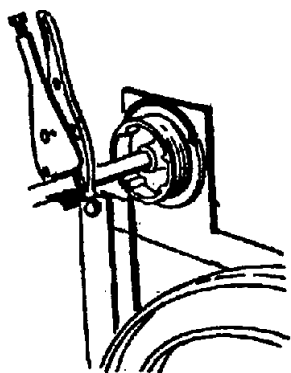


Figure 28.

LAY TORSION SPRING ON THE FLOOR, MAKING SURE THE BLACK CABLE DRUM AND THE BLACK SPRING CONE ARE ON THE SAME SIDE. ALSO CHECK THAT THE RED CABLE DRUM AND THE RED SPRING CONE ARE ON THE SAME SIDE. IF YOUR DOOR IS FURNISHED WITH ONE SPRING, MAKE SURE THE MATCHING SPRING CONE AND CABLE DRUM COLORS ARE ON THE SAME SIDE.

SLIDE THE END BEARINGS ONTO THE SHAFT AND LIFT THE SPRING ASSEMBLY ON TOP OF THE HORIZONTAL TRACK ANGLE. RED DRUM & SPRING SHOULD BE ON THE LEFT SIDE OF DOOR, WHEN STANDING INSIDE GARAGE & LOOKING AT THE DOOR & BLACK DRUM & SPRING ON THE RIGHT SIDE. NOTE: MAKE SURE THE INNER-HUB OF THE BEARING IS AGAINST THE CABLE DRUM. FASTEN THE BEARING PLATE TO THE HORIZONTAL TRACK WITH 5/16" x 1" BOLT AND WASHERS ON BOTH ENDS OF SHAFT.

MOVE SPRING ANCHOR PLATE OVER STUD, OR HEADER, IN CENTER OF DOOR. LEVEL THE SPRINGS AND FASTEN THE ANCHOR PLATE TO THE STUD OR JAMB PLATE. (MAKE SURE THE JAMB OR STUD IS A SOUND AND SECURE MEMBER). USE 5/16" x 1-1/2" LAGS TO ANCHOR THE PLATE. (NOTE: IF YOU ARE GOING THRU DRYWALL, OR PLASTER, A LONGER LAG MAY BE NEEDED).

MOVE CABLE DRUMS AGAINST THE END BEARING PLATE. ON ONE SIDE ATTACH THE CABLE THRU THE SLOT ON THE DRUM EDGE. (MAKE SURE THE CABLE END STOP IS SNUG AGAINST DRUM). TURN DRUM SO CABLE IS COMING BETWEEN WALL AND DRUM. TURN DRUM UNTIL CABLE IS TAUT. THEN TIGHTEN SET SCREWS ON DRUM TO THE SHAFT. CLAMP A PAIR OF VICE GRIPS ON THE SHAFT SO THAT THE SHAFT HAS NO MOVEMENT. (MAKE SURE THE CABLE IS STRAIGHT FROM THE BOTTOM BRACKET TO THE DRUM). REPEAT THIS PROCEDURE TO THE SECOND DRUM. MAKE SURE BOTH CABLES HAVE THE SAME TIGHTNESS.

MAKE SURE DOOR IS LOCKED OR SECURE BEFORE STARTING TO WIND SPRINGS. YOU WILL NOW WIND THE TORSION SPRINGS WITH (2) 1/2" x 18" STEEL RODS, (AVAILABLE AT THE FACTORY). WIND SPRINGS TOWARD THE CEILING, (OR UP),--THE AMOUNT OF TURNS THAT ARE MARKED ON THE TAG OF THE SPRING. (WHEN WINDING SPRINGS, **KEEP HANDS AWAY FROM SPRINGS AND BOLTS**). AFTER WINDING THE NUMBER OF TURNS REQUIRED, TIGHTEN THE SET SCREWS ON THE SPRING CONE. IF YOUR DOOR HAS TWO SPRINGS ALL SPRINGS ARE WOUND TOWARD THE CEILING, (OR UP). REPEAT THE SAME OPERATION TO SECOND SPRING. THEN RELEASE THE VICE GRIPS FROM THE SHAFT AND REMOVE ALL THE NAILS THAT ARE HOLDING THE SECTIONS IN PLACE.

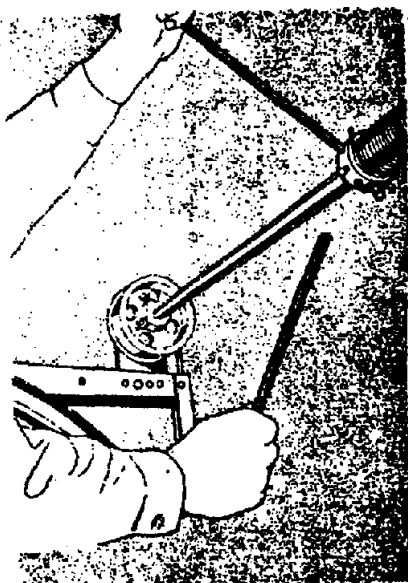


Figure 29.

STEP 31 ADJUSTING THE BACK HANGS

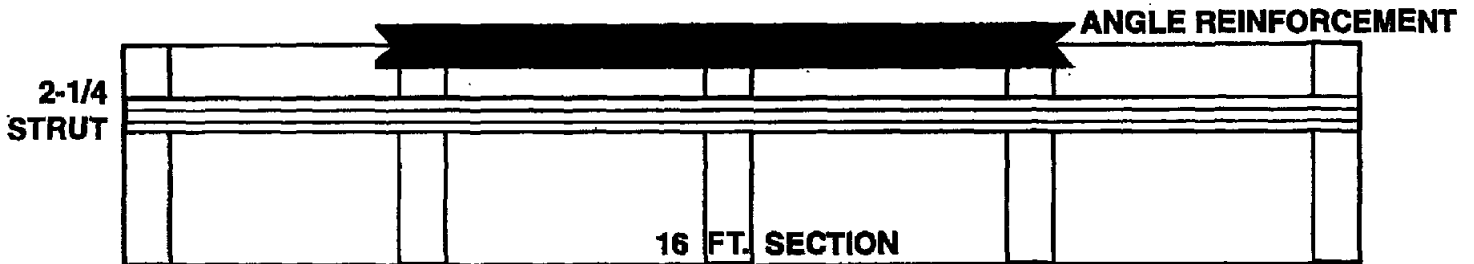
OPEN DOOR SLOWLY TO THE OPEN POSITION, CHECKING TO MAKE SURE SPACING BETWEEN HORIZONTAL TRACK AND DOOR ARE THE SAME ON BOTH SIDES OF DOOR, AND THAT THE ROLLERS ARE NOT BINDING. IF TRACK ADJUSTMENTS ARE NEEDED...

(TORSION TYPE SPRING). CLOSE THE DOOR AND ADJUST THE HANGS AND TRACK.
(EXTENSION TYPE SPRINGS). PROP DOOR IN OPEN POSITION AND UNHOOK THE EXTENSION CABLE FROM TRACK ANGLE & CLOSE DOOR. THEN ADJUST THE TRACK. AFTER THE ADJUSTMENTS, RE-OPEN THE DOOR & RE-FASTEN THE CABLE TO THE TRACK ANGLE. IF THE DOOR IS TRAVELING CROOKED, THE TENSION OF BOTH SPRINGS ARE NOT THE SAME. ADJUST BY MOVING THE CABLE CLIP FORWARD OR BACK, AS NEEDED.

STEP 32 IF DOOR SEEMS TOO FAST OR SLOW, ADJUST THE SPRINGS ACCORDINGLY. KEEP IN MIND THAT IF THE WOOD DOOR IS NOT PAINTED, ADDITIONAL WEIGHT WILL BE ADDED AFTER THE PAINT IS APPLIED.

STEP 33 ADJUST DOOR STOPS TO MEET THE DOOR.

STEP 34 ALL STEEL DOORS REQUIRE ADDITIONAL REINFORCEMENT OF TOP SECTION, WHEN AN ELECTRIC OPERATOR IS TO BE INSTALLED. THIS EXTRA MATERIAL WILL NOT BE SUPPLIED UNLESS SPECIFIED BY CUSTOMER. THE REINFORCEMENT USUALLY CONSISTS OF ONE PIECE OF 1-1/4 x 1-1/4 PUNCHED ANGLE MOUNTED ON THE TOP EDGE OF THE SECTION WITH A VERTICAL PIECE CONNECTING TO THE CENTER HINGES.



FAILURE TO REINFORCE TOP SECTION COULD RESULT IN PERMANENT DAMAGE TO TOP SECTION SHOULD THE DOOR MEET AN OBSTRUCTION DURING AUTOMATIC OPERATION. SAFETY TAGS & LABELS ARE PROVIDED AND SHOULD BE PLACED ON DOOR AT EYE LEVEL. DO NOT ASSUME THEY ARE NOT NECESSARY!

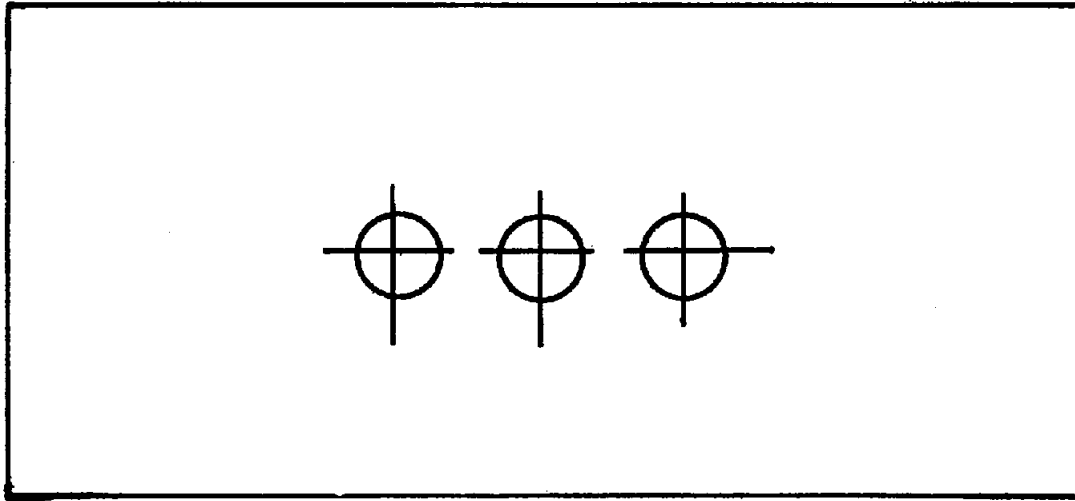
LIMITED WARRANTY

UNITED GARAGEDOOR CO. WARRANTS TO THE PURCHASER THAT ANY PART THEREOF WHICH PROVES TO BE DEFECTIVE WITHIN ONE YEAR FROM DATE OF PURCHASE WILL BE REPLACED TO THE DEALER WITHOUT CHARGE. THIS WARRANTY DOES NOT EXTEND BEYOND NORMAL WEAR AND TEAR, NOR TO DAMAGE BY CIRCUMSTANCES BEYOND THE MANUFACTURER'S CONTROL AND DOES NOT INCLUDE ANY REPLACEMENT LABOR.

IF ANY PART IS CLAIMED DEFECTIVE, SUCH CLAIM SHOULD BE REFERRED TO THE DEALER FROM WHOM THE DOOR WAS PURCHASED, AND SUCH DEALER WILL BE AUTHORIZED TO RETURN THE PART FOR INSPECTION. IF SUCH INSPECTION PROVES MATERIAL TO BE DEFECTIVE, REPLACEMENT WILL BE MADE DIRECT TO THE DEALER AT NO CHARGE.

ALL GUARANTEE IS NULL AND VOID UNLESS WOOD DOORS ARE PAINTED WITH ONE COAT OF PRIME PAINT AND AT LEAST ONE COAT OF TOP QUALITY EXTERIOR PAINT ON THE INSIDE AND OUTSIDE AND ALL EDGES WITHIN ONE WEEK OF INSTALLATION OR DELIVERY.

THIS WARRANTY IS EXPRESSED IN LIEU OF ALL WARRANTY EXPRESSED OR IMPLIED AND ALL OTHER OBLIGATIONS OR LIABILITIES OF UNITED GARAGEDOOR AND IT NEITHER ASSUMES OR AUTHORIZES ANY PERSON TO ASSUME FOR US ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SAID DOORS



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DATE OF INSTALLATION: ____ / ____ / ____

DEALER:

NOTES: _____

