



WILSON DOORS

Installation Manual

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FOREWORD

The purpose of this instruction manual is to make the assembly of your Wilson Bifold Door as simple and speedy as possible. By using our past 40 years of experience, we feel you find the assembly and installation to be quite smooth and simple compared to other doors the same size. Please follow our suggestion and see that the job superintendent receives a copy of this prior to the door's arrival.

This instruction manual has been designed to be used by persons in the construction trade. It is assumed that construction procedures accepted by the industry will be followed in areas not detailed and for general safety precautions. We realize that no two installations are the same; and if any questions should arise on your particular installation, please feel free to call 262-723-6869 and ask for customer service. Out of state CALL TOLL FREE 800-558-5974.

Due to continuing development to improve our doors, specifications are subject to change at any time without notice.

SAFETY SAFETY SAFETY SAFETY

Wilson Doors, Inc. considers safety to be of the utmost importance.

We've designed and manufactured the door with numerous safety devices.

THE MOST IMPORTANT FACTOR IN THE SAFE OPERATION OF THE WILSON BIFOLD DOOR, HOWEVER, IS THE OPERATOR. The door is only as safe as the person using it. The operator should be fully informed and trained in the usage and operation of the Wilson Bifold Door.

When used and maintained as designed by the manufacturer, the Wilson Bifold Door will give you years of safe, trouble-free service.

Should you have any questions regarding the use and/or maintenance of the Wilson Door, call customer service at 800-558-5974.

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WARNINGS AND CAUTIONS

Statements in this manual preceded by the following words are of special significance.

WARNING

Means there is the possibility of personal injury to you or others.

CAUTION

Means there is the possibility of damage to the door.

We recommend that you take special notice of these statements. Read them carefully before proceeding with door assembly.

TOOLS AND EQUIPMENT

- Forklift or crane for unloading and lifting door into place. It should be capable of lifting two (2) feet higher than overall height of door. For doors over 60 feet wide, a crane is recommended.
- Transit level
- Wrenches:
 - 7/16 combination
 - 9/16 combination
 - 5/8 combination
 - 3/4 combination
 - 1-1/8 combination (on large doors)
 - 1/4 drive ratchet
 - 7/16 socket
 - 1/2 drive ratchet
 - 1/2 socket
 - 9/16 socket
 - 3/4 socket
 - 1-1/8 socket (on large doors)
 - 9/16 deep socket
- Straight blade screwdriver
- Wire cutter
- Pliers
- Allen wrenches
- Tape ruler
- Two (2) C-clamps or C-clamp vice grips
- 1/4" exterior plastic wire ties, 1 dozen (12)
- Two (2) 2" x 4" x 12" pieces of wood for each top hinge of your door.

I. PREPARING THE OPENING

The surface in front of the door opening should be cleared of all obstacles and be as level as possible for a distance of two (2) feet farther than that of the height of the door.

Example: A door 1960 hinge height would have a surface cleared 2160 out in front of the opening. The door will be assembled lying face down in this area so the smoother the surface, the easier it will be to align door frames. Note: On doors over 2260 hinge height it is extremely important to have a smooth working surface or it will drastically increase assembly time. **SEE Figure 1.**

The header should be ready for the door when it arrives per specifications sent out with original order. If any questions should arise, please call the office at 800-558-5974 and ask for customer service.

Please have your building ready for the door when it arrives. Again if you have any questions, CALL! The driver will not stand around while you finish your opening, and you will lose the supervision.

The jamb-track, if specified to be an H-beam, should be in place and ready for the door. Take care to set jamb flush with header or poor seal will occur at the top of the door in the jamb area. **SEE Figure 2.** If the jamb-track is to receive an angle iron, be sure it is set flush and tight up to header. If attaching angle to wood. Do Not Use Lag bolts; use only carriage bolts on 20 centers. **SEE Figure 3, Page 11.** Refer to production

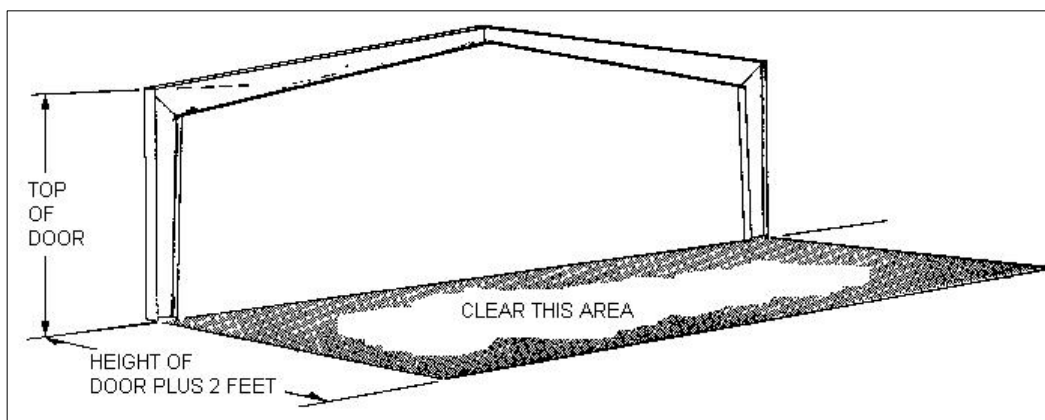


Figure 1 Preparing surface for door assembly

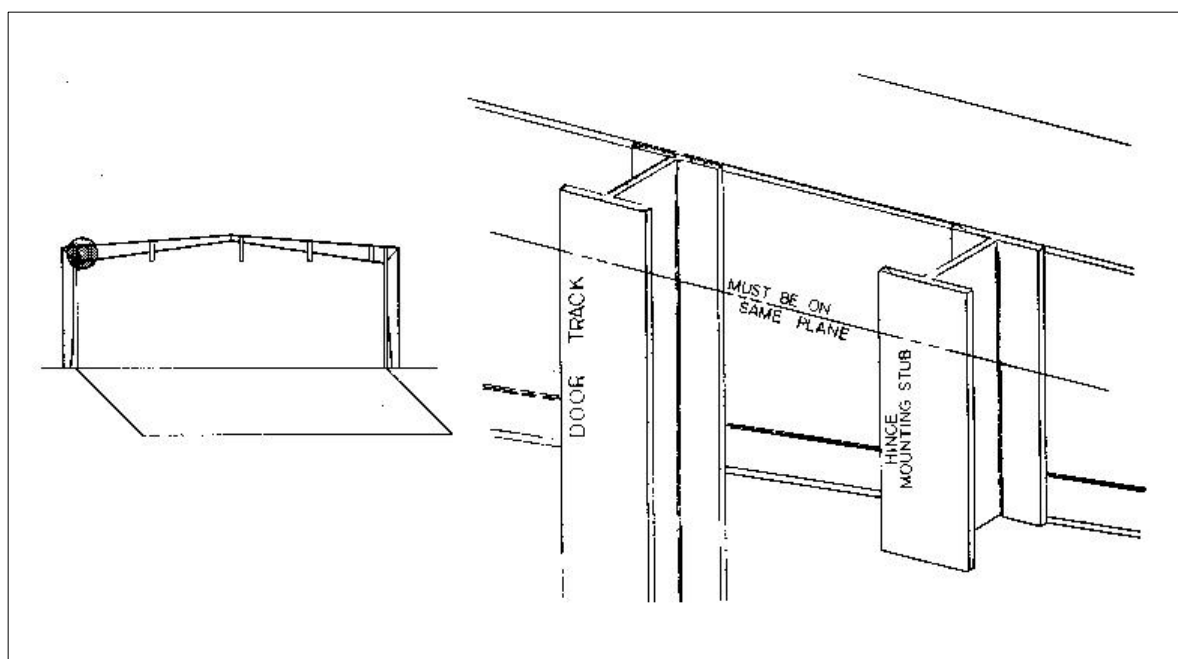


Figure 2 Door track and hinge-mounting surface

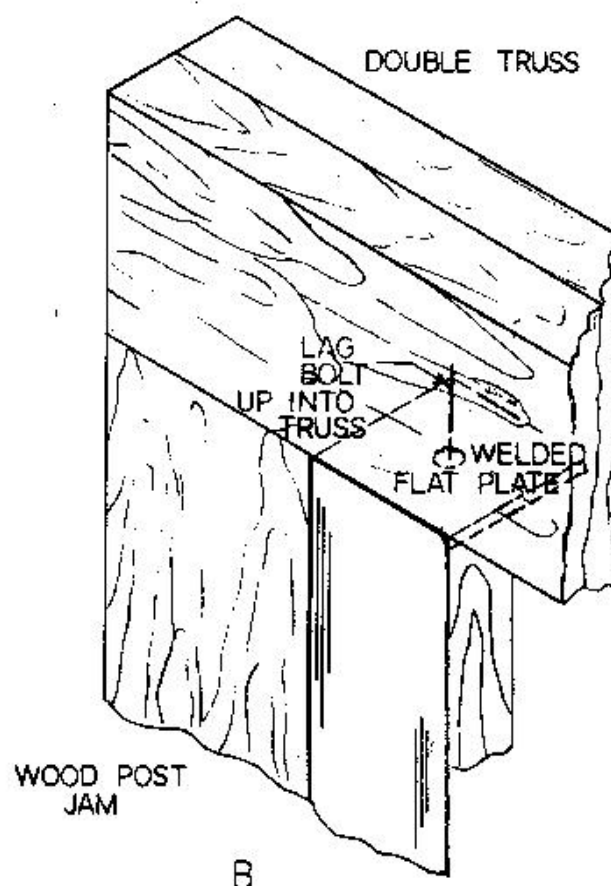
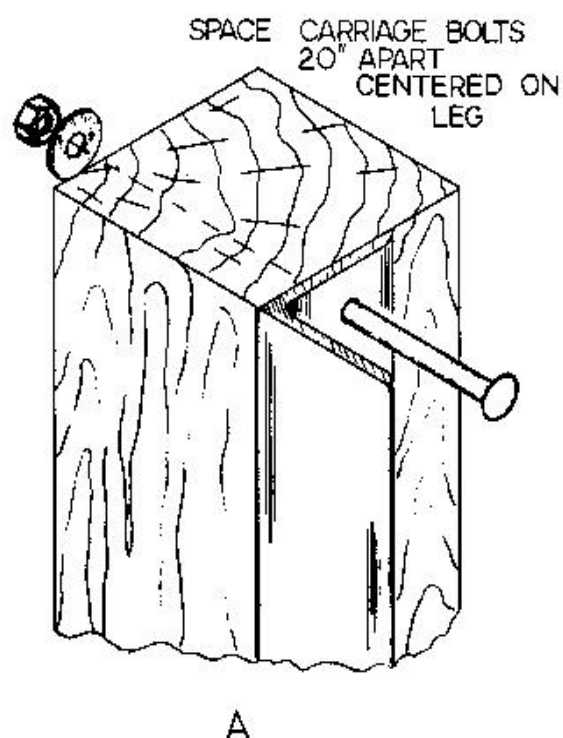
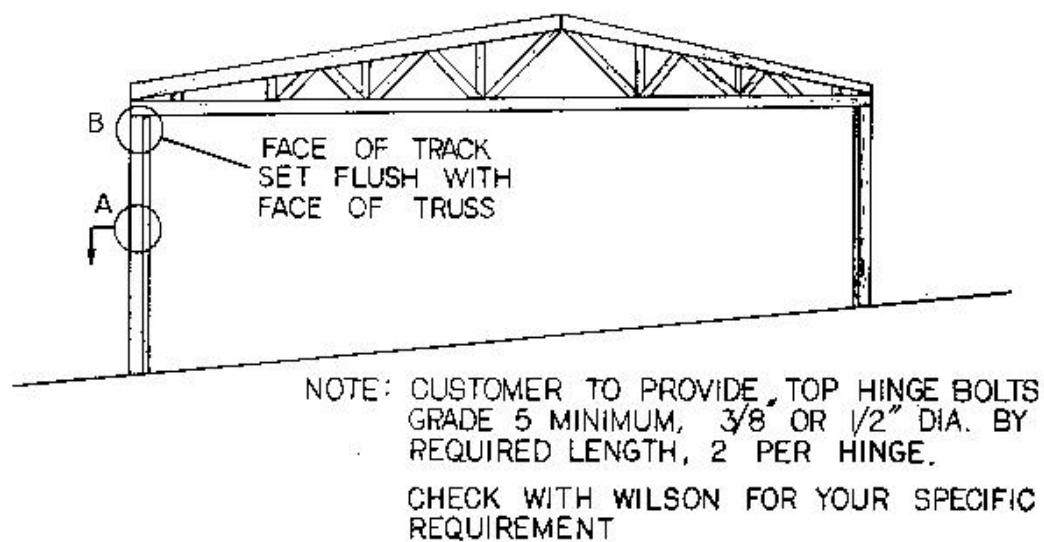


Figure 3 Attaching track to wood post building

prints sent for your approval for more specific details. The sheeting, if installed above door on header before door is installed, should be left loose on the bottom. A rubber seal will go up under this sheet later. Leave all trim off around door opening. You will have to go back up and sheet the door anyway so the trim can be put on then.

NOTE

We strongly recommend that the sheeting be left completely off end wall where door will be installed. The door will be sheeted after it is stood up and building sheeting can easily be attached at that time.

II. UNLOADING AND PLACING FRAMES IN PLACE

You will need a forklift or overhead-lifting device of some sort to lift the door frames off the trailer. Use a

lifting device that will handle the weight of the door and will lift two (2) feet higher than the top of the hinge. It can also be used later to stand the door in place.

Note: Doors 40' X 14' and smaller can be unloaded by hand using a crew of six (6) men.

Doors can be built in full width without being spliced if shipping allows. If your door was built without being spliced you will need a fork truck to handle unloading.

The driver will assist in unloading the trailer. Follow his advice and have at least a four (4) man crew to work with him.

The door frames are marked on the outside ends as to their location viewed from the outside looking in. **SEE Figure 4.** Start with a bottom first, preferably the section with the service door if so equipped, and lay it in place face down in front of the opening with the bottom roller up to the track and wind pin hooked on back side. **SEE Figure 5.** Do the same with the other bottom section.

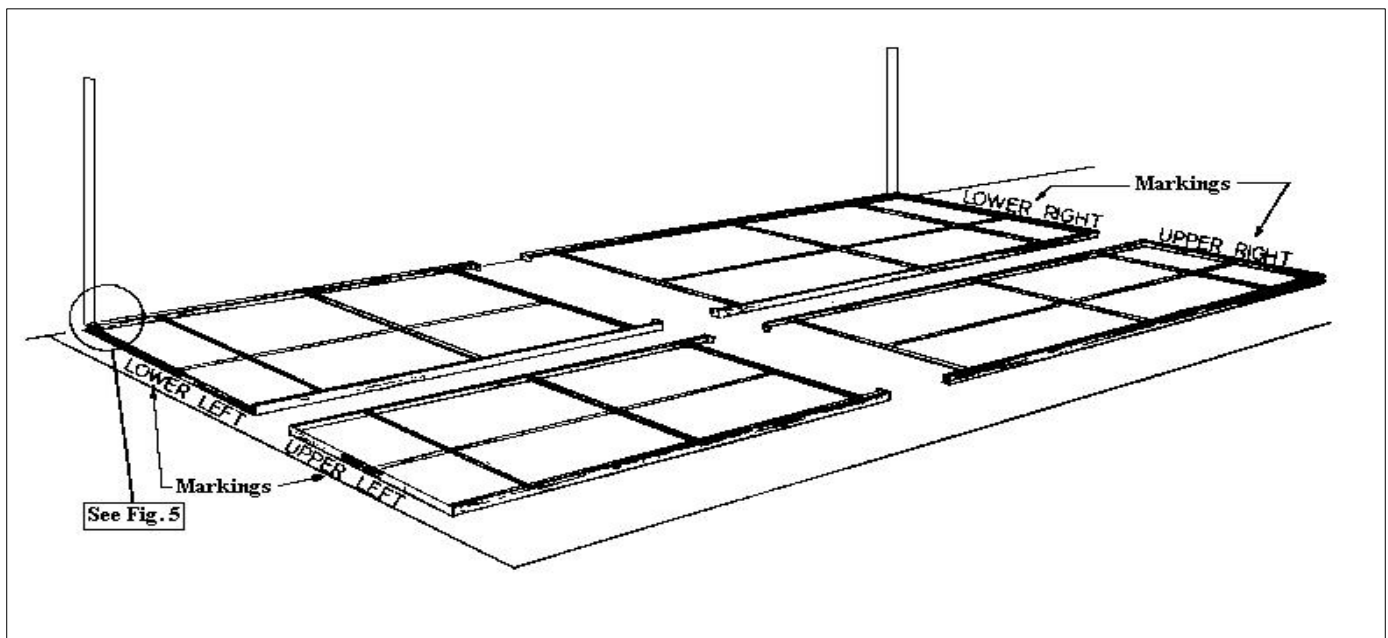


Figure 4 Positioning door frames for assembly

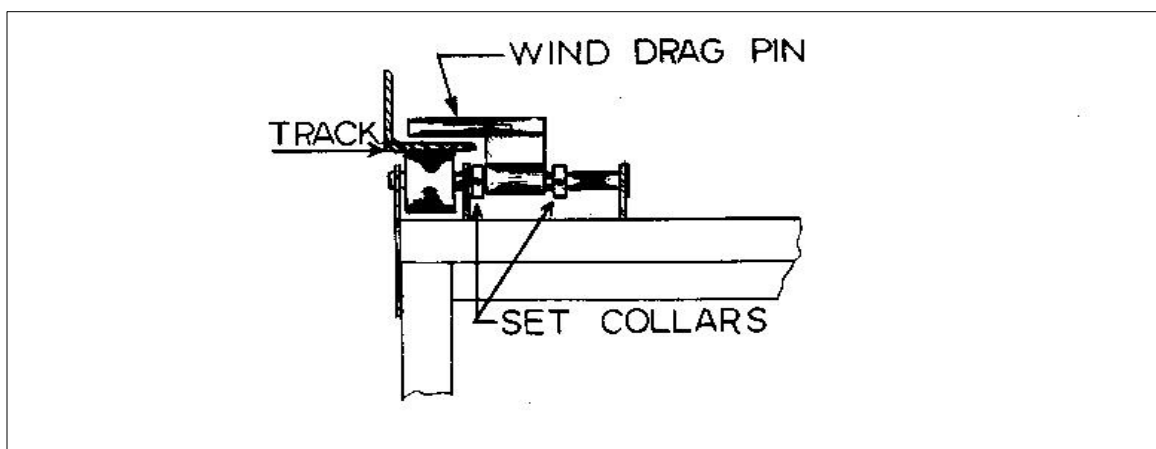


Figure 5 Positioning door frames for assembly

Before bolting sections together

On bottom sections the center drive shaft must be slid in place, keeping the cable tubes in line from one door section to the next. **SEE Figure 6.**

CAUTION

Care must be taken not to scratch or mar the service door when so equipped. The top sections can now be placed in their respective positions.

NOTE

Some doors are shipped without being spliced in width so the above assembly will not be required.

III. DOOR ASSEMBLY

A. Bolt Bottom Sections Together

1. If door is not spliced in height (22600 top of hinge and under), proceed to Step 2. Doors that are spliced in height will require assembly of the sections. Sections are clearly marked for ease of assembly.

It is important that the frame be level when assembling or the sections could end up with a bow in them. Align the frames that go together and slide them together being sure no foreign material gets on the mating surfaces. Take care to keep frames sliding together evenly. (Don't let one end slide all the way in before the other.) **SEE Figure 7.**

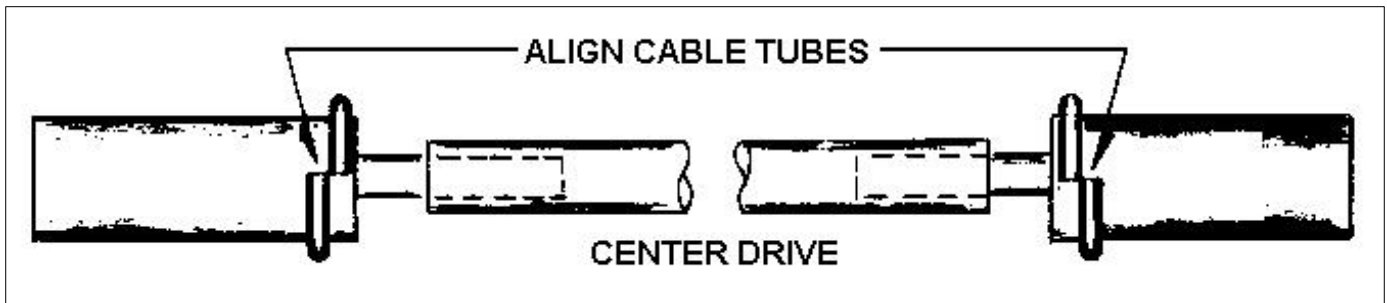


Figure 6 Aligning drive shafts and installing center drive

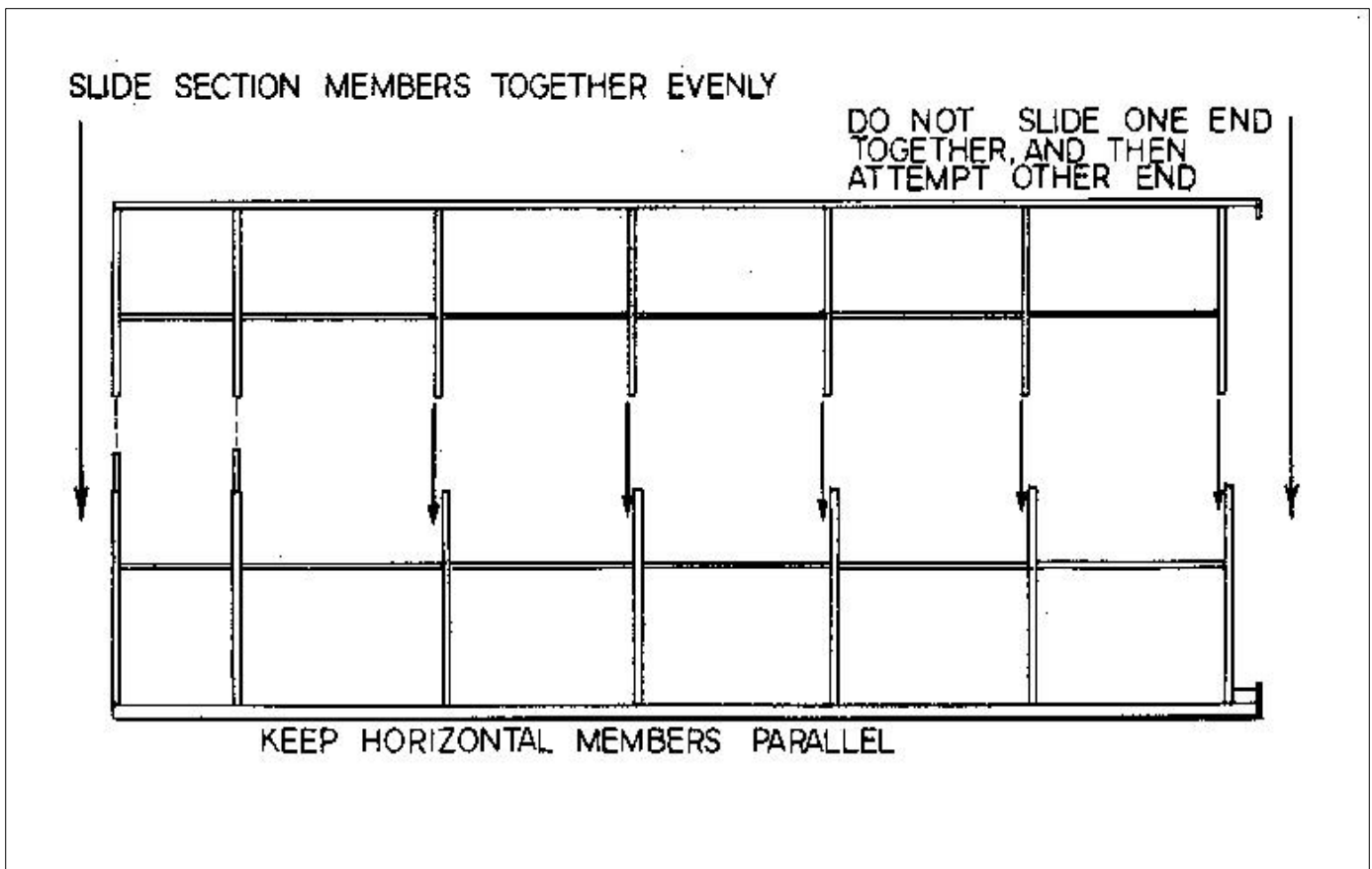


Figure 7 Assembling sections on vertically spliced doors

Once together check for bowing and then bolt together. **SEE Figure 8.** The flat head bolts on the front side door can be installed after the door is standing in the opening. **SEE Figure 9.**

2. Pull bottom sections together and start aligning splice bolt holes and installing bolts. Care should be

taken to be sure all splice plates are clean and all burrs removed. All bolts require flat washers on both sides. **SEE Figure 10 Page 15.** Do not tighten any bolts until all are started. Torque bolts to recommended specification. Refer to torque chart. **SEE Figure 11, Page 15.**

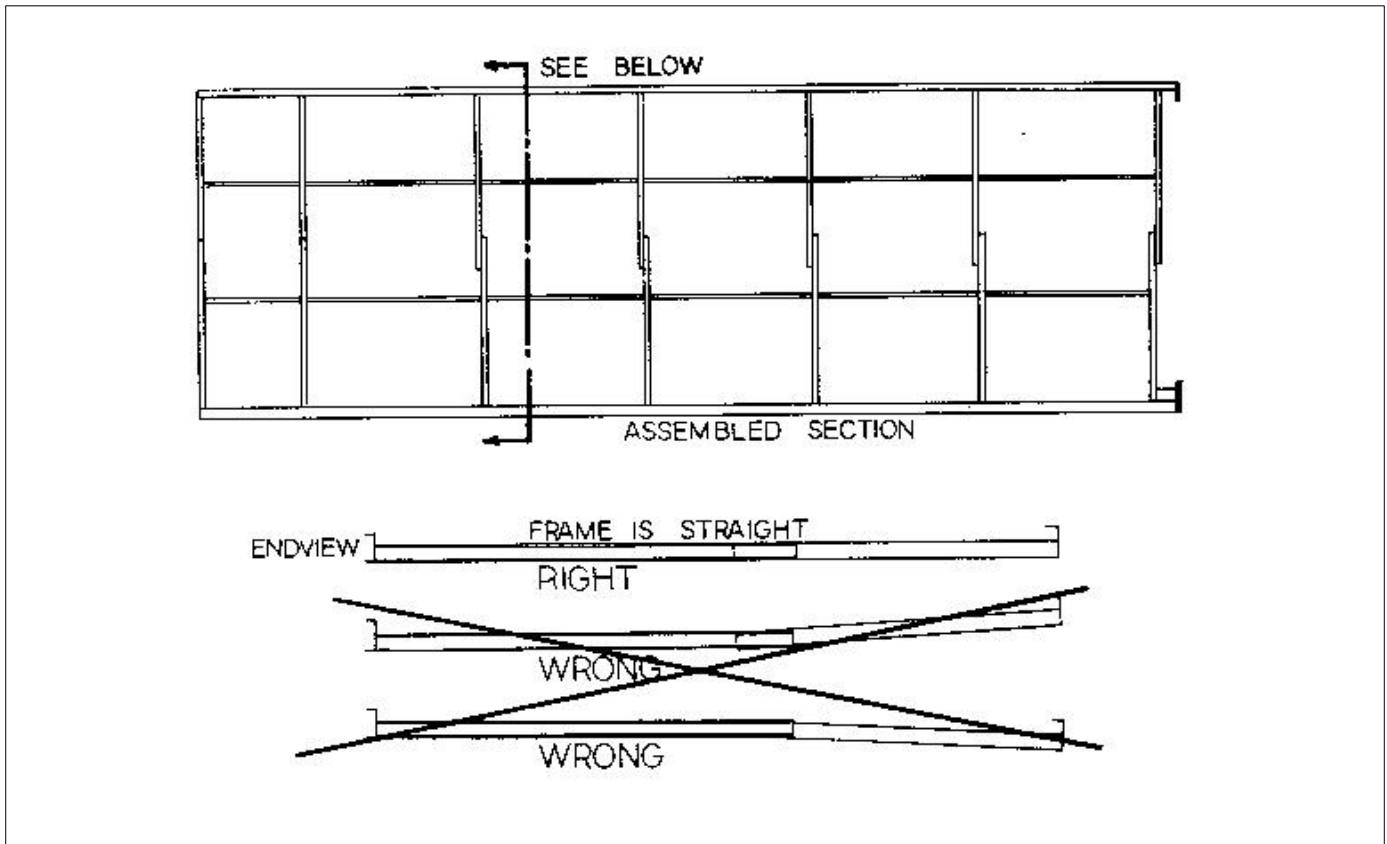


Figure 8 Checking for bow in sections

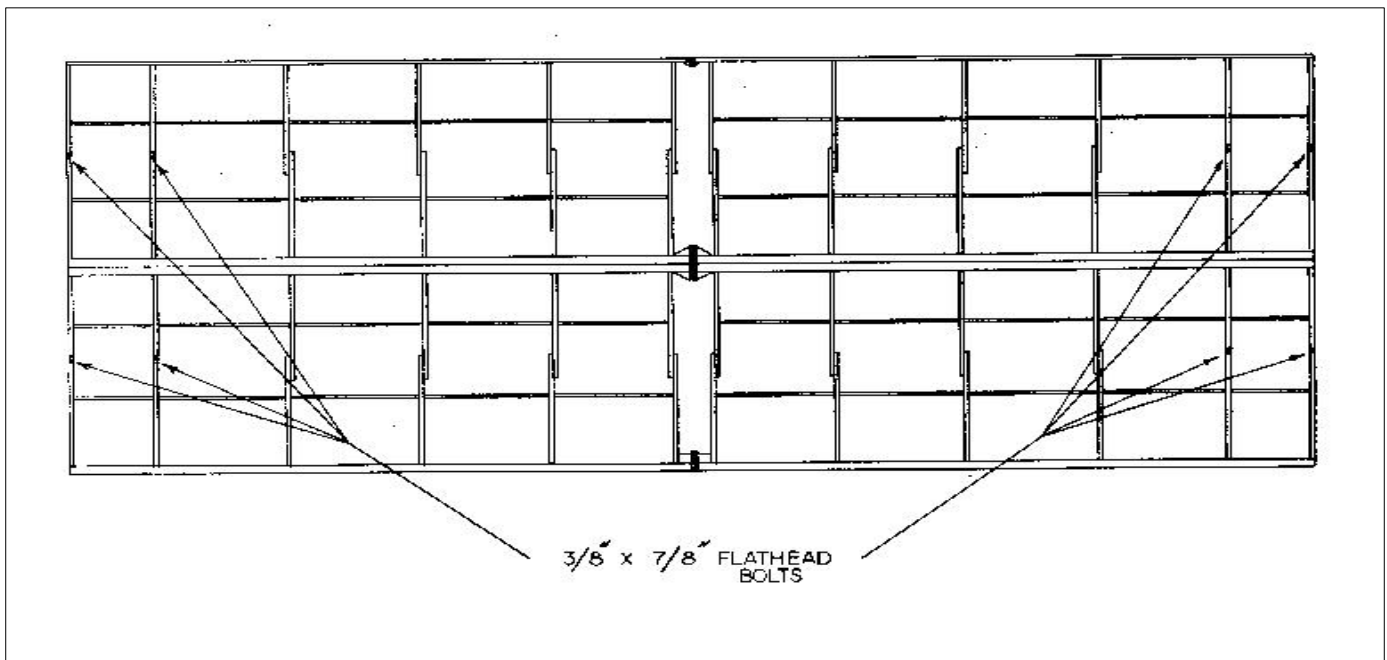


Figure 9 Installing Special flat head bolts

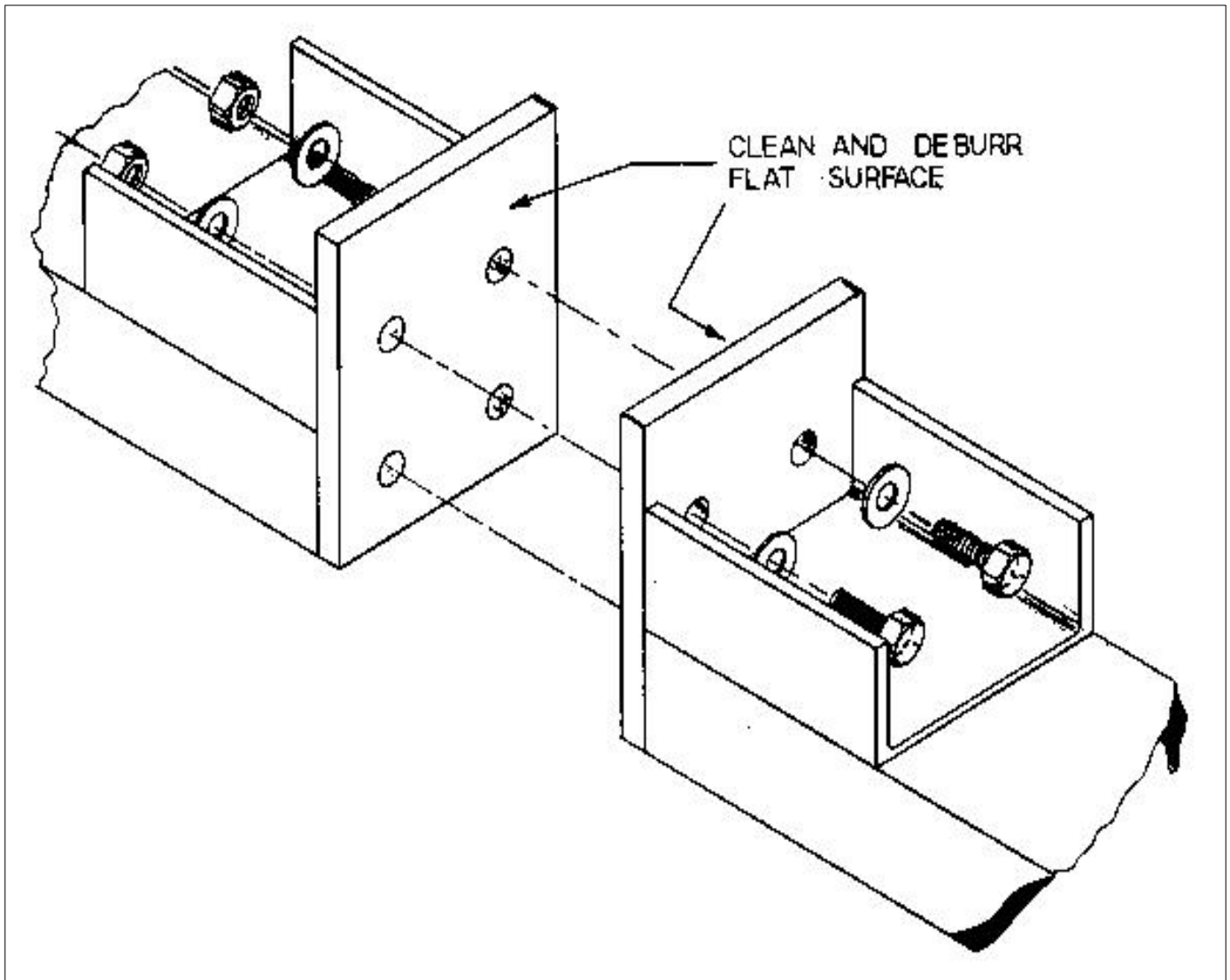


Figure 10 Bolting sections together

TORQUE REQUIREMENTS													
GENERAL FASTENER TIGHTENING SPECIFICATIONS													
Torque to the values given in this table unless specified otherwise below. Torque figures are in ft.-lbs.													
Fine or Course Thread Fastener	Grade Designation	Tensile Strength Minimum	Material	Screw, Stud, or Bolt Shank Size or Diameter									
				1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
 CAP SCREW	A.S.T.M. A-449 S.A.E. 5 STEEL	105,000 P.S.I.	Medium Carbon Steel or Low Alloy Heat Treated	9	18	31	50	75	110	150	250	378	583
 CAP SCREW	S.A.E. 8 STEEL		Medium Carbon Alloy Quenched Tempered	13	28	46	75	115	165	225	370	591	893
 CAP SCREW	A-354-BD. A490*					55	90	138	198	270	444	709	1071

Figure 11 Torque Requirement

B. Hinging Top To Bottom

Remove hinge pins at centerfold of door. Slide top section up to bottom section so hinges line up and reinstall hinge pins.

NOTE

It is recommended that the hinge be lubricated with lithium grease.

To simplify installation of cotter key in hinge pin, be sure hole in pin is parallel with door. Be careful no foreign material gets between sections or difficulty may occur in aligning hinges. **SEE Figure 12.**

NOTE

It is sometimes helpful to lift the top of top section to align hinges. In some cases it may also be necessary to loosen hinges in order to align and then retighten after hinge pins are installed.

Install cotter key in hinge pin and bend end over. **SEE Figure 13.**

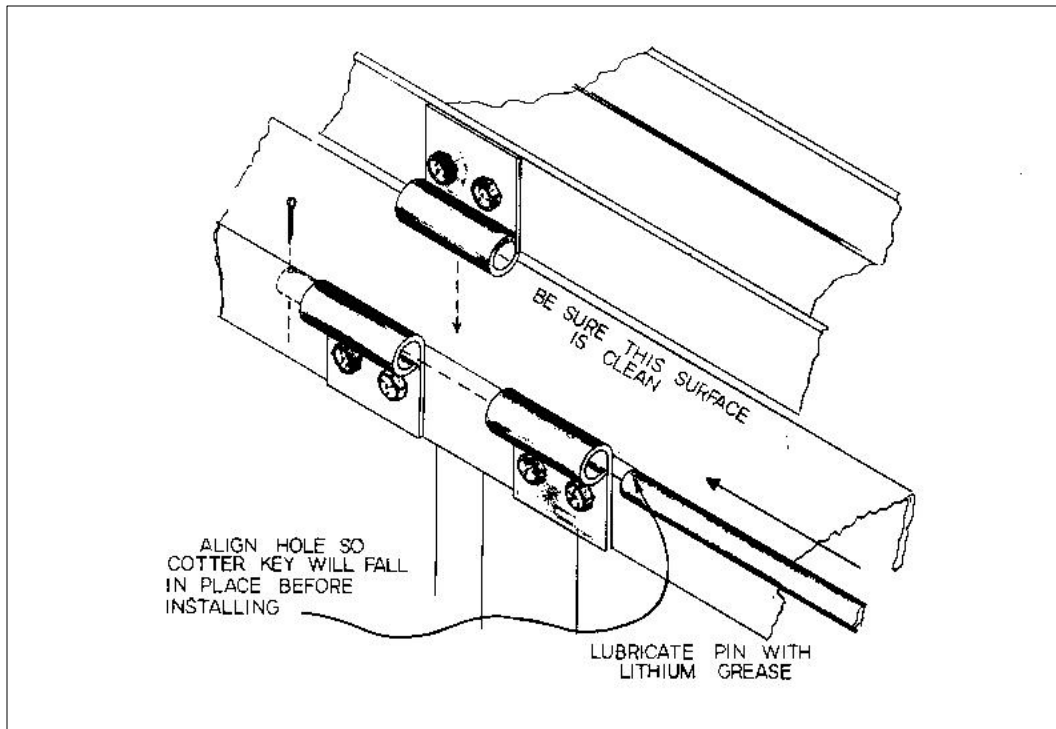


Figure 12 Installing hinge pins

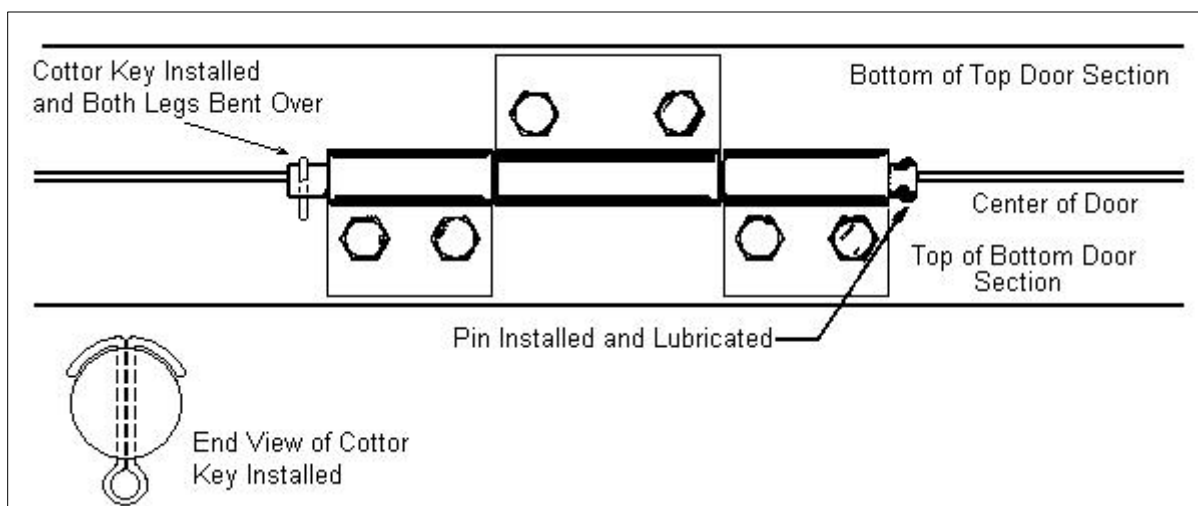


Figure 13 Hinge pin in place with cotter key installed

C. Bolt Top Sections Together

Clean splice plates on top sections and deburr if necessary. Bolt together as in Part A.

D: Install Turnbuckles

If door is not equipped with wind load trusses, proceed to step E (doors usually smaller than 54 ϕ). Lay turnbuckles out and note letters on plates. Locate trusses on the door and note letters on ends at center splice. **SEE Figure 14.** Install turnbuckles on corresponding trusses matching letters and tighten bolts using torque chart in **Figure 11. Page 15.**

E. Install Set Screws

If door is equipped with a 2-inch drive shaft the center drive will have set screws at each end to remove slop in the coupling. Install and tighten at this time. **SEE Figure 15.**

NOTE

Check to be sure center drive is centered before tightening set screws.

The turnbuckle adjustment will be made after the door is running but before it is sheeted. See instructions under final adjustments.

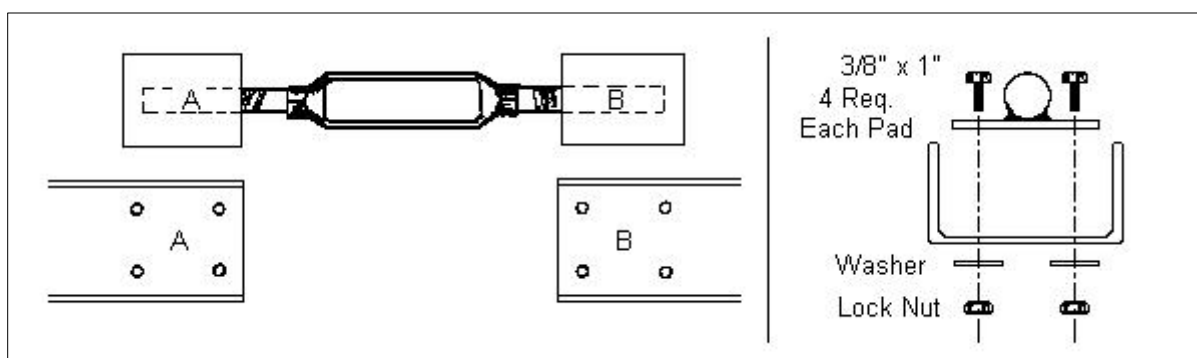


Figure 14 Locating and installing turnbuckles on wire trusses

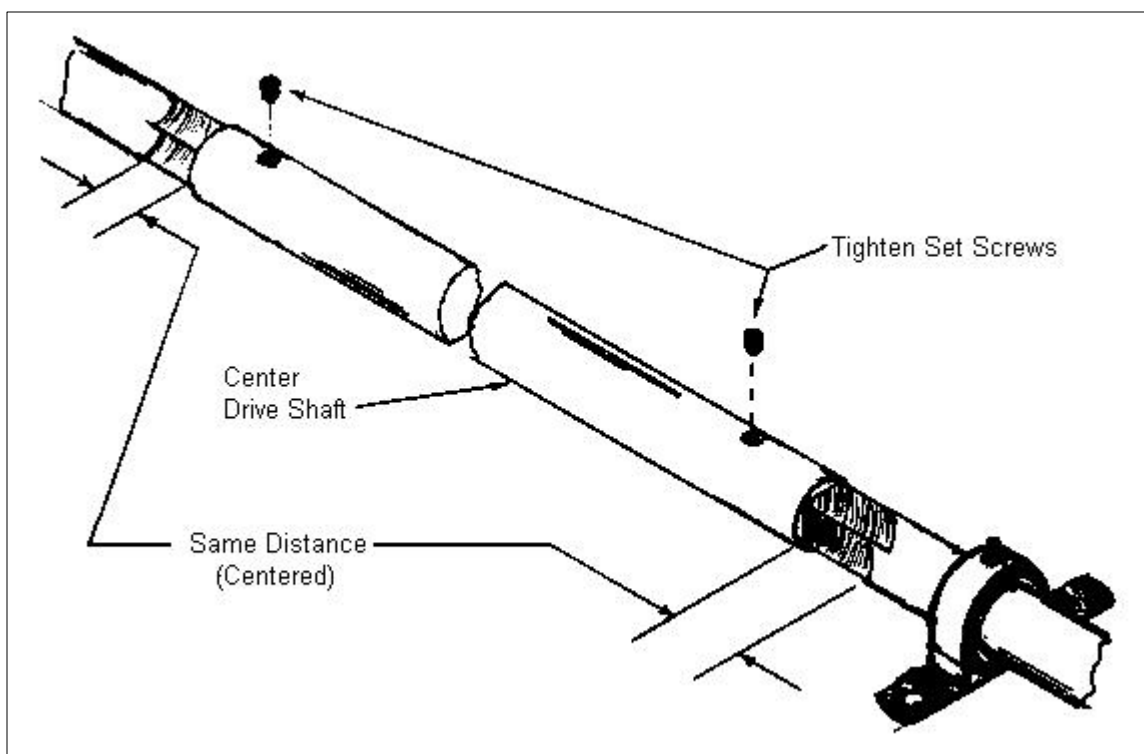


Figure 15 Installing set screws on 2 inch center drive shafts

F. Feed Lift Cables

NOTE

Doors equipped with auto locks will have to have the drive shaft turned until the factory installed lock is completely closed.

On larger doors, 55' wide and up with bottom truss:

Standing with the drive shaft in front of you and facing the inside of the building, tube opening up, feed the lift cable through the tube opening facing you until the button on the end of the cable is up tight to the tube. **SEE Figure 16 and 17.** Repeat this for each lift cable.

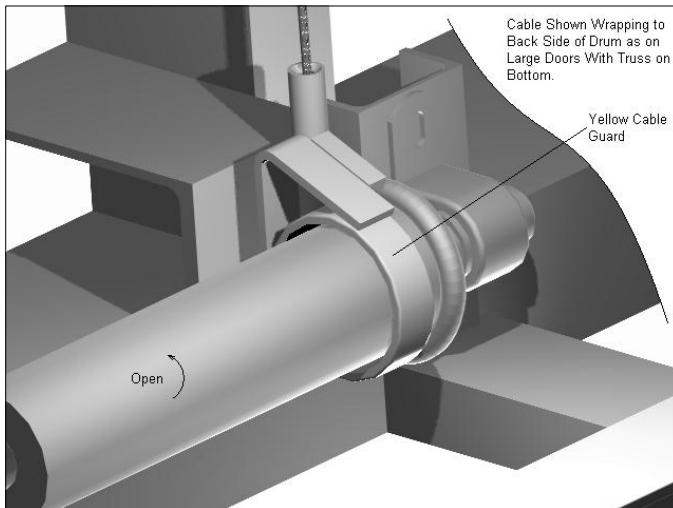


Figure 16 Installing lift cables—larger doors

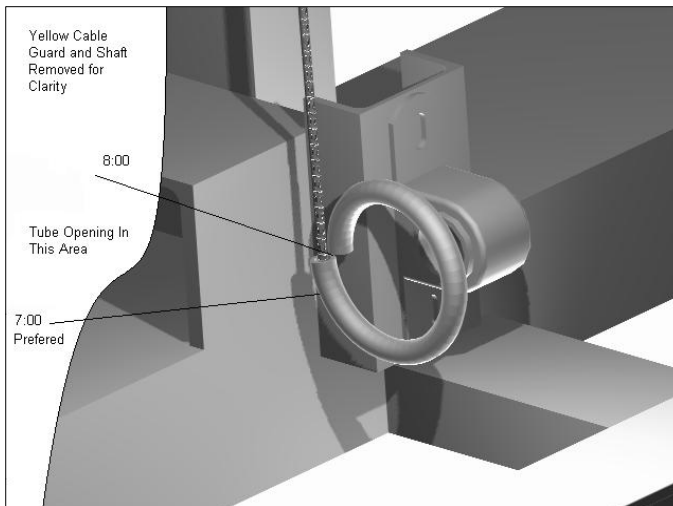


Figure 17 Installing lift cables—larger doors

Smaller doors without bottom truss, 54' wide and less

Standing with the drive shaft in front of you and facing the outside of the building, tube opening up, feed the lift cable through the tube facing you until the button on the end of the cable is up tight to the tube. **SEE Figure 18.** Repeat this for each lift cable.

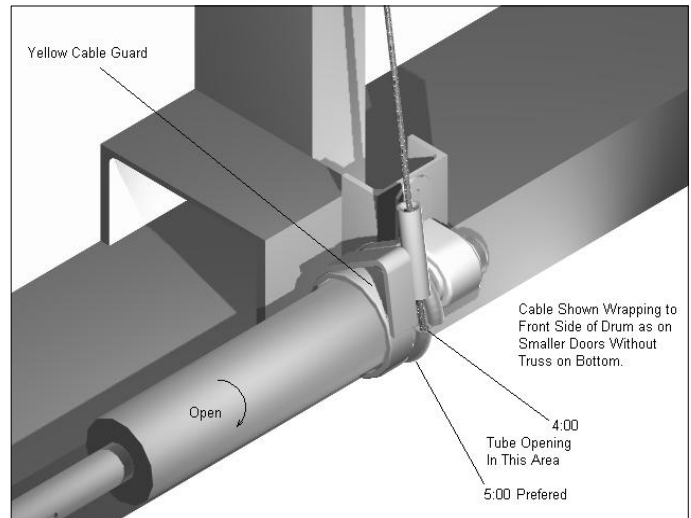


Figure 18 Installing lift cables—smaller doors

NOTE

If needed a small amount of grease on end of cable going into tube will make cable easier to feed.

G. Attaching Motor- Gearbox

WARNING

Motor is **not waterproof!** Motor should **not** be exposed to rain or snow. Keep motor and electrical controls covered with a plastic trash bag until door sheeting is complete and building is enclosed.

Remove 4 bolts holding motor plate on door. Place motor-gearbox in place on top of plates and reinstall bolts previously removed. **SEE Figure 19.** **DO NOT** tighten bolts at this time. Loosen and be sure chain slack adjuster is at the lowest point of travel. Install the chain being sure to turn the drive shaft so the lift cables come out of tube at the proper location. **SEE Figure 20, Page 19.**

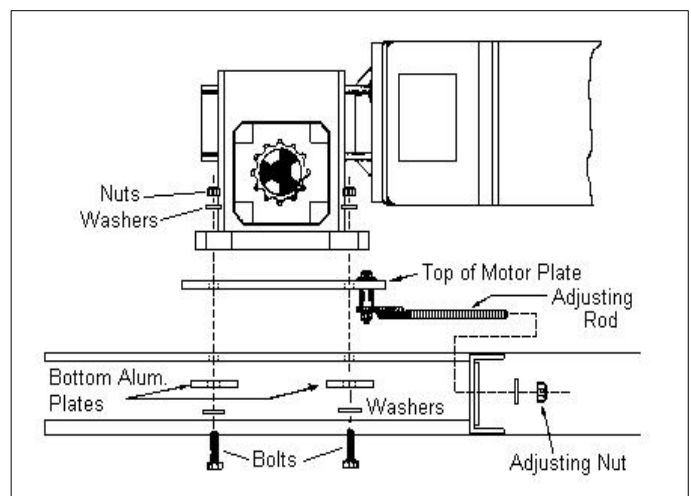


Figure 19 Installing brake motor—gearbox

NOTE

Doors equipped with auto lock. Refer to Group VI section K for proper drive shaft position. Page 41.

WARNING

The chain is a vital link in the drive mechanism. It has been designed with a sufficient safety factor to perform under normal conditions. However, the chain should be inspected for irregularities before installing. If any should exist, do not use. Failure of the chain could result in the door falling causing bodily and/or property damage. Care should be taken when installing master links. If damage should occur

when attempting to install, do not operate door before replacing. Start to tighten chain adjuster until most of the slack is removed. Align chain sprockets if necessary. Move only sprocket on drive shaft. **SEE Figure 21.** DO NOT move sprocket on gearbox. Adjust chain again to be sure it is snug and tighten as needed. **SEE Figure 22, Page 20.**

WARNING

Chains will loosen considerably during initial operation and should be rechecked often during the first months of operation.

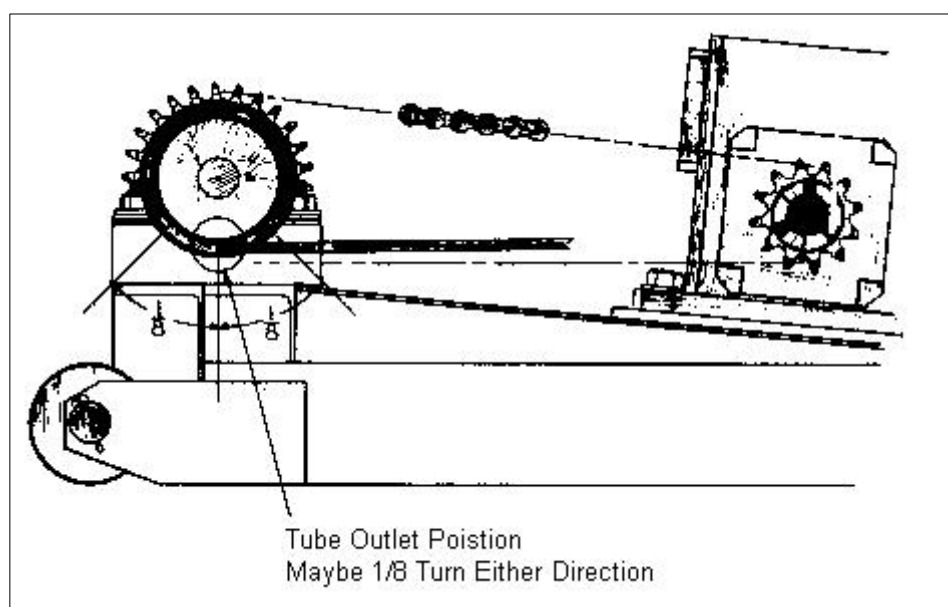


Figure 20 Installing drive chain and aligning drive shaft

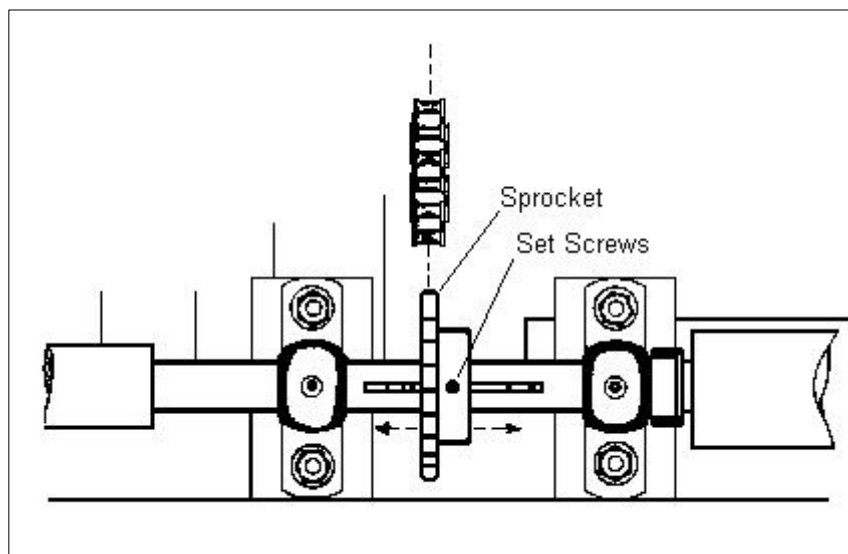


Figure 21 Adjusting sprocket to align chain

NOTE

All doors have at least two (2) drive chains for redundancy. When tightening dual chains on the same gear box it is sometimes difficult to get the same tension on both chains do to indexing of the sprockets and gear box shafts. This is acceptable as long as chains are tightened so the slack is even on opposite sides of chains.

WARNING

Check that all sprocket set screws are tight.

Caution

A loose or missing set screw could cause drive key to fall out letting door fall if open.

Recheck before proceeding to next step.

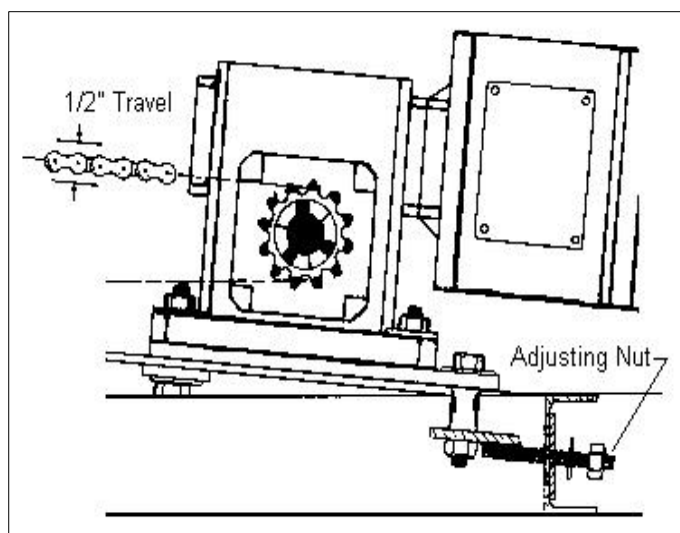


Figure 22 Adjusting chain tension

H. Bolt On Truss Braces

If your door is not equipped with a truss, proceed to Step One (1).

On some doors with wind load trusses, the braces on the bottom truss are bolted on rather than welded for shipping purposes.

If they are welded on, proceed to Step 1. If the braces are the bolt-on style, they will be found in the parts box along with fasteners. Note the letters on the braces. Locate the bottom truss on the door and note the letters by the predrilled holes and install and tighten bolts. **SEE Figure 23.** For recommended torque **SEE Figure 11, Page 15.**

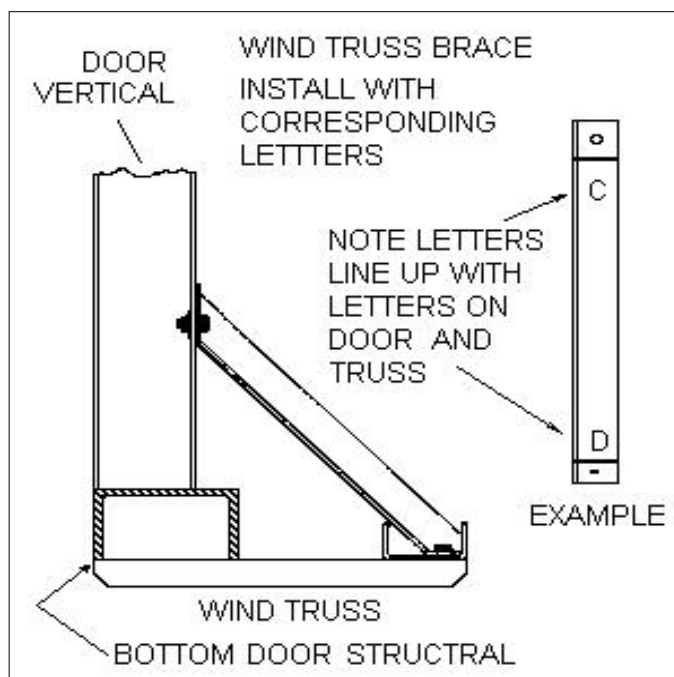


Figure 23 Locating and installing wind truss braces

I. Attaching Electrical Controls

Remove two (2) $\frac{1}{4}$ " bolts from limit switch mounting bracket. Loosen clamp on open end of drive tube. Slide drive tube over gearbox shaft. **SEE Figure 24 Page 21.** Install mounting bolts back in bracket and align limit switch shaft with gearbox shaft. Tighten limit switch mounting bolts and recheck alignment of shafts. Tighten both drive tube clamps.

Caution

A loose or missing clamp could cause failure of limit switch to function in both the up and down travel, severely damaging the door and causing it to tear off the building.

You are now ready to install the chain guard. Loosen bolts from guard mounting bracket and install guard over chain. Being sure guard is not touching any-

thing, tighten mounting bolts. **SEE Figure 25.**

Move control box inside building and out of the way for now.

J. Lock Cables and Lock Adjustment

For shipping, the lock cable for the end farthest from the lock handle has been doubled back and clamped. Remove this clamp and route cable to pulley above lock handle. Feed through pulley and attach to turnbuckle on lock handle.

NOTE

Back turnbuckle out to give room for adjustment later on.

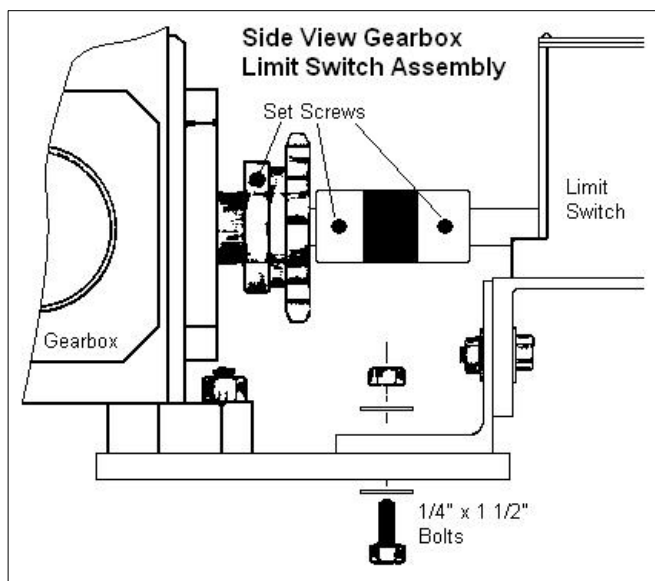


Figure 24 Installing limit switch and checking set screws

CAUTION

Adjust turnbuckles so cables are snug when locked. Be sure cables are on all pulleys. **SEE Figure 27, Page 22.** (Short cable will be pre-adjusted at factory so it can be used as an example.)

Install springs on lock cams.

SEE Figure 30, Page 23.

NOTE

Doors with auto locks, do not have lock switches. Proceed to next step.

The lock switch is now ready to be installed. Remove mounting bolts from switch housing. Remove cover from switch housing and remove activator cam.

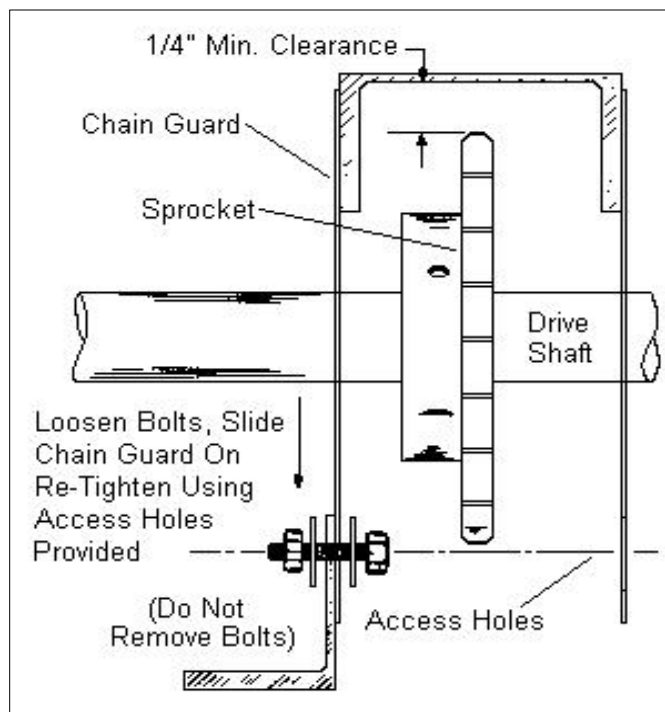


Figure 25 Installing chain guards

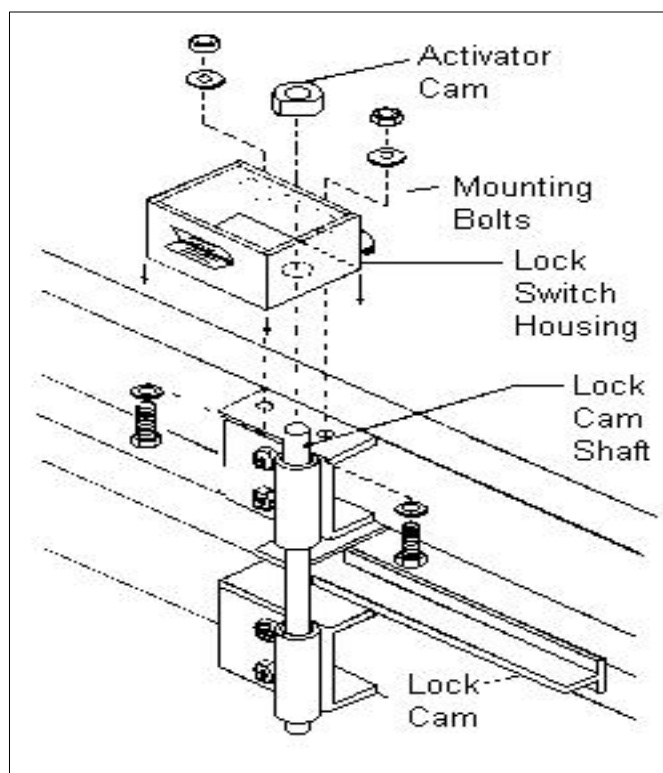


Figure 26 Installing lock switch

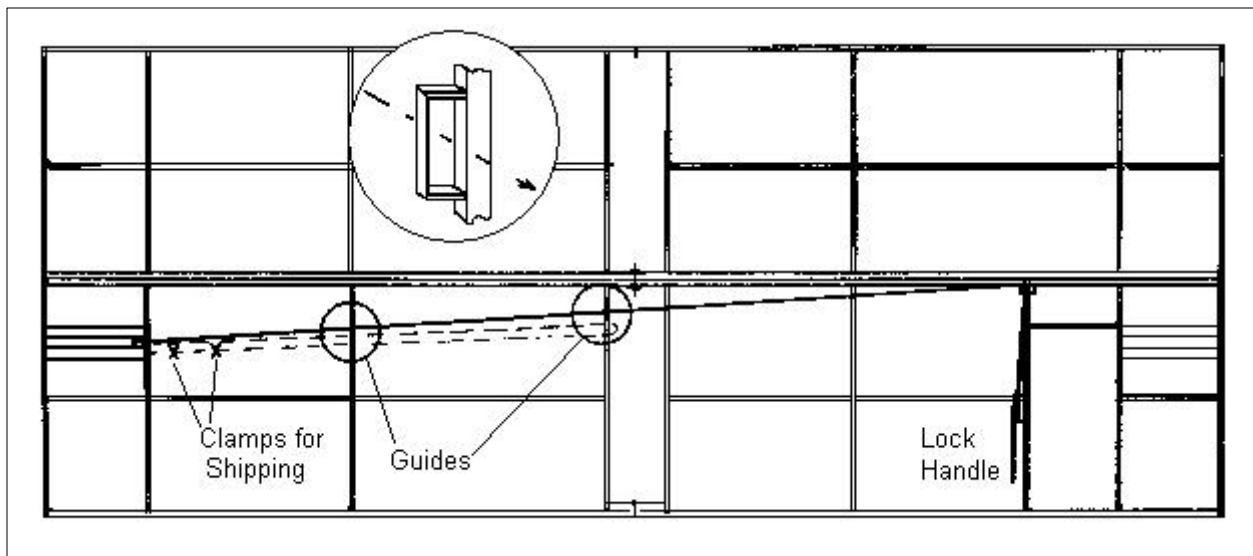


Figure 27 Routing lock cables

(For shipping it is placed loose inside.) Install switch housing over top of lock cam shaft which is on the same side of the door as the electrical controls with two mounting bolts removed earlier. Be careful not to damage switch by using force.

NOTE

On large doors with two lock handles there will be a switch on both lock cams. Install both in same manner. They will be tied together in series electrically.

Check to be sure that the lock shaft is coming up through the center of the hole in the bottom of the switch housing or lock cam may bind. **SEE Figure 26, Page 21.**

NOTE

To precede with next adjustment, lock cams must be adjusted properly. Install lock switch activator cam by sliding over lock camshaft protruding up into switch housing. Be careful not to bend switch lever. Adjust switch by rotating cam until flat side is parallel with switch lever when door is in locked position. **SEE Figure 32, Page 24.** Tighten set screw and double check adjustment by unlocking and locking door and listening for switch to activate. It may be necessary to bend switch lever to get proper adjustment. **SEE Fig. 32, Page 24.** Install cover when completed.

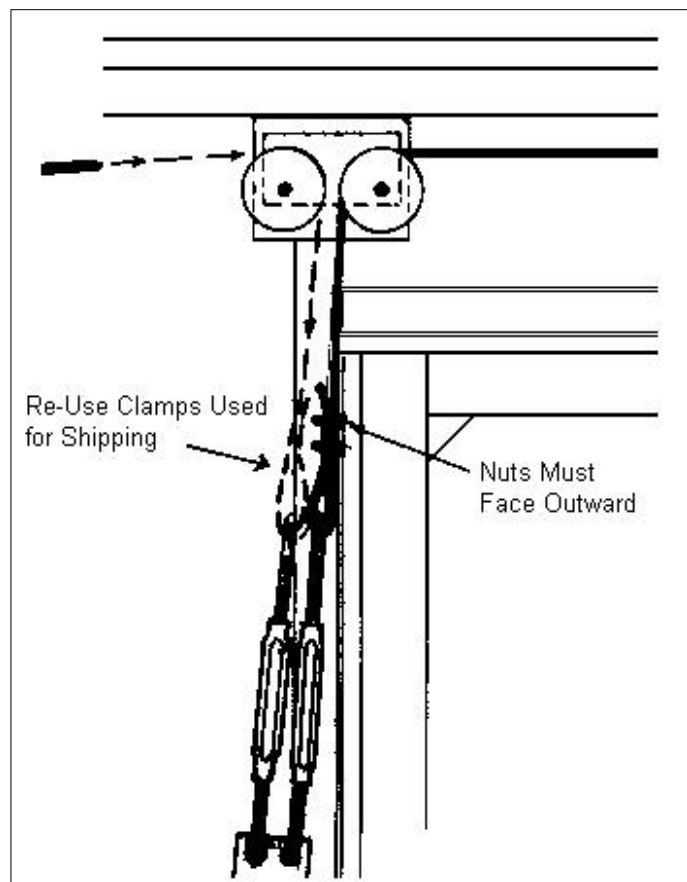


Figure 28 Routing lock cables

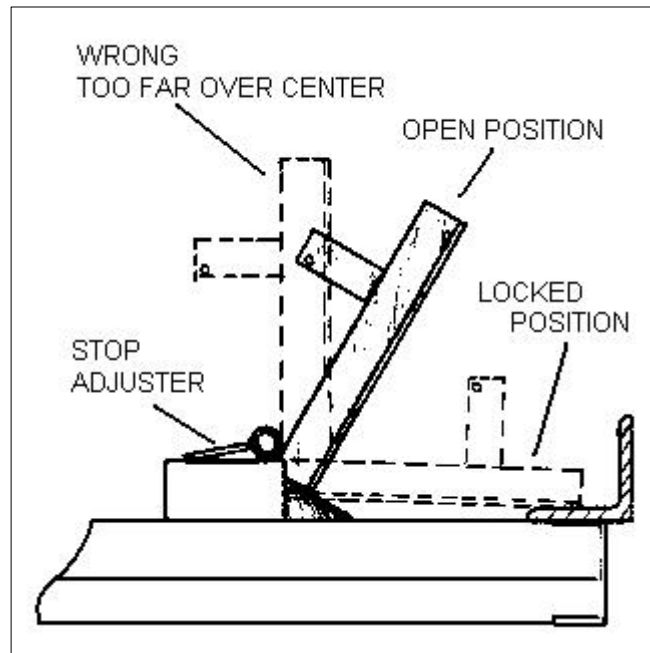


Figure 29 Setting lock cam stop

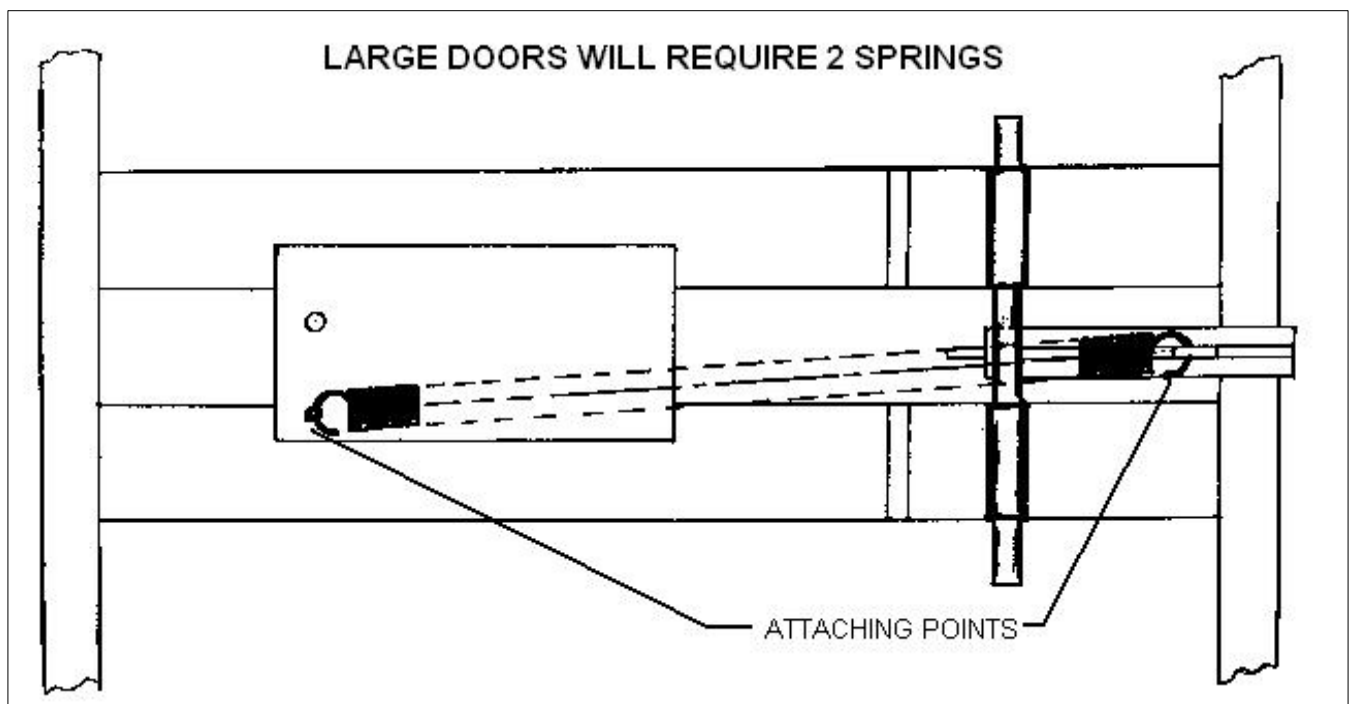


Figure 30 Installing lock cam release springs

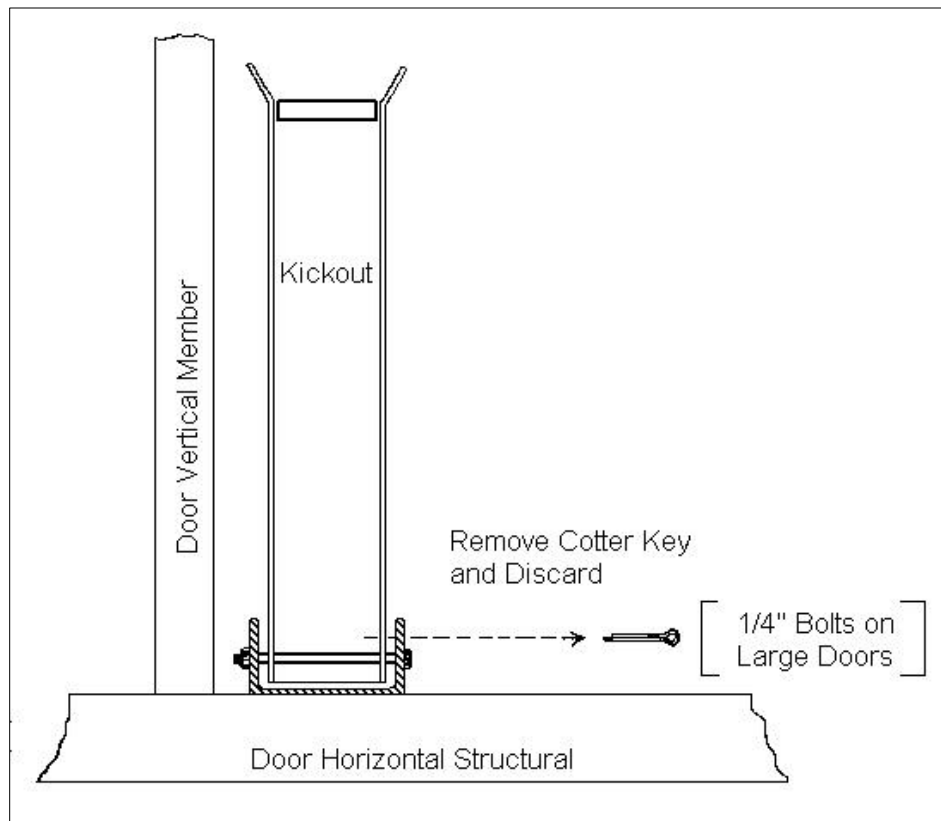


Figure 31 Removal of shipping cotter key

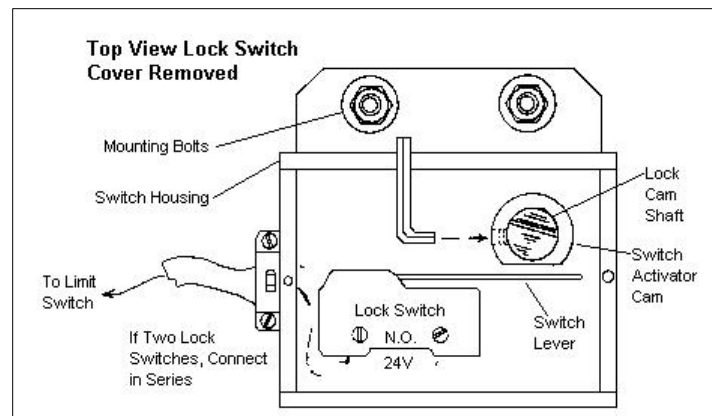


Figure 32 Adjusting lock switch

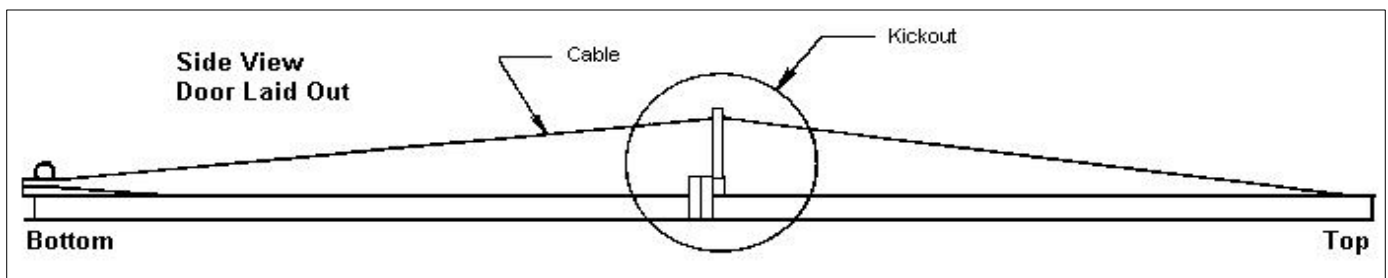


Figure 33 Routing lift cable over kickouts

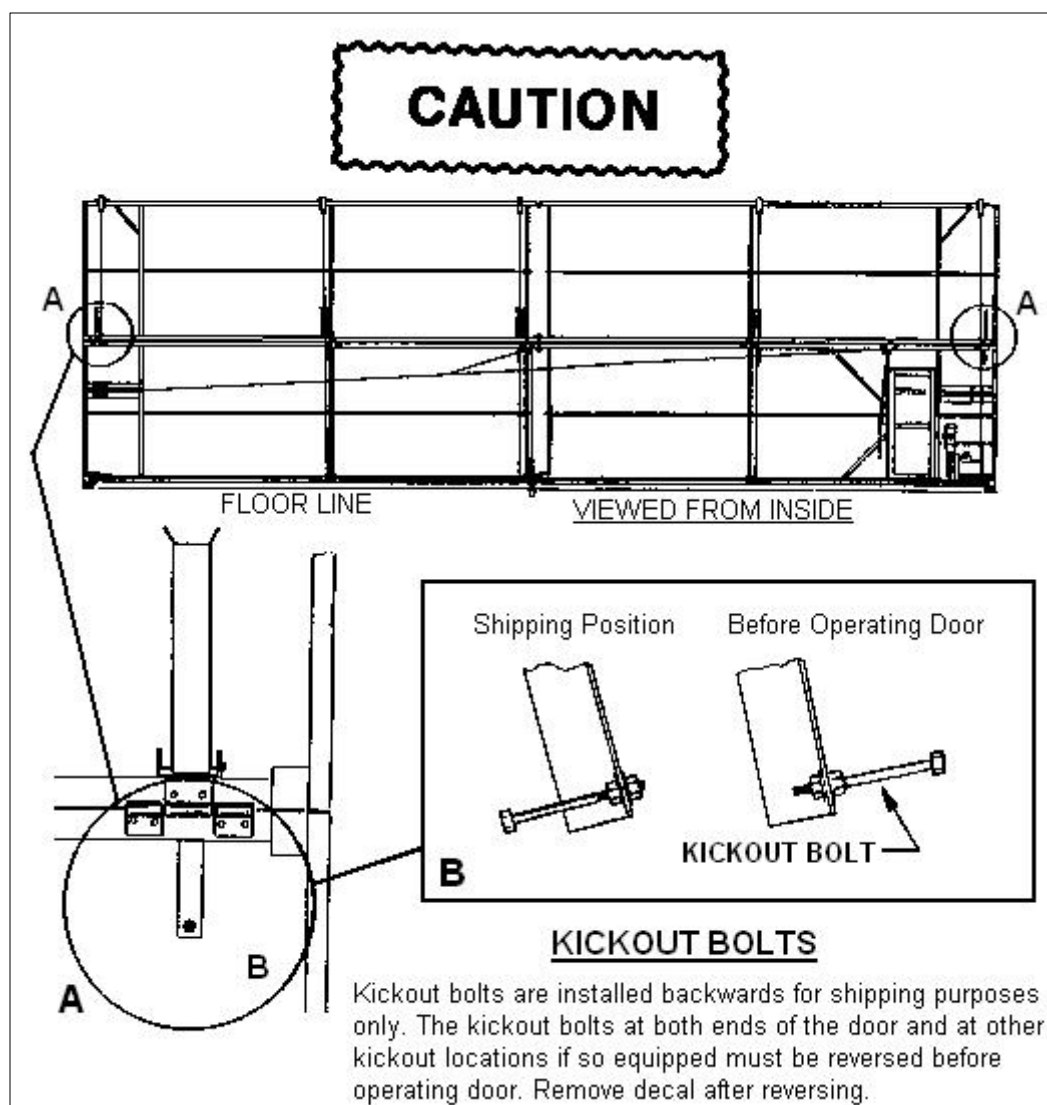


Figure 34 Reversing kickout bolts

K. Lift Cables

NOTE

If door is equipped with Optional Auto Lock this adjustment is completed later. Proceed to Section IV Page 27.

The kick-outs which are located at the center of the door directly above the lift cables as they come off the drive shaft must have the cotter keys removed from their side. **SEE Figure 31, Page 24.** The cotter keys may be discarded. Be sure that you remove the entire cotter key or damage to the door could occur. They are for shipping only.

Below the kick-outs are stops that prevent the long kick-out arms from cutting into the bottom half of the door when the door opens. These outer stops have bolts installed backwards for shipping purposes only and will have to be reversed **before** the door is operated. Failure to do this will result in damage to the door. **See fig. 34 Page 25. Note:** Some very large doors may have bolts at each stop.

The bolts are marked with warnings and directions for reversing when they leave the factory but can possibly come off during shipping. If in doubt, please call.

Check to make sure the kick-outs swing freely and do not hang up at all. Stand the kick-outs up and lay the lift cables on them. **SEE Figure 33, Page 24.** Be sure lift cables are free to pull away from the door.

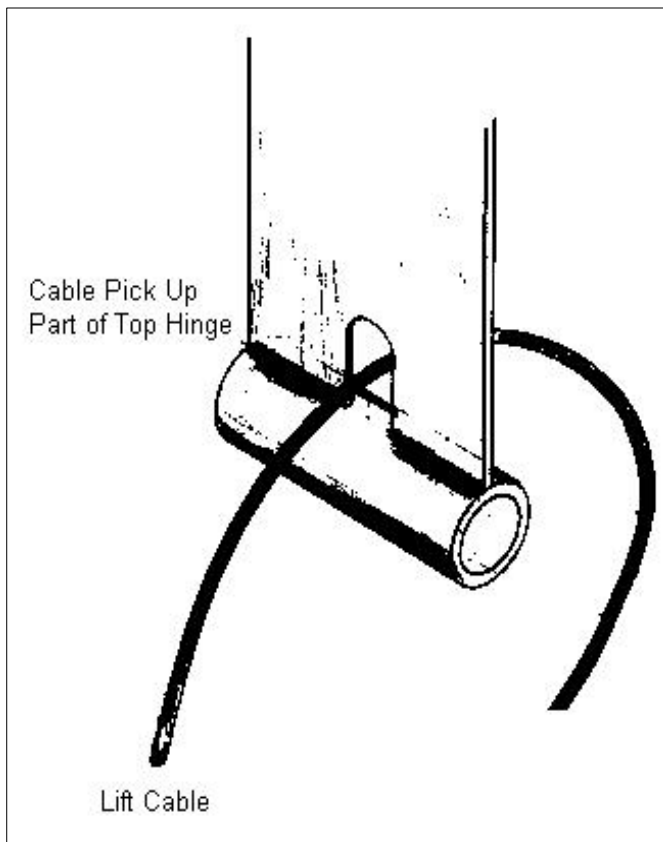


Figure 35 Clamping lift cables

Slide two (2) cable clamps over the cable and feed the cable through the pickup on top hinge. Slide a clamp up as close to pickup as possible and slide the second clamp 1-1/2 inches lower and tighten. **See Figure 35 and 36.**

If door is laid out on flat level ground and hinges will be attaching to bottom of header, the cables may be adjusted on the ground at this time. Start at one end of door and pull lift cable so that at the kick-out it will not lift over fingers but yet is not tight, putting pressure on it. Next check dimensions on cable from door structural and set other cables the same. See final adjustments **Step E and Figure 62, Page 39.**

NOTE

Be sure drive shaft is positioned correctly before attempting to adjust the cables on the ground. Auto Lock doors are different than Manual Lock Doors and are adjusted later.

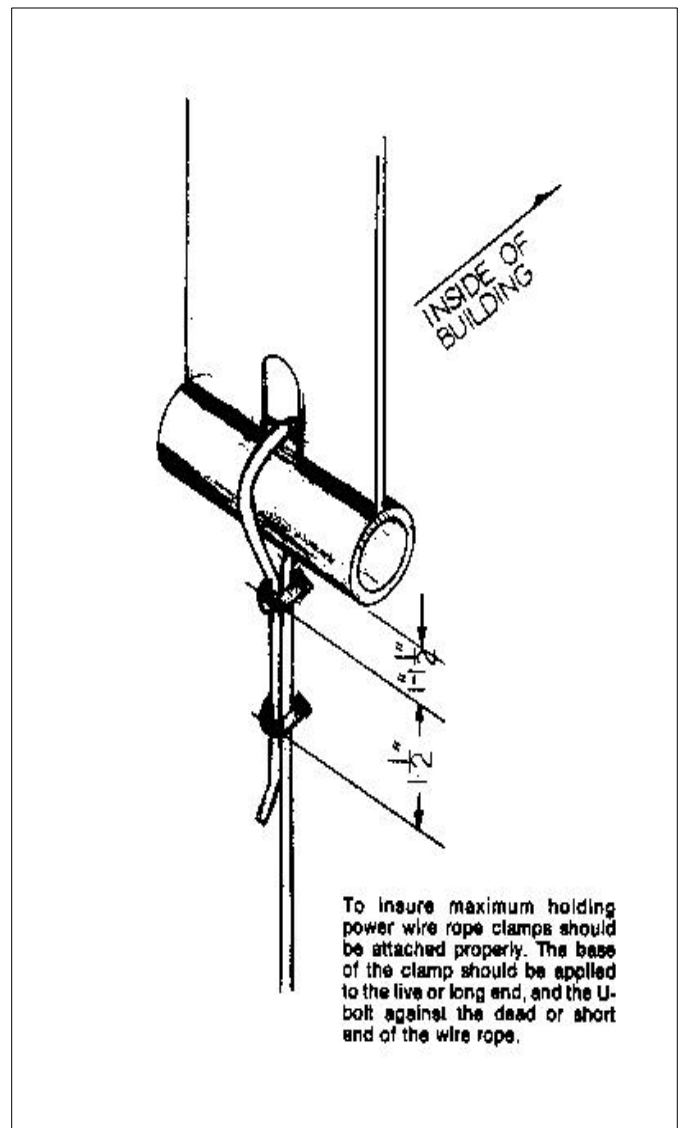


Figure 36 Clamping lift cables

WARNING

While door is still on the ground go over entire door and check for bolts that may have come loose during shipping or were omitted during assembly.

IV. STANDING INTO OPENING AND ATTACHING HINGES

CAUTION

Protect face of service door from scratching.

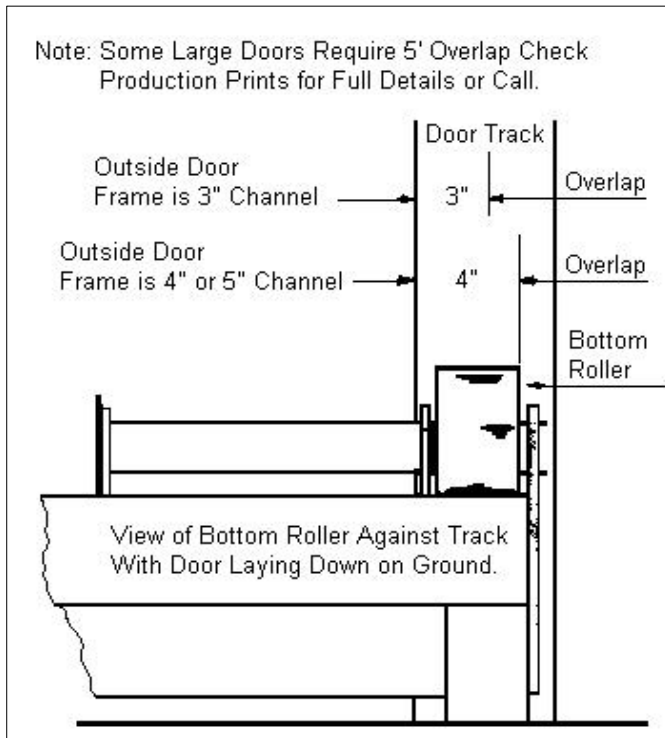


Figure 37 Centering door on track

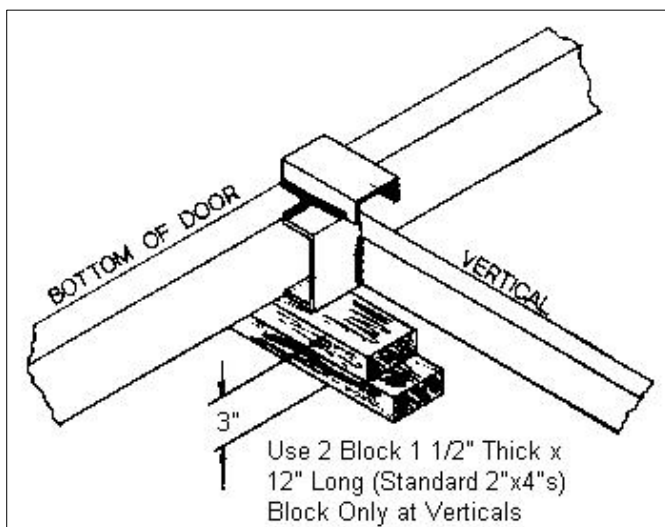


Figure 38 Blocking bottom of door for proper height

A. Center Door

Measure the overlap of the bottom rollers on each side of door. Slide door whichever way is needed to center it. **SEE Figure 37.** Care should be taken not to rack door when sliding. Within $\pm 1/8$ is acceptable. Auto lock doors are very sensitive to centering. Take extra care on doors with this option.

B. Block Bottom

Block bottom of door 3" above finished floor. Block only where door has vertical members. Two (2) standard 2 x 4s stacked on top of each other about 12-14 inches long work well. The number of hinges on the top of the door is a good indication of how many places it should be blocked at the bottom. **SEE Figure 38.** When blocking door with bottom truss be careful not to put spacers on any weldments causing door to be higher than 3"

NOTE

It is understood the cement will not hold a steady grade across the full width of the door, and the blocking of the door is just a starting point to stand the door on.

C. Standing Door

Doors 44" x 14" and smaller can be stood in place by hand. Seven (7) men or on smaller doors less can lift a door easily. On larger doors a forklift or crane that can handle the weight and lift at least two (2) feet higher than the top of the hinges should be used.

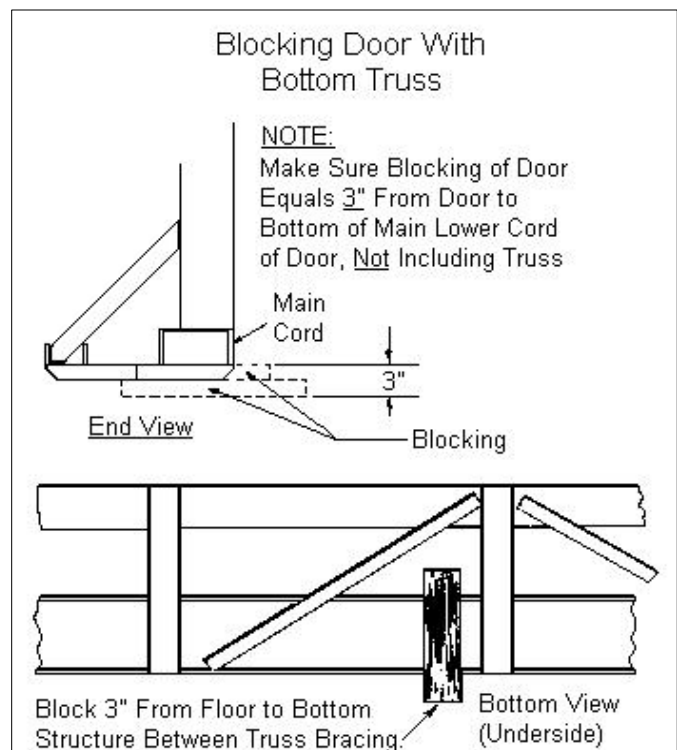


Figure 39 Blocking door with truss bottom

HELPFUL HINT

While the door is still on the ground it would be easier to attach the side seal to the door. **See Paragraph F** under Sheeting + Insulating **page 49**

If lifting by hand, lift from center of the door; if by fork lift or crane, spread lifting points a reasonable dis-

tance for the span of the door but stay next to the verticals and lift and move in towards the building at the same time. Watch bottom cord of door. If it lifts off blocks at center, you are lifting too much and should move in toward building. **SEE Figure 40.**

CAUTION

Care should be taken by equipment operator

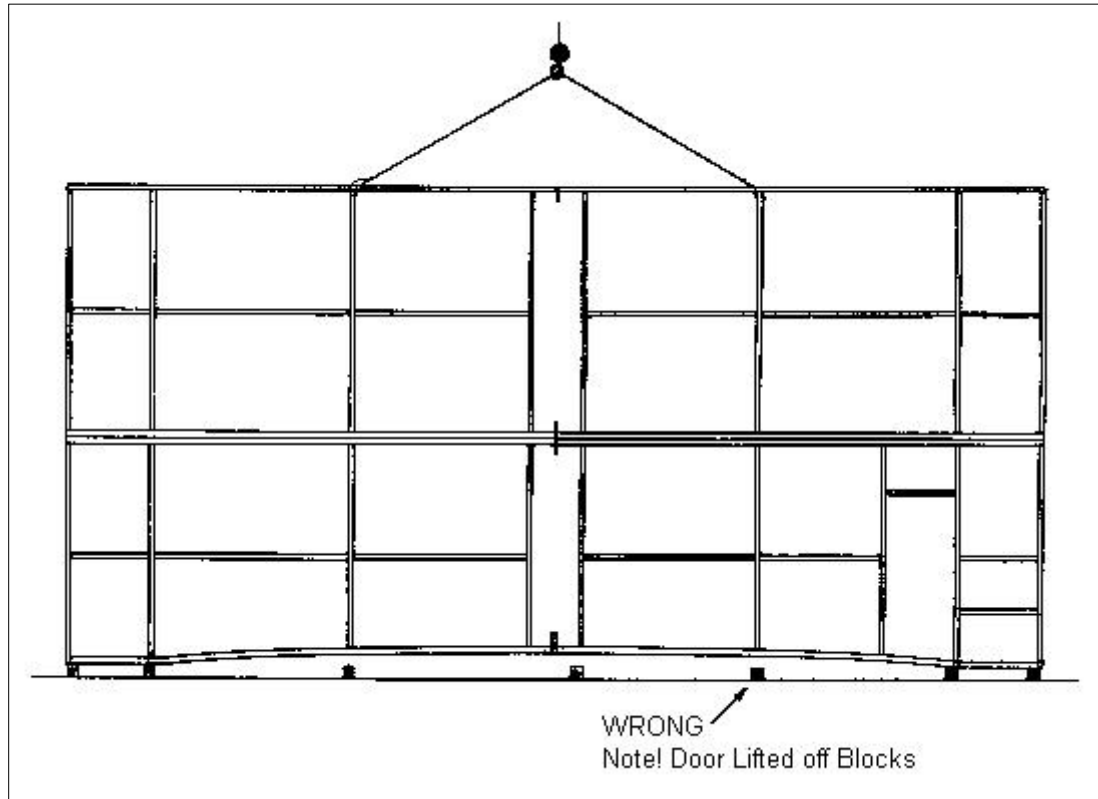


Figure 40 Standing door in opening

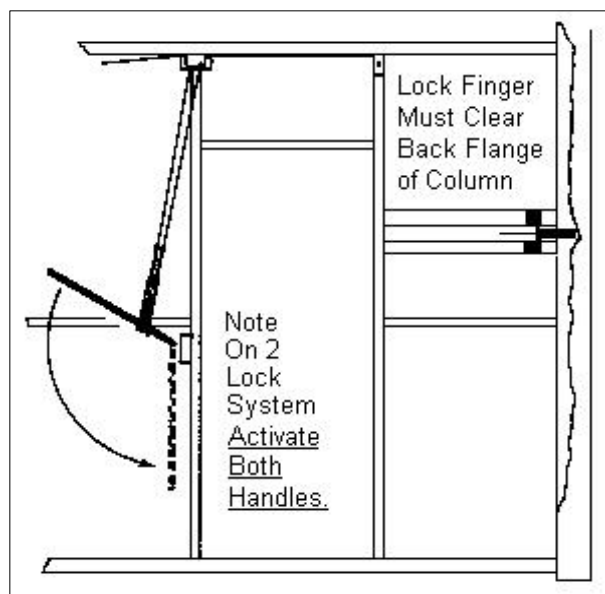


Figure 41 Securing door in opening once stood in place

not to jerk or loosen tension at lift points or damage to door could result. Be as smooth as possible.

Once door is standing up against building the hand lock levers can be locked to secure door temporarily. **SEE Figure 41.** Clamp door as necessary to secure before continuing.

NOTE

It may be necessary to push door open to get lock cams inside H beam jambs when so equipped.

D. Plumbing Door

There are other ways to plumb the door, but we feel the following is the most accurate.

Measure by hooking ruler on bottom of the top channel next to a vertical that has a hinge at top and shoot with a transit. **SEE Figure 42 Page 29.** Determine which end is low and start there with the bot-

tom channel 3/8" off of finished floor and work across length of door. Once door is leveled, go back and check top section for center and alignment with jamb. **SEE Figure 42.** Check door overlap on track for centering and adjust as necessary. Remember on auto lock doors this is very important to be centered.

E. Check for Racking

Determine how much, if any, the door is racked by viewing the door at the edge with track. **SEE Figure 42.** Keep top of door centered by pulling one way or the other. Remember the door is stacked on the wood blocks at the bottom and will straighten itself somewhat once hanging from the top hinges.

NOTE

All of above is assuming opening is square.

WARNING

When centering door, make certain there is proper clearance between door and building sheeting trim at top and sides. Check Wilson print or call 800-558-5974.

F. Attaching Hinges

Hinges on a steel building should be welded to building. Weld on the vertical sides of hinges, as much as possible, across the top, and across the bottom of hinges. **SEE Figure 43, Page 30.**

Failure to weld hinges on top, sides and bottom could cause hinges to bend or rip off building.

On wood structures use appropriate size bolts on predrilled holes in hinges and plate backside of truss to distribute load. **SEE Figure 45 Page 30.**

CAUTION

Do Not Use Lag Bolts. They will not support the door in a fully open position.

G. Attaching Wind Stops

The door wind stops provided are 4" x 4" x 3/16" flat steel plates. Position each on back side of track flange that the door is rolling on so the wind drag pin on the door will catch the wind stop should a high wind lift the door when in an open position. This stop should be located six (6) inches above the clear opening design of the door and welded. See serial name plate on door for exact clear opening for your door. **SEE Figure 44 Page 30.**

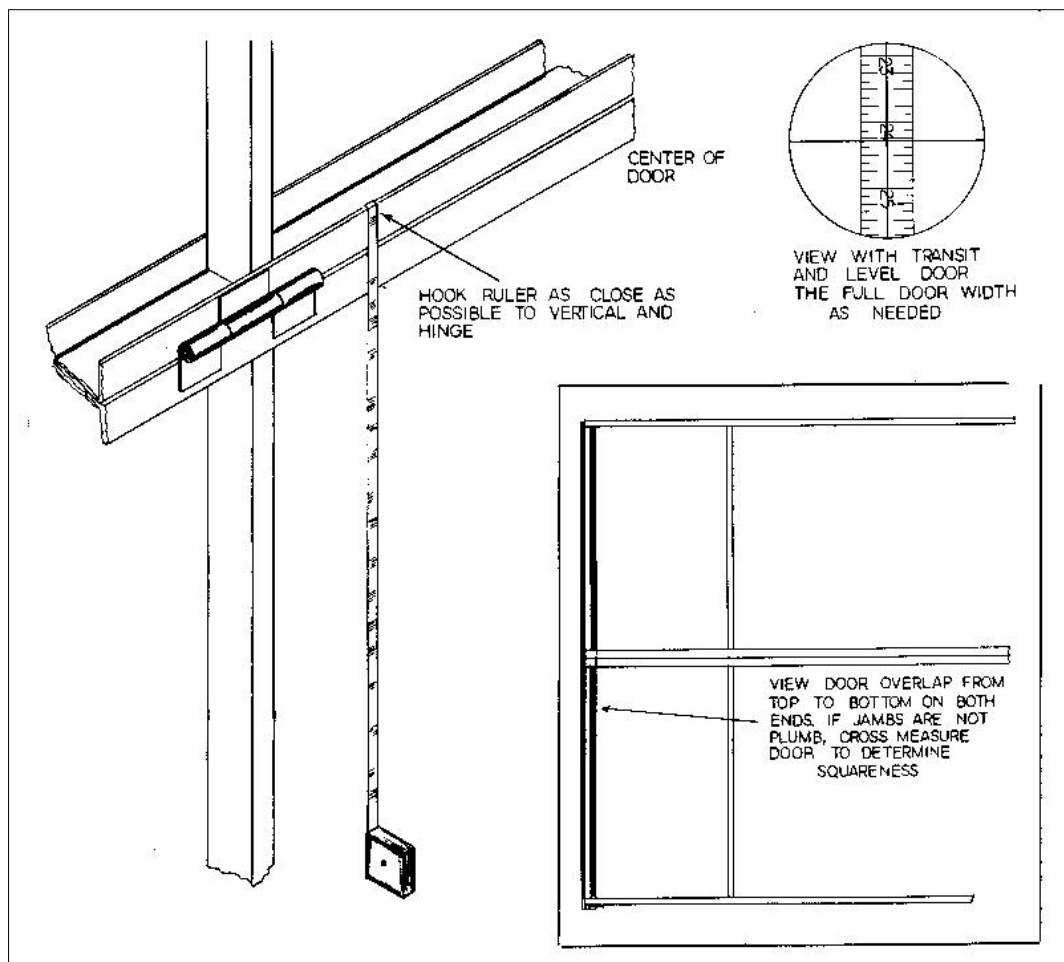


Figure 42 Leveling door with transit / Viewing door and track overlap

V. ELECTRICAL HOOKUP

The electrical layout is designed to meet National Electrical Code Section 513 and UL 325. Local codes may be stricter, and in all cases should be given preference over the national code. DO NOT attempt to change any of the wiring. It has been assembled and checked at the factory and is in proper working order as wired. Check schematic inside control box cover for full details on hookup. If any questions should arise, call Wilson Doors and ask for customer service at 800-558-5974 or 262-723-6869.

One of the most common electrical problems is undersize wires feeding the door. Under heavy loads motors can draw up to ten times their running amperes under start up. Therefore we have suggested wires sizes for the wiring being run to the door. **SEE Fig. 47 Page 32.** Failure to follow these sizes could result in stalling of the door under heavy start up loads and/or blowing fuses because of higher than normal amperes caused by voltage drops.

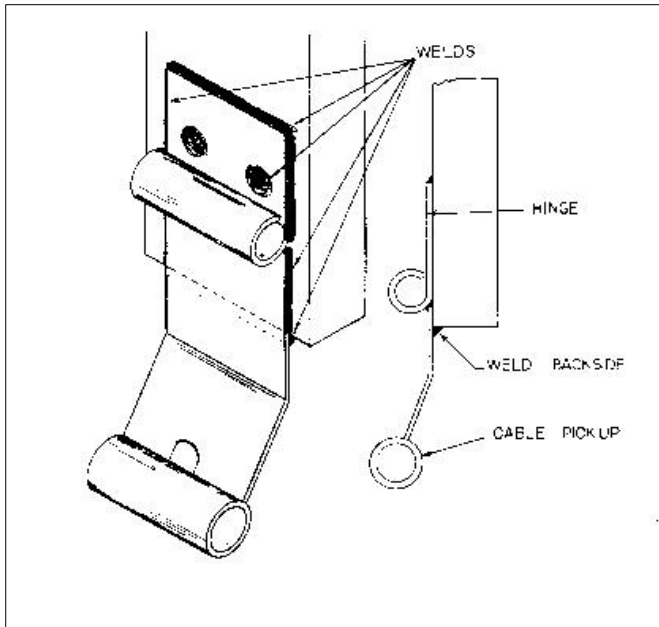


Figure 43 Welding top hinges to building

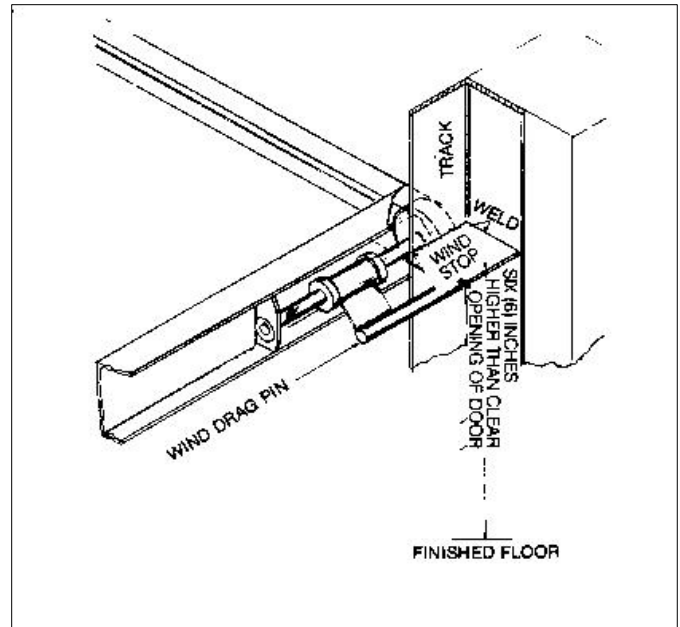


Figure 44 Wind lift stop

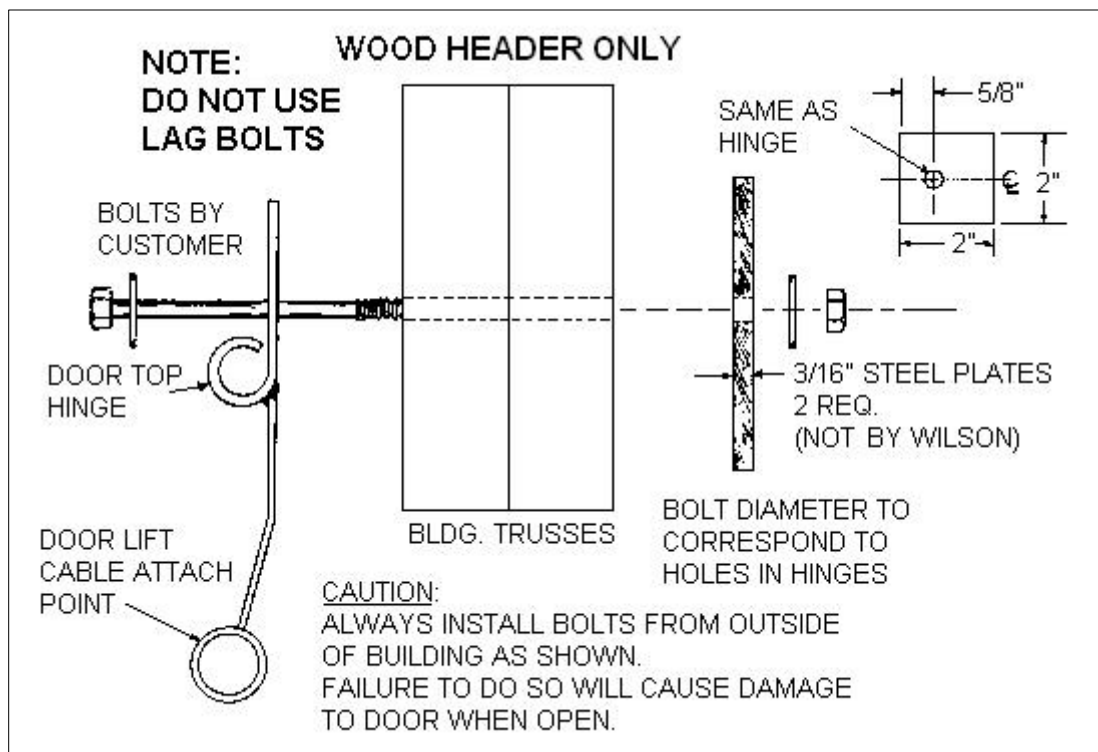


Figure 45 Bolting top hinges to wood building

A. Mounting Control Box

The control box should be mounted in a location where it will be out of reach of small children and out of the weather as much as possible. **SEE Figure 46.**

B. Running Conduit

As much wiring as possible should be enclosed in conduit for protection.

C. Routing Wiring

The wiring from the motor and limit switch should run together up the closest vertical, looped at the top of the door so as not to pull tight when door is open. **SEE Figure 46 this page, Figure 49 and 50 on Page 33, Figure 51 and 52 on Page 34 and 35.** Care should be taken so wiring will not become tangled in lift cables or drive.

Run wiring inside channel as much as possible and be careful about going around lock cables so cables do not wear against wiring. From the top of the door all high voltage wires (motor leads) must be enclosed in conduit. **SEE Figure 46 this page and Figure 51, Page 34.**

An electrical disconnect is supplied by Wilson for

emergency power shutdown and overload protection for the motor.

Wire size to Wilson's control box **must** be adequate to minimize voltage drop during starting and running. Refer to Tables A and B for suggested wire sizes. Keep in mind that this type motor will draw 8 to 10 times its running Amps at start up input rush. Design your building's wiring heavy enough to eliminate costly corrections later.

VI. FINAL ADJUSTMENTS

A. Manual Locks

On some installations where an H-beam is used as the track-jamb it will be necessary to notch the back flange of beam so the lock lever can travel to full release. **SEE Figure 52 Page 35.** The lock cables can be adjusted by using the turnbuckles on the lock handle. Adjust one side at a time until the door seals to track satisfactorily. **SEE Figure 53 Page 35.**

NOTE

Excessive force should not be needed to lock door. Stop and locate problem before proceeding.

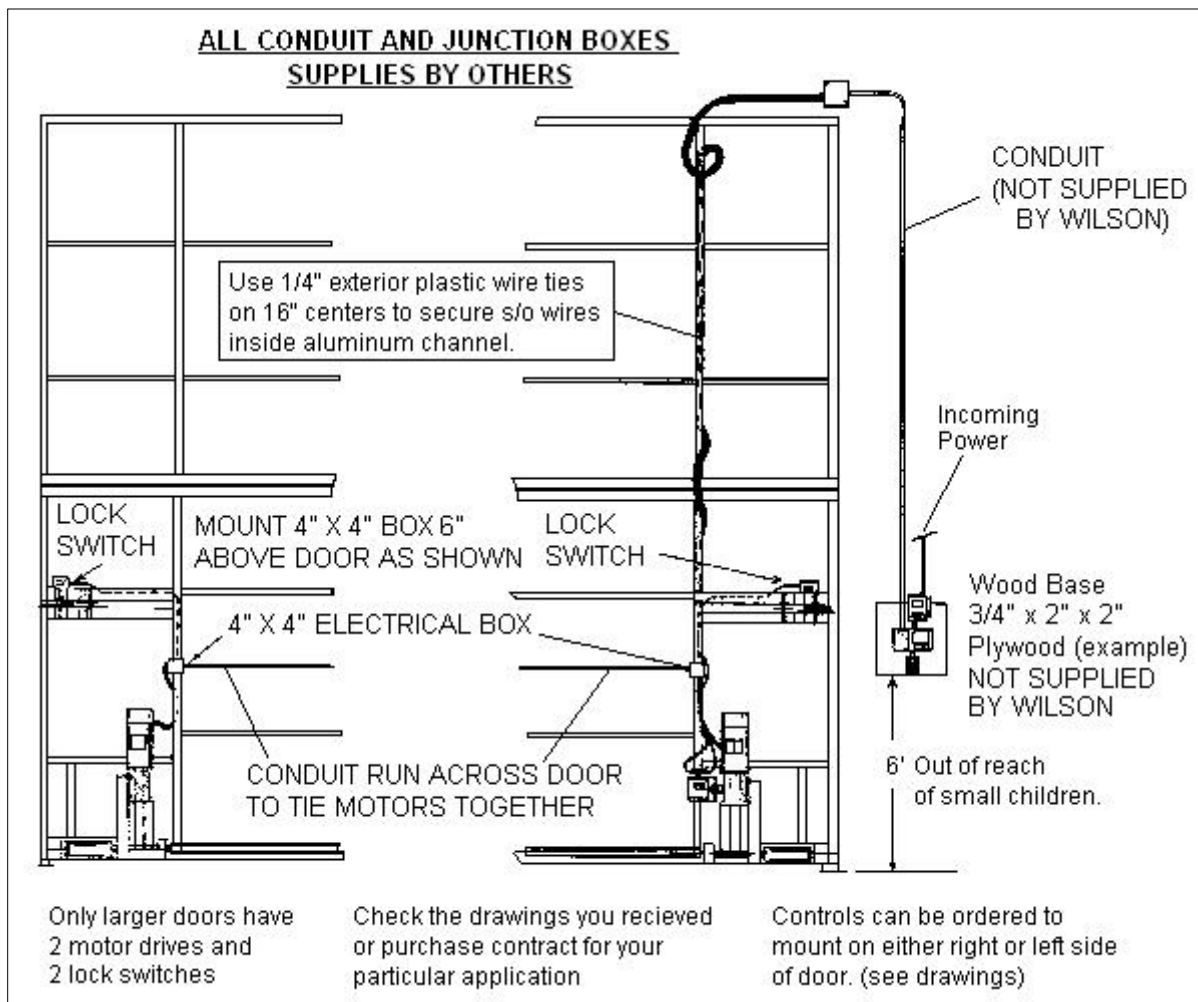


Figure 46 Mounting control box

B. Lock Switch

The lock switch must be tested after door has been wired and ready for use.

1. Unlock door.
2. Run door up until lock cams will clear track.
3. Activate locks.
4. Attempt to run door up.
5. If 2 lock handles on door test each one individually.

The door should not run. If it does run, adjust activator cam so switch is activated and door will not run.

SEE Figure 54, Page 36.

C. Straightening Door

With door locked shut, view down front of door and note if door is bowing in or out.

Doors without wind trusses will require shims at center splice as required to straighten door. **SEE Figure 55 Page 36.**

Doors with wind trusses will require that the turn-

buckles be adjusted to move door in or out. **SEE Figure 56 Page 36.**

Shortening turnbuckles will make the door bow in, and lengthening turnbuckles will bow the door out. Be sure to work all turnbuckles, or the door will not be vertically straight.

D. Wind Load Floor Connector

NOTE

Be sure you have straightened the door properly before installing the floor connector. Failure to do so will result in misalignment later.

1. Round Tube Style

Note sleeve supplied with door. On smaller doors it will be 3 inches in diameter, on medium-size doors 4 inches and on larger doors or high wind load doors there will be more than one 4 inch sleeve.

Determine and mark where the wind pin will contact the floor. The sleeve should be installed to its full

TABLE A - MINIMUM WIRE SIZES FOR SINGLE PHASE MOTORS

Motor HP	25 Feet 230V	50 Feet 230V	100 Feet 230V	150 Feet 230V	200 Feet 230V
3/4	14 ga.	14 ga.	12 ga.	10 ga.	8 ga.
1	14 ga.	14 ga.	10 ga.	8 ga.	8 ga.
1 1/2	14 ga.	12 ga.	10 ga.	8 ga.	6 ga.
2 - 1	14 ga.	12 ga.	8 ga.	6 ga.	6 ga.
2 - 1 1/2	10 ga.	10 ga.	8 ga.	6 ga.	4 ga.
2 - 2	8 ga.	8 ga.	8 ga.	6 ga.	4 ga.

TABLE B - MINIMUM WIRE SIZES FOR THREE PHASE MOTORS

Motor HP	25 Feet 230V			100 Feet 230V			150 - 200 Feet 230V		
	208V	230V	460V	208V	230V	460V	208V	230V	460V
3/4	14 ga.	14 ga.	14 ga.	12 ga.	14 ga.	14 ga.	8 ga.	10 ga.	14 ga.
1	14 ga.	14 ga.	14 ga.	10 ga.	12 ga.	14 ga.	8 ga.	10 ga.	14 ga.
1 1/2	12 ga.	14 ga.	14 ga.	10 ga.	10 ga.	14 ga.	6 ga.	8 ga.	14 ga.
2 - 1	12 ga.	12 ga.	14 ga.	8 ga.	10 ga.	14 ga.	6 ga.	6 ga.	12 ga.
2 - 1 1/2	10 ga.	12 ga.	14 ga.	8 ga.	8 ga.	14 ga.	4 ga.	6 ga.	12 ga.
2 - 2	10 ga.	10 ga.	12 ga.	8 ga.	8 ga.	12 ga.	4 ga.	4 ga.	10 ga.

Note: If motor sizes are not shown, call Wilson Doors Service Department at 262-723-6869

Figure 47 Electrical wire size table

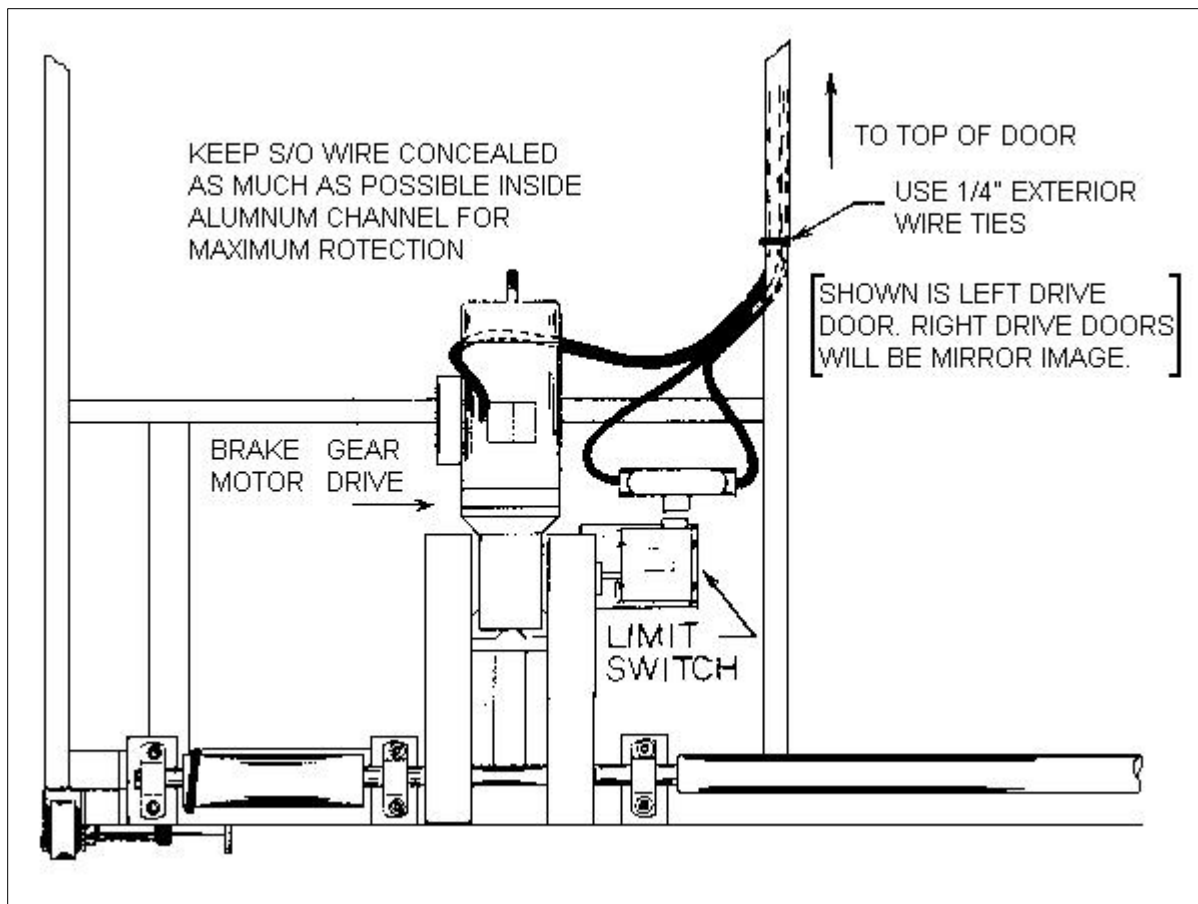


Figure 48 Routing wires

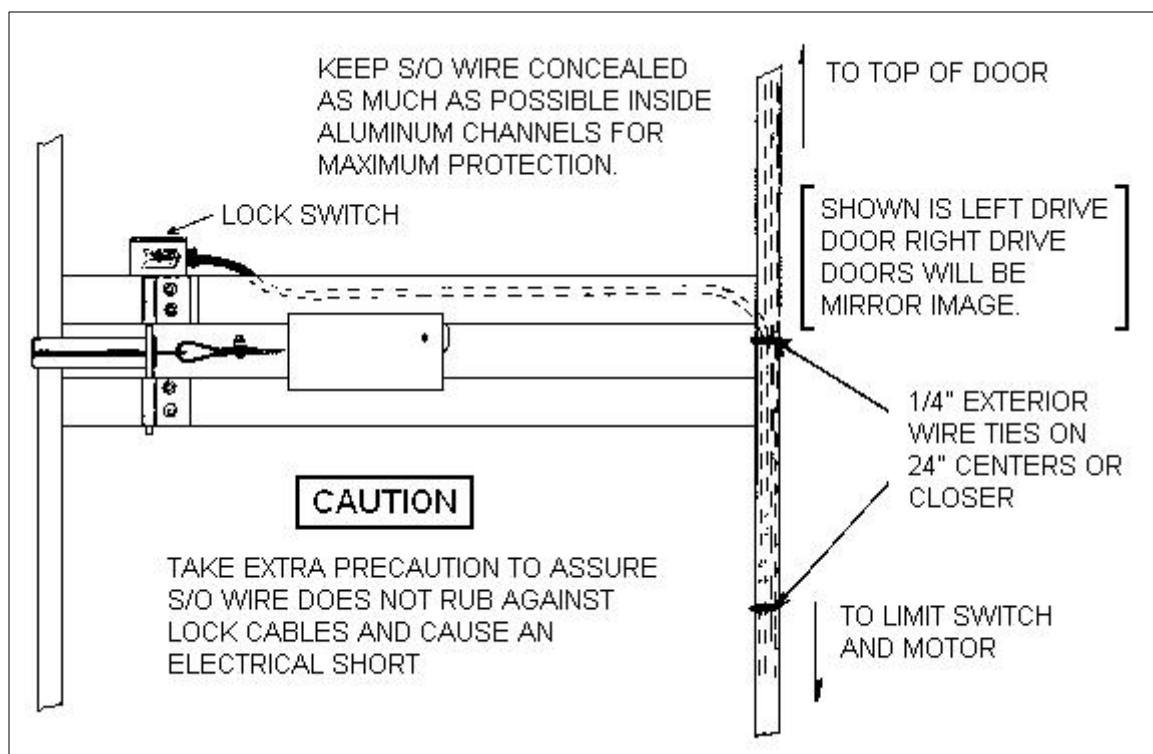


Figure 49 Routing wires

depth centered on the pin. If the floor has already been poured, use a core drill to drill out the concrete and install sleeve.

Adjustment:

With the door locked, adjust wind pin to drop into floor 3 inches minimum. **SEE Figure 57 Page 37.** This is done with the door locked an loosening cable clamp on the end of center pin cable and raising or lowering center pin to desired height. Be sure pin clears floor socket when door is raised. **SEE Figure 58 Page 37** Retighten clamp.

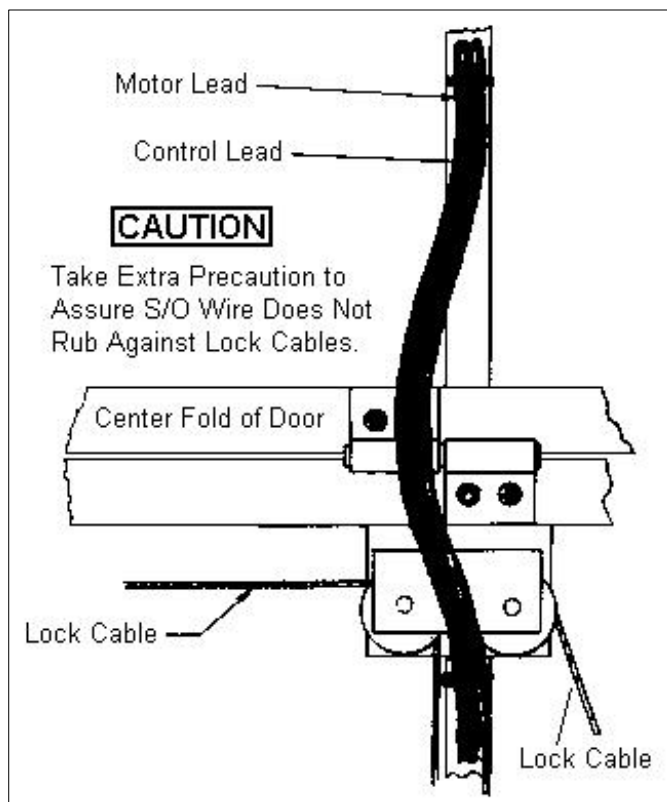


Figure 50 Routing wires

2. Scissors Style

This style wind load floor connector is designed to fully lock the door so there is very little movement when fully closed. It is used mostly on larger doors. This lock will not work properly unless the door is installed to + or - 1/4" of the 3" clear dimension between the bottom door structural and the finished floor. **SEE Figure 59 Page 38.**

The door must be operating under its own power before assembly. Steps E and F must be completed.

1. Raise door to comfortable working height.
2. Install lock components as show in **Figure 60.** Take care to assure that all parts move freely.
3. Remove tack welded inside stop from floor plate.
4. Place plate on floor under lock fingers on door.
5. Lower door onto floor lock plate and position so outside stop is 1/4" away from outside finger. (This is the heavy flat plate.)
6. Mark holes on floor.
7. Open door and attach plate to floor where marked with 1/2" fasteners (not supplied by Wilson).
8. Close door and set the inside stop 1/4" from inside finger and weld into place. (This is the channel).

E. Lift Cables – Down Limit

CAUTION

Care must be taken not to overrun door past its designed opening and closing positions.

NOTE

The lift cables and down limit switch adjustment must be performed simultaneously. See **Page 37 Section F. Setting Limit Switch.** If equipped with optional auto locks, skip to **Page 41 – Section K.**

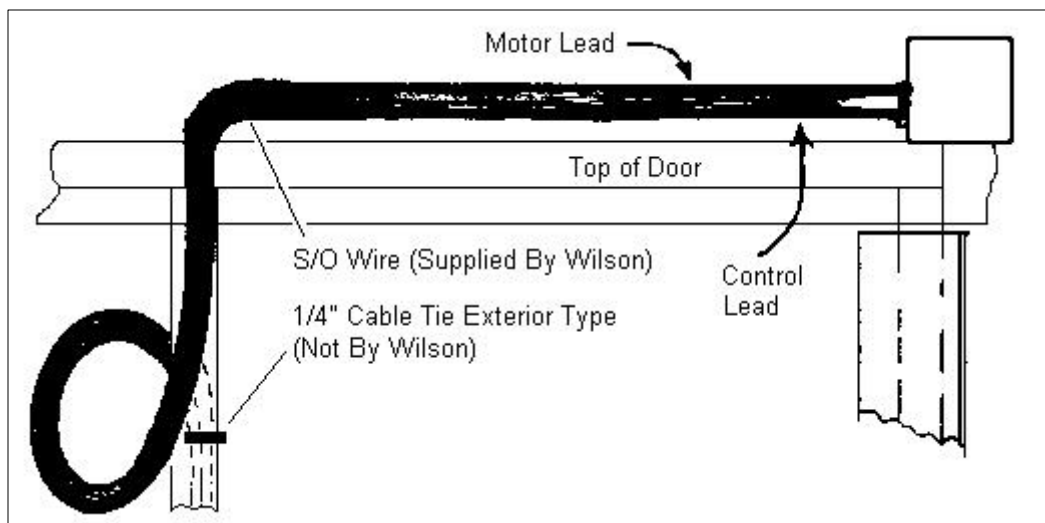


Figure 51 Routing wires

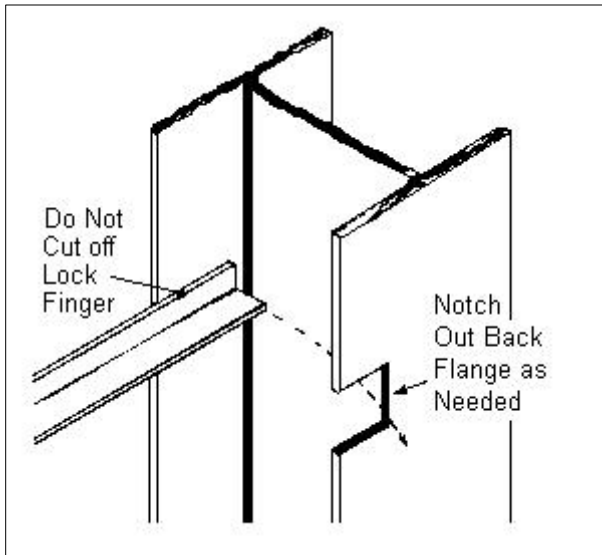


Figure 52 Notching beam flange

The drive shaft should be set so it stops with the lift cables fully unwrapped and the cable tube end between 7 and 9 o'clock on drive shafts that wrap to the back side of the drum, **SEE Figure 60 Page 38.** and between 3 and 5 o'clock on drive shafts that wrap to the front side of the drum. **SEE Figure 61 Page 38.** Next the door should be in the locked position with lock adjustment being performed previously. *The cables should be adjusted so as tight enough not to be able to be pulled beyond the kick-out fingers but still loose enough so as not to have any tension on them when door is locked. **SEE Figure 62 Page 39.** Once one cable is adjusted properly, measure out from the center of door structure to the cable. This distance can then be used to set the remaining lift cables. A tolerance of plus or minus 1/8" should be held.

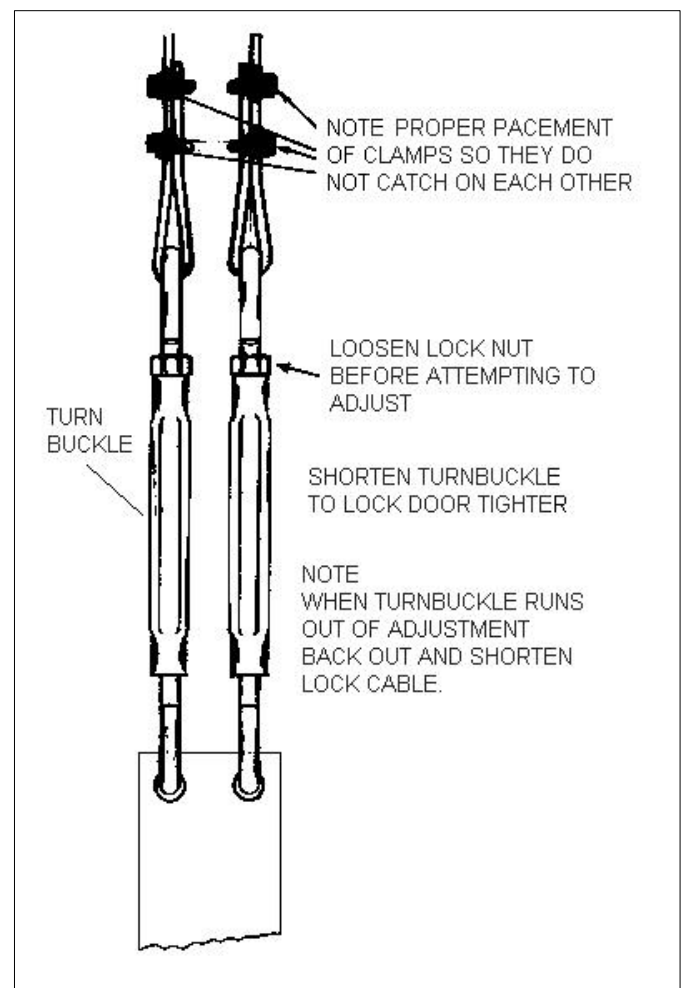


Figure 53 Final lock cable adjustment

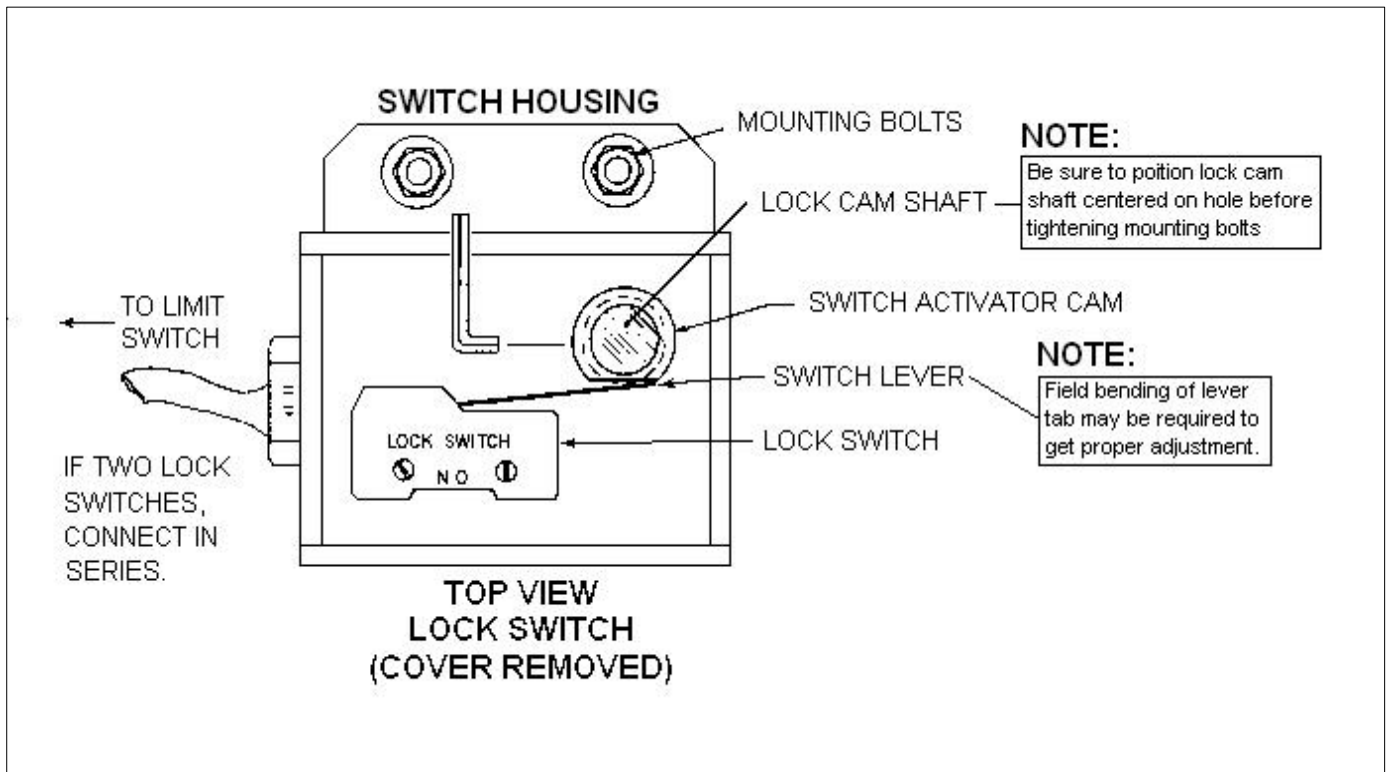


Figure 54 Adjusting lock switch

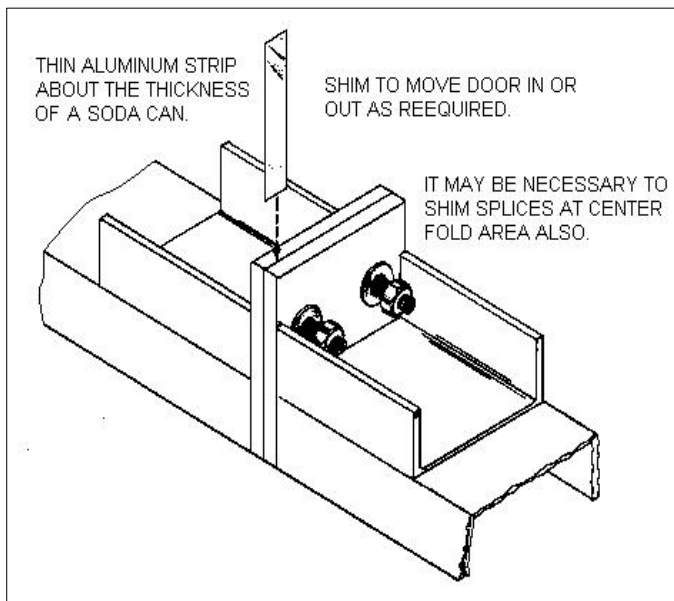


Figure 55 Shimming splice to straighten door

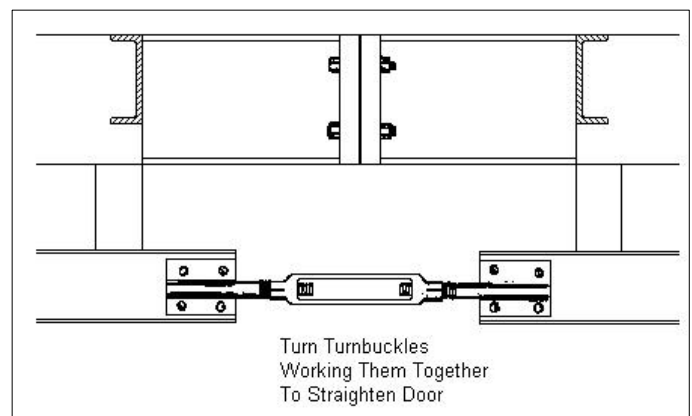


Figure 56 Adjusting turnbuckles to straighten door

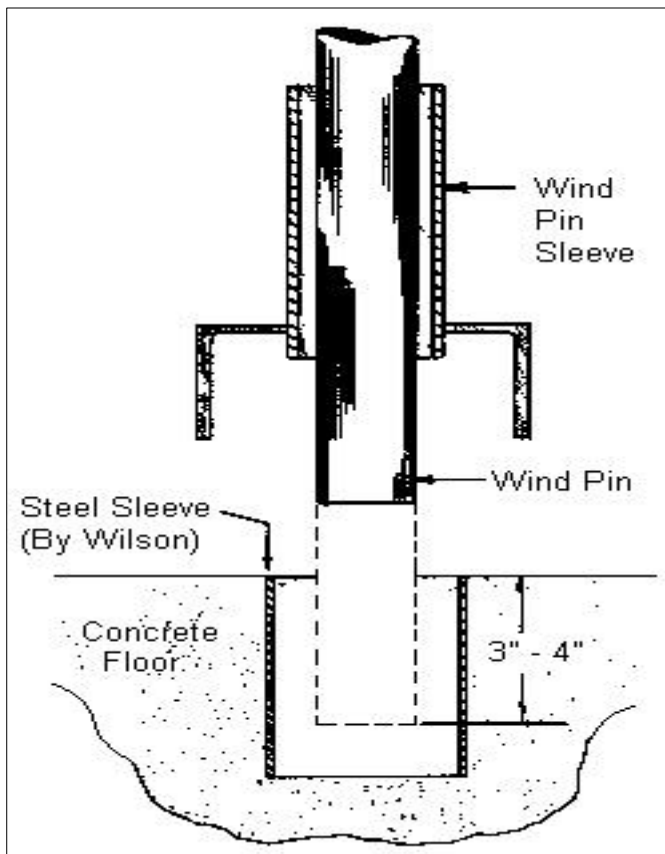


Figure 57 Locating floor socket for wind load pin

F. Setting Limit Switch

The limit switch is a revolving type switch. That is, it measures the amount of turns the gearbox makes and breaks the electrical circuit holding the contactors in shutting the door off.

NOTE

If door is equipped with auto lock refer to that section before proceeding.

To Set the Limits:

SEE Figure 64, Page 39.

1. Loosen cam screws (A). For Up or Down Limit
2. Operate door until desired travel is reached. Refer to **Page 34, section E** and serial number plate on door structure by main motor drive. This plate will give maximum opening height. DO NOT exceed this height. Doing so could damage door.
3. Move cam wheel (B) counterclockwise to activate switch. Be sure to approach switch from proper direction or setting will not be accurate.
4. Tighten cam screws (do not over tighten).

CAUTION

Care must be taken not to over run the door past its designed opening and closing positions or damage to door will occur.

G. Photo Sensor Installation

NOTE

Door must be operational with both up and down limits adjusted before proceeding with photo sensor wiring and adjustments.

1. The photo sensors mount at the door jambs 8" up off the finished floor and anywhere under the travel of the door. **SEE Figure 65 Page 39.** Drill a 1-1/8" hole in each jamb as shown in **Figure 66 Page 40.** Jambs that can not be drilled will have to have a 4x4 electrical

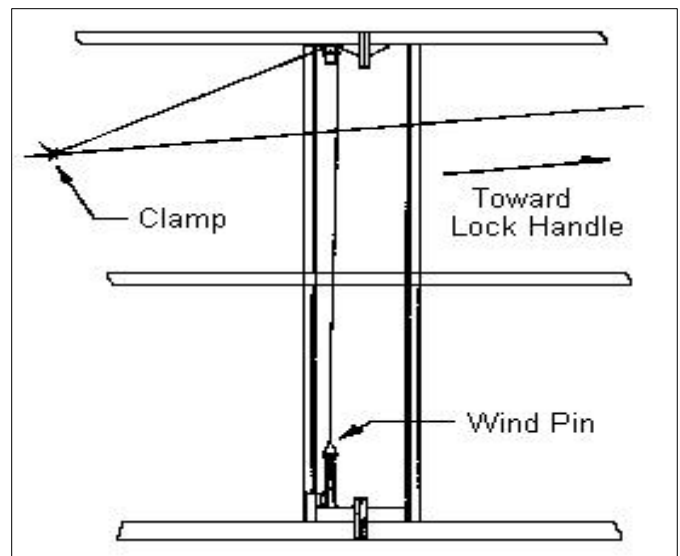


Figure 58 Adjusting wind pin for depth

box mounted on the back of the jamb. The photo eyes can then be mounted inside the box.

2. There are two photo sensors. One is an emitter and the other the receiver. The receiver has three wires. It is important that the receiver is installed on the control side of the door. This is the side that the control box is mounting to. Install the emitter on the far side.

3. Remove cover on limit switch box and locate switch labeled **photo**.

4. Open door 7- 8 feet and disconnect power by turning emergency disconnect.

5. Be sure electrical power is disconnected. Run wiring up over the door to control box and make necessary connections per **Figure 67 Page 40**.

6. Reconnect electrical power. If photo sensors are aligned, the relay will not activate when the power is turned on. Check by passing object in front of sensor on control side. Relay should energize (clicking noise) each time sensor is blocked. If nothing happens and relay did not energize when power was supplied, check the back of each sensor. If they are getting power, a small red light will be lit. If not, check wiring for proper hook up. If both are lit, they need to be aligned. Move until the relay is activated and tighten sensor to mounting hole. (It is sometimes necessary to adjust both sensors.)

After final alignment, test by running door in both directions. Activate sensor while staying out from under path of door. Door will stop travel in down direction and continue running in up direction when sensors are adjusted properly.

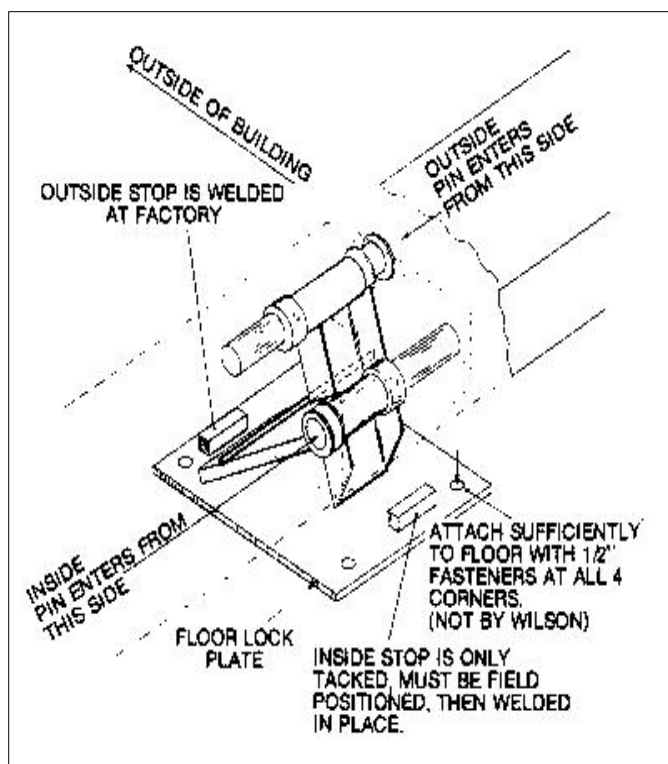


Figure 59 Scissors style floor lock

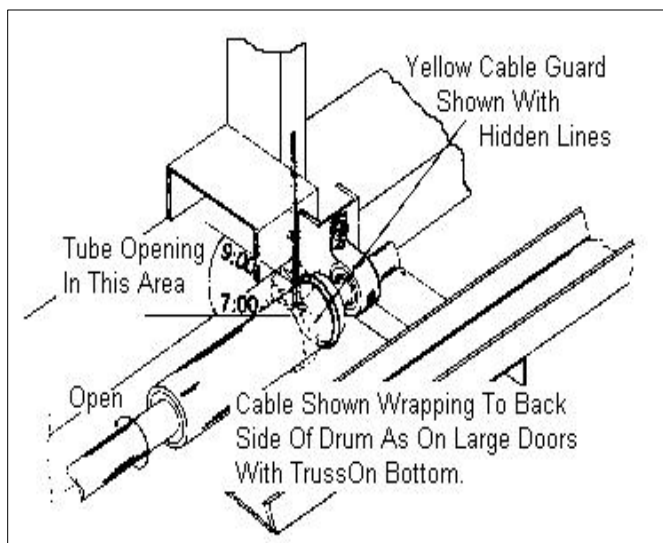


Figure 60 Adjusting drive shaft for proper stopping position—large doors

NOTE

Sensitivity adjustment has been factory set at maximum. **DO NOT READJUST**

7. Test by blocking beam. You should hear relay click in control box.

8. Run door down to 60 off the finished floor and stop door. Locate switch in limit labeled **photo**. Turn adjusting wheel counterclockwise until the switch clicks. This will deactivate photo sensor for the first 60-80 of travel so the door will not block the beam itself when opening and closing.

9. Test door by blocking beam while door is traveling in both directions. Door should stop when traveling down and continue when traveling up when object passes through opening.

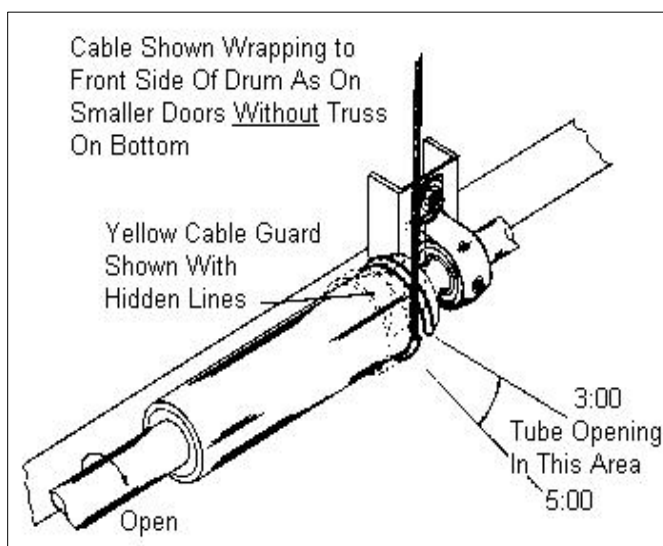


Figure 61 Adjusting drive shaft for proper stopping position—small doors

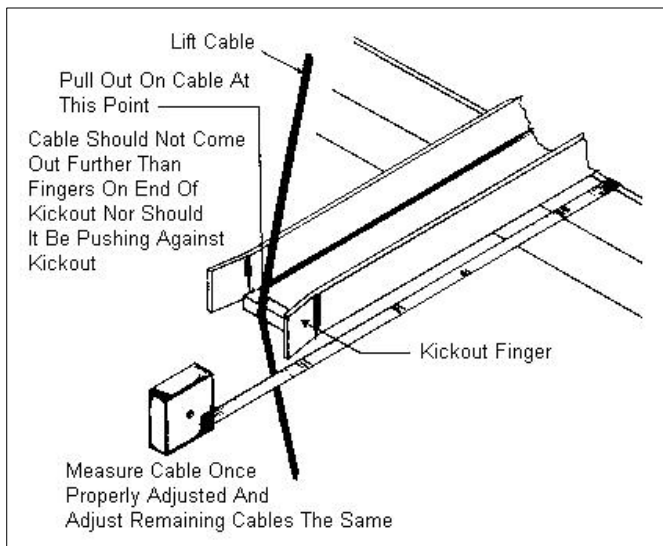


Figure 62 Adjusting lift cables

H. Wind Drag Pin

The door has to be running to perform this adjustment properly.

Back off set collars so drag pin can walk back and forth.

Slide drag pins over close to track.

Run door fully open and back down noting if drag pin pushes back away from track as door goes up. (This is caused by the door jamb not being perfectly plumb.)

CAUTION

Do not run door higher than designed height. Serious damage to door will result. See serial number plate for clear height.

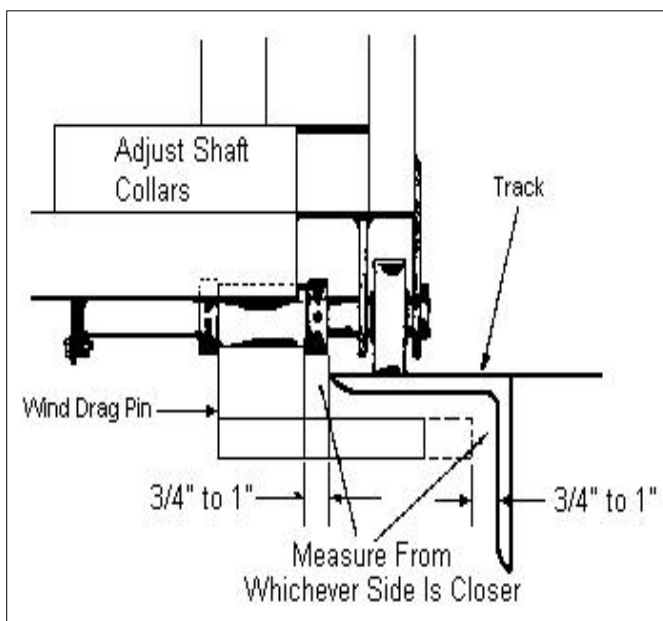
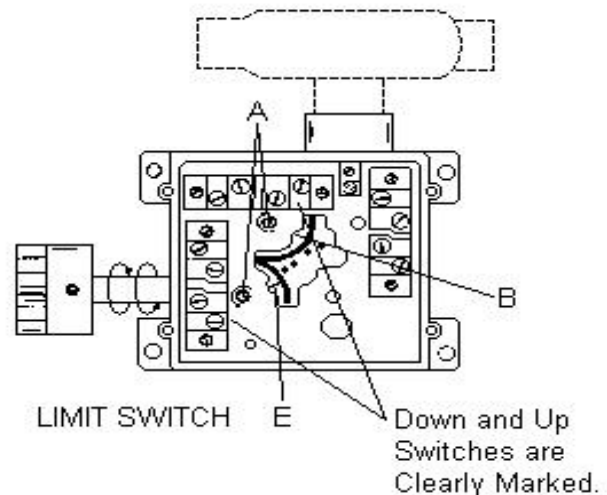


Figure 63 Adjusting wind drag pins

Back drag pins away from track another $\frac{3}{4}$ to 1" and adjust set collars to limit drag pins travel. Be sure pins are free to move up and down. **SEE Figure 63.**

CAUTION

Do not set drag pins too tight or door could jamb open and drop at any time if lift cables are backed off, causing the door to fall uncontrolled.



Adjusting Instructions

Caution Disconnect Radio Control if so Equiped.

G. To Set The Limits

1. Loosen Cam Screws (A).
2. Operate Door Until Desired Travel is Reached.
3. Move Cam Wheel (B) to Activate Switch. Be Sure to Approach Switch From Proper Direction, or Setting Will Not Be Accurate.
4. Tighten Cam Screws (DO NOT OVERTIGHTEN)

Figure 64 Adjusting limit switch

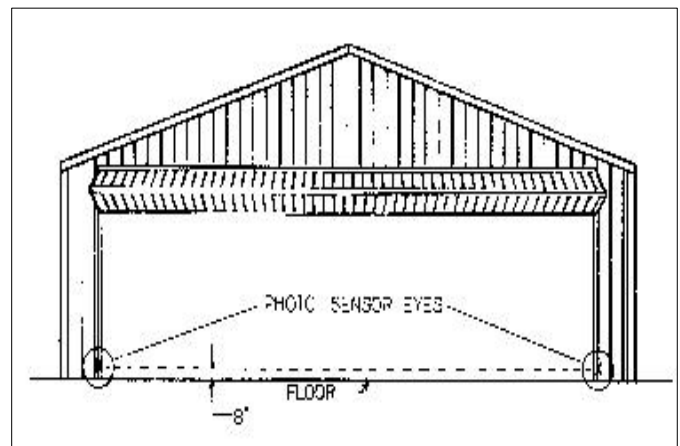


Figure 65 Photo sensor installation

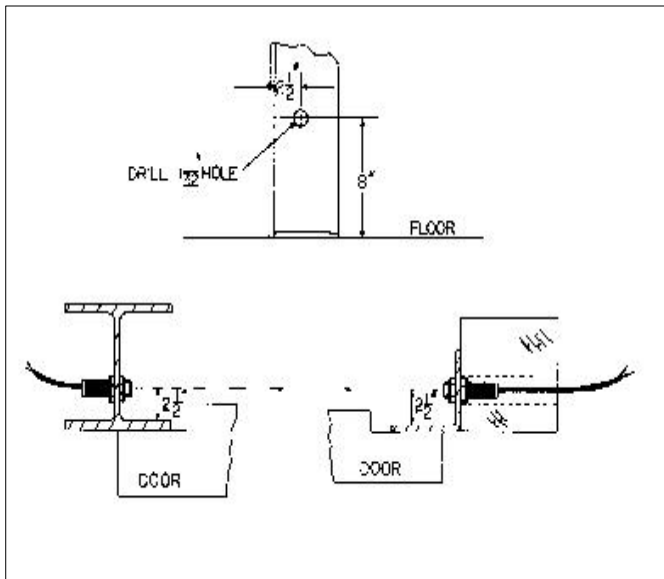


Figure 66 Photo sensor installation

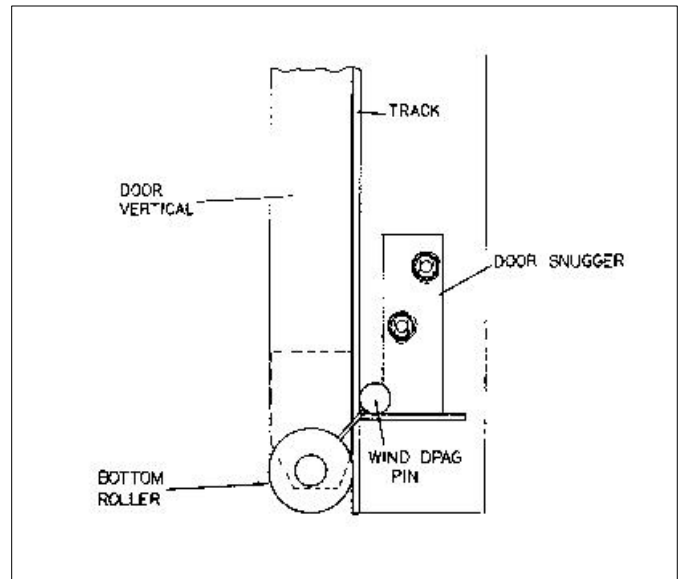


Figure 68 Installing door snagger

I. Door Snagger

This is on doors with 70 bottom channels only. At the bottom of each door track a snagger needs to be installed. This prevents the bottom of the door from moving by pinching the wind drag pin between the track and the snagger. **SEE Figure 68.** With door fully closed and locked, position snuggers so wind drag pin is pinched in an upward position to prevent movement of door away from track. Mark jamb and drill 1/2 - inch hole and bolt to jamb.

NOTE

It is not recommended that snagger be welded to jamb because of possible adjustment requirements later on.

J. Cross Cables

Some larger doors have cross cables installed at the factory on bottom and/or top sections. These cables are designed to stiffen the bottom section when the door is open. When properly adjusted the cables will have only enough tension on them to keep them from sagging when the door is closed. Caution should be used here not to over tighten the cross cables. The door can be pulled out of shape by over tightening of these cables. Start at one end of the door and work each cable turnbuckle until sag is out of cable and go on to next until completed. Then go back and recheck making final adjustments as necessary. Again, do not over tighten. **SEE Figure 69.**

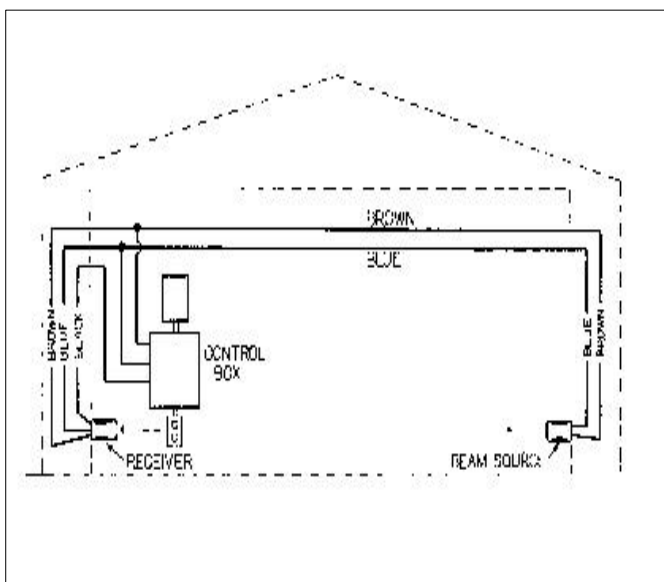


Figure 67 Photo sensor installation

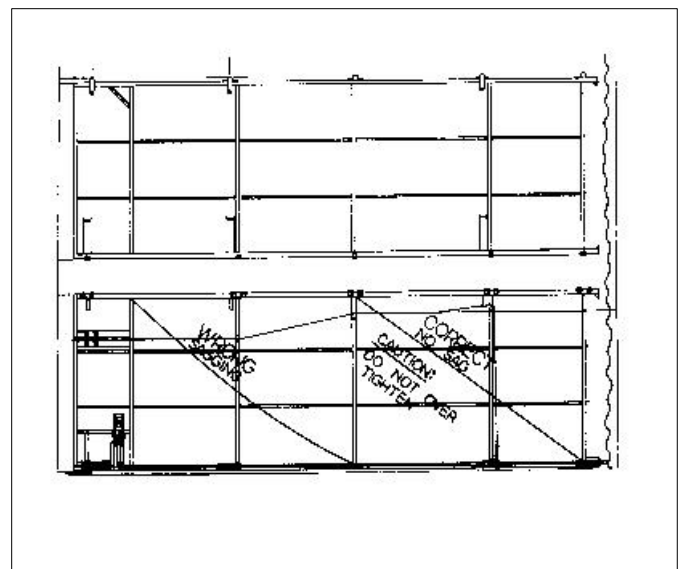


Figure 69 Installing door snagger

K. Optional Auto Locks

In order to adjust locks properly the previous steps in this assembly manual must have been completed.

CAUTION

Failure to perform all other preceding adjustments could cause damage to lock system.

STEP 1. Clamp door closed at the jamb somewhere around the door lock cam area. **Figure 71, Page 42.**

STEP 2. Check that lock fingers move freely during full travel from locked to unlocked position.

STEP 3. Turn drive shaft until the lock cams on single cam locks have $\frac{1}{4}$ " clearance at the front edge

of the track or $\frac{1}{2}$ " for dual cam locks. This is done by removing the top cover on the motor and releasing the brake then turning the motor with a wrench or optional crank handle.

STEP 4. Adjust lift cables and attach lift cable springs. **SEE Figure 72-73, Page 42.**

WARNING

Failure to remove clamps could result in personal injury from flying objects.

STEP 5. Remove clamps holding door closed. Set down limit switch. **See Page 37 Section F** Setting Limit Switch. Run door all the way up. Set up limit **Page 37 Section F.** Run door down keeping your hand on the stop button to stop door manually if locks start to over tighten. Adjust down limit switch to get a

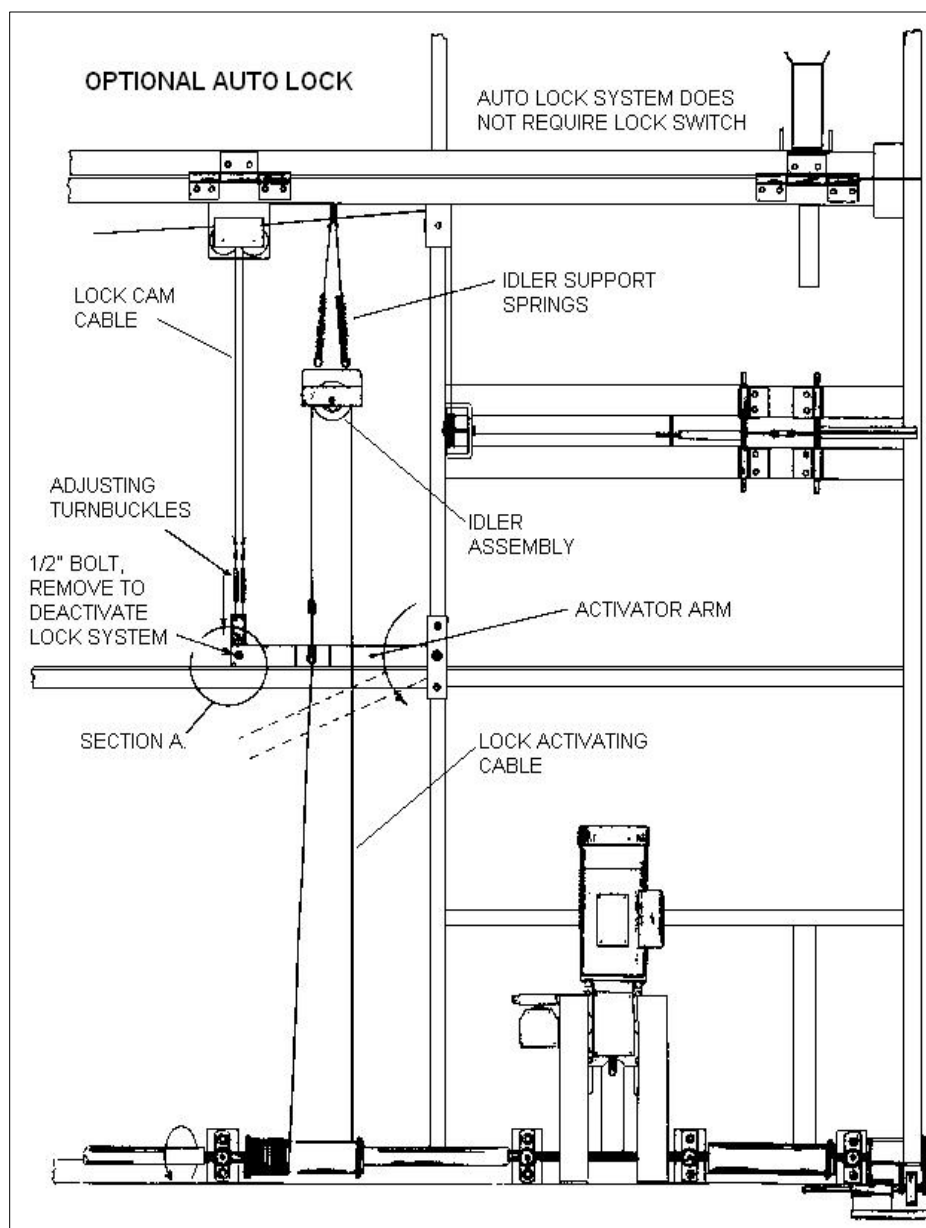


Figure 70 Auto lock

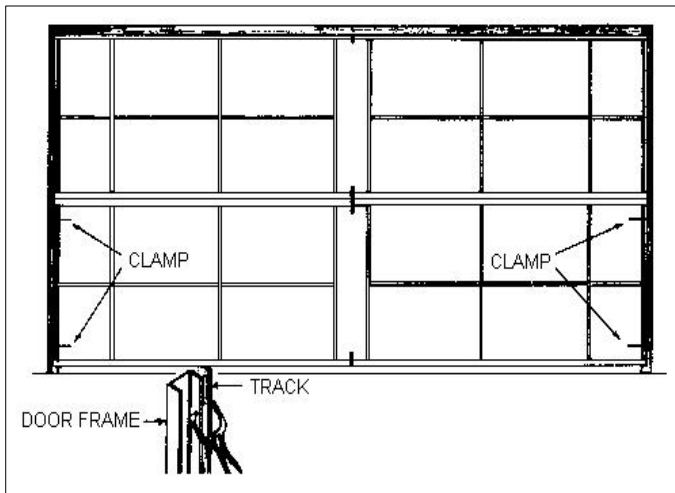


Figure 71 Clamping door to track to hold in place

good seal at sides of door. Do not have excessive pull on any cable. Door will seal nicely without heavy loads on cables. The final seal may be fine tuned by turning the individual lock cable turnbuckles. **SEE Figure 70, Page 41.**

NOTE

When lowering door the first time extreme caution needs to be taken when lock cams first start to move. They must clear the track edge and swing around on the back side. If not, they could jam into the edge of the door track and cause a cable to snap. If this starts to occur stop the door immediately and readjust the lift cables. They are too tight or lift cable timing is off. **SEE Figure 70, Page 41.**

CAUTION

If limit switch shuts off late or turnbuckles are adjusted too tight, lock systems can be torn apart.

Stop door with stop switch if over locking should start to occur and correct problem before proceeding.

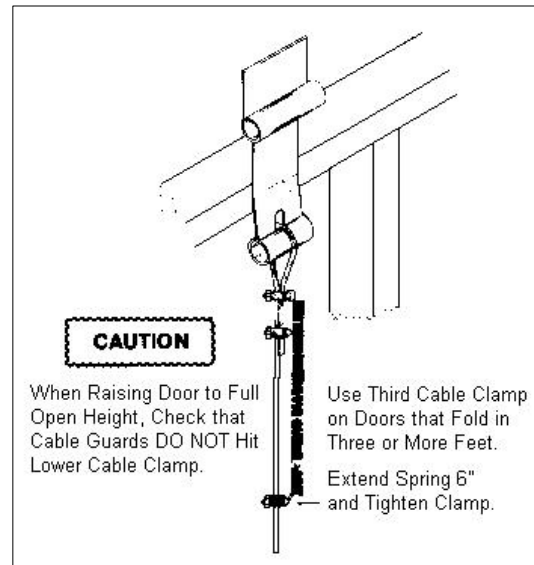


Figure 72 Installing lift cable springs (auto lock doors only)

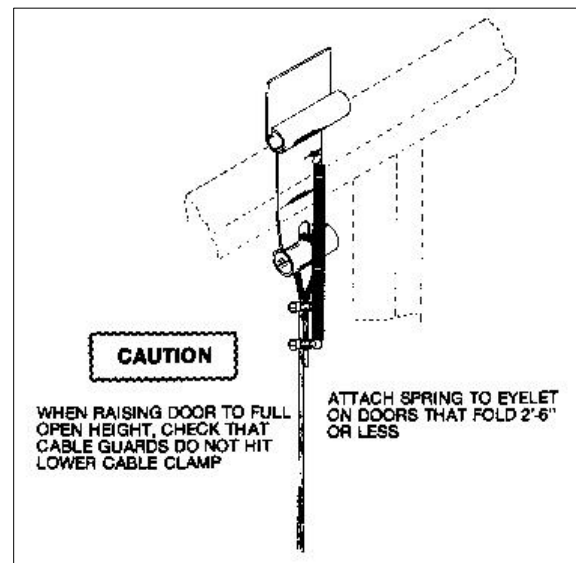


Figure 73 Installing lift cable springs (auto lock doors only)

VII. SHEETING - INSULATING

WARNING

Read entire section before starting work.

A. Squaring the Door

Before sheeting, it is recommended that the door be run several times to see how well it is tracking. It will also help plumb the door in case it was racked during assembly or setup. Check door at jam to see how well it

is aligned with it. (It is assumed the tracks are plumb.) It may be necessary to rack door square by pulling on door whichever direction is needed. This is accomplished in the same manner a building is squared before sheeting. Once squared the door should be clamped to the track to hold it in position until sheeted. **SEE Figure 71 Page 42.** Once the door is sheeted properly, the door will stay in this position and the clamps can be removed.

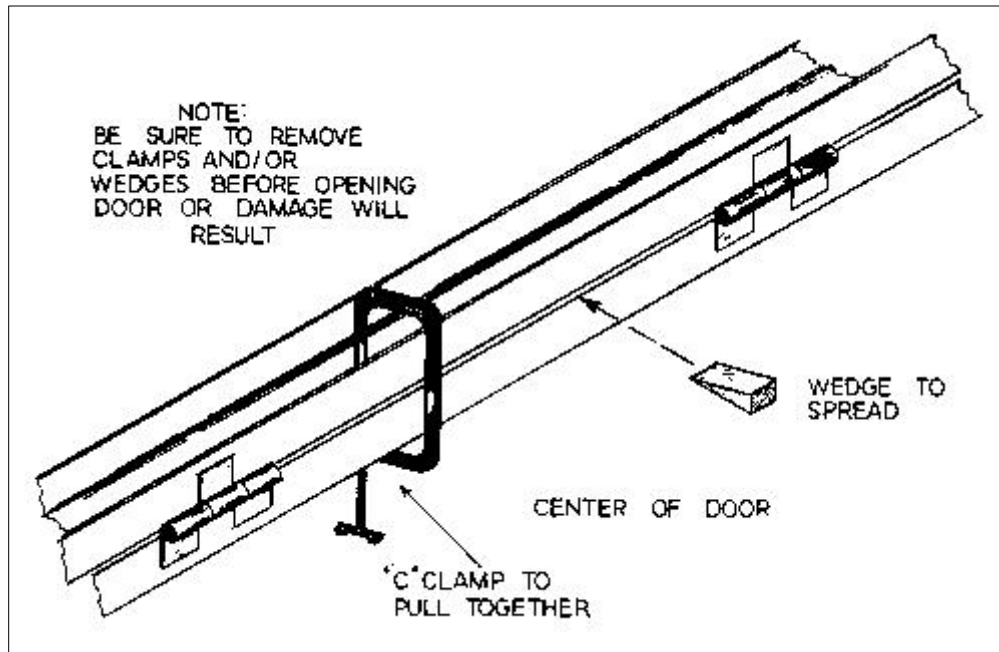


Figure 74 Straightening center fold area

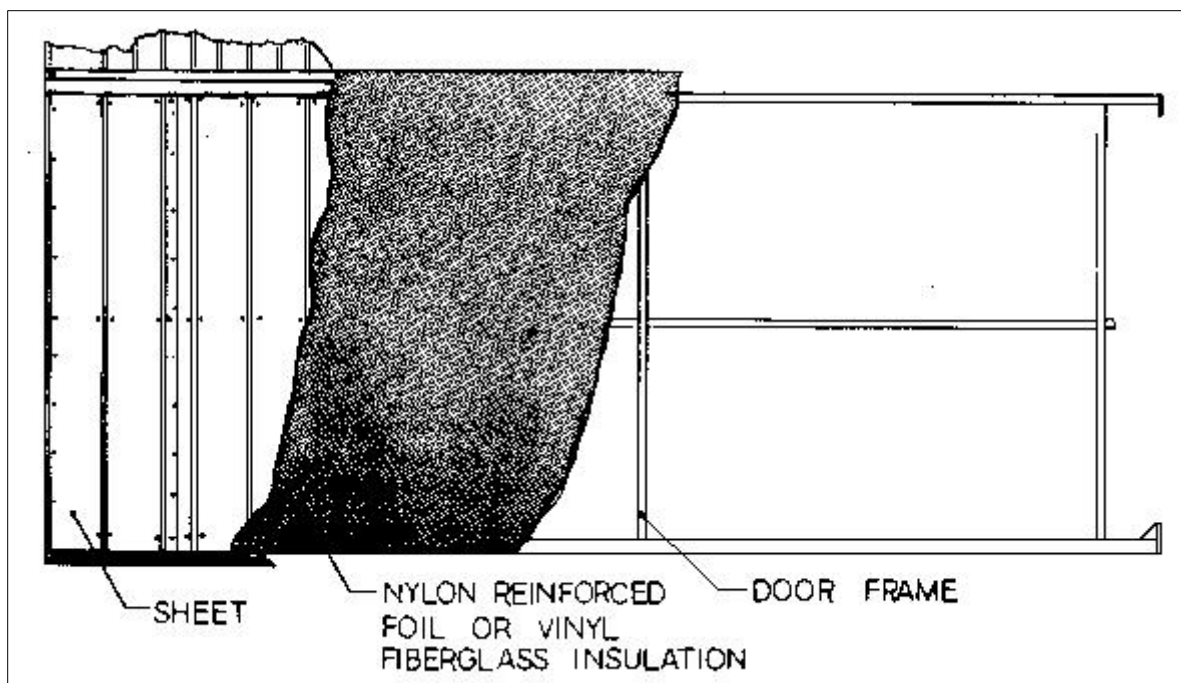


Figure 75 Insulating

B. Check Center Gap

Check center gap of door at fold area. This gap should be consistent throughout the door. On some doors it may be necessary to spread or pull together this gap to make it consistent. This is done with wedges or clamps and should remain until after the door is sheeted which will hold the channel rigid. **SEE Figure 74, Page 43.** DO NOT forget to remove after sheeting.

C. Center Sheeting Girt

At the center of the door where it bolts together, the sheeting girts are absent. These are shipped in the parts box and need to be installed and fastened into place before sheeting the door. **SEE Figure 78 Page 45.**

D. Insulating

There are many different ways to insulate the door. Basically, the door may be insulated the same way the building is insulated with some exceptions. Our experience has shown that nylon reinforced foil or vinyl backed fiberglass insulation sandwiched between the sheeting and the door works the best. **SEE Figure 75, Page 43, and Figure 76.**

NOTE

Do not use board-type insulation on doors over 50" wide.

If spray insulation is used, be sure to tape center fold gap or door will not close properly.

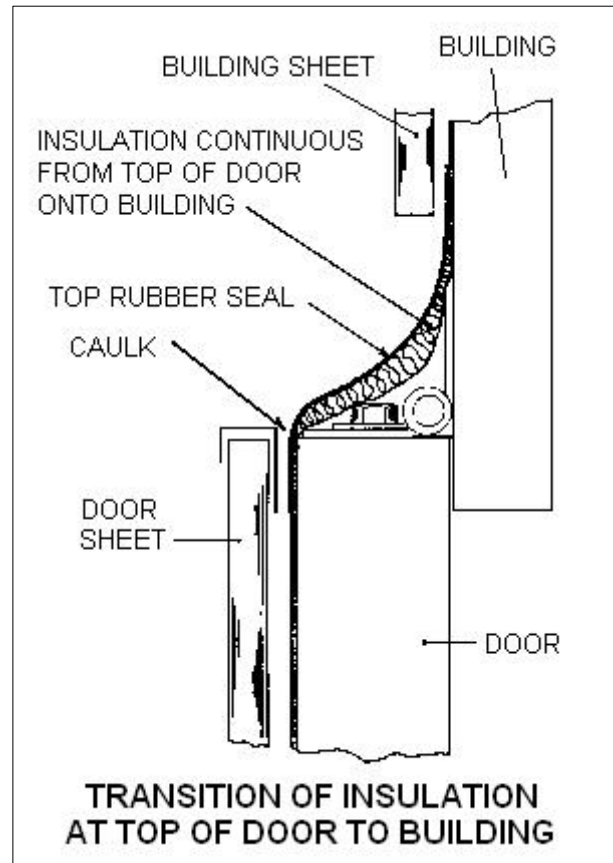


Figure 76 Insulating

E. Sheeting

NOTE

Doors over 22'0" to top of hinge must use mastic tape on sheeting seams to enhance diaphragm strength of the sheeting.

1. Attaching Sheet

The Wilson Door was designed to sheet vertically, the same as your building. Twenty-six (26) gauge steel sheet or 24 gauge aluminum should be considered minimum sheet thickness. A sheet design that will give good diaphragm action is a must. A good example is McElroy's Multi-Rib®.

CAUTION

USE OF ARCHITECTURAL TYPE SHEETING WILL VOID ALL WARRANTIES. SEE Figure 77.

The sheeting must be drawn up as tight as possible to the door. Attaching screws should be installed

on each side of the sheet ribs on all horizontal door members. At ends of door sheeting must be attached to last vertical of door not slid up inside the trim. The seams should be stitched every 2' to enhance the diaphragm action of the sheeting. See Figure 79.

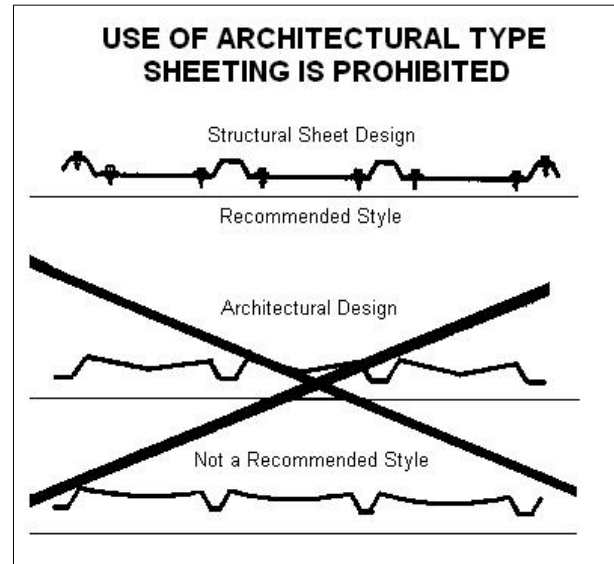


Figure 77 Identifying proper sheeting

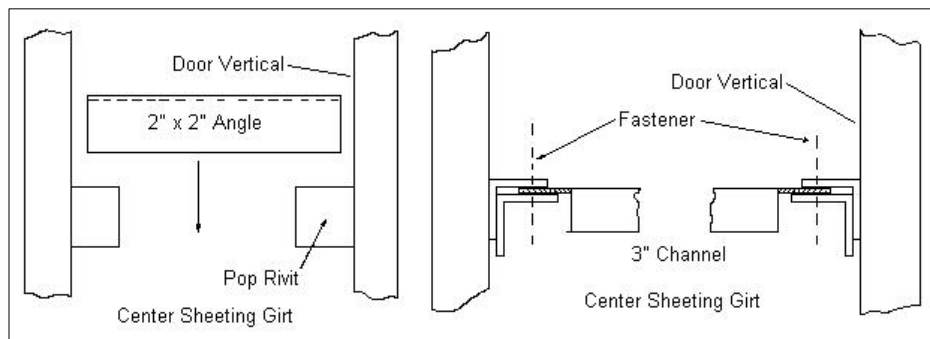


Figure 78 Installing center sheeting girt

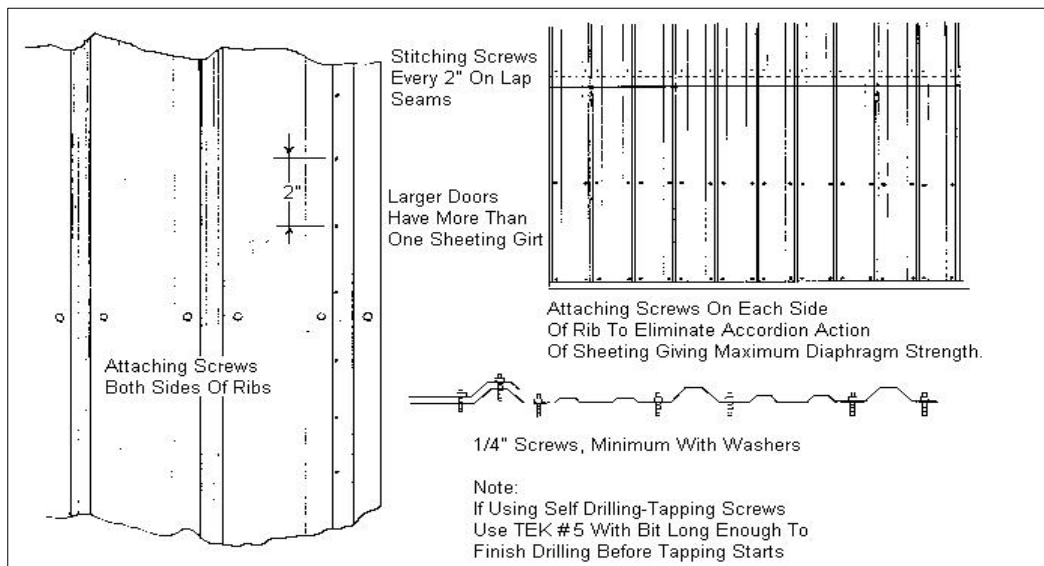


Figure 79 Attaching sheeting

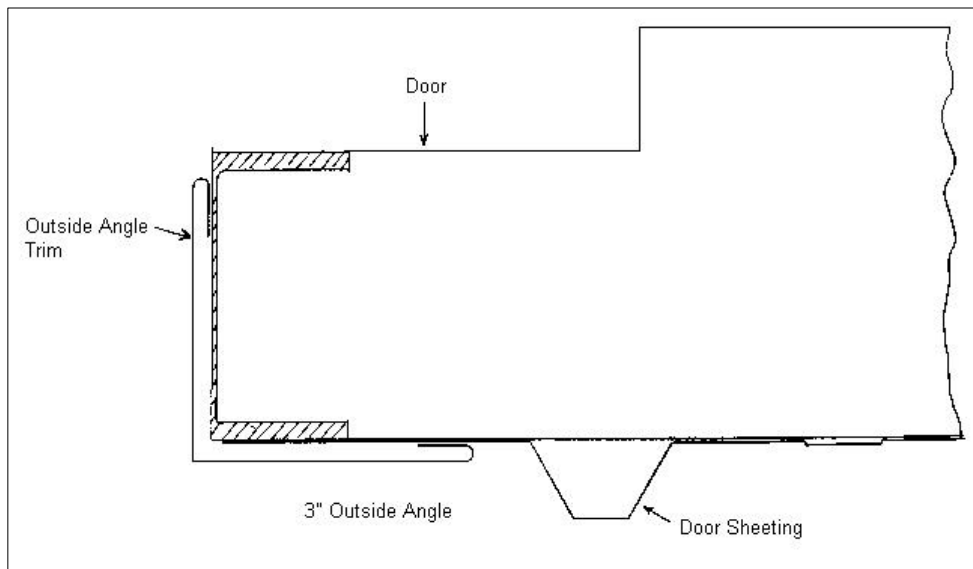


Figure 80 Attaching sheeting trim

It is not recommended that fiberglass or other translucent plastic material be used to cover door unless these products will give the required diaphragm strength to the door. If natural light is desired inside hangar, install translucent panels in side wall or roof.

The preferred way to bridge the gap at the center of the door is to extend the top sheeting 3-4 inches beyond bottom of top section, overlapping top of bottom section. The sheet must be shimmed out at least $\frac{1}{2}$ " at bottom of top sheet to give sufficient clearance for screws under overlap sheet. This is preferred because if it rains when the door is open the rain will run off the door like a roof overhang. **SEE Figure 81.**

NOTE

Inspect top, and center of door sheeting for binding. When installed properly, sheeting

should never bind.

2. Rubber seal

A. Top

The rubber on the top of the door is designed to tuck up under the bottom of the building sheeting above the door. It should then lie loosely on top of the door coming down on face and tuck behind door sheeting $\frac{1}{2}$ " trim. This will protect the rubber from ripping under high winds. **SEE Figure 82, Page 47.**

NOTE

If door is equipped with bottom sensing edge option, it must be installed at this time. **SEE Section J., Page 51.**

B. Bottom

The bottom rubber seal on the bottom of the door is designed to collapse no more than 2". It should be installed before the sheeting is attached to the bottom section.

1) Fold rubber in half and staple top of seal with insulation stapler or heavy-duty stapler. This will hold rubber folded making it easier to work with.

2) Center and attach rubber to bottom of door, being careful not to collapse more than 2". Be sure to follow contour of floor. Pop rivets are all that is necessary because sheeting will sandwich seal to door and its fastener should go through seal. This will also allow for replacement in the future. **Do Not** cut off extra seal at each end at this time. This will be folded over later to seal ends of door. **SEE Figure 88, Page 48.**

3) Capping the ends. In order to seal ends of door at bottom it will be necessary to fold the seal as shown in **Figures 83, 84, 85, & 86**, steps 1 through 4 **Pages 47, & 48**. This will give an excellent bottom seal on the bottom ends of door. If done properly light will not even

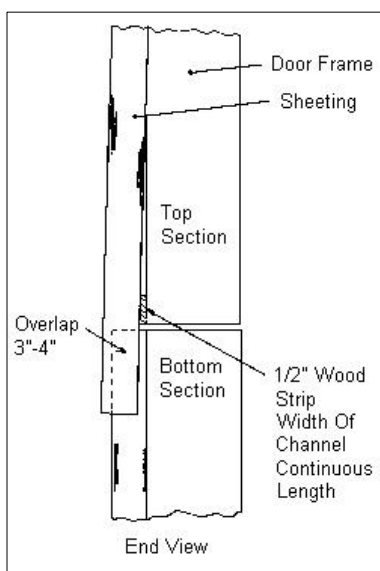


Figure 81 Sheeting at center fold of door using the overlap method

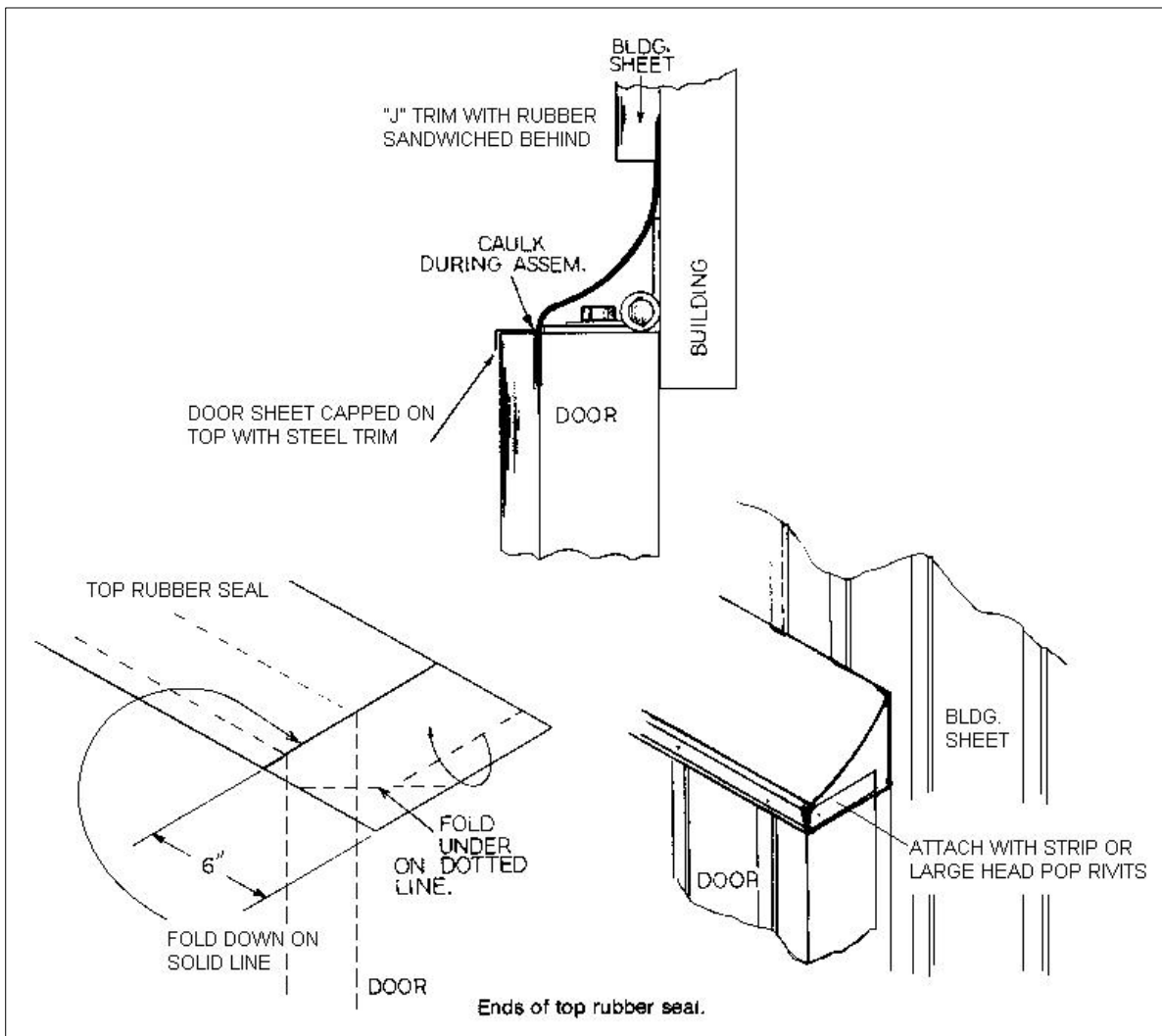


Figure 82 Attaching rubber seal at top of door

come in from this area.

Trim

The door sheeting trim is basically up to the individual. Some like to keep it simple and some like to dress the door up. We recommend that all sharp edges be trimmed off; and if door is not insulated, a closure or bottom sheeting cap be installed on bottom of door. If this is not done, dirt and snow can blow in. **SEE Figure 88 Page 48.**

WARNING

Inspect top, sides and center of door sheeting for binding both closed and fully open. When installed properly sheeting should never bind.

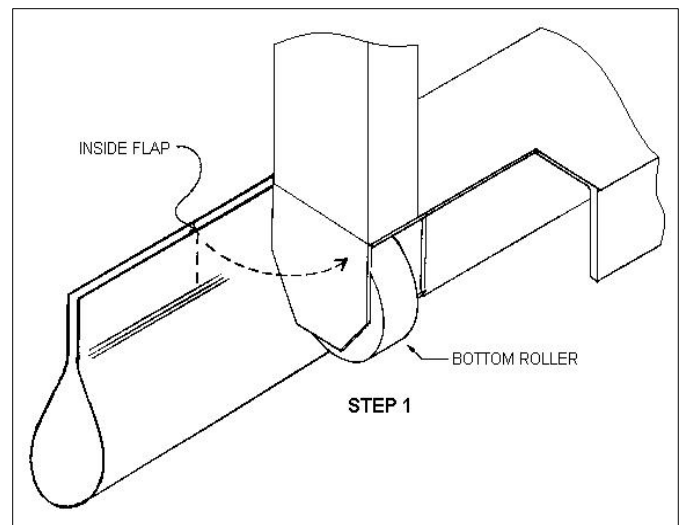


Figure 83 Sealing lower edge of door

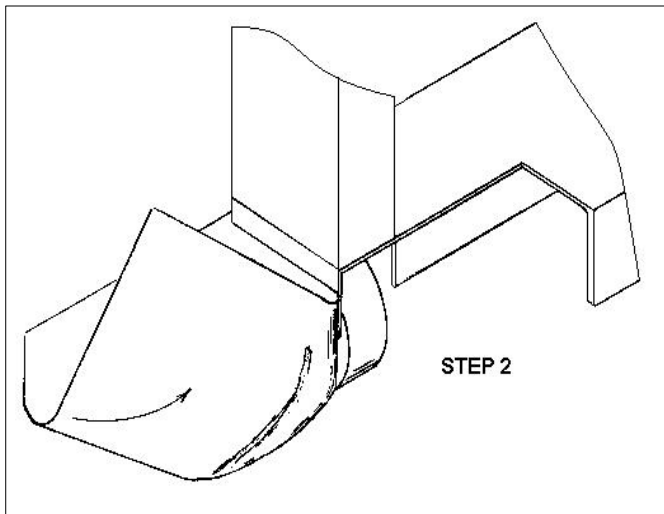


Figure 84 Sealing lower edge of door

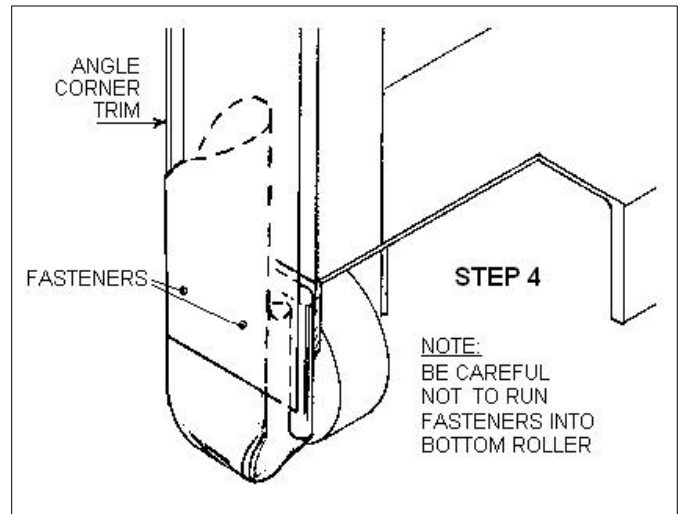


Figure 86 Sealing lower edge of door

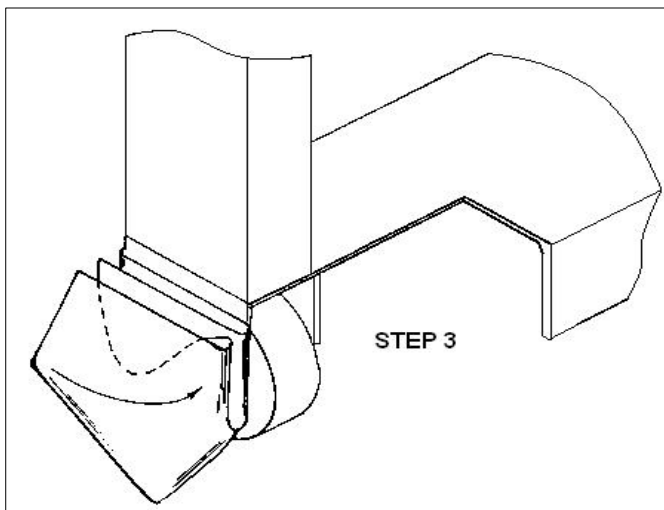


Figure 85 Sealing lower edge of door

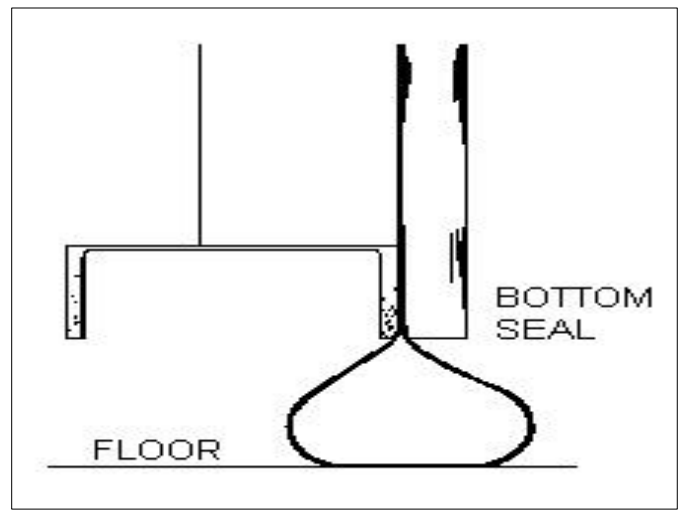


Figure 87 Attaching rubber seal to bottom of door

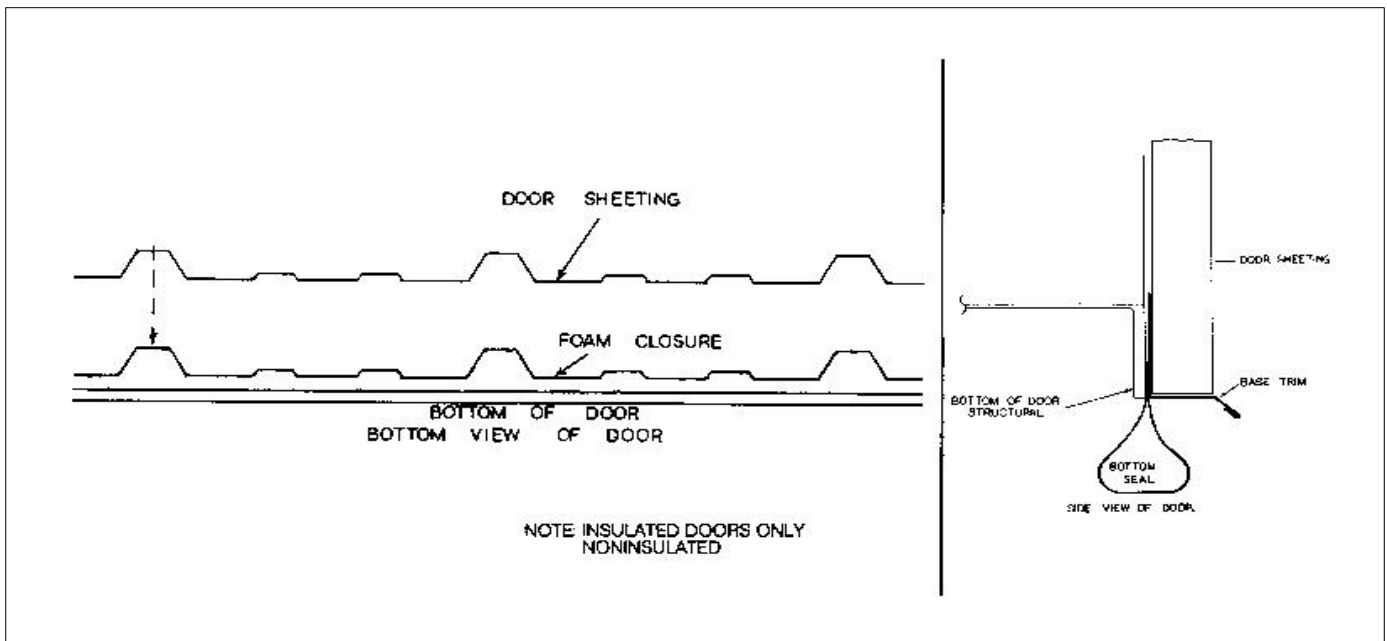


Figure 88 Closing off bottom of sheeting

F. Side Seal

Foam seal 1 inch wide and $\frac{1}{2}$ inch thick is supplied with every door. This is designed to seal the edge of the door with the track. To install seal, lift door $\frac{1}{2}$ to $\frac{3}{4}$ open. With a ladder on the outside edge clean aluminum of all oxides and wipe dry. Roll the seal out onto the aluminum channel. The seal has its own adhesive so be careful to keep it clean or it will not adhere well. On bottom half of door, start down inside bottom roller pocket. This will prevent seal from pulling up as door is at final closing position. Extra care must be taken to clean this pocket and get seal down in as deep as possible. Failure will result in seal coming off on bottom of door. Keep seal flush with outside edge of door. Press down to seal firmly and be sure the adhesive takes. It is recommended that the door be lock closed after completion of seal installation for 24 hours to assure good adhesion. **SEE Figure 89.**

G. Optional Cold Weather Package

An optional cold weather seal is available for temperature controlled buildings. It consists of a second rubber seal at bottom of the door and enough foam seal to go around the perimeter of the door and through the center fold twice. Refer to **Figure 90** for details. Again be sure aluminum is free of all oxides before installing foam and temperature is above 50° F for best results.

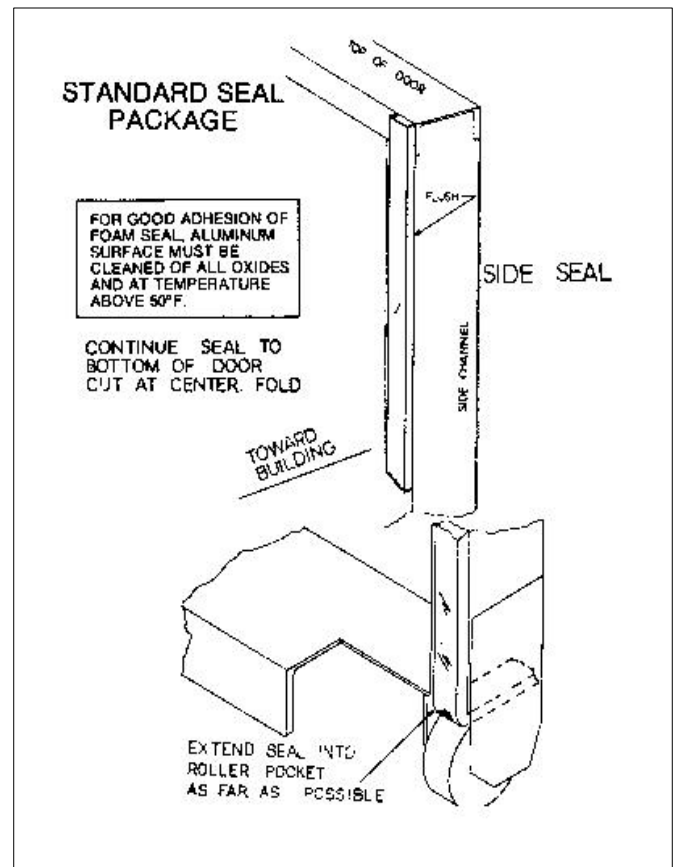


Figure 89 Installing side seal

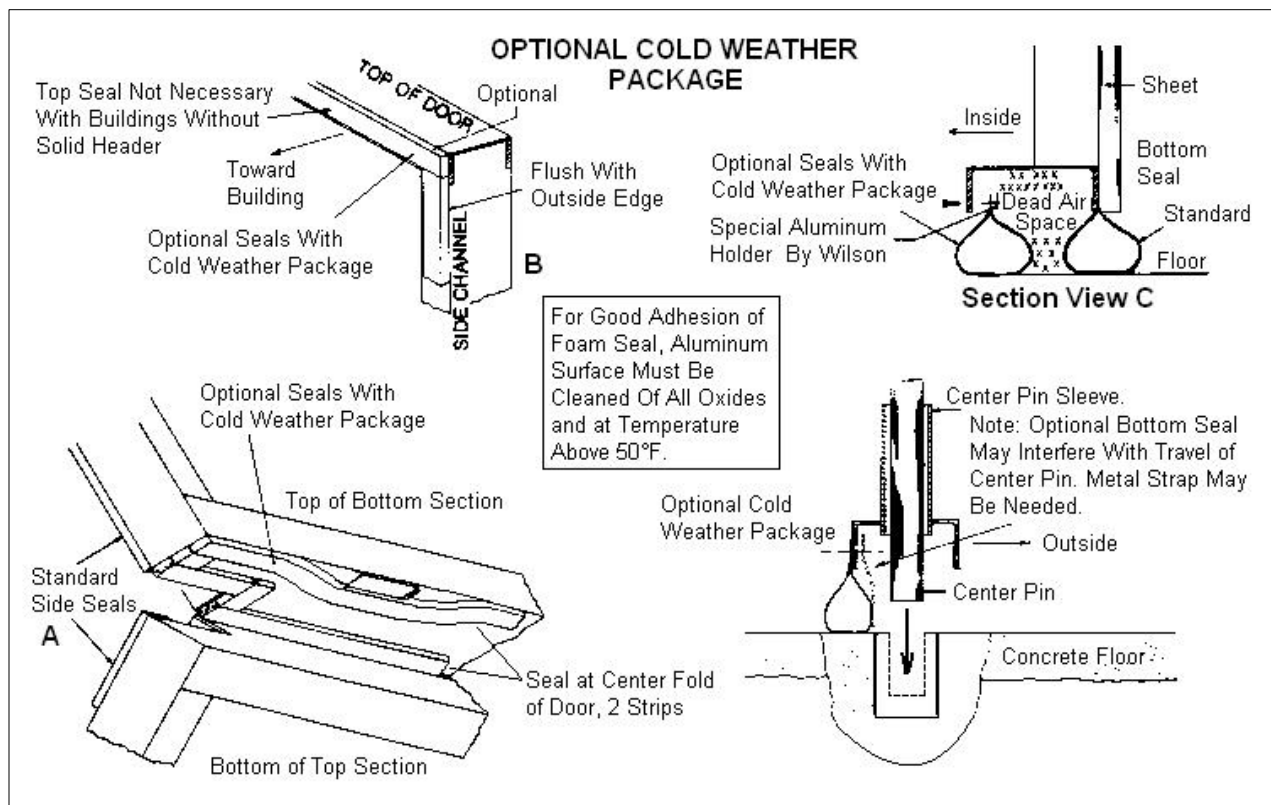
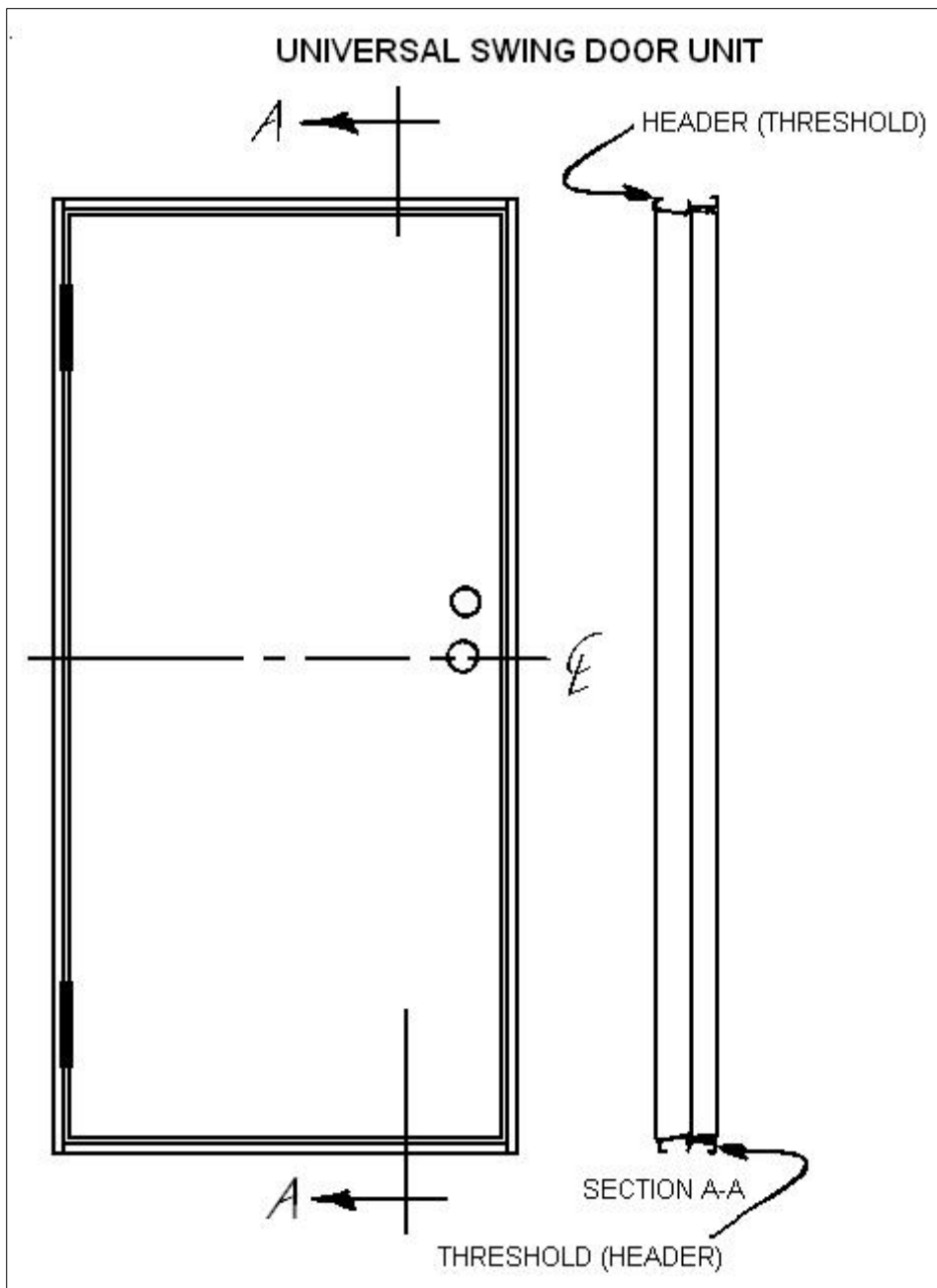


Figure 90 Installing optional cold weather package

H. Optional Service Door

Three different service doors are available: a non-insulated 30"x 70" door, factory installed, a 26"x 64" or a 36"x 68" insulated door pre-hung but not installed. **SEE Figure 91** for full details on service doors. Pre-hung doors come with their own instructions. See those instructions for details.



THIS DOOR UNIT WILL SWING ANY OF FOUR WAYS - Insulated Doors Only (Left In, Left Out, Right In, and Right Out)

Note:

Since this door unit is symmetrical about the center line, as shown, the unit may be inverted to change from a right hand swing to a left hand swing or from a left hand swing to a right hand swing. If the unit should be inverted to change the swing, it is suggested that the hinge pin be removed and reinstalled accordingly. (Not necessary if fixed pin.) In changing from in swing to out swing, or the reverse, the screws holding the window light frame together may be removed and the windows reinstalled so that the screw heads are on the inside of the building.

LOCK INSTALLATION

To prevent lock malfunction, **DO NOT** insert key before installing lock.

On factory installed doors see instructions included with door lock set for installation.

Figure 91 Optional service doors

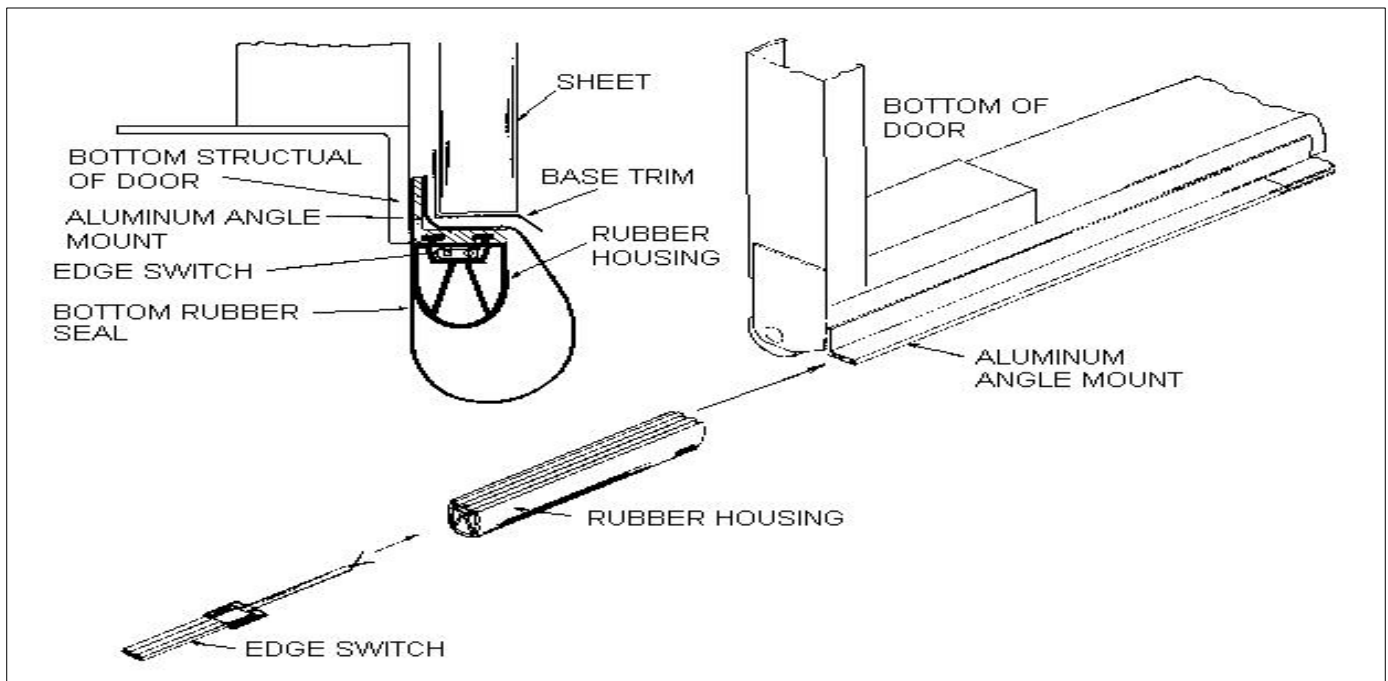


Figure 92 Optional sensing edge

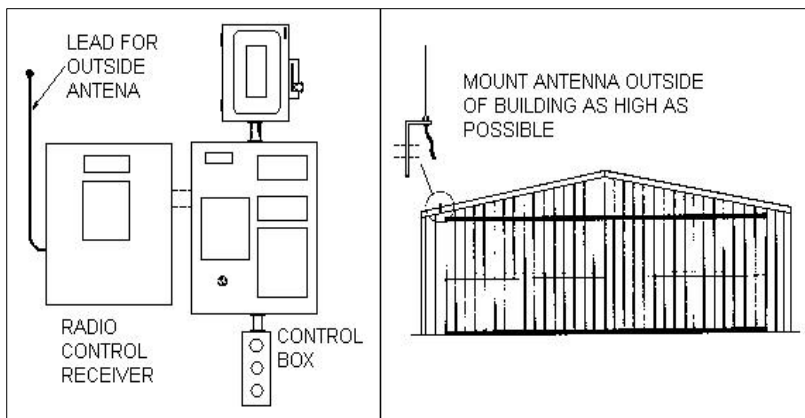


Figure 93 Optional radio control

I. Optional Radio Control

WARNING

Disconnect power to receiver before attempting to do any work on door. Failure to do so could result in door operating unexpectedly.

The radio control unit supplied is completely prewired. Mount the receiver in an area that will give it the most protection from the weather. Usually this is close to the door control box. Once box is mounted, attach exterior antenna outside hangar in area that will give the best reception. This is not a long-range system. The Federal Communication Commission regulates output power to four watts. Operator should be in view of door when operating to prevent damage or personal injury. Refer to **Figure 93**.

J. Optional Bottom Sensing Edge

NOTE

If bottom sensing edge option is supplied, it must be installed at the same time the bottom seal is installed.

The bottom sensing edge is an electrical tape switch which is pressure sensitive. When activated the switch is closed which activates an electrical relay stopping and reversing the door.

Care must be taken when installing to

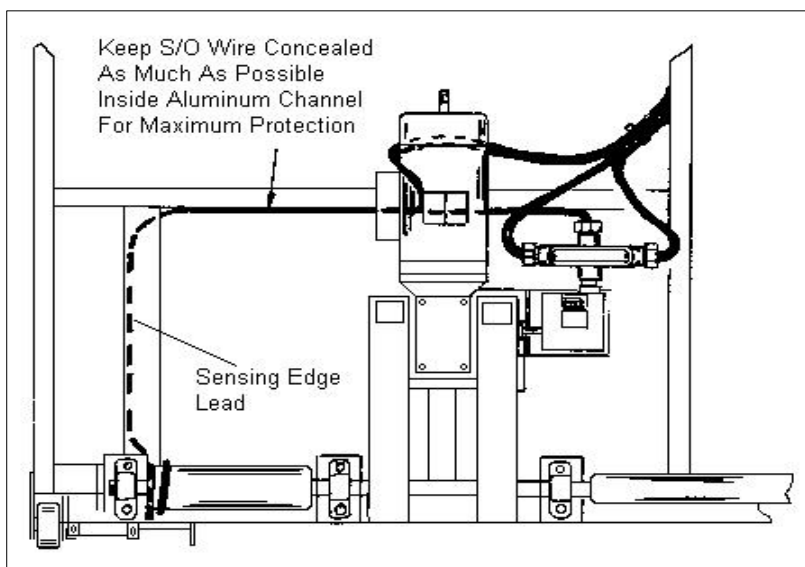


Figure 94 Electrical connections for sensing edge

assure that no pressure is on the tape switch when under normal operating conditions. The following is the recommended installation procedure:

1. Determine location of sensing edge in relation to door sheeting and bottom edge of door. Remember the edge switch cannot make contact with anything during normal door operation.
2. Starting at control end of door, fasten mounting channel that holds the rubber housing as shown in **Figure 92 Page 51**. It is necessary that the grooves in the channel holding the rubber housing be aligned from one section to the next. If not you will have difficulty installing the housing. Cut the last section of mounting channel as needed with a hacksaw.
3. Using silicon spray to lubricate the rubber housing, slide the rubber housing into the mounting grooves on mounting channel and pull it the full length of the door. (It is best if there are two people, one feeding the housing into the mount and lubricating and one pulling.)
4. Once installed, electrically test for continuity before installing bottom seal and sheeting. This is a normally open circuit.
5. After sensing edge is installed across bottom of door route wires to give them protection from damage and wear and connect to conduit outlet box on limit switch and make necessary electrical connection. **SEE Figure 94 on page 51 & Figure 95.**

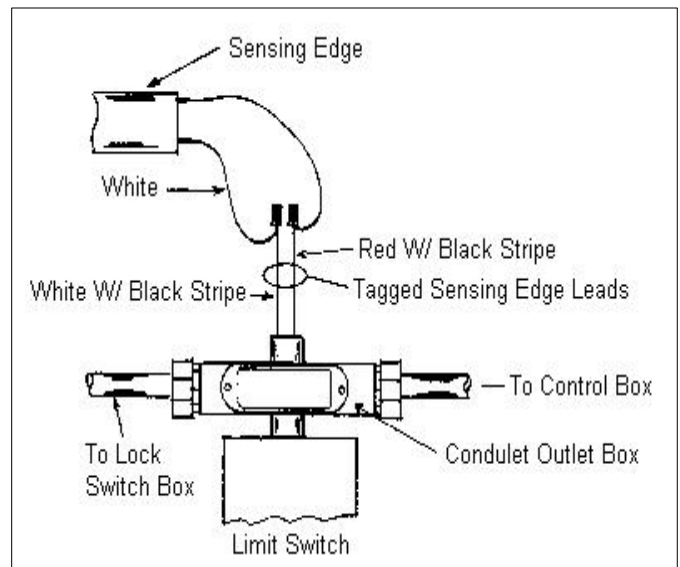


Figure 95 Electrical connections for sensing edge

K. Optional Upper Override Disconnect

This switch is activated mechanically by the door if it should go too high. The mechanical part is designed to be adaptable to all buildings and mounts off of the upper stop plate which is welded to the door track. **SEE Figure 96.**

The activator arm makes contact with the door's bearing block or frame as shown and pulls down on the disconnect switch if the door should for some reason go too high.

CAUTION

WARNING

Adjust so disconnect is activated before the wind drag pin hits the stop plate. Failure to do so could cause door to fall uncontrolled. **SEE Figure 96.**

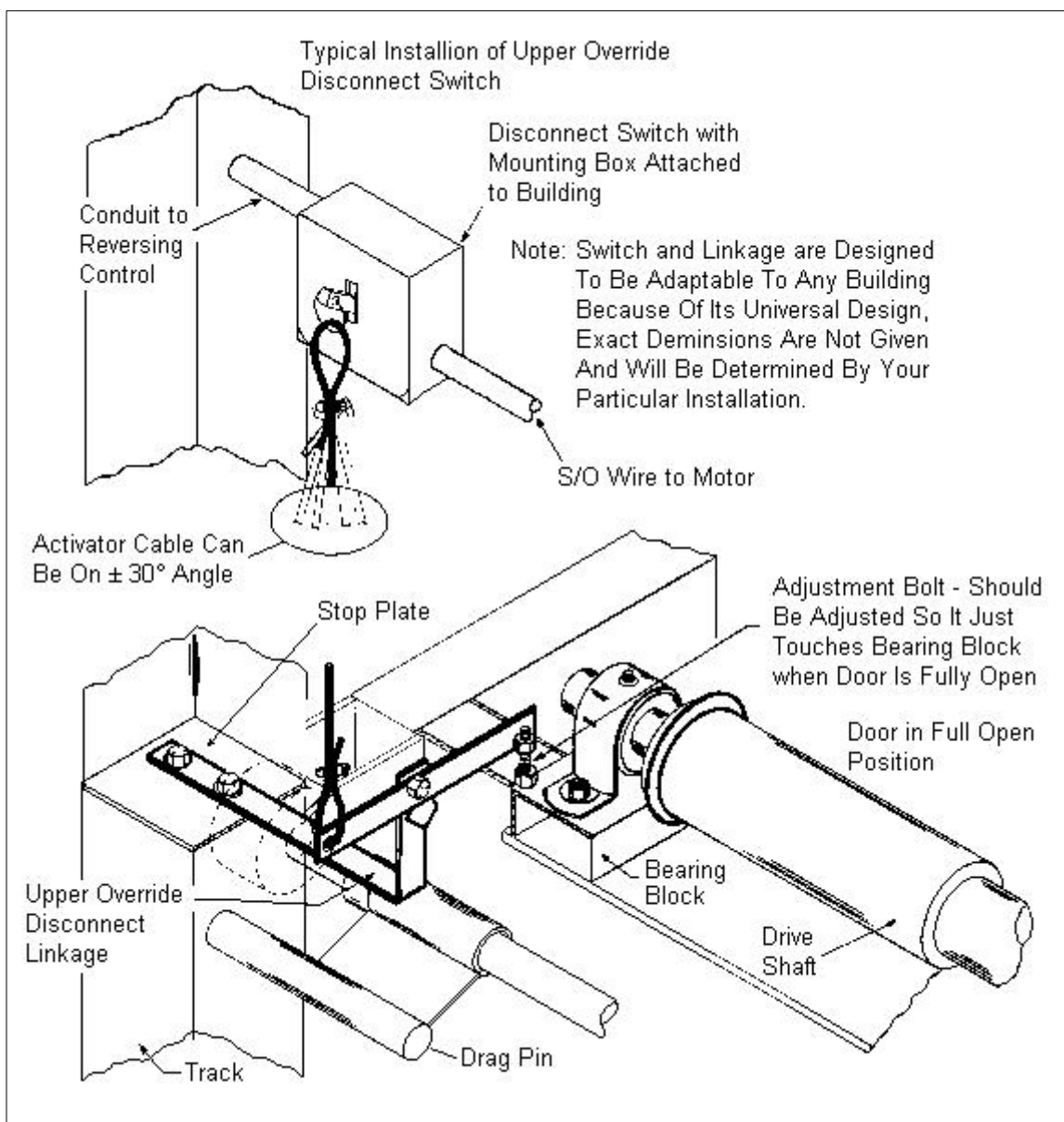


Figure 96 Installing upper override disconnect

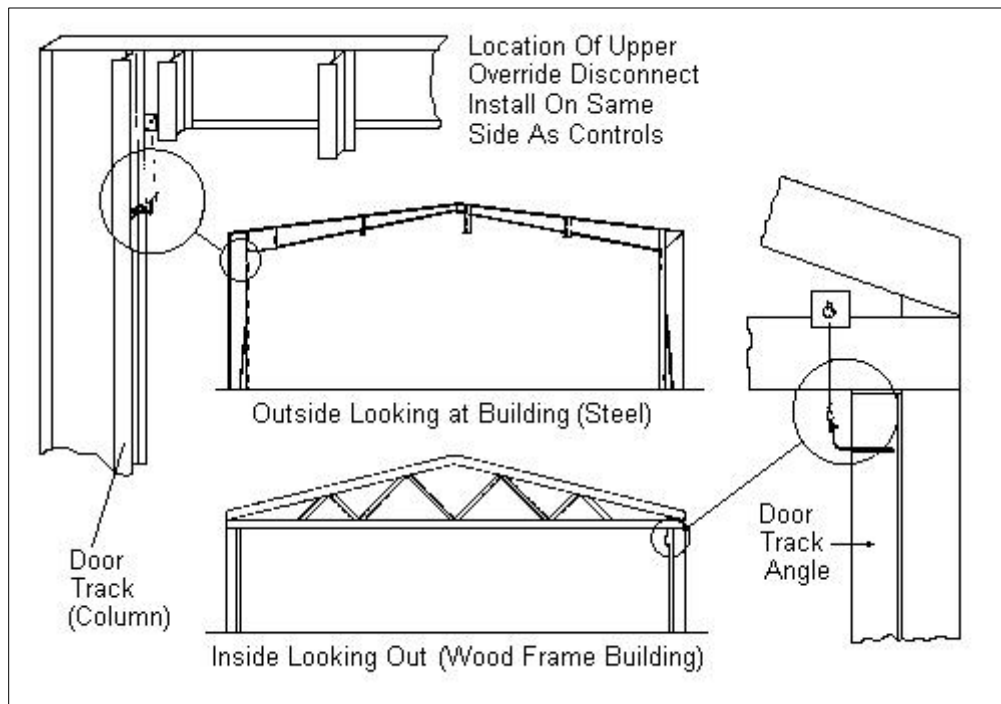


Figure 97 Installing upper override disconnect

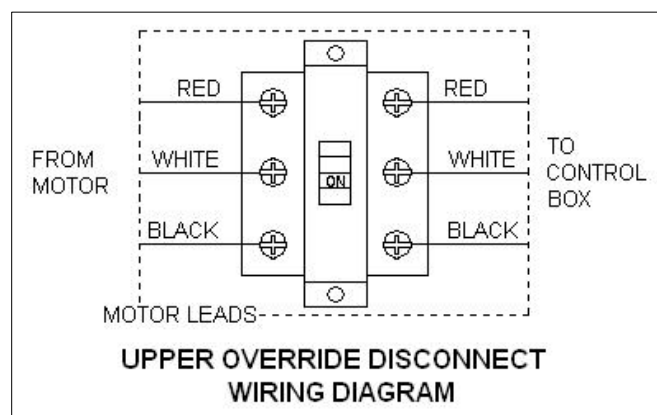


Figure 98 Installing upper override disconnect

OPTIONS AVAILABLE

SERVICE DOORS

30"x70" covered in mill finish aluminum, installed in bifold door at the factory.

26 1/8" x 6 3/4" 1-5/8" insulated white embossed covering with commercial grade lock set.

36 1/8" x 6 3/4" 1-5/8" insulated white embossed covering with commercial grade lock set.

DEADBOLT LOCK

For Service doors commercial 7anti saw roller in stainless steel deadbolt for added locking security.

COLD WEATHER PACKAGE

Recommended when insulating and heating a building. Includes second bottom rubber seal, aluminum strips to hold seal and foam seal for centerfold area of door. Priced per linear foot of door width.

3 BUTTON CONTROL STATION

Magnetically held push button with up, down, stop buttons. (Standard is 2 button constant pressure deadman switch). Includes upper override disconnect and photo sensor eye.

UPPER OVERRIDE DISCONNECT

Back-up switch that disconnects power to door, if upper limit fails or if limits are overridden. Standard with 3 button control station.

AUTO LOCK

Push of a button convenience to automatically lock and unlock bifold door. Requires 3-button control.

RADIO CONTROL

Hand held radio control with 2 transmitters, receiver external antenna and coax cable. Requires auto lock and 3-button control.

SENSING EDGE with REVERSER

Electrical sensing switch along bottom of door to stop door if it comes in contact with an obstruction. Door will then reverse to a fully open position. Priced per linear foot of door width.

***PHOTO SENSOR**

Beam of light that if interrupted, when door is coming down, will cause door to stop.

MANUAL BACKUP

From the floor, manual method of operating bifold door if power is temporarily lost.

****SOLAR POWER**

Designed for remote areas where standard electrical power is not available or is cost prohibitive. This is a self-contained, electrically 12V DC operated door.

BATTERY BACK UP

This is similar to computer battery back ups. It allows the door to operate on battery inverter technology.

ANY OTHER ITEMS

Call for quote.

SPECIAL NOTE

Sensing edge with reverser and photo sensor eyes are mandatory on all residential applications. Both are highly recommended on all doors.

ONE YEAR LIMITED WARRANTY

Wilson Doors, Inc. guarantees its products to be free of defects in material and workmanship for one year from date shipped. Electrical components are not a product manufactured by Wilson Doors, Inc. and are guaranteed by their manufacturer for one year through Wilson.

All defective parts must be returned, prepaid, for our evaluation before replacement parts will be sent out.

Normal maintenance and adjustments are not covered under this warranty, as they are the responsibility of the owner-user.

Wilson Doors, Inc. is not responsible for down time of door or labor required for replacement of items.

Subsequent damage to products other than manufactured by Wilson is not covered under this warranty.

This is a limited warranty. Your rights may vary according to state laws.

If you are unable to return a defective part immediately we will ship new part UPS-COD and refund your money for the part when it is returned. WE MUST HAVE DEFECTIVE PARTS BACK FOR EVALUATION.

Warranty void if registration is not filled out and sent within 30 days of installation.

FINAL CHECK OUT

These adjustments need to be completed after door is running under its own power before installation can be considered complete.

WARNING CAUTION

Failure to complete these adjustments will result in unsatisfactory door operation and possibly door failure.

Final Adjustments Checks. – Check Off As Completed.

- ☐ 1. Check drive chain adjustmenté é é é é é é é Pg. 20
- ☐ 2. Limit switch down adjustment Pg. 34
- ☐ 3. Check lift cable adjustment Pg. 39
- ☐ 4. Check top hinges for proper attachment Pg. 30
- ☐ 5. Wind drag pin adjustment Pg. 39
- ☐ 6. Limit switch up adjustment..... Pg. 37
- ☐ 7. Assure wind lift stops are installed Pg. 29
- ☐ 8. Test lock switch adjustment Pg. 22
- ☐ 9. Wind load floor connector Pg. 37
- ☐ 10. After door is sheeted, check that no trim is binding..... Pg. 43
- ☐ 11. Test photo sensor eye Pg. 37

Options – (If Equipped) – Test

- ☐ 12. Test upper override disconnect Pg. 53
- ☐ 13. Test bottom sensing edge..... Pg. 51
- ☐ 14. Test radio control Pg. 51



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