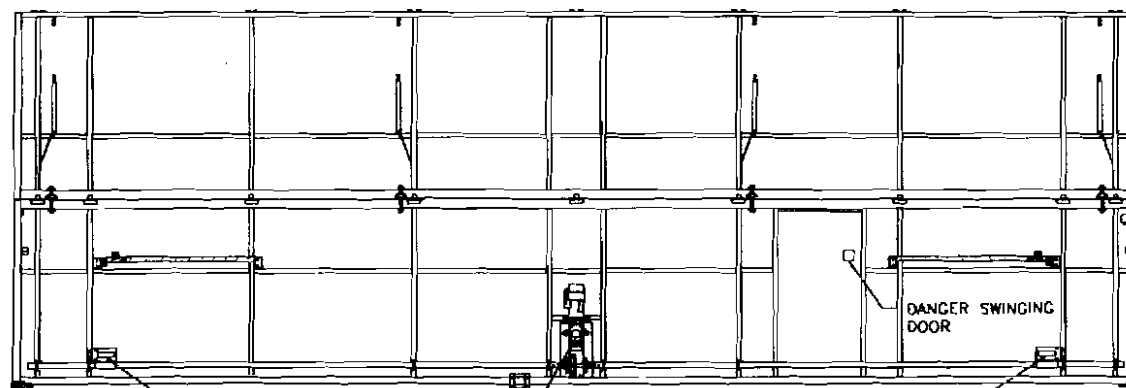
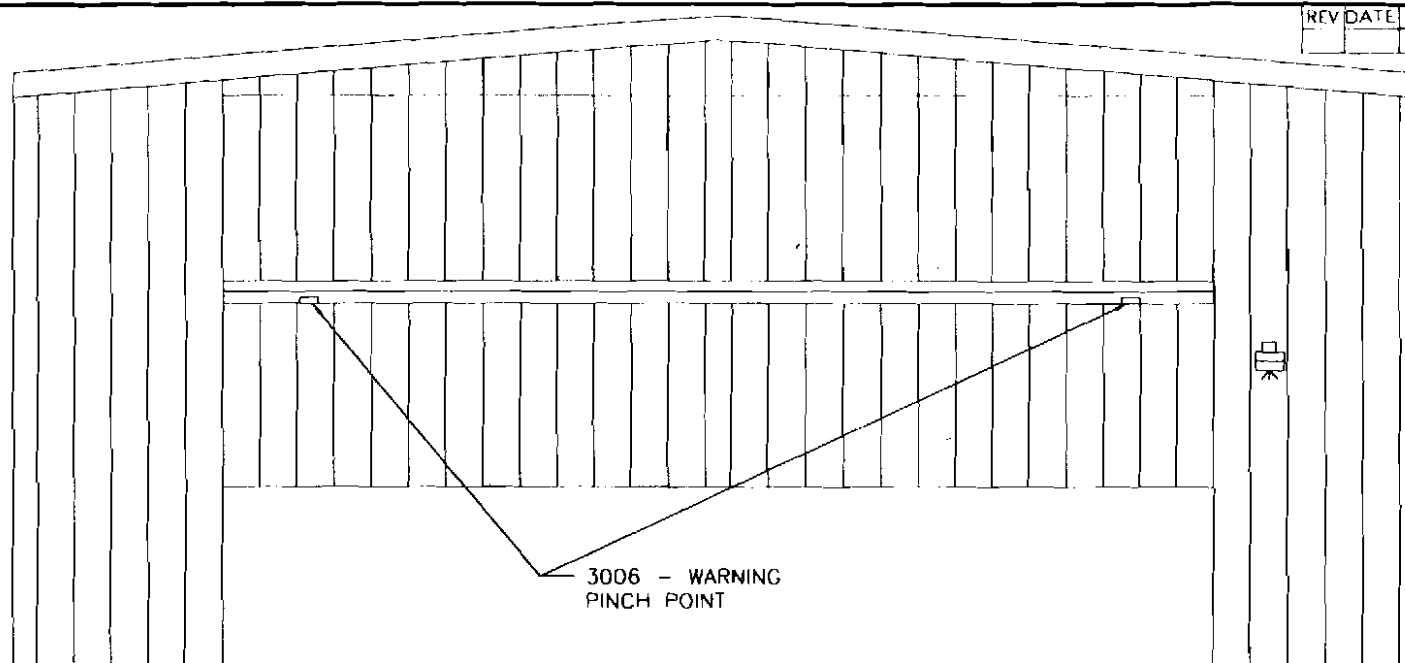




125540-1 WARNING

3012 - WARNING - MOVING
PARTS HAZARD

DOOR
PANEL

3003 - WARNING
PINCH POINT

ITEM NO.	PART NO.	QTY.	DESCRIPTION
			
3380 E. AIRPORT ROAD EL DORADO SPRINGS, MO 64744 (417) 876-6508 / FAX (417) 876-6506			
WARNING LABEL LOCATION			
DATE	DRAWN BY	JOB NO.	SCALE
02/04/03	STAUFFER		NONE
DRAWING NO.		INS-WARNING	



**America's *Finest* Bi-Fold
Canopy Door**

3380 E. Airport Road
El Dorado Springs, Missouri 64744
(417) 876-6508 Fax (417) 876-6506

DOOR OPERATING GUIDE

1. Prior to opening the doors, be sure that there is no equipment or objects parked along the outside of the door.
2. While opening the doors, observe the operation of the up cycle making sure that doors are operating smoothly and quietly. Continue to observe the operation until the doors are stopped.

"CAUTION"

DO NOT LEAVE THE DOOR UNSUPERVISED WHILE DOOR IS IN MOTION.

3. While lowering the doors, observe the operation of the down cycle making sure that the doors are operating smoothly and quietly. If any unusual sound or abnormal condition occurs, stop the doors and try to determine the cause.
4. Extreme caution must be exercised during the lowering cycle as not to allow the door to come in contact with any object. If the door is lowered onto an object, check for cables that may have become loose, are not wrapping properly on the line shaft, or may have fallen off a pulley.
5. If any of the above conditions occur, correct the problem before continuing to operate the doors or serious damage may occur. If the problem cannot be corrected, call your service representative.

'CAUTION'

DO NOT GET UNDER THE DOOR WHILE DOOR IS BEING OPERATED.



TABLE OF CONTENTS

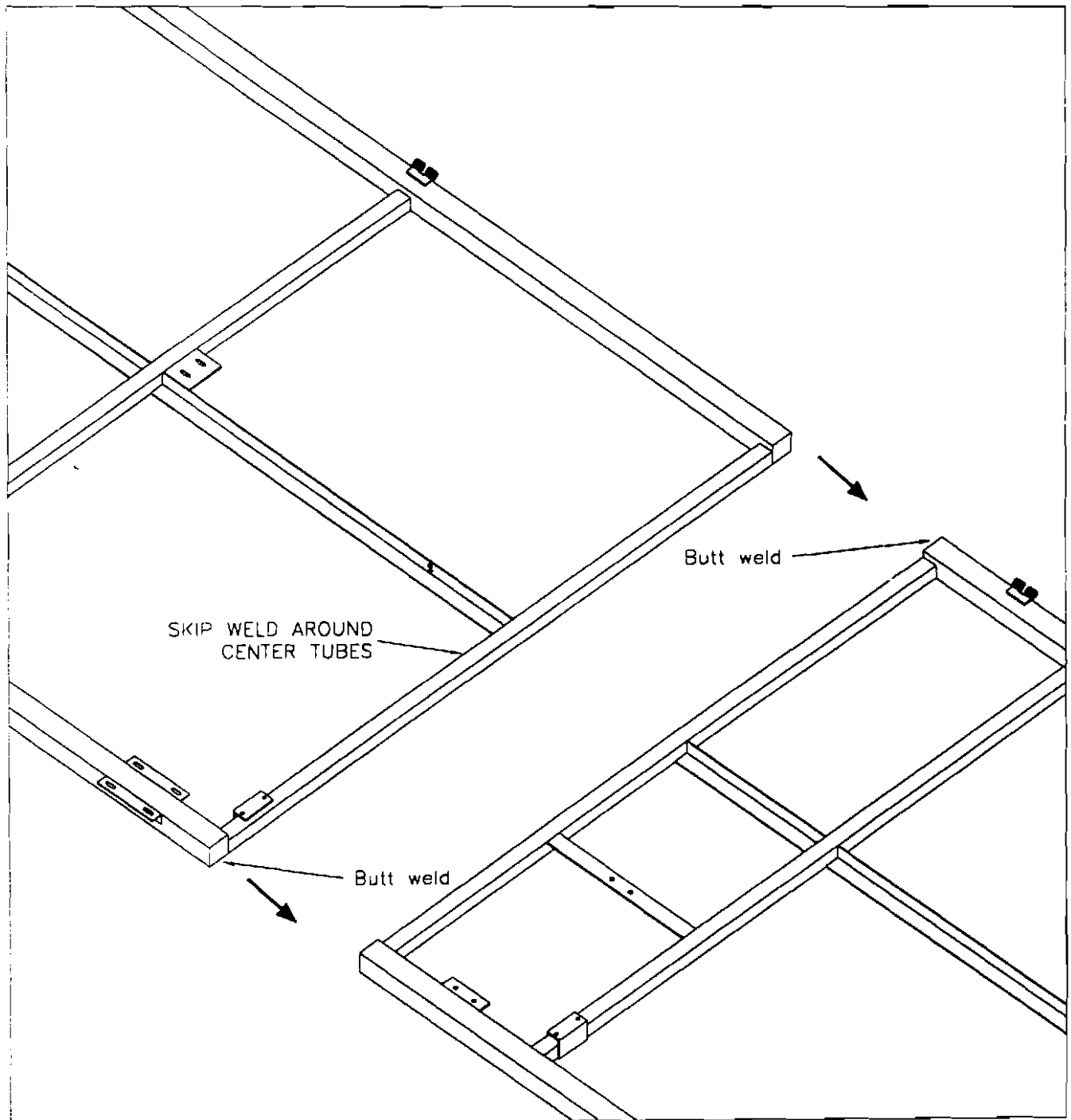
	Step	Page
1. BOTTOM PANEL		
A. Bottom Panel.....	2	1
B. Door Jamb Angle & Door Roller.....	3	2
C. Operator & Line Shaft	4	3
D. Automatic Door Locks.....	5	4
E. Placing Panel In Opening.....	6	5
2. TOP PANEL		
A. Top Panel.....	7	6
B. Top Hinges.....	8	6
C. Cable Tensioners.....	9	7
D. Placing Panel in Opening.....	10	8
3. DOOR HARDWARE		
A. Door Poppers.....	11	9
B. Wiring Door	12	10
C. Checking Rotation	12	10
D. Over Travel Disconnect	12	11
4. CABLING		
A. Closing Cables.....	13	12
B. Lift Cable.....	14	13
5. ADJUSTING LIMIT SWITCHES		
A. Down Limit Switch	15	14
B. Top and Over Travel Limit Switches.....	16	14
6. FINAL PARTS		
A. Tensioner Channel	17	15
B. Floor Locks	18	16
C. Cable Pads.....	19	16
7. SEALS		
A. Bottom Seal.....	20	16
B. Top Seal.....	21	16
8. OPTIONS		
A. Pass Door.....		17
B. Miller Edge Wiring.....	12	18
Miller Edge Installation.....	22	21
C. Radio Remote Wiring.....	12	19
D. Radio Remote & Miller Edge Wiring.....	12	20
9. MAINTENANCE		22
10. WARRANTY		23

STEP 1:

Check door opening frame to be sure height and width are correct. Header must be straight and level. Jamb must be plumb.

STEP 2:

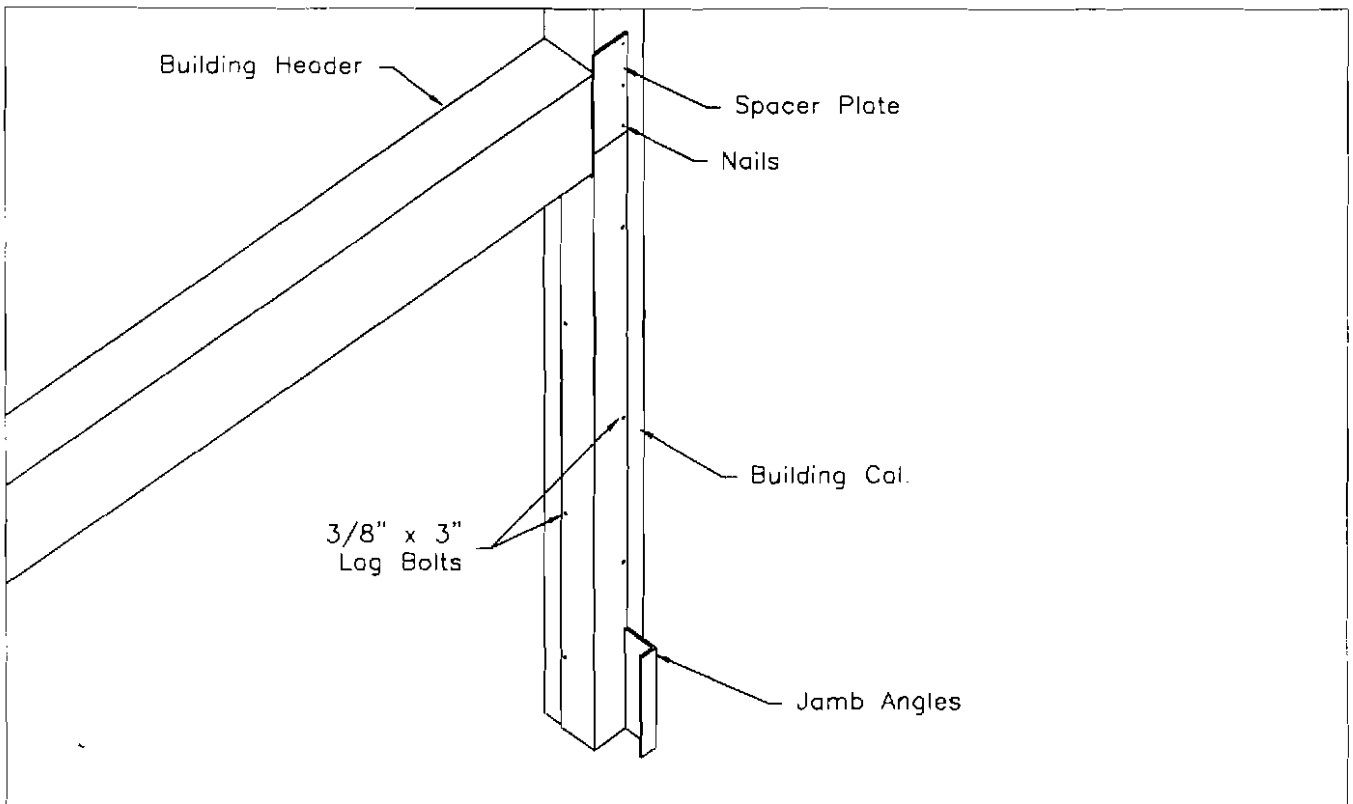
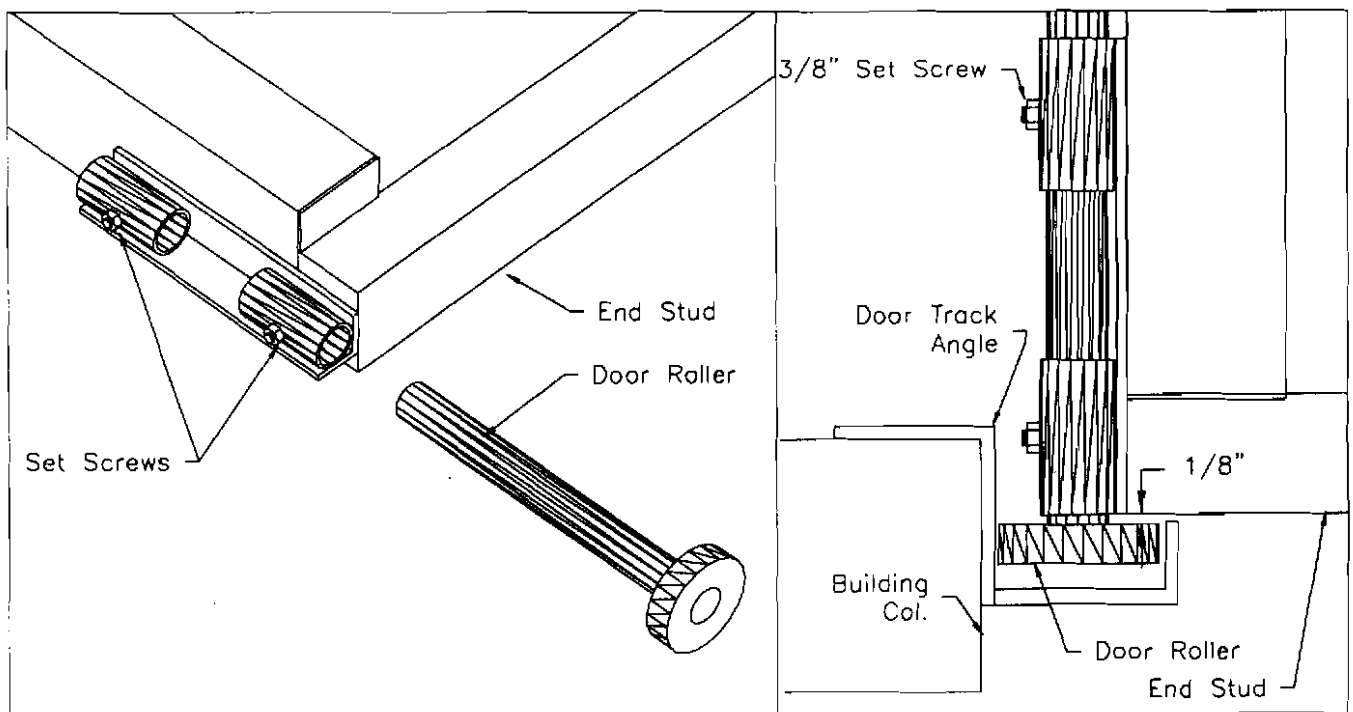
Place the bottom two panels out on a flat level surface with the bottom of the door against the door col., line the panels up straight and level and butt weld the tubes together as shown in detail 1.



Detail 1

STEP 3:

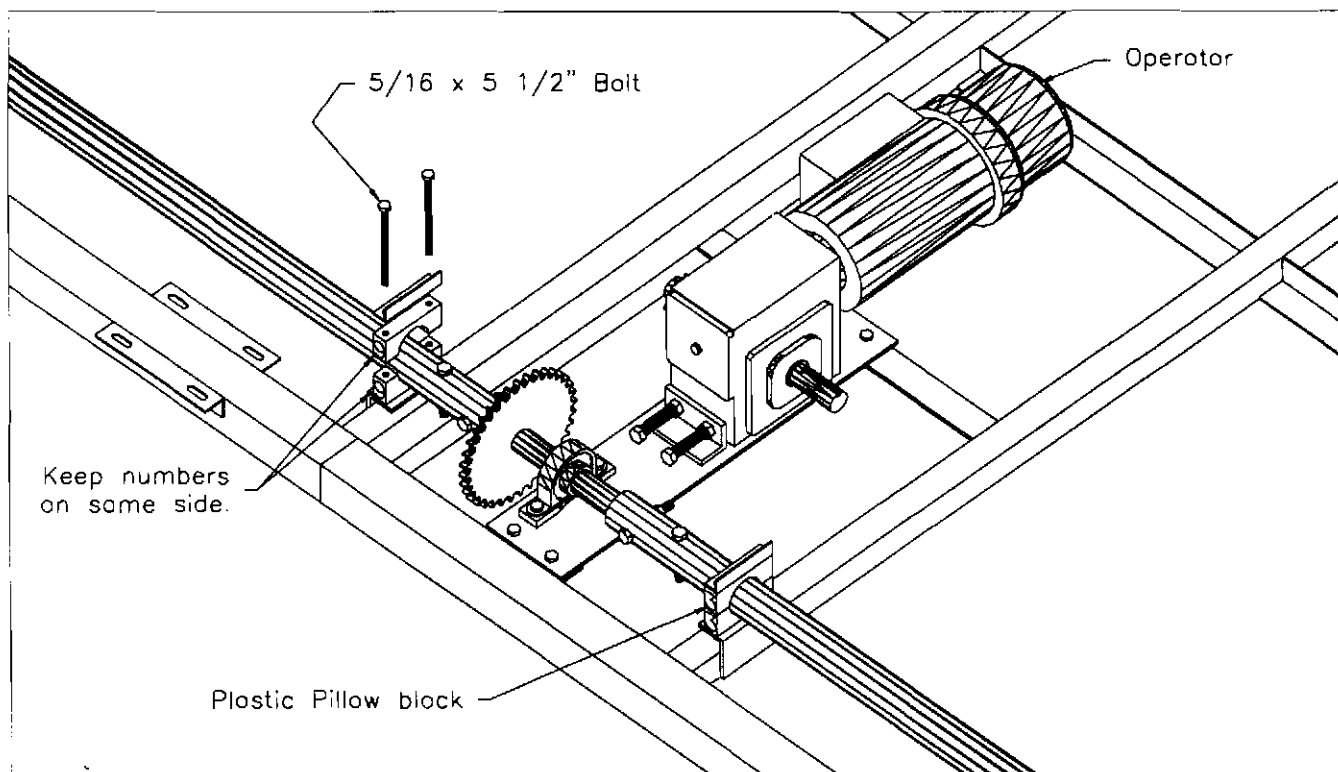
Place Door Track Angle and Spacer Plates on building col. and lag bolt and nail in place as shown in detail 2. Install door roller as shown in detail 3. Be sure to leave 1/8" between the roller and the end door stud. Then tighten the set screws to hold door roller in place. Set door roller in door jamb angles as shown in detail 4.

**Detail 2****Detail 3****Detail 4**

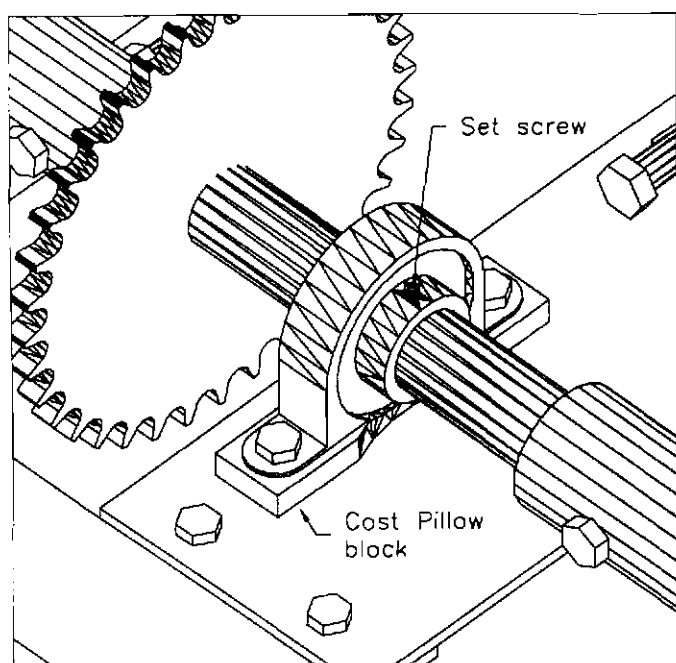
STEP 4:

3

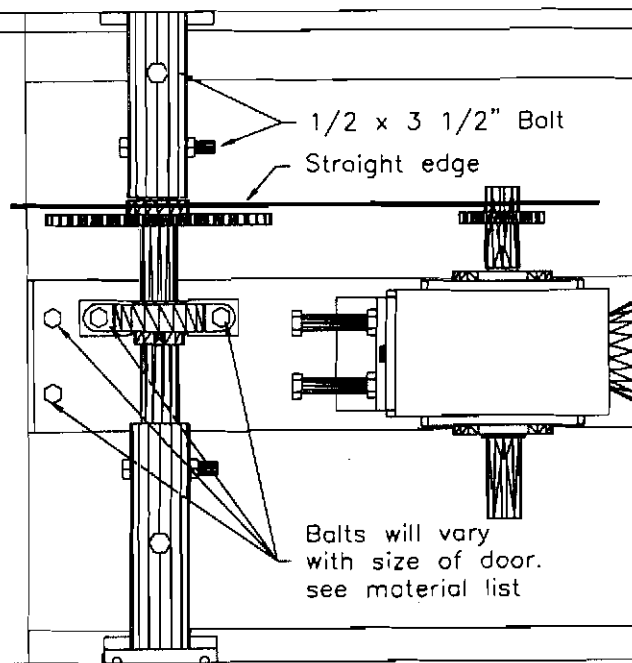
Install and bolt operator in place, next place the drive shaft with the cast iron pillow block in place. Put the bottom 1/2 of the poly-plastic pillow blocks in place, keeping the numbers on the side of the blocks match. Place line shafts in and align lifting eyes to the top of the door. Tighten set screws on the cast pillow block. (See Detail 6) Put the top 1/2 of the pillow blocks on and tighten. Line up both sprockets with a straight edge and tighten the bushing and set screws. (See Detail 7) Place chain on and bolt the line shaft together.



Detail 5



Detail 6

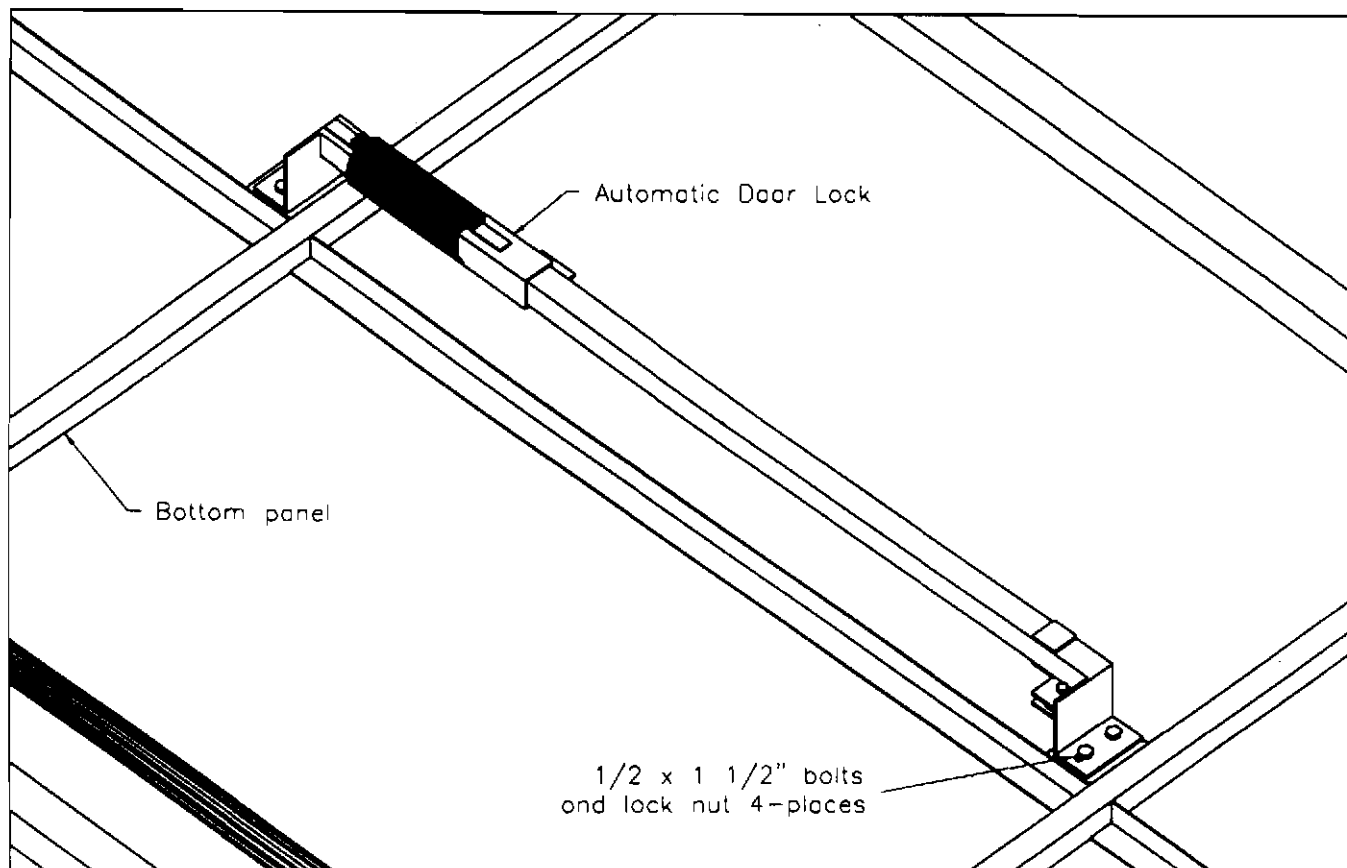


Detail 7

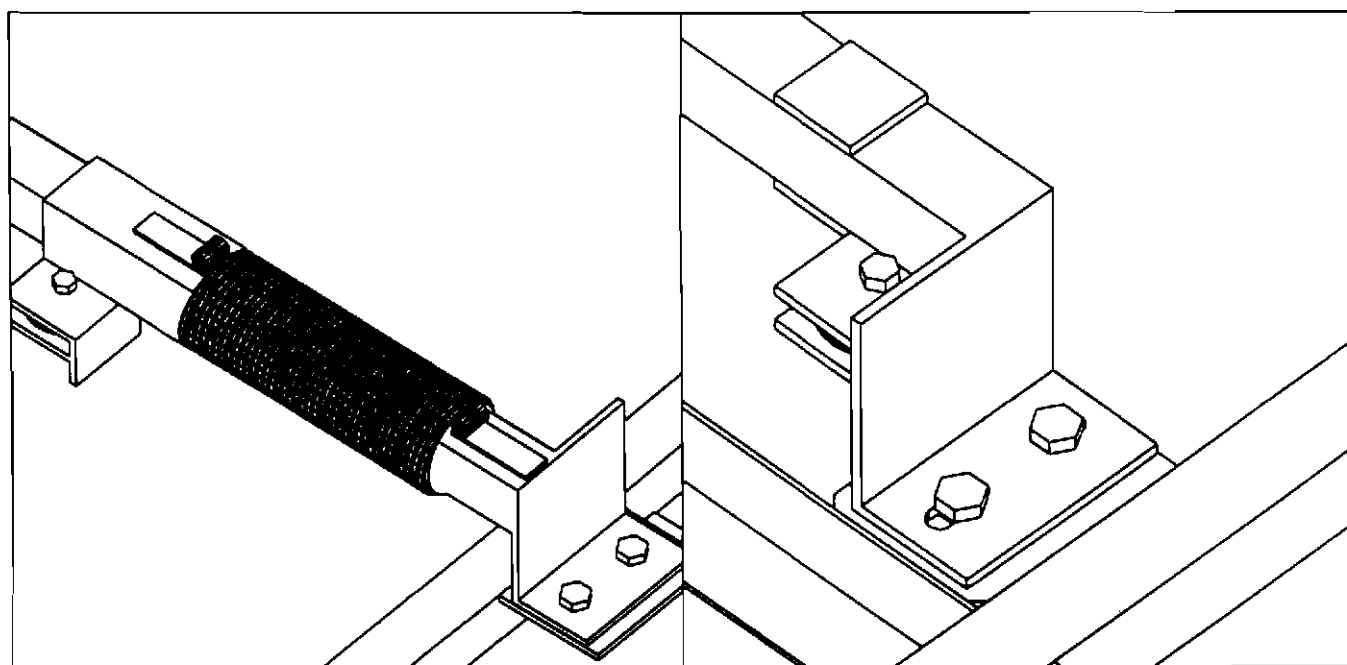
STEP 5:

4

Place Automatic Door Lock in place and tighten.



Detail 8



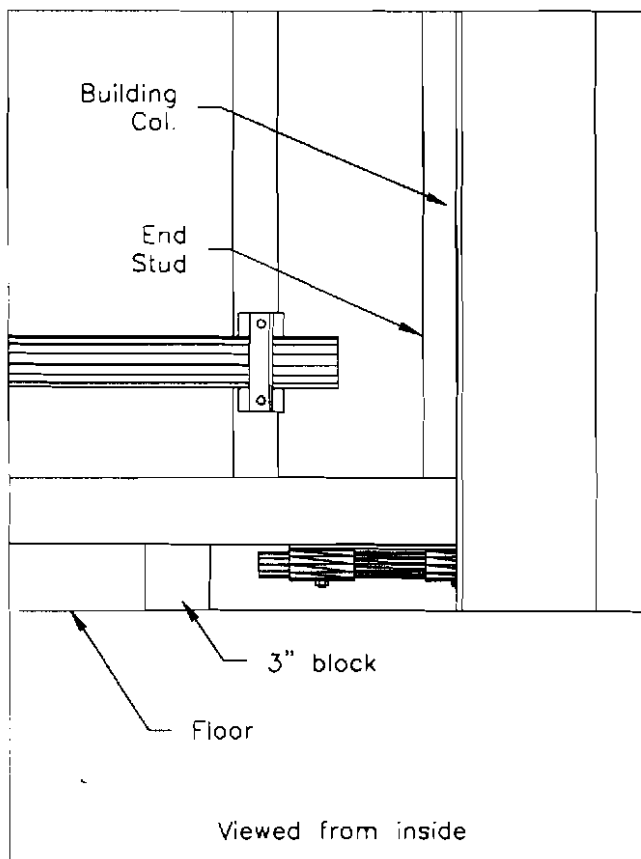
Detail 9

Detail 10

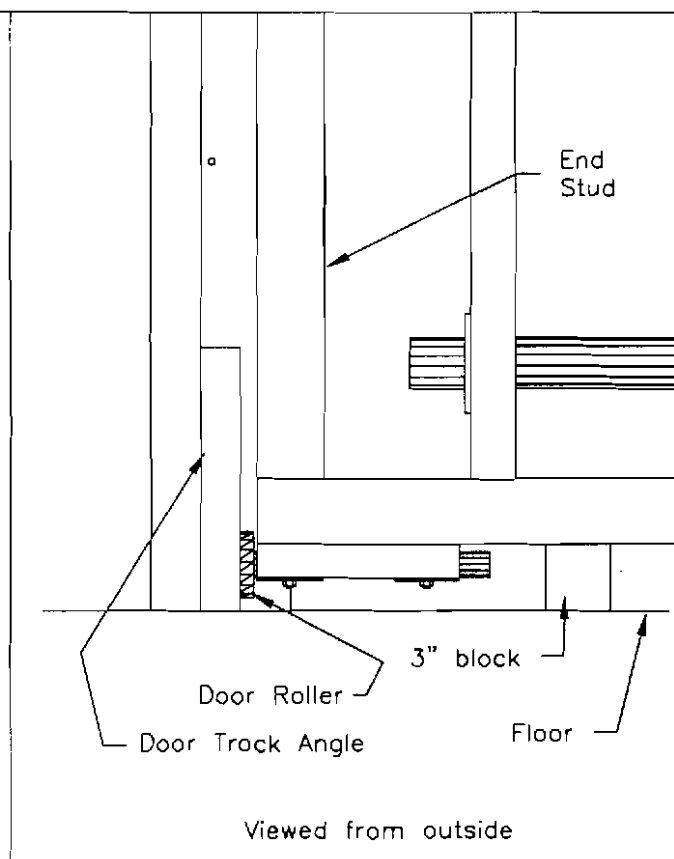
STEP 6:

5

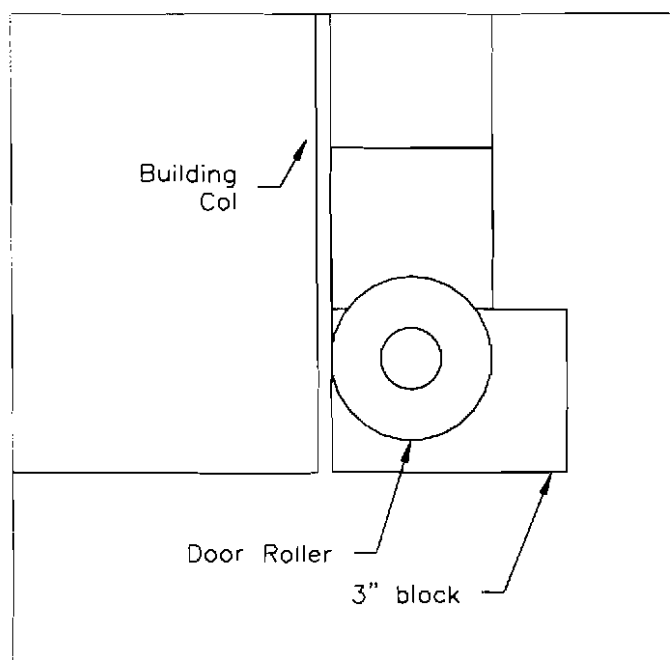
Now set the assembled panels on 3" blocks to make sure door is at the proper elevation, straight and level. Be sure that each side of the door is overlapped 1 1/2" as showed in detail 14. When the door is in position clamp to columns at each end, the panel should be 3" above the finish floor.



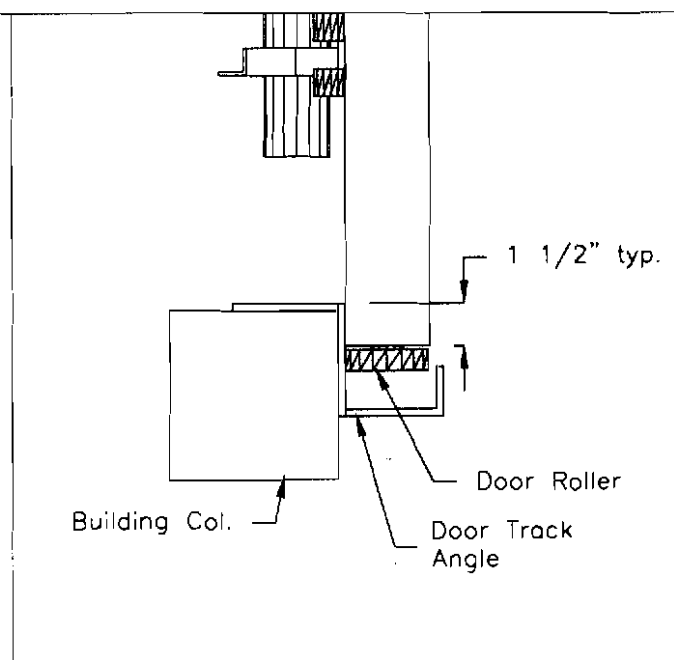
Detail 11



Detail 12



Detail 13

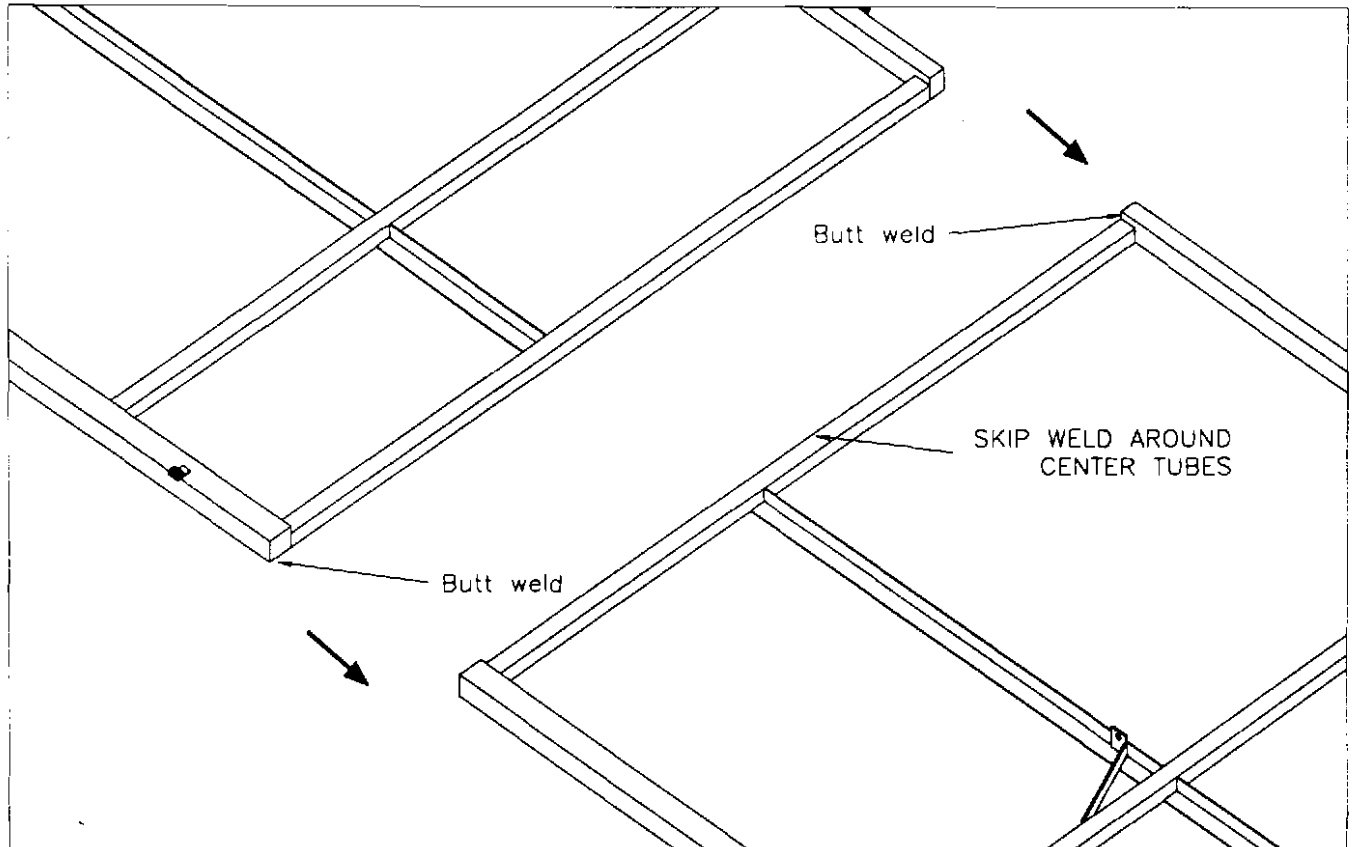


Detail 14

STEP 7:

6

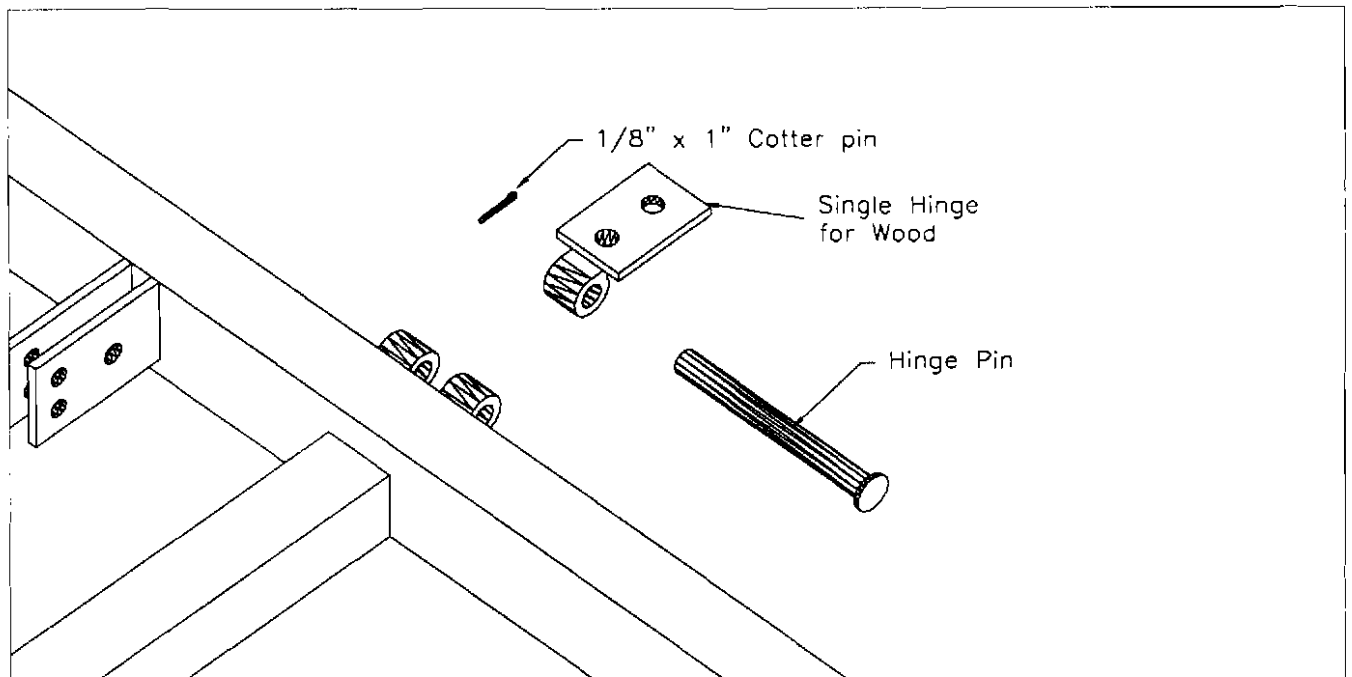
Lay out the two top panels. Be sure panels are straight and level. Buttweld and skip weld panels together as shown in detail 15.



Detail 15

STEP 8:

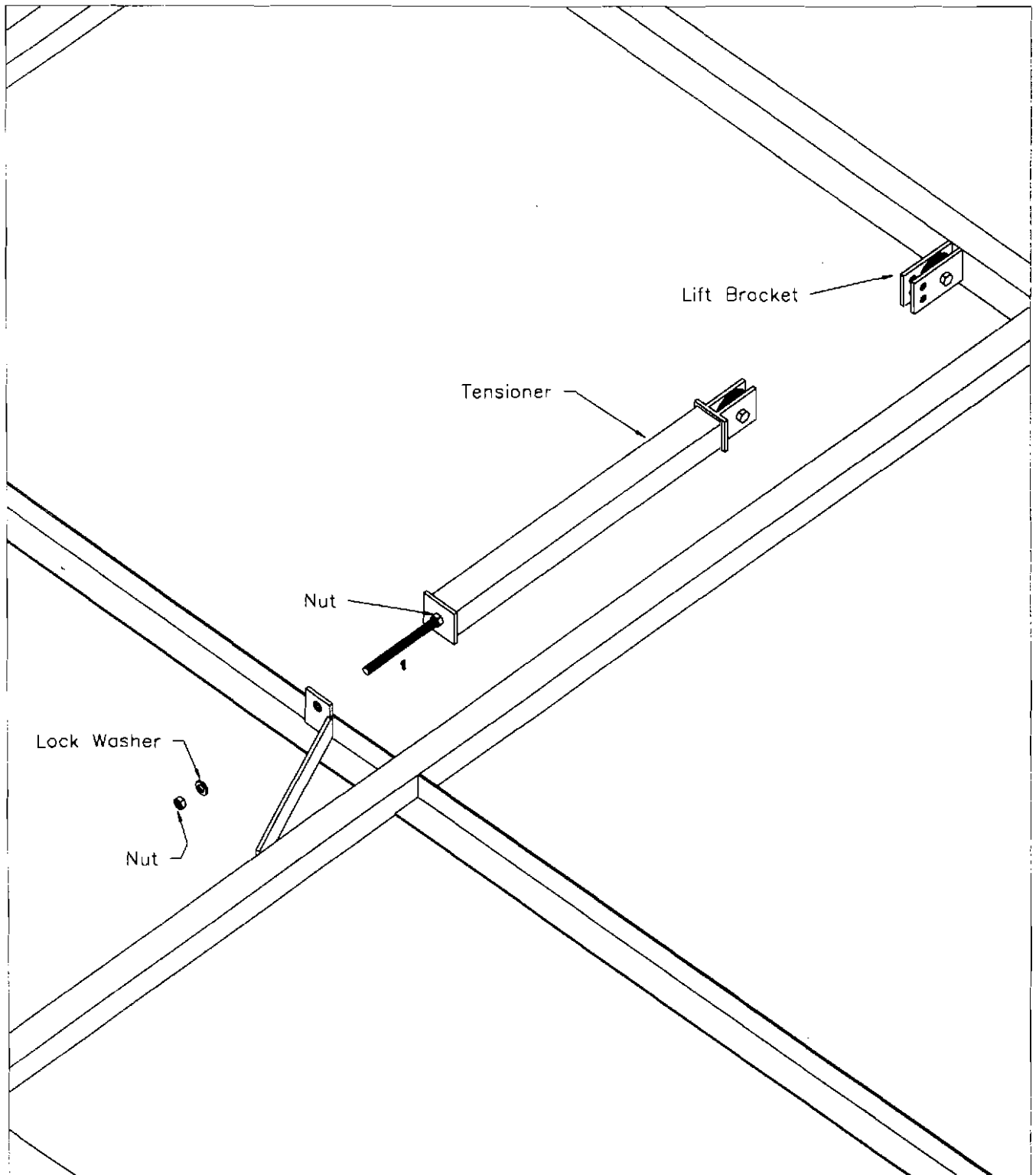
Install the top hinges, hinge pins and cotter pins in place as shown in detail 16. Be sure to grease hinge pins before installing.



Detail 16

STEP 9:

Install the Tensioner (TI-22) as followed. With the Cable Tensioner (TI-22) under no tension, run one nut up to the bottom of the Tensioner. Slide the Tensioner (TI-22) into the bracket and place a lock washer and other nut on and tighten. See Detail 17.

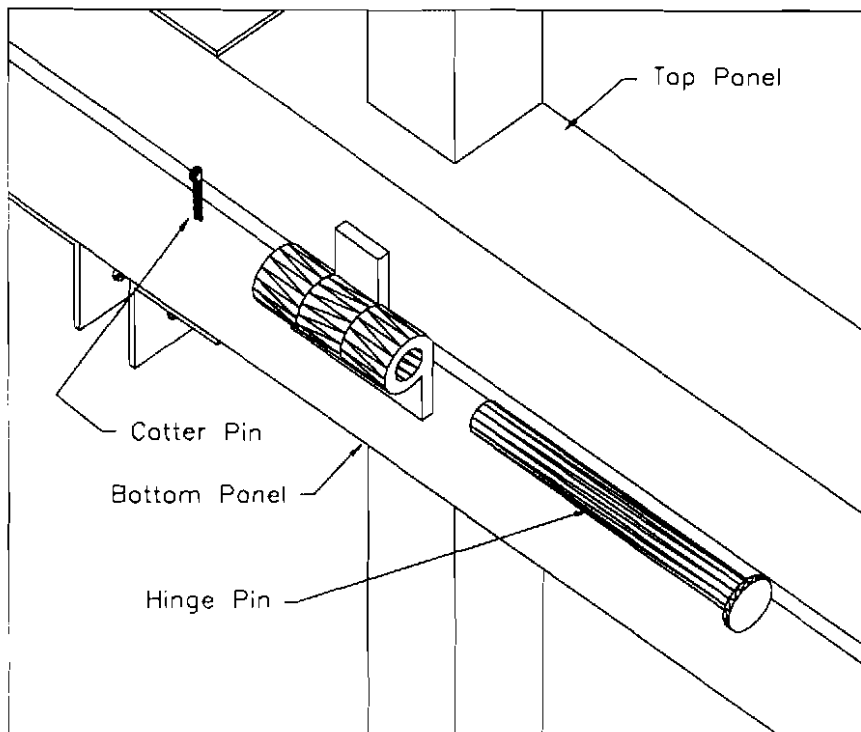


Detail 17

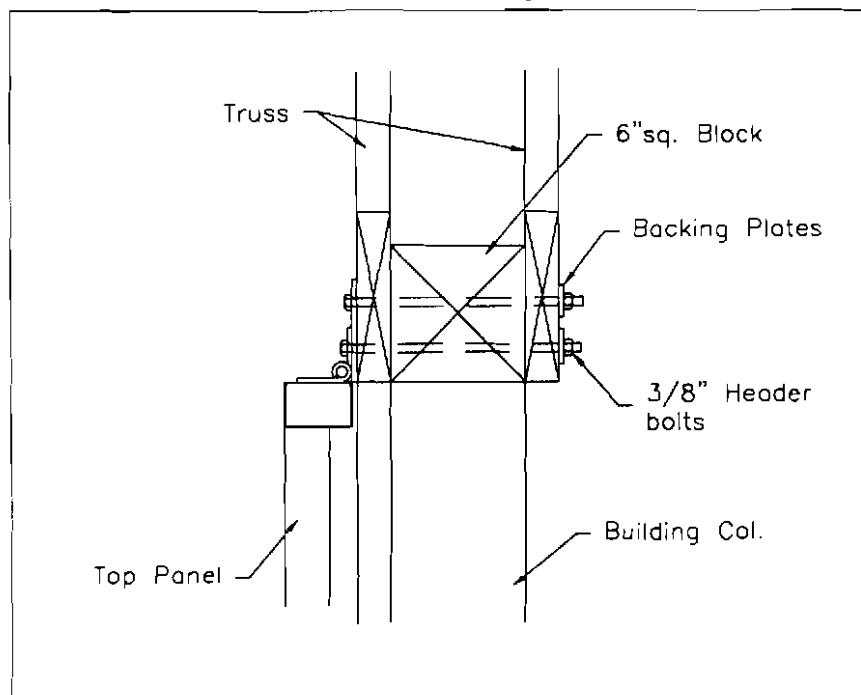
STEP 10:

8

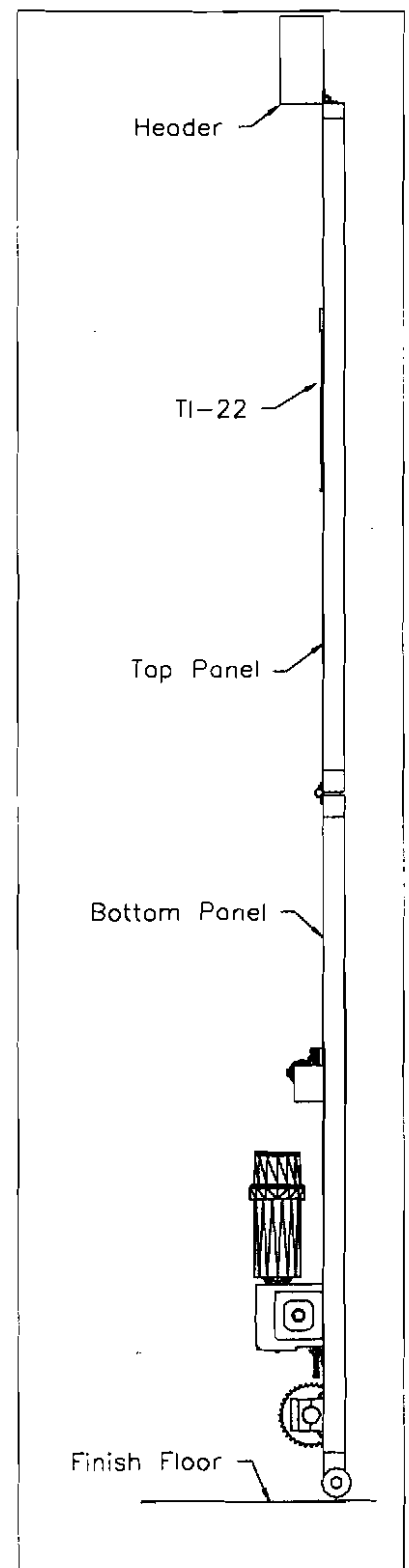
After top panel is assembled tip up and lift into position on top of the bottom panel. Install hinge pins and cotter pins at all center door hinges as in detail 18. Be sure to grease hinge pins before installing. Check door to be sure it is centered in the opening and that it is level. The door should be 3" off the finished floor. After checking to be sure that the door is centered and level, drill and bolt hinges to the header as shown in detail 19.



Detail 18



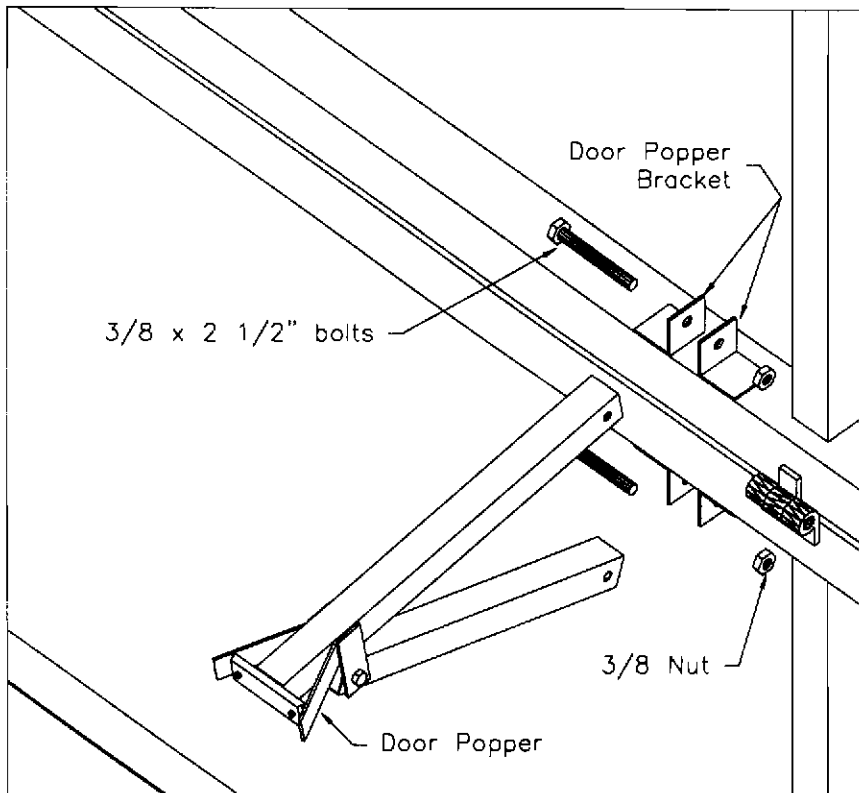
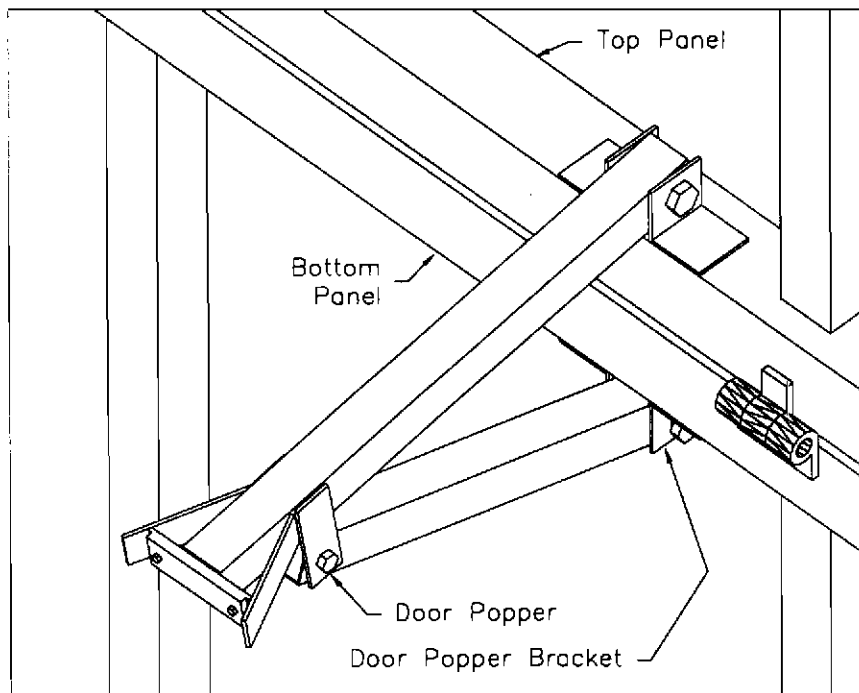
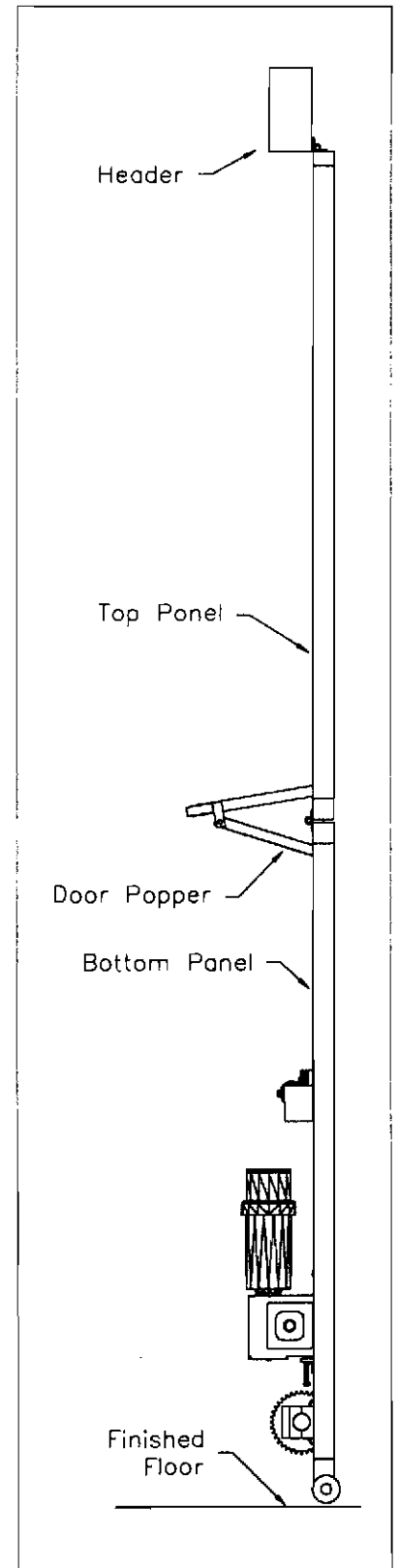
Detail 19



Detail 20

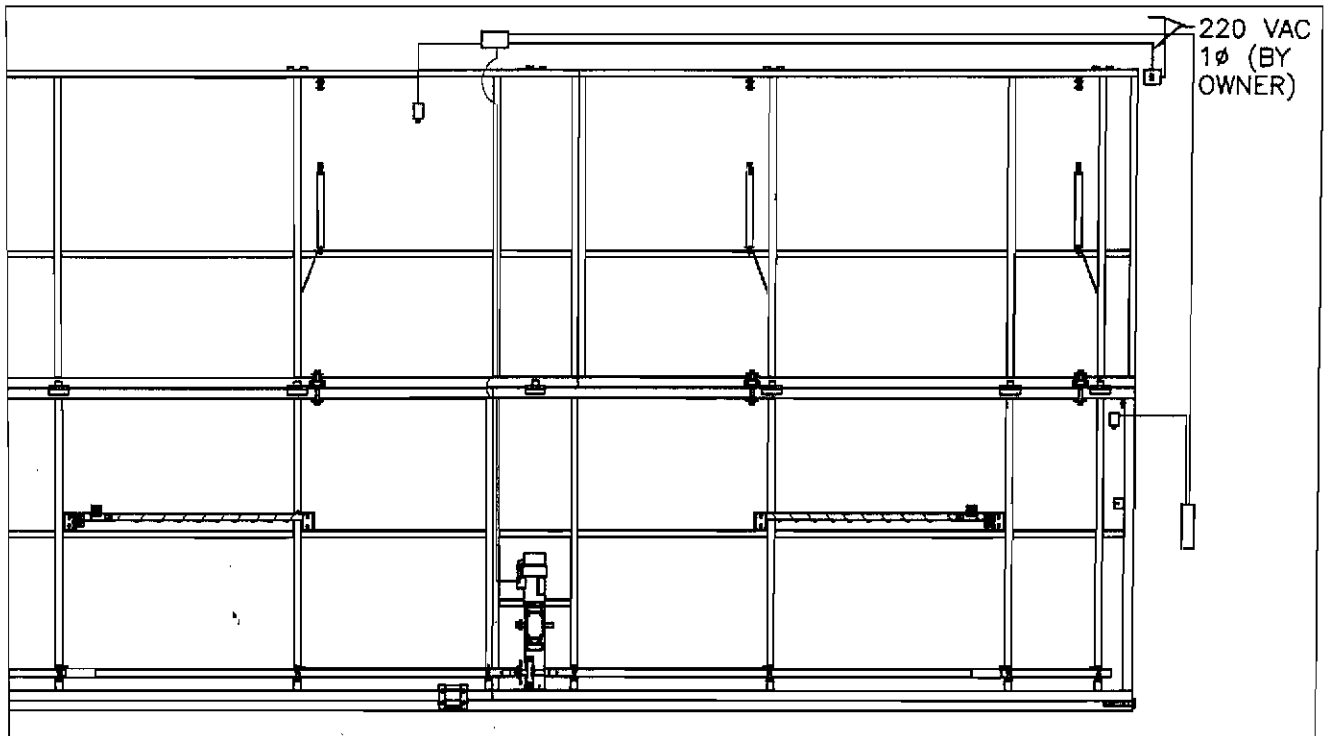
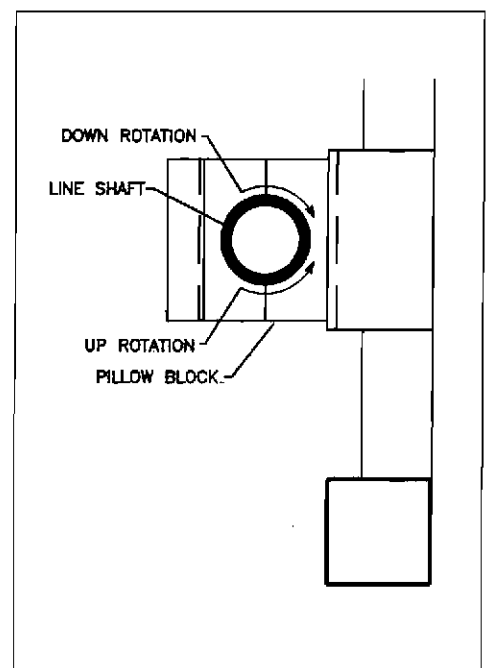
STEP 11:

Install Door Poppers as shown.

**Detail 21****Detail 22****Detail 23**

STEP 12:

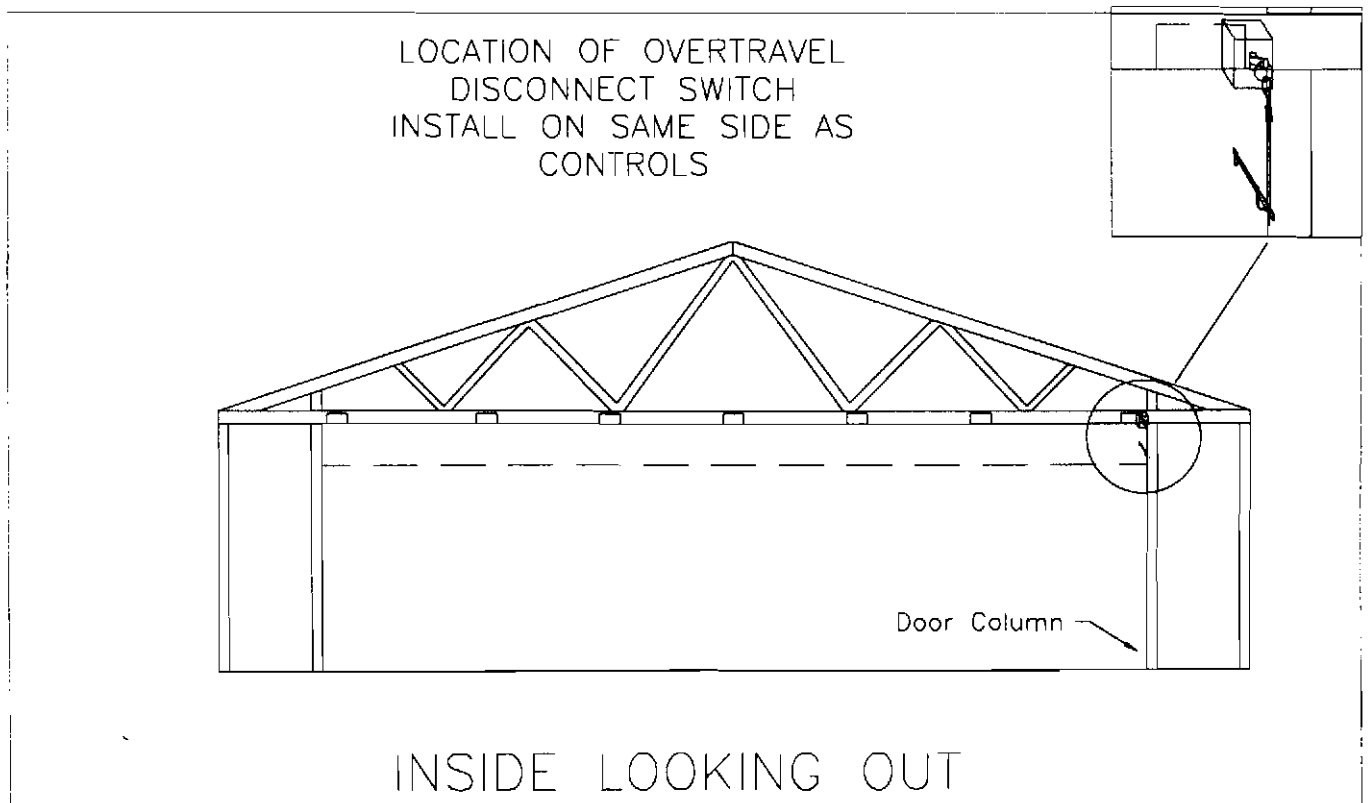
Run electric cord from the motor to junction box (by others) at top of door. Be sure to leave a loop at the center of the door and a longer loop at the top of the door. Run electric cord from pushbutton station to junction box at top of door and connect wires. Also connect limit switches. Run operators and check direction of the rotation. To check the rotation, place right shoulder on the inside of the door. The line shaft should turn clockwise for down and counterclockwise for up. Make wiring changes if incorrect. CAUTION: CONTACT HANGAR DOOR CO. BEFORE MAKING ANY WIRING CHANGES TO AVOID VOIDING OF FACTORY WARRANTY ON THE ELECTRICAL EQUIPMENT.

**Detail 24****Detail 26**

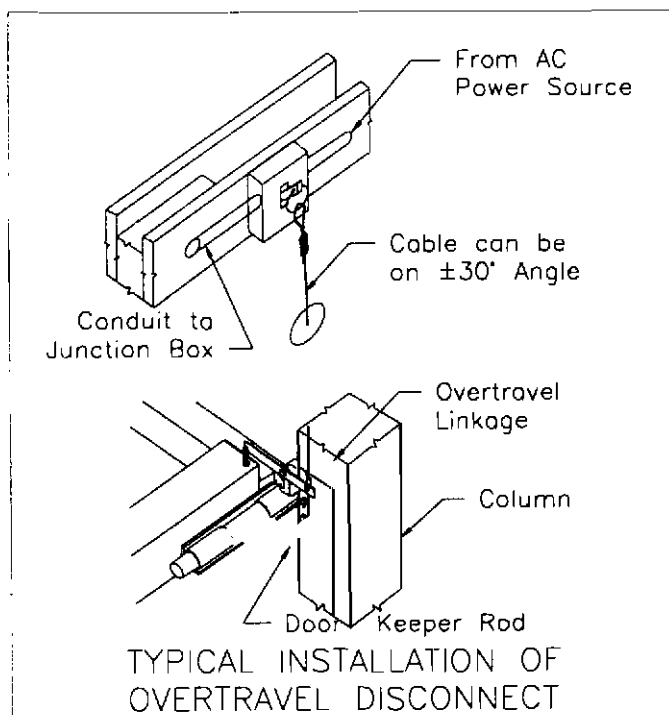
ins2043R1

OVERTRAVEL DISCONNECT SWITCH

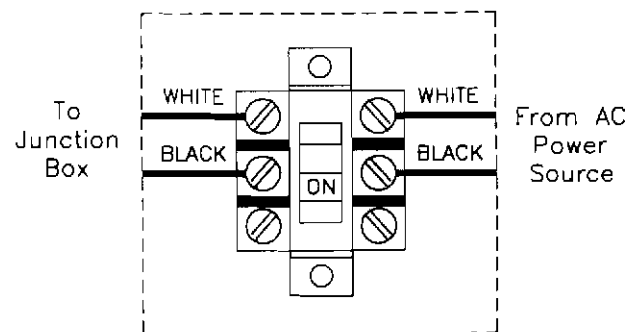
This switch is activated mechanically by the door if it travels over the set clear opening height. The mechanical part is designed to be mounted on the interior of the column and welded in place. The activator arm makes contact with the bottom door cord and pulls on the disconnect switch. See figures below.



Detail 27



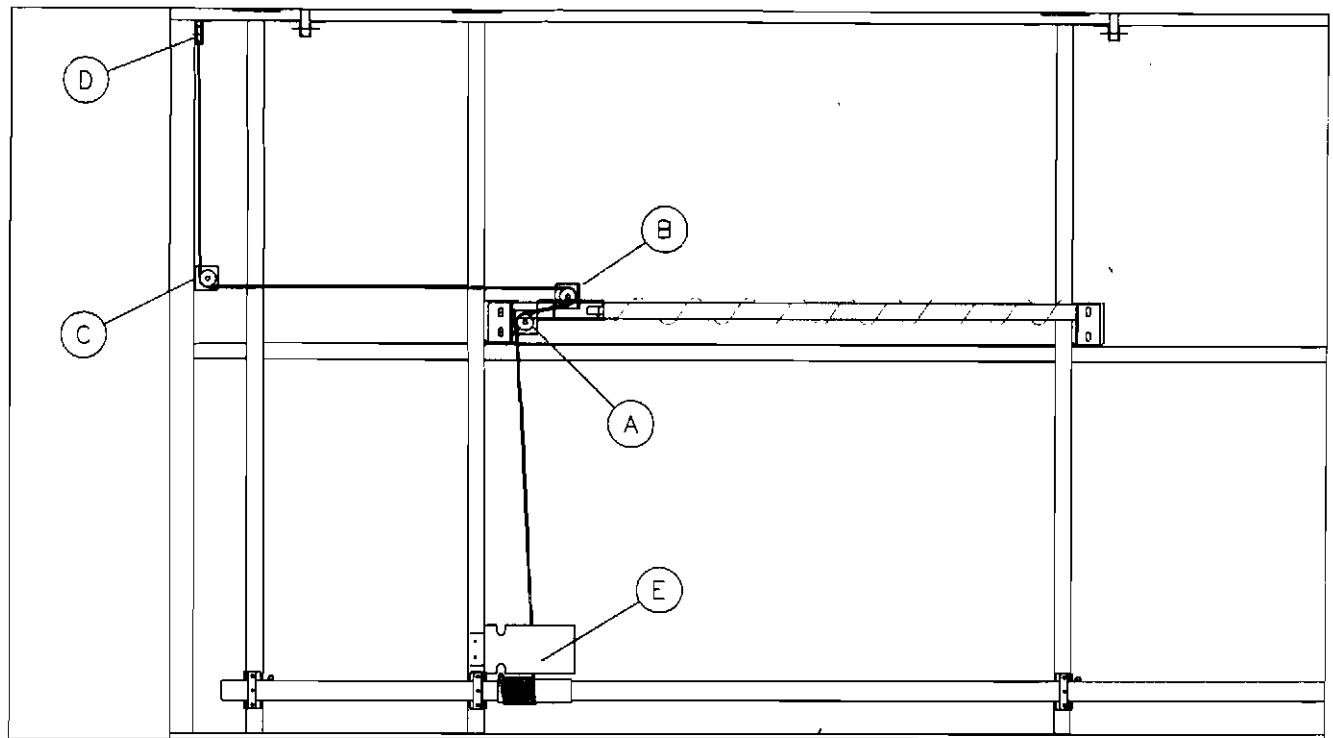
Detail 28



OVERTRAVEL
DISCONNECT
WIRING DIAGRAM

Detail 29

Install closing Tensioner cables.



Detail 30

Important Note: Prior to installing lock cables be sure door is at full closed position and clamped closed to door jamb.

Automatic Jamb Lock Installation Instructions

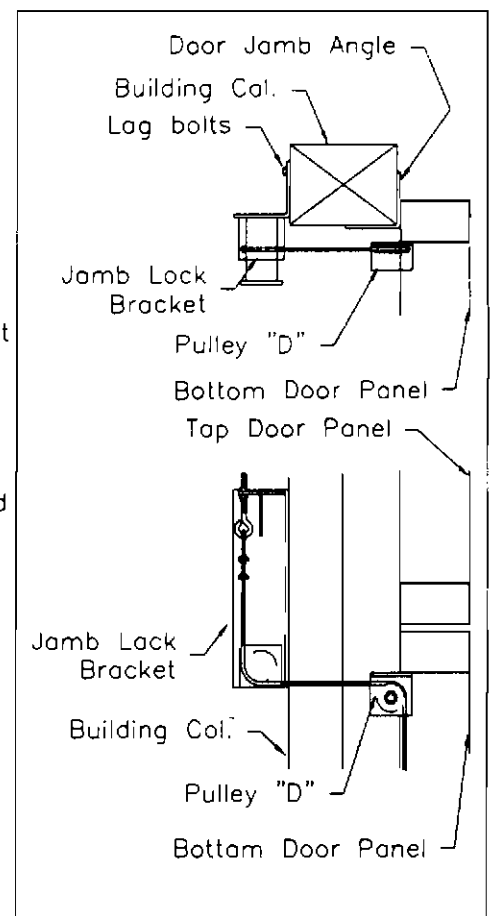
Step 1: Install Jamb Lock Brackets on the inside of the jamb columns as shown in detail 31. Be sure that the bottom of the 2" pipe lines up with the top of pulley "D".

Step 2: On the Automatic Door Lock pull sleeve down to the stop and clamp in place. Install lock cables, pass thru pipe sleeve and make correct number of wraps on line shaft (see chart below) keep wraps neat and tight. Be sure cable feeds off the line shaft between the shaft and the door.

Step 3: Next take cable around pulley "A", then around pulley "B" on tube sleeve, around pulley "C" and "D", around 2' pipe to the eyebolt clamp with 2 cable clamps. Be sure to remove clamps at jamb and tension lock before operating door.

Door Clear Opening	Number of Wraps on Drum
10'-0"	19 Full Wraps
12'-0"	22 Full Wraps
14'-0"	24 Full Wraps
16'-0"	27 Full Wraps

Step 4: Install ALG guard at location "E" on both sides of door approximately 1/2" above pillow block.



Detail 31

ins2037W

STEP 14:

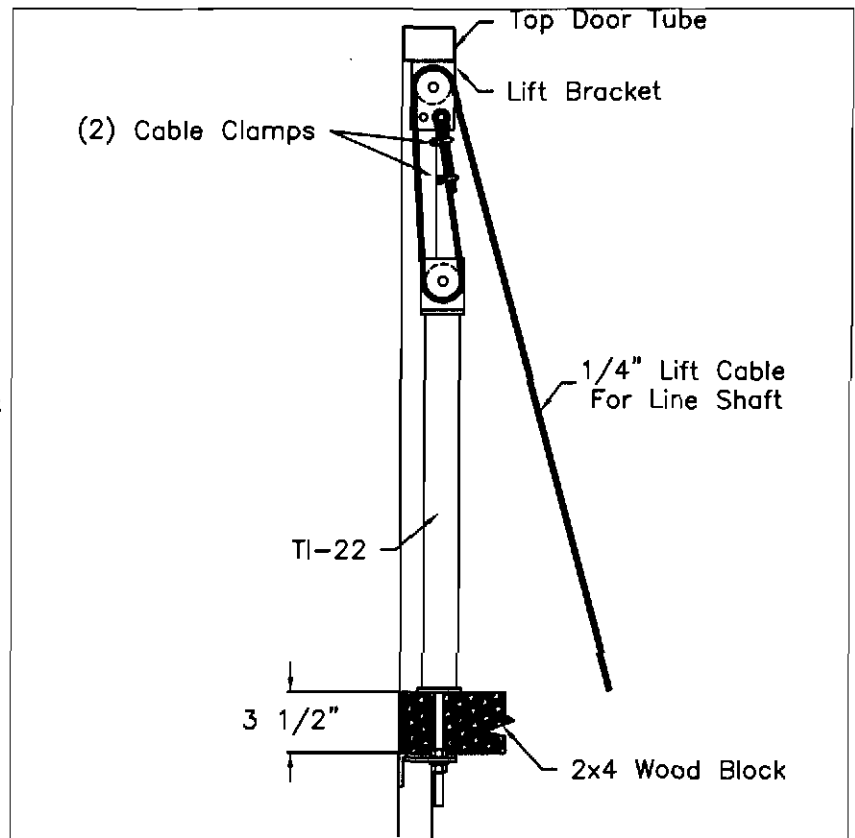
13

Install lift cables.

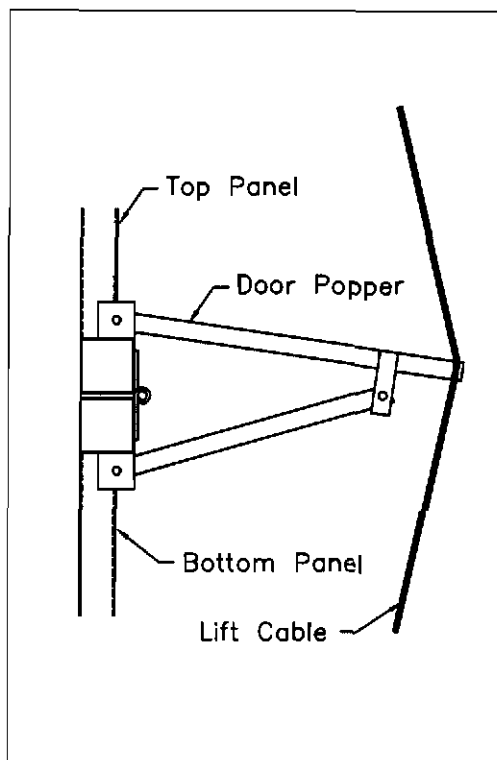
When door is ready for cabling, pull up on the TI-22 and insert a 2x4 block under it. This will provide the 3 1/2" space needed. Next run the cable thru the cable catch on the line shaft & around the shaft to make 2-full wraps, thru the cable guard, over the door popper, thru the pulley in the lift bracket, down to the cable tensioner (TI-22), thru the pulley & back up to the lift bracket. Work the slack out of the cable, BE SURE NOT TO LIFT THE TENSIONER OFF THE BLOCK. Clamp using (2) cable clamps, remove the block from under the TI-22.

(Follow this procedure for the other tensioner. When done all the TI-22 should be 3 1/2" off the tensioner support brackets.)

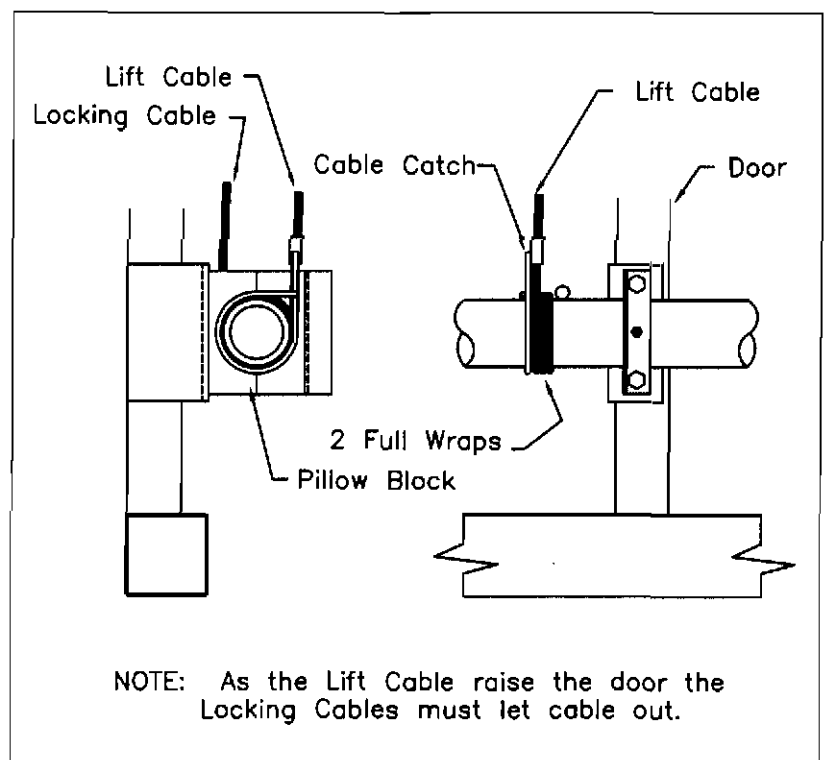
NOTE: The lift cables must wrap from the outside of the line shaft.



Detail 32



Detail 33

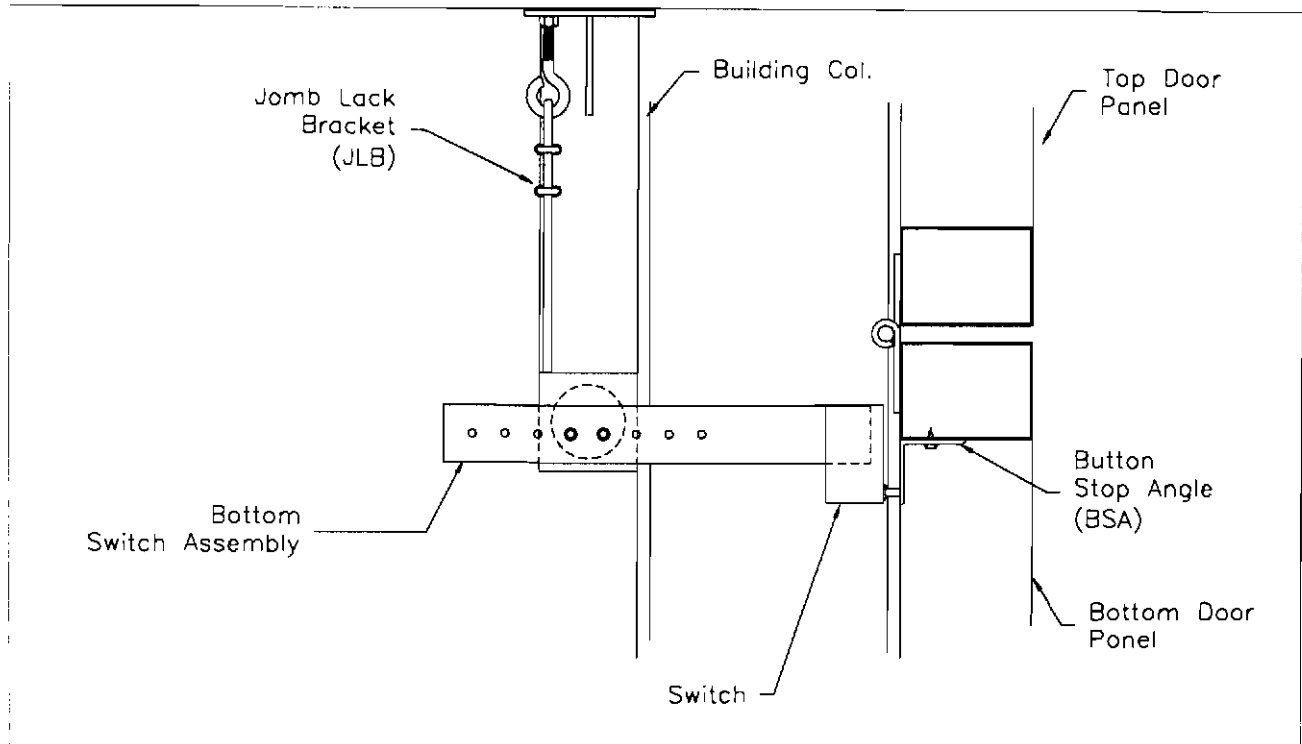


Detail 34

STEP 15:

14

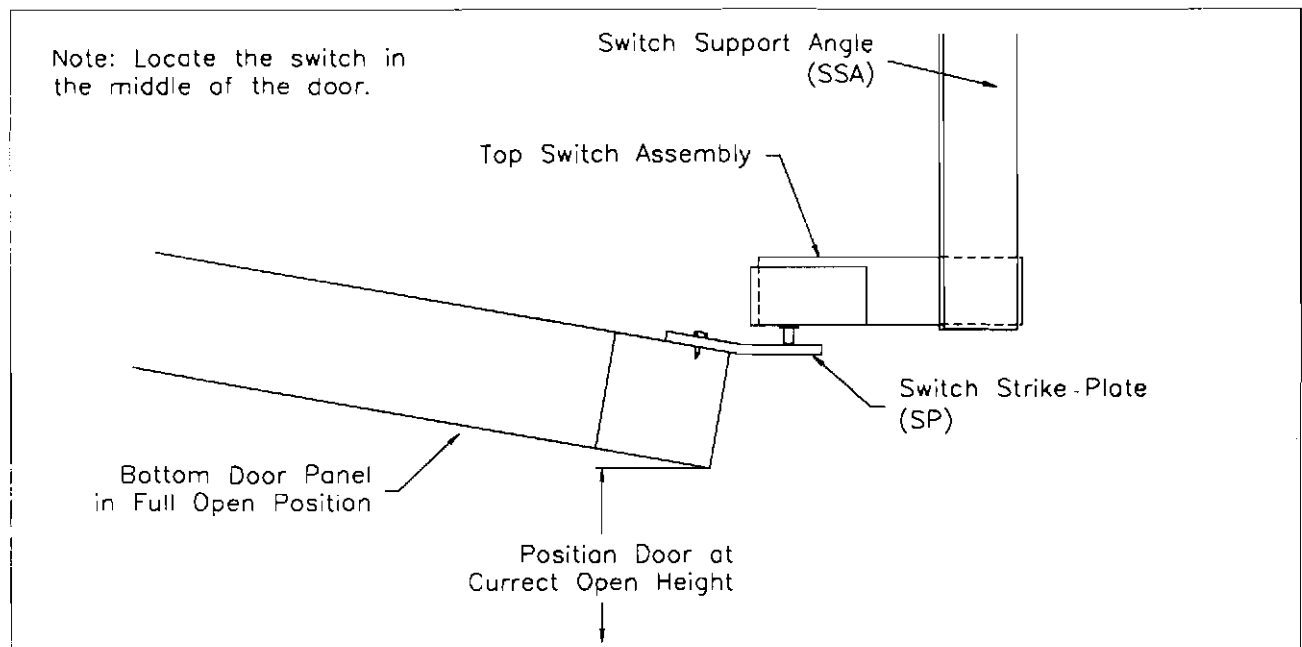
Install Bottom Down Limit Switch. Attach switch button stop angle (BSA) to door with two (SMS) sheet metal screws. Place switch box so switch will shut off as door pulls against door jamb. (Adjust for snug - not tight closure.) Attach switch assembly to Jamb Lock Bracket with sheet metal screws.



STEP 16:

Detail 35

Install Top Limit Switch. Clamp switch assembly to (SSA) angle. Then attach Switch Strike Plate to door with two (SMS) screws. Note do not place the (SP) more than 2" below the bottom of the door. Raise the door to the full open position. (NOTE: Do not go over the full open height, because this will damage the door.) Position the switch so that the top limit switch will strike the switch strike plate in the center. When in place be sure switch is level and weld angle to header and switch assembly to angle.

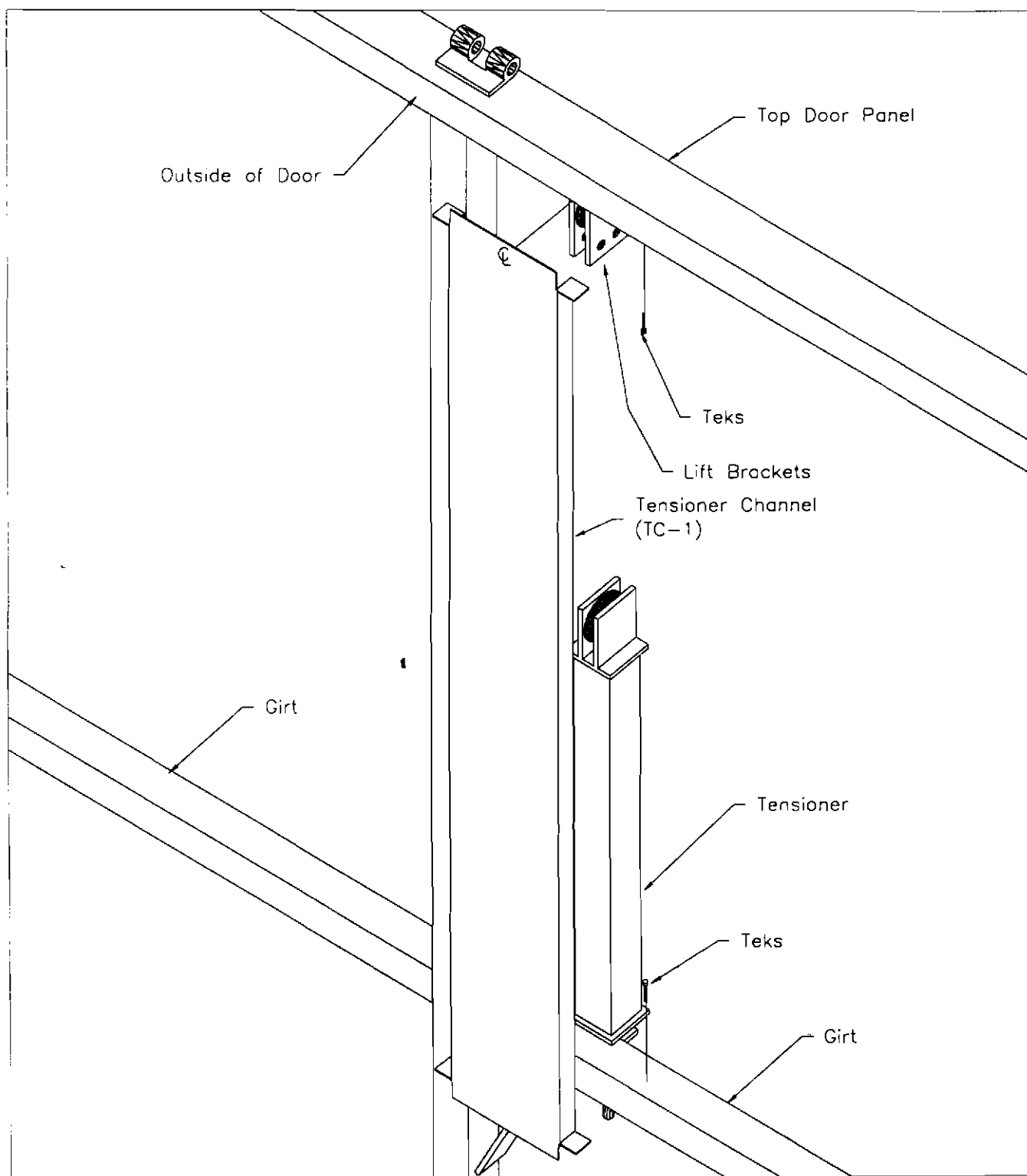


Detail 36

ins2038W

STEP 17:

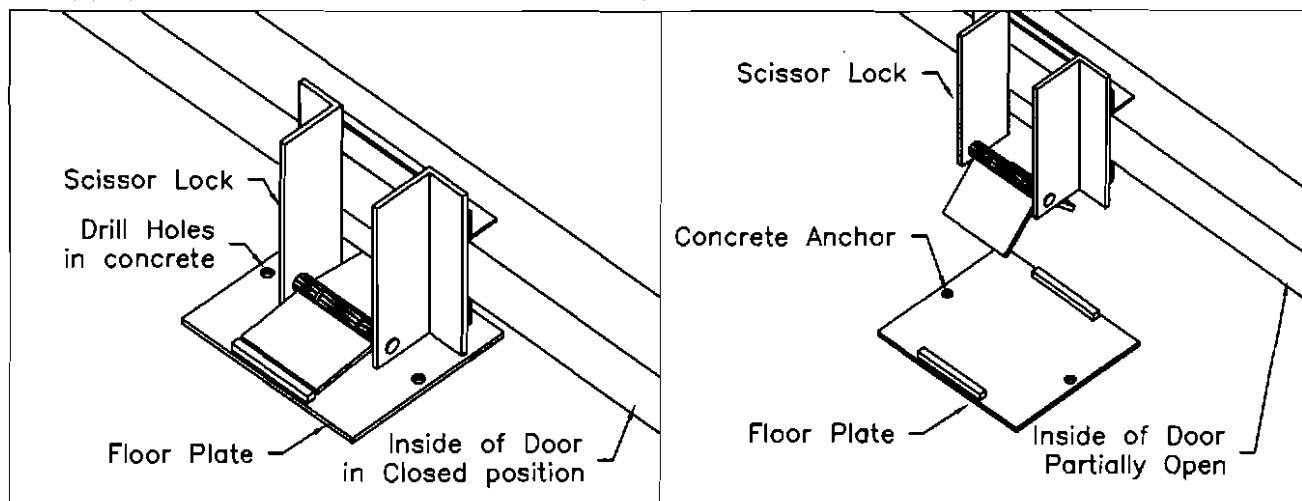
If the door is to be insulated, install the Tensioner Channel (TC-1). Center the TC-1 using the lift bracket as the center location.

**Detail 37**

STEP 18:

16

Install door base automatic scissor locks on bottom inside of door. Bolt scissor lock angles to bottom panel with (4) $\frac{3}{8} \times 1$ " bolts & locknuts. Field drill floor plate for concrete anchors.



STEP 19:

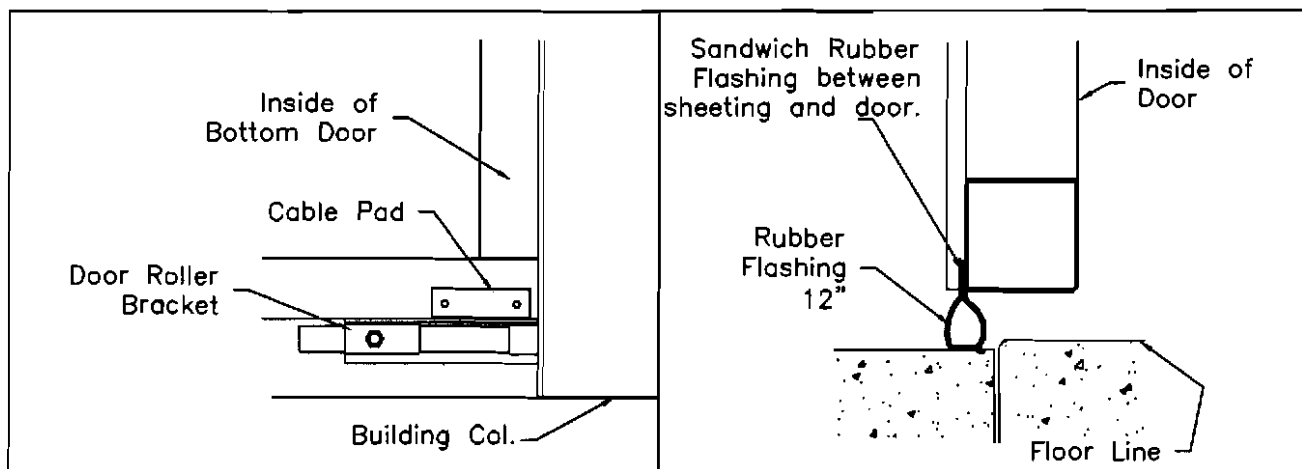
Detail 38**Detail 39**

Open door to locate where the cable is going to run on bottom tube and add a cable pad using sheet metal screws as in detail 40.

NOTE: IF YOUR DOOR IS EQUIPPED WITH A MILLER EDGE, SEE PAGE 21 FOR STEP 20.

STEP 20:

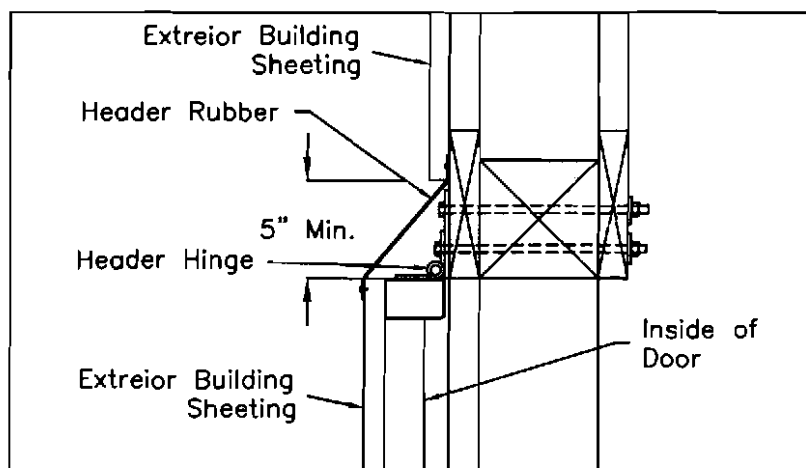
Base seal installation see detail 41.

**Detail 40****Detail 41**

NOTE: IF YOUR DOOR IS EQUIPPED WITH A PASS DOOR, SEE PAGE 17 BEFORE CONTINUING.

STEP 21:

Door is now ready for exterior sheeting and header rubber flashing, installed at the same time.

**Detail 42**

ins2039W

PASS DOOR INSTALLATION

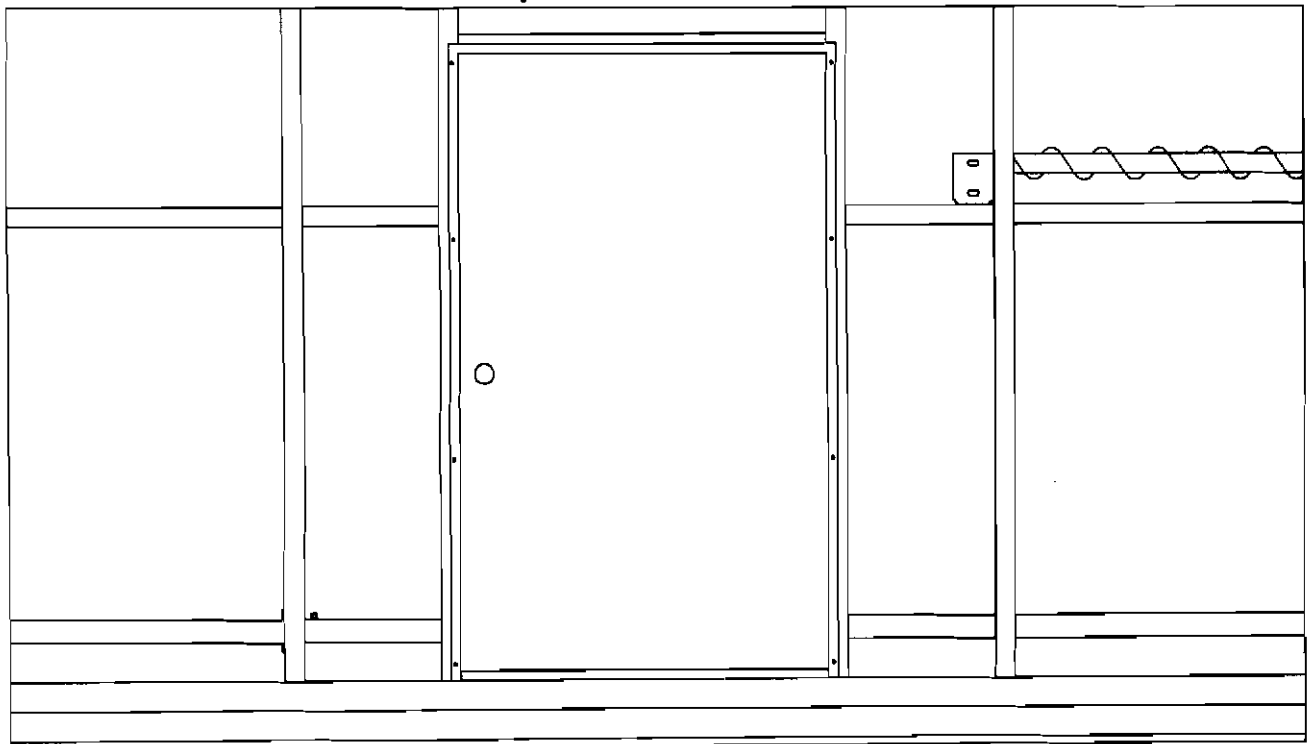
17

Locote the Pass Door opening.



Detail 43

Slide Pass Door into opening from the outside of the door panel. Fasten door in place with 8 sheet metal screws. NOTE: Be sure that the door opens to the outside of the building.



Detail 44

ins2026W



2000 SERIES MAINTENANCE AND SERVICE LIST

These service checks should be performed a minimum of once a year and are suggested every six months. Always inspect the door structure for any damage or stress cracks. The header system should also be inspected for loose bolts, cracks, and any bent or damaged members.

1. Grease line shaft pillow blocks through grease zerk.
2. Oil center hinge at all hinge locations, check cotter pins.
Replace if needed.
3. Check sprockets and chain at operator:
 - A. If sprockets have shifted, loosen mounting bolts and realign using a straight edge.
 - B. If chain is loose, adjust by using the tensioning bolts on the gear reducer. Loosen the four bolts on the back of the gear reducer, tighten the tensioning bolts until the chain has from 1/4" to 1/2" of play. Re-tighten all the bolts that were used. Oil chain thoroughly.
4. Lubricate all the lift cables using an old rag and gear oil. As the rag is passed over the cables, watch and feel carefully for frays in the cables. Any cables excessively frayed should be replaced.
5. Check adjustment of the locking cables which should be tight enough to close the door gently. Over tightening of these cables will lead to premature cable failure.
6. With the door in full closed position, check door rollers for excessive wear. Check to see that the door is tracking straight. This can be seen by the marks left by the door rollers on the outside of the jamb.
7. Check that all switches and wiring are undamaged and in good working order. Check that all mounting brackets are tight.
8. Check the top and bottom seals for tears. Replace if necessary.



ONE YEAR LIMITED WARRANTY
SERIES 2000 Electrically Operated Bi-Fold Canopy Door

Wilson Hangar Doors of Missouri, Inc. guarantees its products to be free of defects in material and workmanship for one year from date of shipping.

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

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

Subsequent damage of other than products manufactured by Wilson Hangar Doors of Missouri, Inc. 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 party immediately we will ship a new part UPS - C.O.D. and refund you money for the part when it is returned.

WE MUST HAVE DEFECTIVE PARTS BACK FOR EVALUATION.