

R Y T E C

Turbo-Seal[®]

Installation Manual



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INTRODUCTION

The information contained in this manual will allow you to install your Rytec Turbo-Seal® Door in a manner that will ensure maximum life and trouble-free operation.

Any unauthorized changes in procedure, or failure to follow the steps as outlined in this manual, will automatically void the warranty. Any changes in the working parts, assemblies, or specifications as written that are not authorized by Rytec Corporation, will also cancel the warranty. The responsibility for the successful operation and performance of this door lies with the owner of the door.

DO NOT OPERATE OR PERFORM MAINTENANCE ON THIS DOOR UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS CONTAINED IN THIS MANUAL.

If you have any questions, contact your Rytec representative or call the Rytec Technical Support Department at 800-628-1909. Always refer to the serial number of the door when calling the representative or Technical Support. The serial number plate is located inside one of the side columns.

The wiring connections and schematics in this manual are for general information purposes only. A wiring schematic is provided with each individual door, specifically covering the control and electrical components of that door.

DOOR SERIAL NUMBER(S)

Your **DOOR SERIAL NUMBER** information can be found in three universal locations. These are at the inside of either side column (approximately eye level), on the drive motor, and on the inside door of the System 4 control panel. (See Figure 1.)

IMPORTANT: *When installing multiple doors of the same model but different sizes, verify the serial number in the control panel with the one in the side column.*

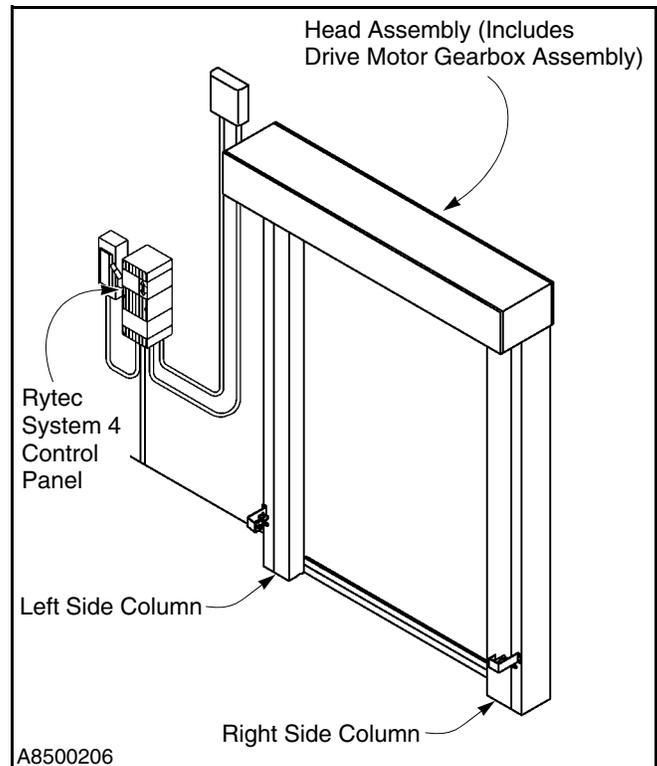


Figure 1

HOW TO USE MANUAL

Throughout this manual, the following key words are used to alert the reader of potentially hazardous situations, or situations where additional information to successfully perform the procedure is presented:



WARNING is used to indicate the potential for personal injury, if the procedure is not performed as described.



CAUTION is used to indicate the potential for damage to the product or property damage, if the procedure is not followed as described.

IMPORTANT: *IMPORTANT is used to relay information CRITICAL to the successful completion of the procedure.*

NOTE: *NOTE is used to provide additional information to aid in the performance of the procedure or operation of the door, but not necessarily safety related.*

INSTALLATION—MATERIAL, TOOLS, AND EQUIPMENT

INSTALLATION

MATERIAL, TOOLS, AND EQUIPMENT

1. Threaded rod (½-in. diameter) and other various wall anchor hardware and material. Concrete anchor bolts (½-in. diameter). (See “ANCHORING METHODS” on page 3.)
2. Assorted shim stock.
3. Double-sided tape (to temporarily hold shims).
4. Carpenter’s or spirit level (4-ft. minimum length).
5. Carpenter’s square.
6. Hammer drill.
7. Masonry drill bit (for ½-in. diameter anchors).
8. Three or four bar clamps (48-in. long).
9. Hammer or mallet, and block of wood.
10. Crowbar or pry bar.
11. Assorted hand tools (pliers, tape measure, etc.).
12. Socket and wrench sets.
13. Water level, line level, or transit.
14. Two ladders (taller than height of door opening).
15. Forklift (see “Forklift Requirements” below).

ADDITIONAL REQUIREMENTS

Labor and Site Requirements

1. Two installers.
2. An electrician is required for making all electrical connections. (See “Electrician’s Responsibilities” on page 2.)

NOTE: All electrical work must be performed in accordance with local and state building codes.

3. 100% accessibility to the door opening during the entire installation process. No traffic should be allowed to pass through the opening while the door is being installed.

Forklift Requirements

A forklift supplied by the customer, dealer, or installer is mandatory for the safe and proper installation of this door. The forklift should have:

- 2,000-pound lift capacity
- Minimum height ability — door height, plus 12 in.
- Side-shift capability (desired)

Electrician’s Responsibilities

For complete details on the responsibilities of the electrician, refer to the Rytec System 4 Drive & Control Installation & Owner’s Manual.

Floor-Loop Activator Requirements

If a floor-loop activator was ordered and shipped with your Rytec door, the following additional items will be required to install the activator.

NOTE: For complete floor-loop installation instructions, refer to the manual that was shipped with the activator.

1. Concrete saw (with water cooling attachment).
2. Water supply and garden hose.
3. Wet/dry shop vacuum.
4. 200–500 feet of 16-gauge, 19-strand, type XLPE, copper, crosslink polyethylene jacket wire (or equivalent). The size of the floor loop will determine the length of wire required.
5. Bondo P606 Flexible Embedding Sealer (or equivalent) — required to fill saw cuts in floor after the activator is installed. For cold temperature applications, Bondo P610 Speed Set must be added to the P606 to ensure the sealer cures properly.

Fill-In Material Requirements

Some applications may require the use of a door pullout (extension) to gain clearance of an existing obstruction between the door and the door opening. The following materials can be used to fill the space or gap between the door and the door opening.

1. 16-gauge hot-rolled sheet steel.
2. 2-in. x 2-in. x ¾-in. angle iron.

INSTALLATION—GENERAL ARRANGEMENT OF DOOR COMPONENTS

GENERAL ARRANGEMENT OF DOOR COMPONENTS

Figure 2 shows the location of the major components of the door and the general placement of the associated sub-assemblies for a typical installation.

This illustration is provided to you for informational purposes only. It should not be relied upon solely during the installation of your door and its sub-assemblies.

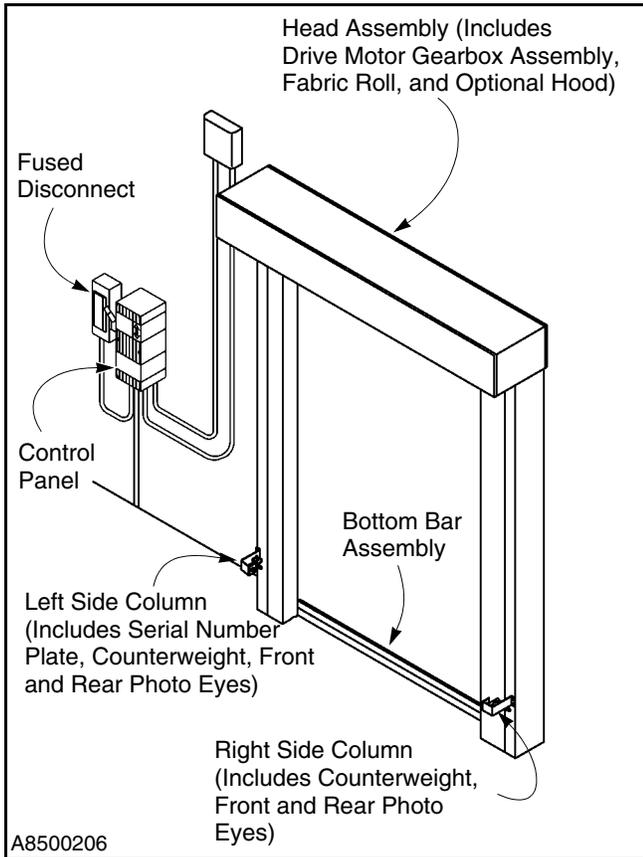


Figure 2

NOTE: Figure 2 shows the front side of the door. Left and right are determined when viewing the front side of the door.

ANCHORING METHODS

Correct anchoring of the side columns to the wall and the floor is important for the smooth and safe operation of the door. The wall material should be strong enough to support the weight of the door and all wall anchors.

Figure 3 through Figure 6 show anchoring methods for various types of walls. Use the method that is best suited for your particular installation site.

All necessary anchoring hardware and material required for the installation of this door are the responsibility of the door owner. If you have any questions, call your Rytec representative or the Rytec Technical Support Department at 800-628-1909.

NOTE: Use 1/2-in. diameter threaded through bolts or 1/2-in. diameter threaded rods to anchor the door to all wall applications. Use 1/2-in. diameter concrete anchor bolts to anchor the door to a concrete floor.

If expansion anchors are used, a quarterly inspection should be implemented for safe and secure door operation.

Concrete, Block, or Brick Walls

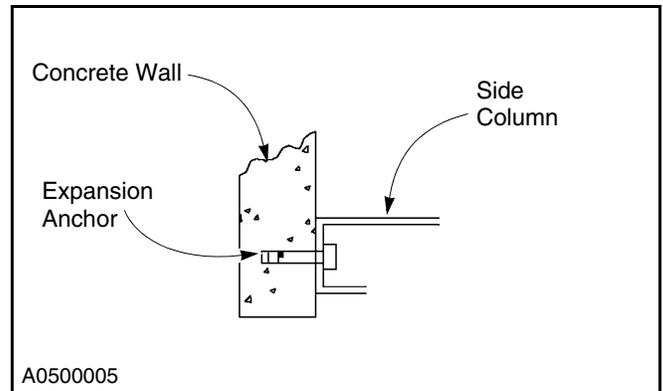


Figure 3

Wood, Block, Brick, or Insulated Walls

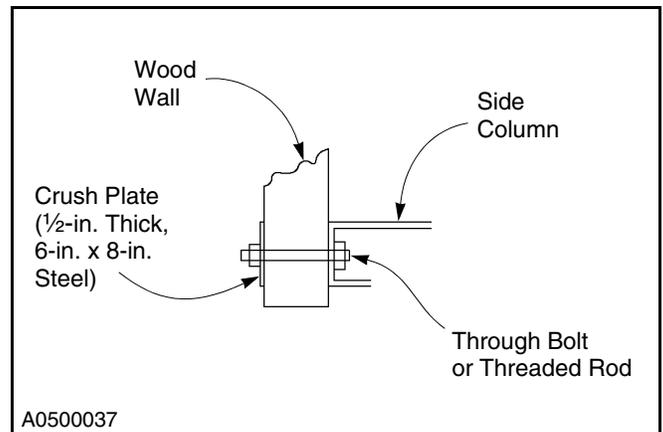


Figure 4

INSTALLATION—UNCRATING

Insulated Wall

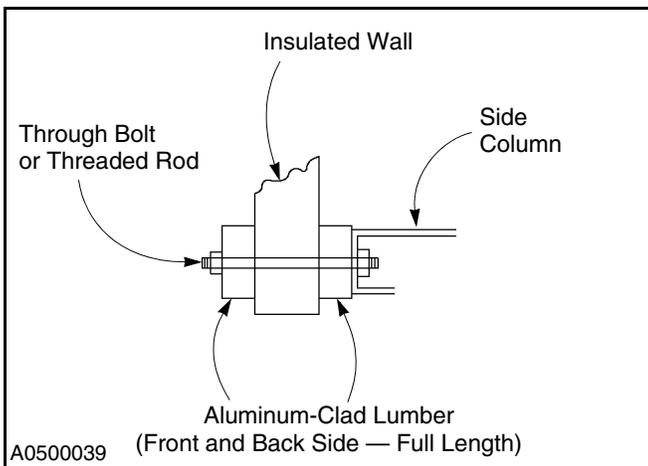


Figure 5

Insulated Wall

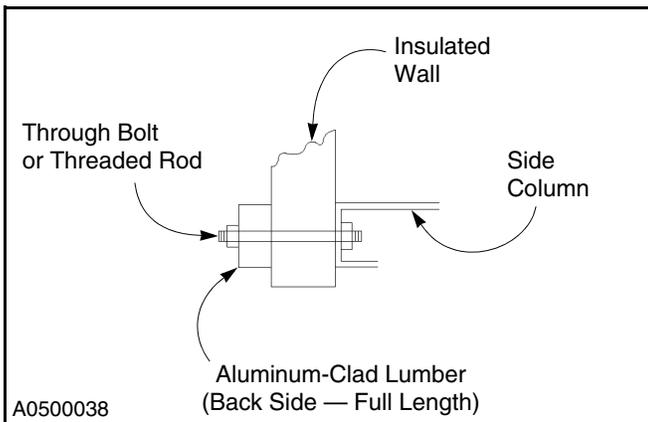


Figure 6

UNCRATING

Your Rytec door has been crated to allow for minimal handling of assemblies during the installation process.

NOTE: Remove parts and sub-assemblies from the shipping crate in the order directed throughout this manual.

1. Remove the top of the crate. (See Figure 7.)
2. Remove the front of the crate.

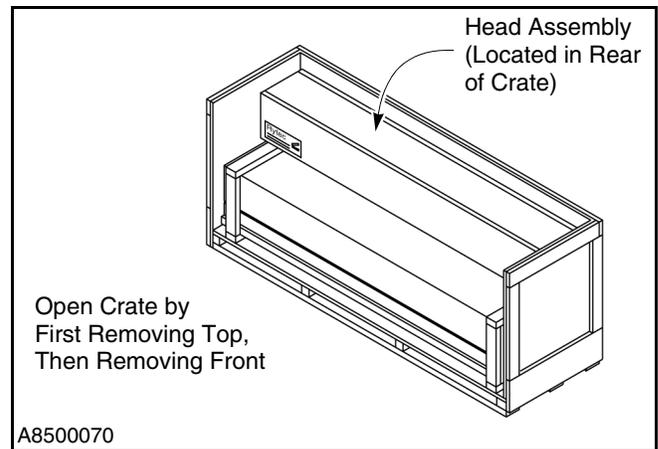


Figure 7

LOCATING CENTERLINE OF DOOR OPENING

NOTE: Accurate measurements are critical for the proper installation and operation of your Rytec door. Verify all measurements.

1. Measure the width of the door opening.
2. Divide the measurement in half to locate the centerline. Then mark the centerline along the floor. (See Figure 8.)

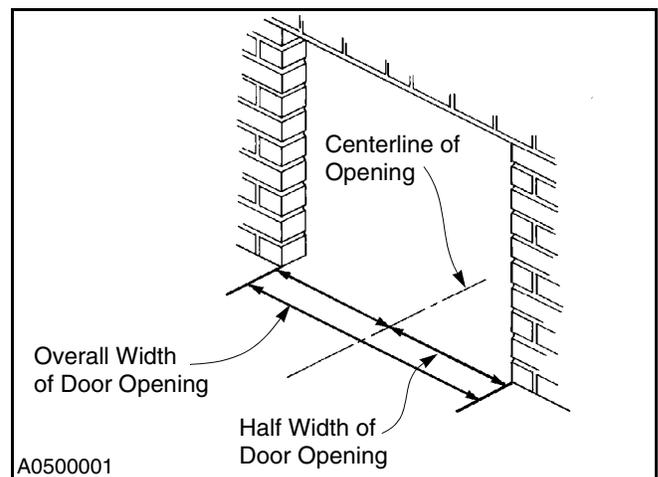


Figure 8

LOCATING SIDE COLUMNS

1. Locate the layout drawing of the door. It should be attached to the small parts carton packed inside the shipping crate. This drawing identifies the production width of your door. Verify the dimension provided by measuring the width (length) of the head assembly.
2. Using the centerline as a reference point, lay out and mark half of the door's production width along the floor. (See Figure 9.)

CAUTION

This door is equipped with a breakaway bottom bar assembly. To ensure that it works properly, the width of the door opening must not be smaller (narrower) than the production width of the door. If the width of the opening is narrower than the width of the door, do not proceed with the installation. Contact your Rytec representative or Rytec Technical Support Department at 800-628-1909.

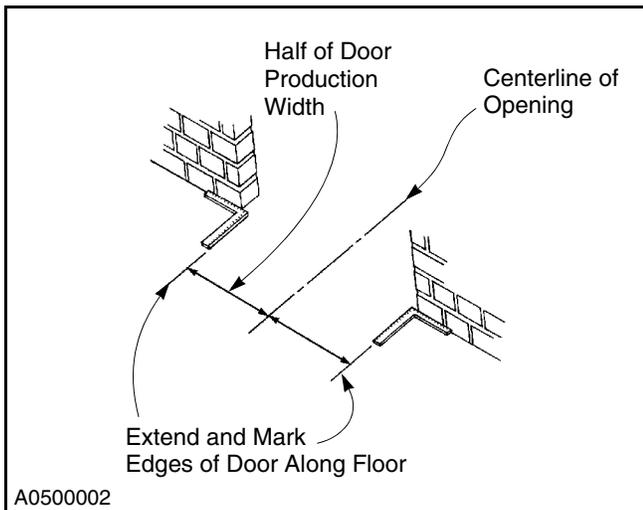


Figure 9

3. With a carpenter's square placed against the wall, mark both sides of the door along the floor. Extend the line along each edge.
4. Check the floor for level across the door opening. The floor must be level within 0.12 in. from side to side. If one side of the opening is higher than the other, a shim under the side column will be required.

Figure 10 and Figure 11 show two methods that can be used to ensure level side columns.

NOTE: Contact the Rytec Technical Support Department if the floor is more than 1 in. out of level.

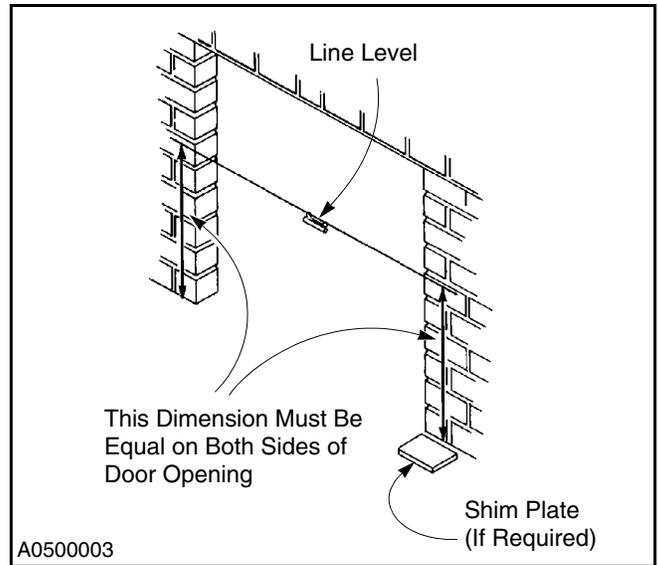


Figure 10

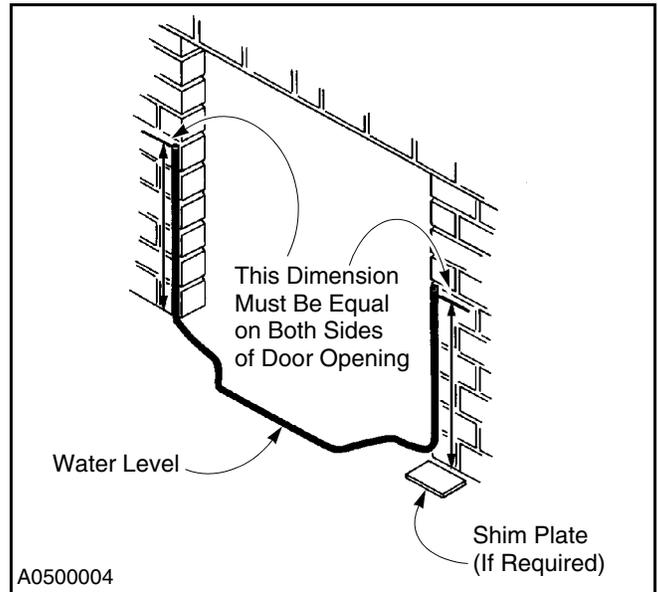


Figure 11

INSTALLATION—SIDE COLUMNS

SIDE COLUMNS

1. Remove the right side column from the shipping crate. (See Figure 12.)
2. Remove the cover from the side column by removing the screws that hold the cover in place. Save all hardware for later use.

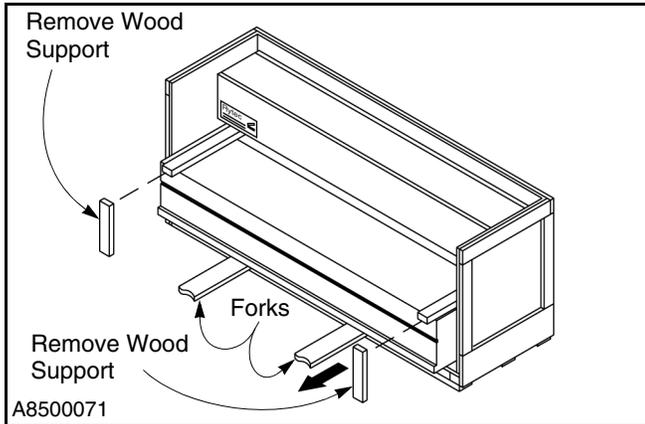


Figure 12

3. Stand the right side column on the floor. Place it against the wall, just outside the line indicating the production width of the door. (See Figure 13.)

IMPORTANT: It is critical that the side columns are mounted square and plumb with the wall, and level across the door opening. Using a 4-foot level and carpenter's square will help ensure the columns are correctly set. Place shims where necessary.

In addition, the use of bar clamps will allow you to temporarily secure the columns to the wall, while allowing you to make slight adjustments during the installation process.

! WARNING

Before drilling any holes, ensure there are no electrical wires, water pipes, or gas lines, etc., buried in the floor or hidden in the wall.

4. Once the side column is set plumb and square, anchor it to the wall and floor. (See Figure 13.) Pre-drilled anchor holes have been provided in the side column. DO NOT securely tighten the anchors at this time — they will be tightened later on, after the head assembly is installed.

NOTE: Use ½-in. expansion shell or stud-type anchors for concrete walls. Use through bolts or threaded rods for brick walls and other applications where expansion anchors are not appropriate.

If a stud-type anchor is used for the bottom anchor, the anchor must not extend more than 1½ in. above the base plate of the side column.

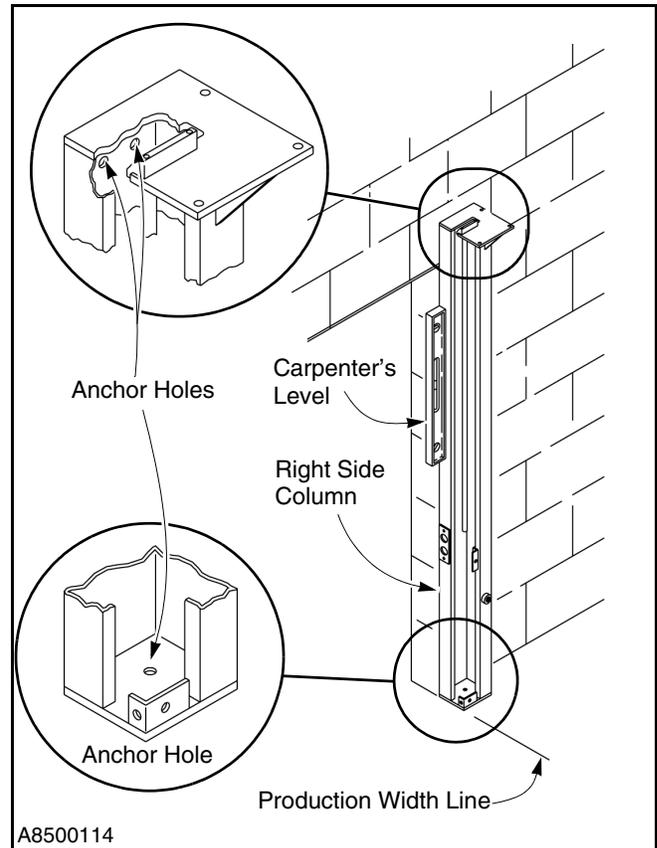


Figure 13

5. Mount the left side column to the wall and floor following the above procedure that was used for installing the right side column.
6. With both columns set and snugly bolted in place, check the overall squareness of each column.

Compare the diagonal measurements and the upper and lower horizontal measurements across the columns. The columns are square and parallel when the diagonal measurements are equal and the horizontal measurements are equal.

If either column requires a slight repositioning (when the difference of either comparison is greater than ¼ in.), use a block of wood and a mallet to nudge the column into position.

HEAD ASSEMBLY

1. Remove the control panel, counterweights, and any other items from the shipping crate that might block the head assembly during its removal.
2. Remove the head assembly from the crate. (See Figure 14.)

NOTE: If the head assembly contains a hood, remove the side cover from both ends of the head. Save all hardware for later use. (See Figure 14.)

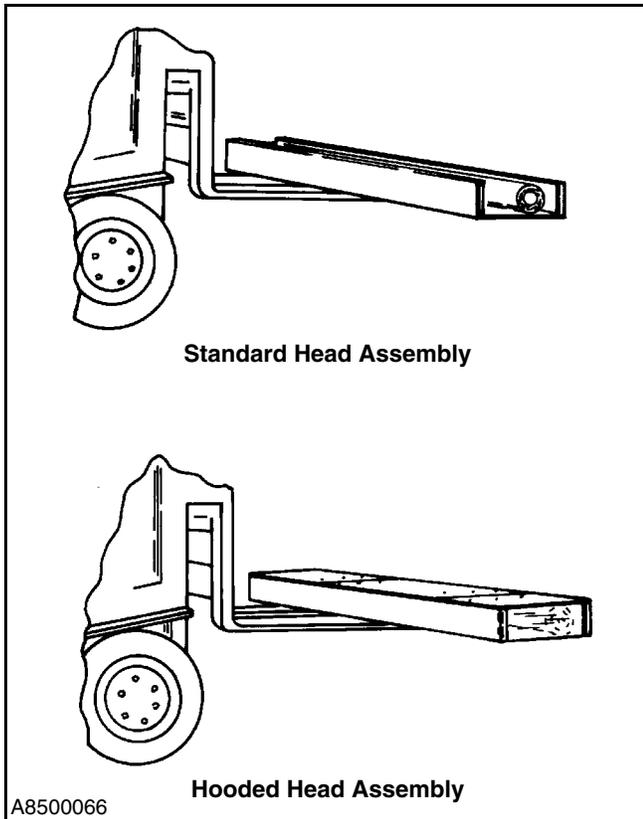


Figure 14

CAUTION

Secure the head assembly to the forklift with C-clamps prior to lifting it to the top of the side columns.

3. Clamp the head assembly to the forklift before lifting it into position. (See Figure 15.)

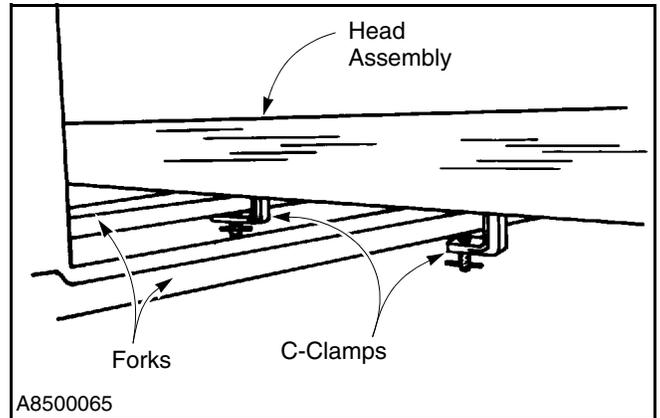


Figure 15

4. With the head assembly safely secured to the forklift, place it on top of the side columns. Align the mounting holes in each side column with the holes in the head assembly.
5. At each end of the bottom edge of the door panel is a plastic breakaway tab. Guide each tab into the channel running along the edge of the adjoining side column.
6. Attach each side column to the head assembly using three 1/2-12 x 1 3/4-in. serrated hex head cap screws and nuts. The screws and nuts are located in the small parts carton. (See Figure 16.)

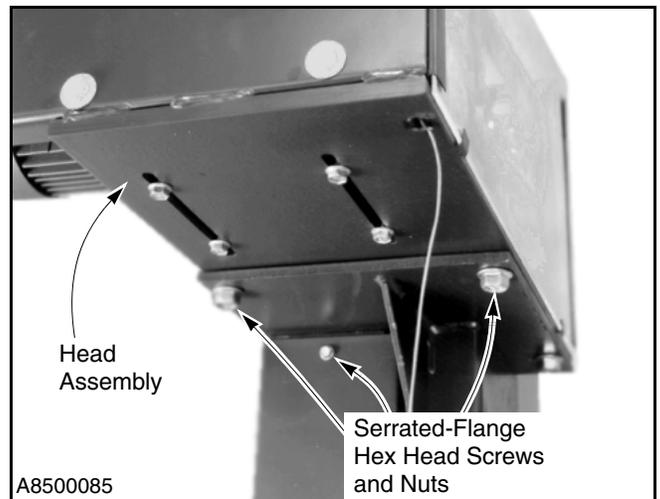


Figure 16

INSTALLATION—COUNTERWEIGHTS

- After the head assembly is secured to both side columns, securely tighten all floor and wall anchors. (See Figure 17 and Figure 18.)

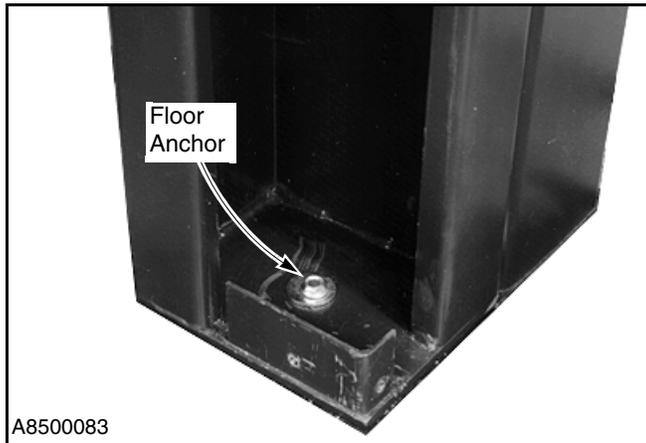


Figure 17

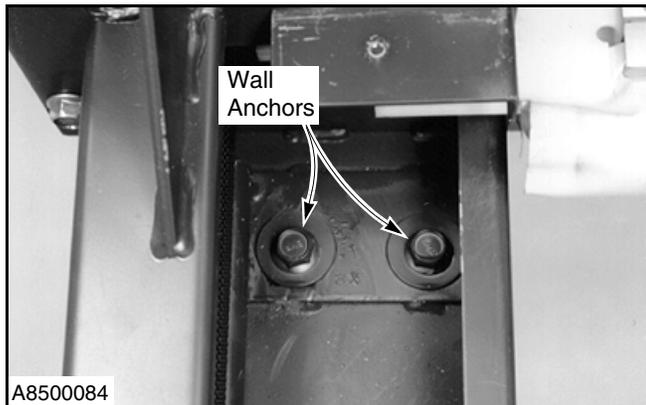


Figure 18

- Unclamp the head assembly from the forklift and then remove the forklift.
- Remove the bar clamps that were used to secure the side columns to the wall.

COUNTERWEIGHTS

⚠ WARNING

A counterweight can weigh in excess of 100 pounds. Make sure that safe handling procedures are followed and that each counterweight is securely supported during its installation. If not handled properly, a counterweight can damage door components and cause serious personal injury.

- Place a counterweight on a 2 in. block in front of each side column with the guide on the weight facing the outside edge of the side column. (See Figure 19.)

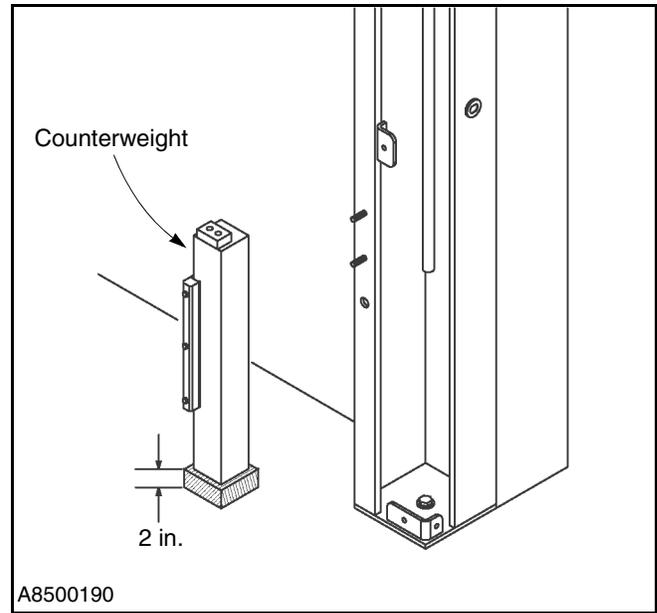


Figure 19

NOTE: To install the counterweight, attach the counterweight strap.

- With the straps hanging straight, attach them to the counterweights using two 1/2-13 x 1-in. serrated-flange hex screws and clamp bars provided in the small parts carton. Route the straps through the clamp bars as shown in Figure 20.

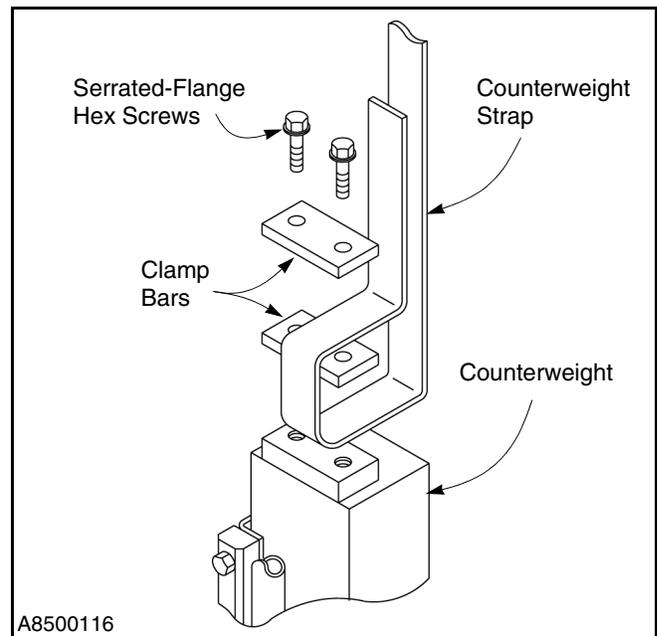


Figure 20

- Twist the counterweight and slide the guide behind the lip on the front of the side column. Then slide the counterweight against the side column until the guide fits behind the conduit guide.

- Securely block each counterweight 16 to 20 in. above the bottom of the side column. (See Figure 21.)

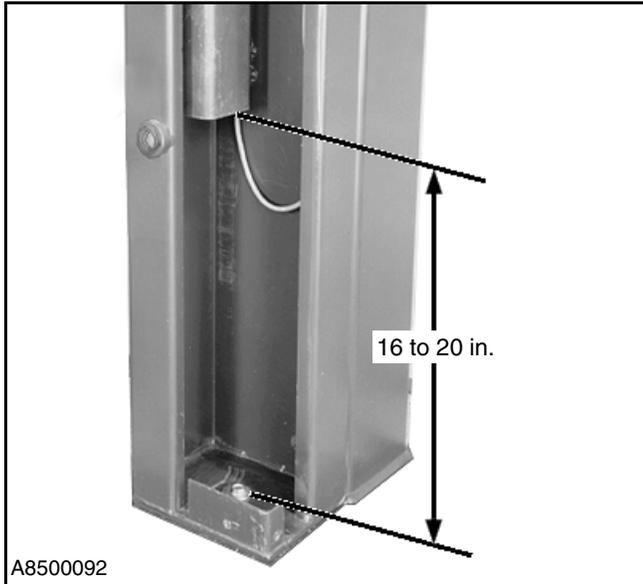


Figure 21

- Remove the shipping tape from around each counterweight strap.

NOTE: Door must be in the fully open position.

- Route each strap over its associated idler pulley as shown in Figure 22.

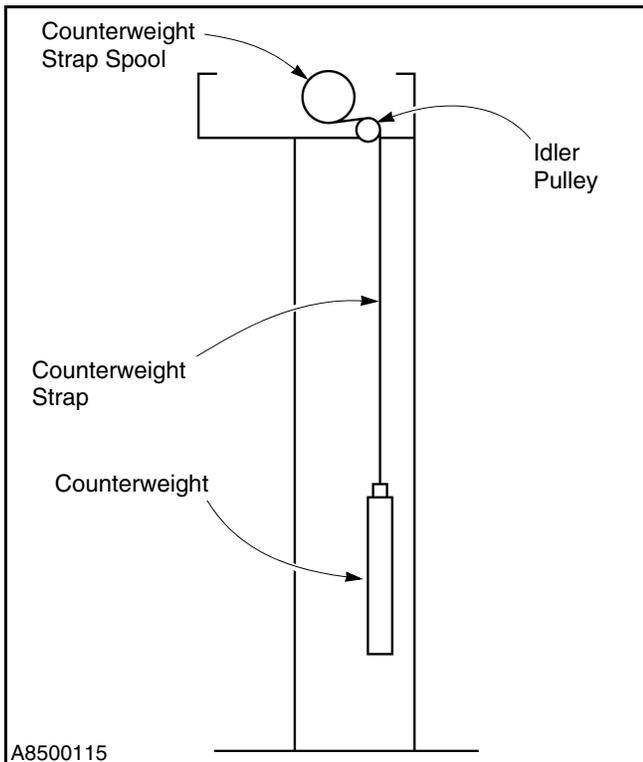


Figure 22

- Tighten the clamp bars to secure each strap. Then carefully remove the support block out from under each counterweight to allow the weights to hang free. If necessary, readjust the straps.

IMPORTANT: *The 16 to 20 in. mounting height for each counterweight, as indicated in Figure 21, is adequate for most Turbo-Seal doors. However, for extra-wide or -short doors, the counterweights may have to be adjusted closer to the bottom of the side column.*

To check the position of each counterweight, first release the motor brake by pulling on the brake release cable. Then manually move the door to its fully closed position. The clearance between the top of each counterweight and the top of its associated side column must be at least 2 in.

If an adjustment is necessary, move the door to the fully open position. After placing a support block under the counterweight, readjust the strap, as required, until the 2-in. clearance is achieved.

- After all adjustments are complete, cut off any excess strap to within 6 in. of the upper clamp bar. Tape the loose end of each strap to the main length of strap.
- Attach the side column covers using the saved hardware.

DOOR SEALING

Caulk the side columns and head assembly where they meet the wall. Use an industrial or construction grade caulk.

INSTALLATION—PHOTO EYES

PHOTO EYES

The Turbo-Seal door is shipped with two sets of photo eyes for monitoring the front and back sides of the door. The photo eyes that monitor the back side of the door were installed at the factory, inside the left and right side columns. To complete their installation, you will need to route the control wire for the photo eyes. Later, the photo eyes to monitor the front side of the door will be installed.

FACTORY-INSTALLED PHOTO EYE

To complete the installation of the factory-installed photo eye located inside the left side column, route the wire cable leading from the photo eye up through the conduit located in the rear corner of the side column. (See Figure 23.)

Continue routing this cable through the hole in the top of the column, then over to the junction box located near the front of the head assembly.

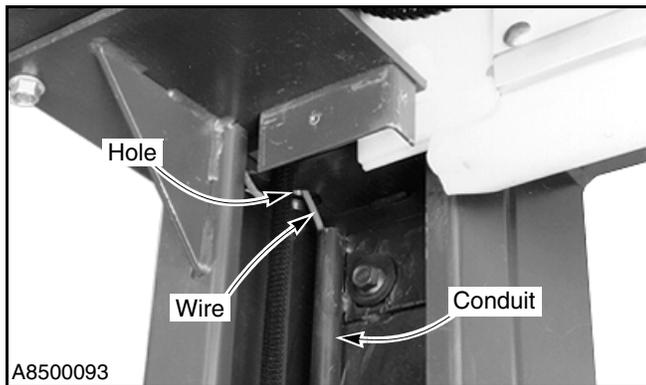


Figure 23

FIELD-INSTALLED PHOTO EYE

1. Remove the photo eye emitter and receiver module assemblies, cord grips, and four stainless steel 1/4-20 hex nuts from the small parts carton.

NOTE: The emitter can be identified by the single green light located along the barrel of the photo eye. The receiver has two lights: one is green and the other is yellow. (See Figure 24.)

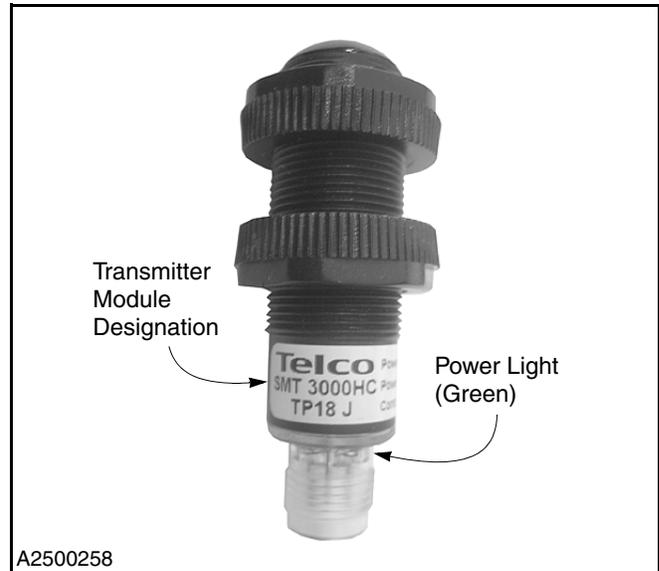


Figure 24



Figure 25

2. Install the photo eye emitter module assembly on the threaded studs located on the front of the left side column. Face the photo eye with its lens pointing toward the center of the door. Use two stainless steel 1/4-20 hex nuts to secure the photo eye module assemblies to the studs. (See Figure 26.)

INSTALLATION—CONTROL PANEL AND ELECTRICAL CONNECTIONS

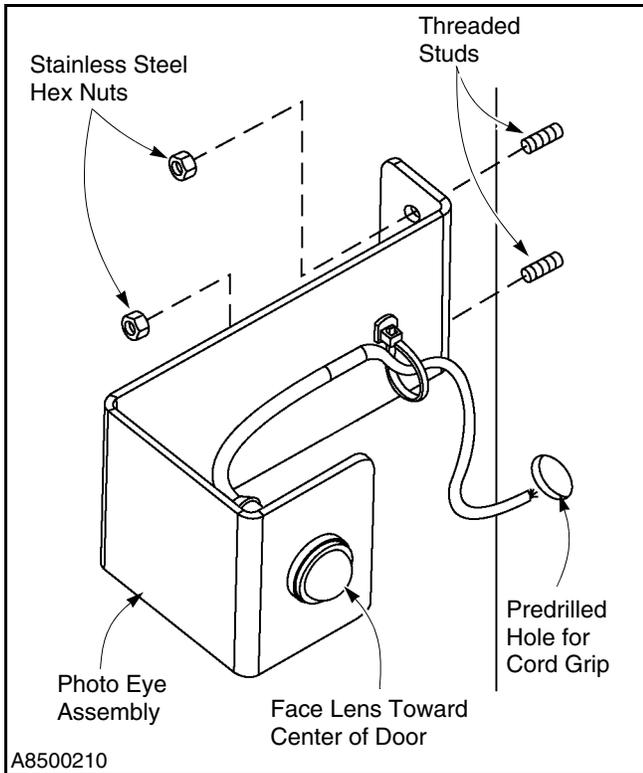


Figure 26

3. Install the cord grip in the hole that is just below the threaded studs.
4. Route the photo eye wire cable through the cord grip. Pull out the majority of slack between the photo eye and cord grip (do not pull the cable too tight). Tighten the cord grip to secure the cable. (See Figure 27.)

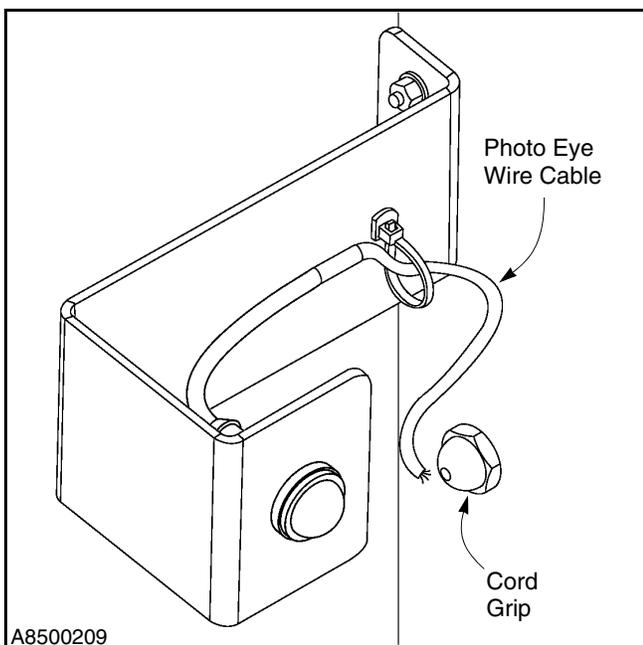


Figure 27

5. Run the wire cable from the back of the cord grip up through the conduit located at the rear corner of the side column — taking the same path as the wire cable on the factory-installed eye. Pass the cable through the hole in the top of the side column, then over to the junction box.
6. Install the photo eye receiver module assembly on the threaded studs located on the right side column. Use two stainless steel $\frac{1}{4}$ -20 hex nuts to secure the photo eye to the threaded studs.
7. Feed the photo eye cable through the cord grip. Pull out the majority of slack between the photo eye and cord grip (do not pull the cable too tight). Tighten the cord grip to secure the cable.
8. Run the wire cable from the back of the cord grip up through the conduit located at the rear corner of the side column — taking the same path as the wire cable on the factory-installed eye. Pass the cable through the hole in the top of the side column, then over to the junction box.

CONTROL PANEL AND ELECTRICAL CONNECTIONS

Once the door has been assembled, see the Rytec System 4 Drive & Control Installation & Owner's Manual for information on control panel installation, electrical connections, door limit settings, and initial door startup procedure.

NOTE: All wiring from the fused disconnect to the control box and from the control box to the motor mount side column, as well as conduit running from the control box to the floor, if a floor loop is used, is provided by the door owner/installer or the electrician. All wiring and conduit must meet all local and state codes. Wires provided with the door are labeled with terminal or contact numbers.

INSTALLATION—OPEN- AND CLOSE-LIMIT DOOR POSITIONS

OPEN- AND CLOSE-LIMIT DOOR POSITIONS

See the Rytec System 4 Drive & Control Installation & Owner's Manual for the proper procedure for setting the open and close door limits. The close and open limit door positions are detailed below.

Close-Limit Position

The close-limit position should be adjusted so that the door travel allows the yellow vinyl loop on the bottom bar to gently seal against the floor. (See Figure 28.)

DO NOT allow the rubber reversing edge, enclosed in the yellow vinyl loop, to come in contact with the floor.



Damage to the rubber reversing edge or other bottom bar parts can occur if the door seal is allowed to seal too tightly against the floor.

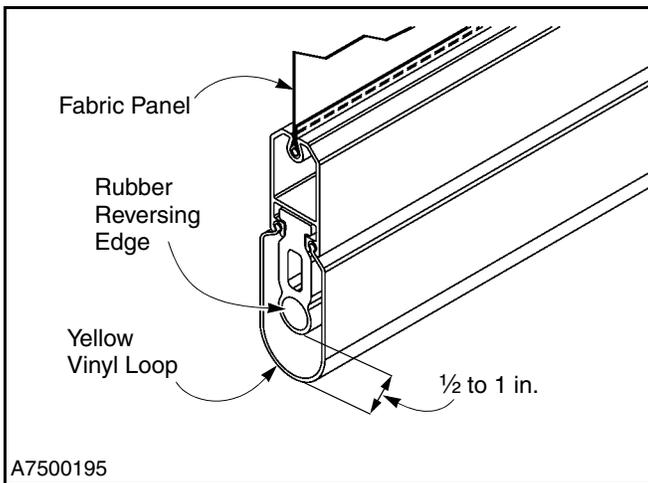


Figure 28

Open-Limit Position

The open-limit switch should be adjusted so that the door travel allows the top of the plastic breakaway tab on the end of the bottom bar assembly to stop approximately 1½ to 2 in. from the bottom of the guide block on each side column. (See Figure 29.)



Figure 29

REVERSING EDGE SWITCH INSPECTION AND ADJUSTMENT



Do not stand under the door panel when testing the reversing edge. If the reversing edge switch is not working properly, the panel could strike personnel and cause injury.

To check the reversing edge switch, run the door through the down cycle. As the door is lowered, tap the bottom of the reversing edge. If the switch is working properly, the door will immediately reverse direction and run to the open position. Push the control panel push-button to close the door after the check is completed.

If the door does not reverse direction, check the air bleed and sensitivity of the reversing edge switch.

Reversing Edge Switch Air Bleed Check



The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

1. The reversing edge switch is located inside the bottom bar assembly, on the end opposite the drive motor. To inspect and adjust the switch, remove the access cover from the face of the bottom bar assembly. (See Figure 30.)

INSTALLATION—REVERSING EDGE SWITCH INSPECTION AND ADJUSTMENT

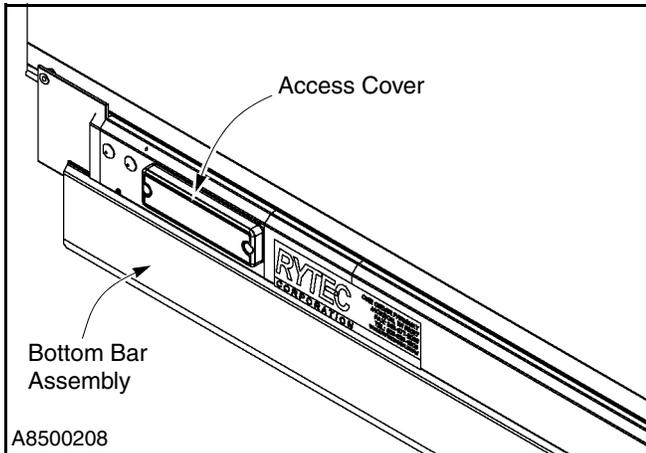


Figure 30

2. Make sure the clear PVC hose is in tight contact with the air input post so that air leakage cannot occur and that vibration will not cause the hose to fall off. Also make sure the hose is not kinked. (See Figure 31.)

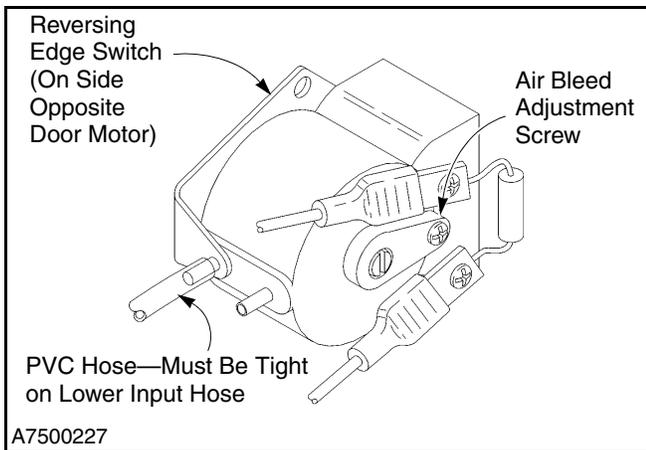


Figure 31

3. The air bleed has been set at the factory and should not require adjustment. If adjustment is necessary, turn the air bleed adjustment screws located on the front and back of the switch fully clockwise — but do not overtighten. Then turn each screw back (counterclockwise) one full turn.

Reversing Edge Switch Sensitivity Adjustment



The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

1. The reversing edge switch is a normally open contact. The PVC hose is on the lower air input post. To adjust the switch, first remove the wires and resistor from the contact terminals and attach an ohmmeter across the two terminals. (See Figure 32.)

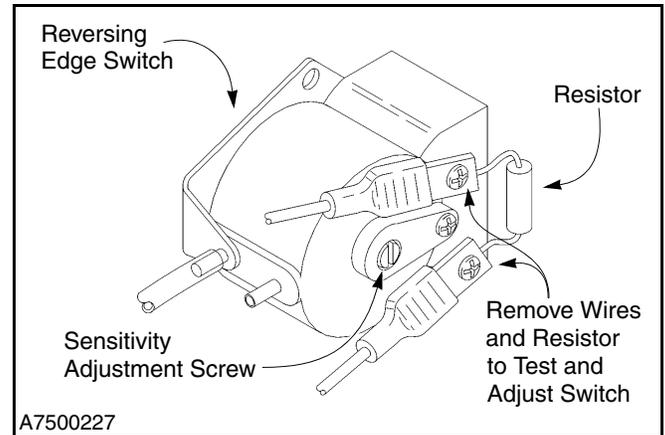


Figure 32

2. Turn the sensitivity adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved. Then adjust the screw three-quarter turn counterclockwise. Adjusting the screw counterclockwise decreases sensitivity, clockwise increases sensitivity. (See Figure 32.)
3. Reattach the wires and resistor, then replace the access cover.

NOTE: If the reversing edge is too sensitive, the door may reverse direction during the closing cycle without coming in contact with an object. If this occurs, readjust the reversing edge switch.

KILL SWITCH CHECK AND ADJUSTMENT

A kill switch has been mounted in the bottom bar assembly. The purpose of this switch is to prevent the door from being operated if the breakaway bottom bar becomes separated from either side column.

Kill Switch Check



Take precautions to prevent the door from being operated when performing the following procedure.

1. Move the door to approximately head or chest height and then stop the door.

NOTE: When a kill switch is activated, it should not be possible to restart the door until the door is reassembled and the control panel is reset.

2. Push the breakaway bottom bar out of the side column. Door should not operate until control panel is reset. (See Figure 33 and Figure 34.)

If the kill switch did not operate properly: Adjust the kill switch and then recheck it. (See "Kill Switch Air Bleed Adjustment" below.)

If the kill switch operated properly: Reinstall the bottom bar into the side column. (See "RESETTING BOTTOM BAR" on page 15.)

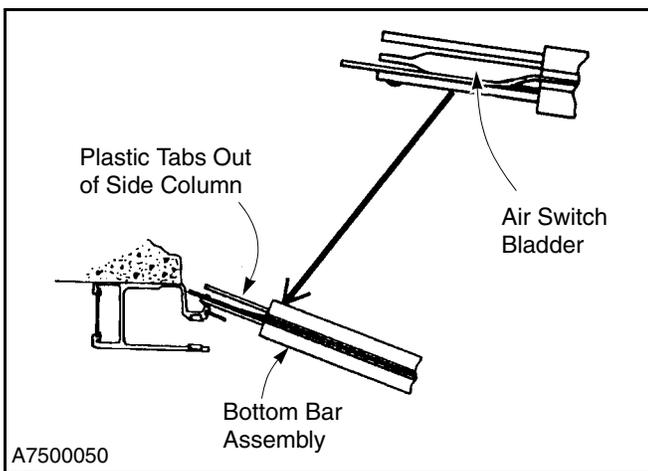


Figure 33

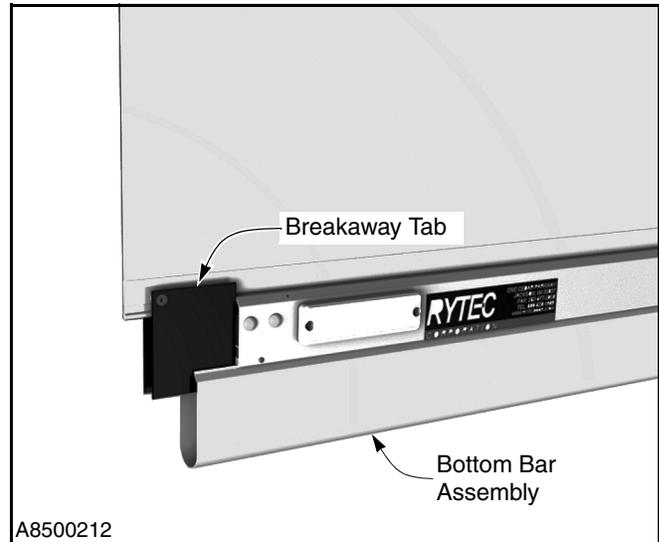


Figure 34

Kill Switch Air Bleed Adjustment

1. The kill switch is mounted in the bottom bar assembly, on the end below the door motor. To access the switch, first remove the access cover. (See Figure 35.)

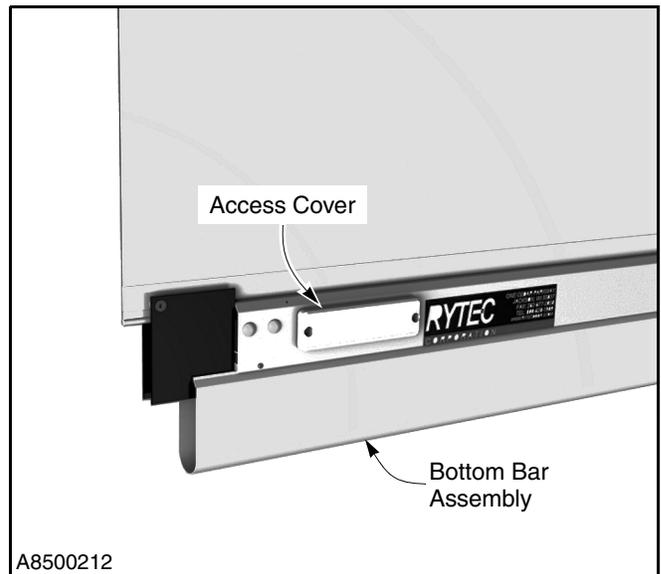


Figure 35

2. Make sure the clear PVC hose is tight on the air input post so that air leakage cannot occur and vibration will not cause the hose to fall off. Also make sure the hose is not kinked. (See Figure 36.)
3. The air bleed has been set at the factory and should not require adjustment. If adjustment is necessary, turn the air bleed adjustment screws located on the front and back of the switch fully clockwise — but do not overtighten. Then turn each screw back (counterclockwise) one full turn. (See Figure 36.)

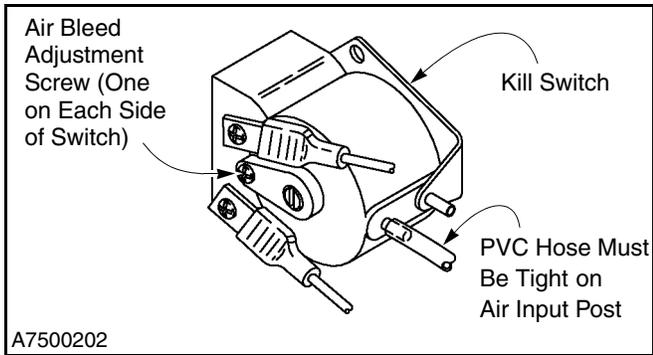


Figure 36

Kill Switch Sensitivity Adjustment

The kill switch assembly is a normally closed contact. The PVC hose is on the upper air input post.

1. Remove the wires from the contact terminals and attach an ohmmeter across the two terminals. (See Figure 37.)

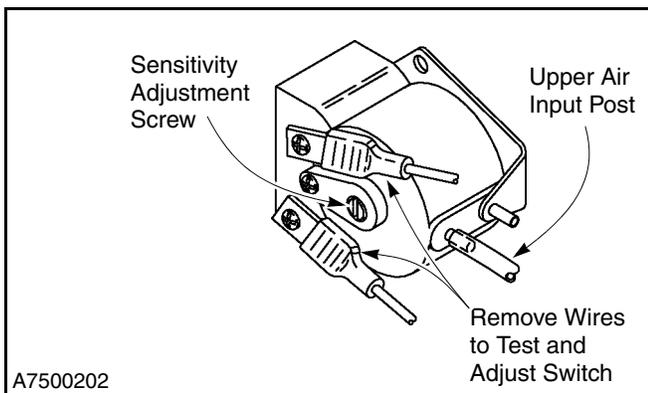


Figure 37

2. To adjust the switch, turn the small adjusting screw located on the face of the switch clockwise or counterclockwise until continuity is achieved. Then turn the screw two turns clockwise for final adjustment. Adjusting the screw clockwise decreases sensitivity, counterclockwise increases sensitivity. (See Figure 37.)
3. Reconnect the wires onto the switch. Replace the access cover on bottom bar.

NOTE: If the kill switch is set too sensitive, it may cause the door to stop during the opening or closing cycles. If this occurs, readjust the kill switch sensitivity setting.

RESETTING BOTTOM BAR



The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

1. Turn off power to the door.

NOTE: If necessary, the door can be manually raised or lowered to a comfortable height to make repairs convenient.

2. If necessary, disengage the motor brake and raise (or lower) the door to a comfortable working height.
3. Position the breakaway tabs on one end of the bottom bar assembly in the side column channel. Lift the other side of the bottom bar and position the breakaway tabs in the side column channel. (See Figure 38.)

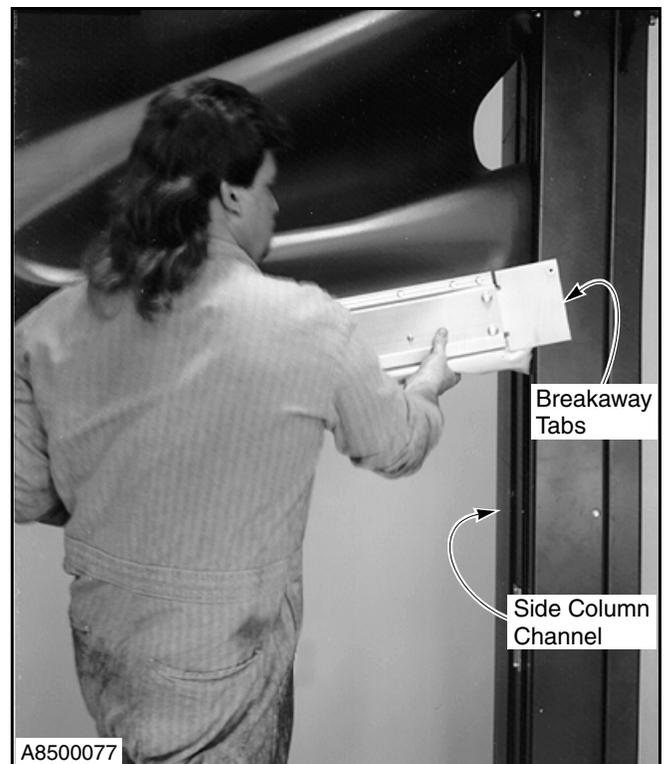


Figure 38

INSTALLATION—PHOTO EYE TEST AND ADJUSTMENT

4. Check to make sure the fabric is tucked inside each channel. (See Figure 39.)



Figure 39

5. Turn power ON.

NOTE: When a kill switch is activated, it should not be possible to restart the door until the door is reassembled and the control panel is reset.

6. Cycle the door and check door operation.

PHOTO EYE TEST AND ADJUSTMENT

The door is equipped with two sets of photo eyes that monitor the front and back sides of the door. Each set of eyes consists of an emitter module and a receiver module.

To prevent one set of photo eyes from interfering with the other set of eyes, the emitters and receivers are mounted diagonally across from each other — the side columns each have an emitter module and a receiver module, from each set of eyes. (See Figure 40.)

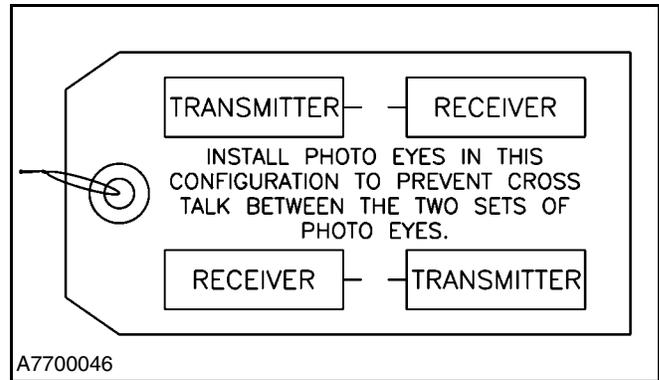


Figure 40

1. Verify that the photo eye emitter mounted on the front side of the door is aligned with the receiver on the opposite side of the door opening. The yellow light on the photo eye receiver will light when the emitter and receiver are properly aligned. (See Figure 41.)

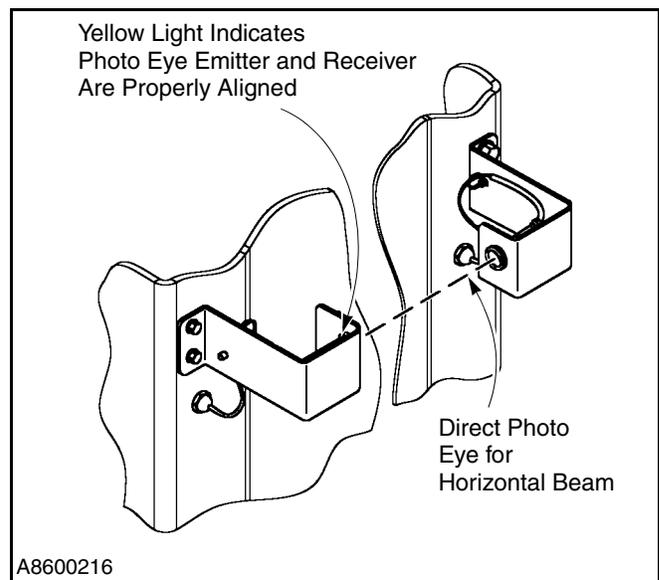


Figure 41

2. If an alignment is necessary, first verify that the mounting brackets supporting the photo eye emitter and receiver are perpendicular to the side column and that the emitter and receiver are aligned. If the photo eye emitter and receiver are not aligned, bend the mounting brackets as needed.
3. Verify that the factory-installed photo eyes on the back side of the door are aligned as described. Make any necessary adjustments until the photo eye emitter and receiver are aligned.
4. After all adjustments are made and both sets of photo eyes are properly aligned, clean the lens of each photo eye using window cleaner and a soft, clean cloth.

TESTING PHOTO EYES

NOTE: Photo eyes act as a safety device to prevent the door from closing if an object or person is within either photo eye beam. The photo eyes are not meant to be used as door activators.

Once power is applied, green lights on the photo eye emitter and receiver indicate that the modules are powered up. When the yellow light on the receiver module is also lit, the emitter and receiver are properly aligned.

Placing your hand in front of the receiver breaks the light path and causes the yellow light to go out. Removing your hand causes the yellow light to come back on. (See Figure 42.)

NOTE: When the cable is connected to the photo eye, there is only a 1/4-inch window to see the green or yellow LED light.
(See Figure 43.)

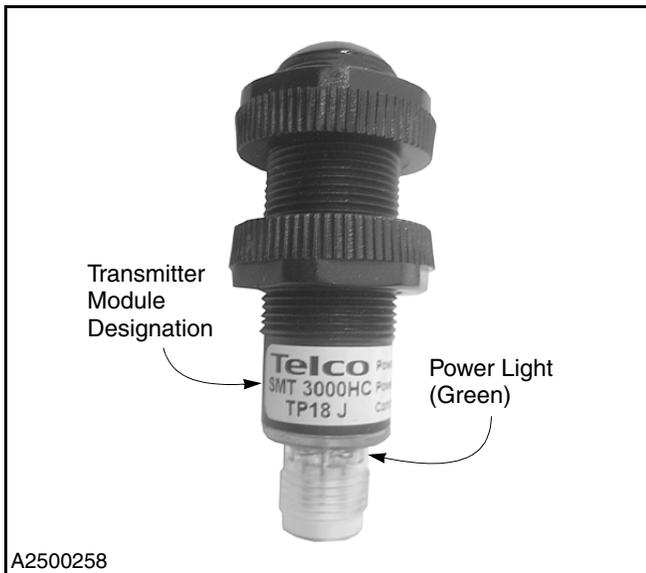


Figure 42



Figure 43

TROUBLESHOOTING PHOTO EYES

If either green light is not lit, check to make sure that power is turned on and that all wiring has continuity and is installed and connected properly.

If the green lights are on but the yellow light on the receiver module is off, check alignment of the emitter and receiver modules. Also, clean the lens of each eye using window cleaner and a clean, soft cloth.

FINAL CHECKS—PHOTO EYE TEST AND ADJUSTMENT

FINAL CHECKS

NOTE: Check all of the following door components and systems once the door panel has been cycled at least 20 times.

Side Columns: Check that side columns are plumb and square and that all anchor bolts are secure and tight.

Head Assembly: Check that all mounting hardware is in place and tight.

Bottom Bar: Smoothly travels up and down within the side columns.

Limit Positions: Adjusted properly. Up and down travel of the door should be as described in “OPEN- AND CLOSE-LIMIT DOOR POSITIONS” on page 12.

Motor: Check that the door travels in the proper direction when the button is pressed.

Reversing Edge: Works properly. As the door is closing, if the reversing edge makes contact with an object, the door should immediately return to the fully-open position as described in “REVERSING EDGE SWITCH INSPECTION AND ADJUSTMENT” on page 12.

Timers: Automatic timers must be set to ensure that the door closes properly, as described in the Rytec System 4 Drive & Control Installation & Owner’s Manual.

Activators: Operate as specified by manufacturer.

Caulk: Ensure that the side columns and head assembly are caulked where they meet the wall of the building.

Counterweight Straps: Check the routing of all counterweight straps as indicated in Figure 22. Ensure that the straps are in full contact with all rollers.

Counterweights: Counterweights should be adjusted as shown in Figure 21. Adjust if necessary.

Kill Switch: When the bottom bar assembly is separated from either end bracket, the kill switch must operate as described in “KILL SWITCH CHECK AND ADJUSTMENT” on page 14.

Photo Eyes: Make sure the photo eyes are working as described in “PHOTO EYE TEST AND ADJUSTMENT” on page 16.

