

Bantam[®]

(Motorized Operation)

Installation & Owner's Manual

WARRANTY

The Bantam Dock Door purchased by you (Buyer) should not be installed or operated before you read all associated product manuals explaining the proper method of installing, operating, and maintaining the equipment.

Rytec Corporation (Seller) warrants that the Bantam Dock Door (Product) sold to the Buyer will be free of defects in materials and workmanship under normal use for a period of twelve (12) months from the date of shipment of the Product from the Seller's plant. Electrical components are warranted for a period of ninety (90) days from the date of shipment. In addition, the Seller offers an extended two (2) year warranty on the two-ply Rilon door panel material. This extended warranty covers parts only. If within the applicable period any Products shall be proved to the Seller's satisfaction to be defective, such Products shall be repaired or replaced at the Seller's option. Such repair or replacement shall be the Seller's sole obligation and the Buyer's exclusive remedy hereunder and shall be conditioned upon the Seller receiving written notice of any alleged defect within ten (10) days after its discovery and, at the Seller's option, return of such Product to the Seller, f.o.b. its factory. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER REPRESENTATION AND WARRANTIES, EXPRESS OR IMPLIED, AND THE SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE.

PARTS AND ASSEMBLIES sold separately by Rytec Corporation that fail due to defects in material or workmanship within ninety (90) days from the date of shipment will be replaced under warranty provided installation has been carried out in accordance with all Rytec procedures. This warranty is limited to providing a replacement part only. This warranty does not cover freight, special charges, or any costs associated with the installation of the replacement part.

Any description of the Product, whether in writing or made orally by the Seller or the Seller's agents, specifications, samples, models, bulletins, drawings, diagrams, engineering or similar materials used in connection with the Buyer's order, are for the sole purpose of identifying the Product and shall not be construed as an express warranty. Any suggestions by the Seller or the Seller's agents regarding the use, application, or suitability of the Product shall not be construed as an express warranty unless confirmed to be such in writing by the Seller.

The Seller's liability with respect to the Product sold to the Buyer shall be limited to the warranty provided herein. THE SELLER SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY THE SELLER, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO. Without limiting the generality of the foregoing, the Seller specifically disclaims any liability for property or personal injury damages, penalties, special or punitive damages, damages for lost profits or revenues, services, downtime, shutdown, or slowdown costs, or for any other types of economic loss, and for claims of the Buyer's customers or any third party for any such damages. THE SELLER SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL, AND CONTINGENT DAMAGES WHATSOEVER.

This warranty shall be void in its entirety if the failure of any product shall be caused by any installation, operation, or maintenance of the Product which does not conform with the requirements set forth by the Seller in the applicable product manuals or is the result of any cause other than a defect in the material or workmanship of the Product.

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INTRODUCTION

The information in this manual will allow you to install, operate, and maintain your Rytec® Bantam® Door in a manner which helps 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 INSTALL, 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 Customer Support Department at 800-628-1909. Always refer to the serial number of the door when calling the representative or Customer Support. The serial number plate is located inside one of the side columns.

This door is equipped with a LiftMaster®¹ Industrial Duty Door Operator. All electrical schematics and wiring diagrams pertaining to this door are included in the LiftMaster owner's manual. That manual is included with the LiftMaster.

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

TOOLS AND EQUIPMENT REQUIRED

1. Socket and wrench set
2. ½-in. diameter concrete anchor bolts (See "ANCHORING METHODS" on page 3.)
3. ½-in. diameter threaded rod (See "ANCHORING METHODS" on page 3.)
4. Two ladders (taller than the door opening height)
5. Forklift
6. Carpenter's level (4-ft. long minimum)
7. Carpenter's square
8. Hammer drill
9. ½-in. diameter masonry drill bit
10. Three or four, foot-long bar clamps
11. Hammer and mallets
12. Crowbar or prybar
13. Assorted hand tools (pliers, tape measure, etc.)
14. Assorted shim stock
15. Water level, line level, or transit

1. LiftMaster is a registered trademark of The Chamberlain Group, Inc.

INSTALLATION—BASIC JOB REQUIREMENTS

BASIC JOB REQUIREMENTS

1. A forklift must be supplied by the customer, dealer, or installer.
2. Two installers are required.

NOTE: One installer must be a qualified electrical technician and all electrical work must meet applicable codes. If the installer is not qualified, an electrician must be present during installation.

3. The customer must guarantee 100% access to the door opening during the installation. No traffic should be allowed through the door during the installation.
4. If an electrician is used, that person must make all electrical connections. The electrician should be present one hour after installation begins.
5. The fusible disconnect and the push-button control station should be installed prior to the start of the door installation. (See Figure 1 for layout.)

ELECTRICIAN'S RESPONSIBILITIES

NOTE: See "ELECTRICAL WIRING ROUTING" on page 13 and "ELECTRICAL CONNECTIONS" on page 14 for details on electrical installation requirements.

1. Provide and mount fused disconnect.
2. Provide and mount push-button control station.
3. Run incoming power wires to fused disconnect.
4. Run power wires from fused disconnect to push-button control station.
5. Run power wires from push-button control station to LiftMaster door operator.
6. Run bottom bar control wires from side column to LiftMaster door operator.

GENERAL ARRANGEMENT OF DOOR PARTS

Figure 1 shows the location of major components of your Bantam dock door. This illustration should be used as reference only and should not be used as part of the installation instructions.

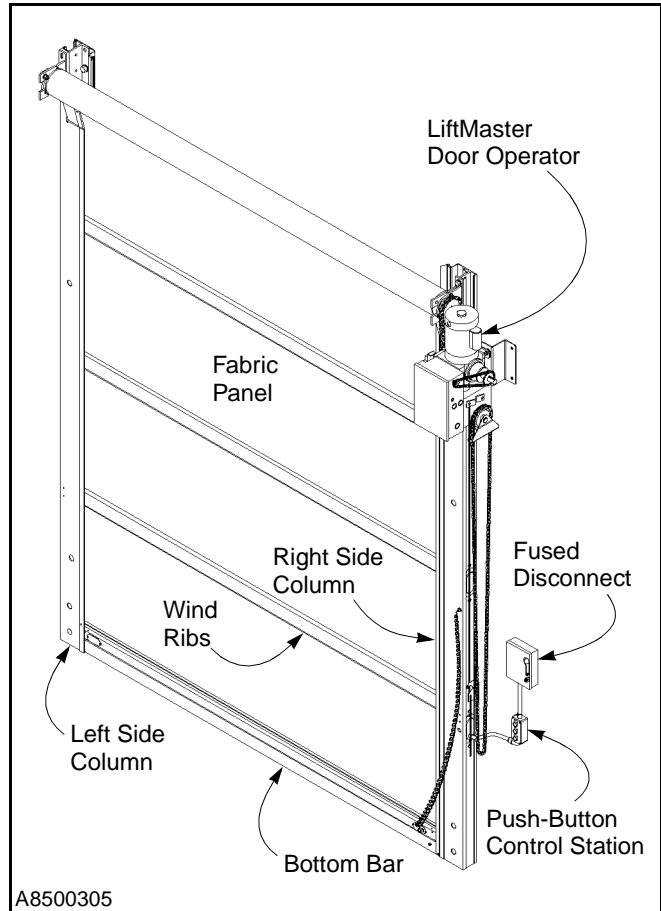


Figure 1

NOTE: The above illustration 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 2 through Figure 5 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 is the responsibility of the door owner. If you have any questions, call your Rytec representative or the Rytec Customer Support Department at 800-628-1909.

NOTE: Use ½-in. diameter threaded through bolts or ½-in. diameter threaded rods to anchor the door to all wall applications. Use ½-in. diameter concrete anchor bolts to anchor the door to a concrete floor or wall.

CAUTION

For specific site preparation information pertaining to the door operator, refer to the site preparations section in the LiftMaster Industrial Duty Door Operator owner's manual. That manual was included with the door.

Also, determine where on the wall the door operator will be mounted to ensure that area of the wall is properly prepared for the weight of the door operator. (Refer to "Motor MOUNTING BRACKET" on page 12 for installation information on the bracket.)

Concrete, Block, or Brick Walls

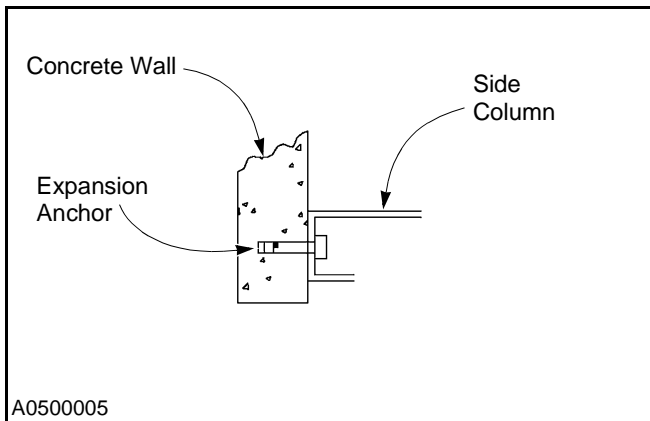


Figure 2

Wood, Block, Brick, or Insulated Walls

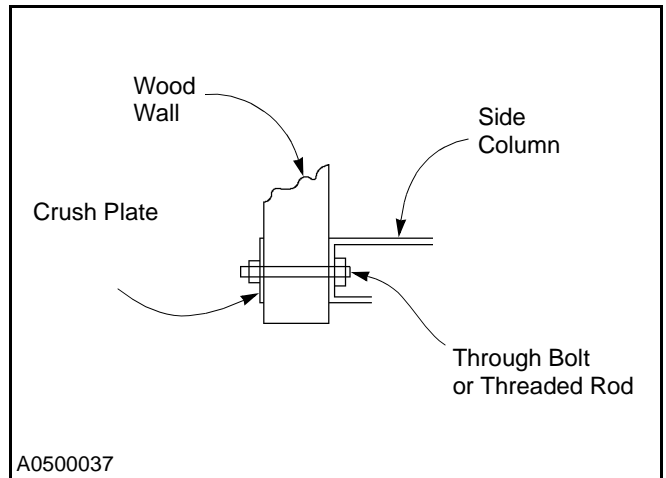


Figure 3

Insulated Wall

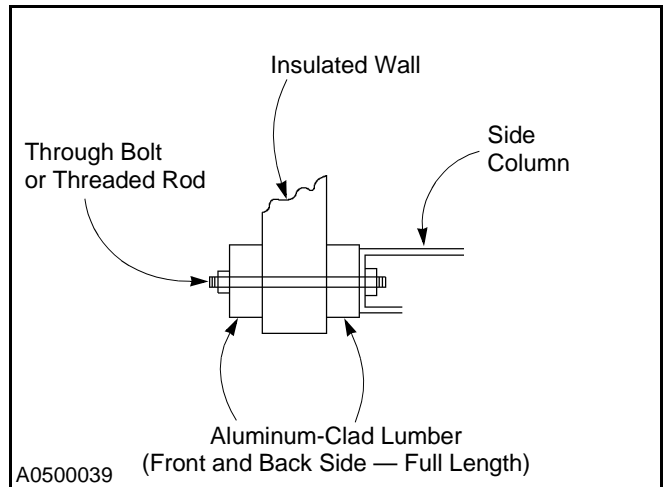


Figure 4

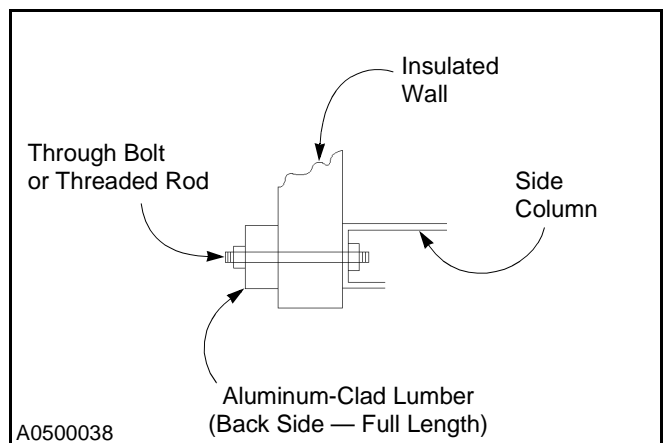


Figure 5

INSTALLATION—LOCATING CENTERLINE OF DOOR OPENING

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 6.)

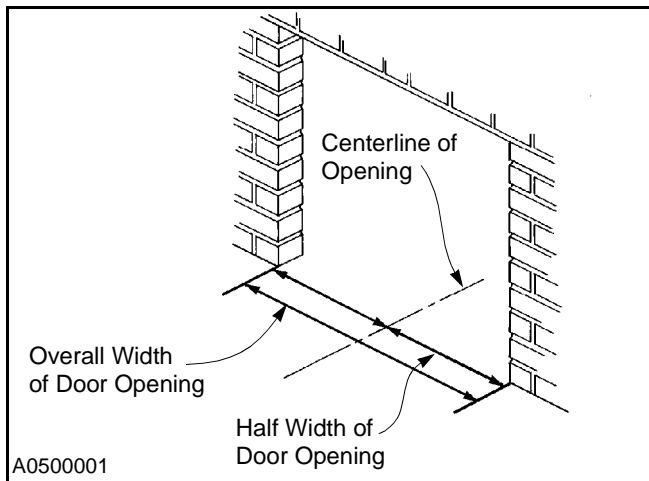


Figure 6

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.
2. Using the centerline as a reference point, lay out and mark half of the door's production width along the floor. (See Figure 7.)



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 Customer Support Department at 800-628-1909.

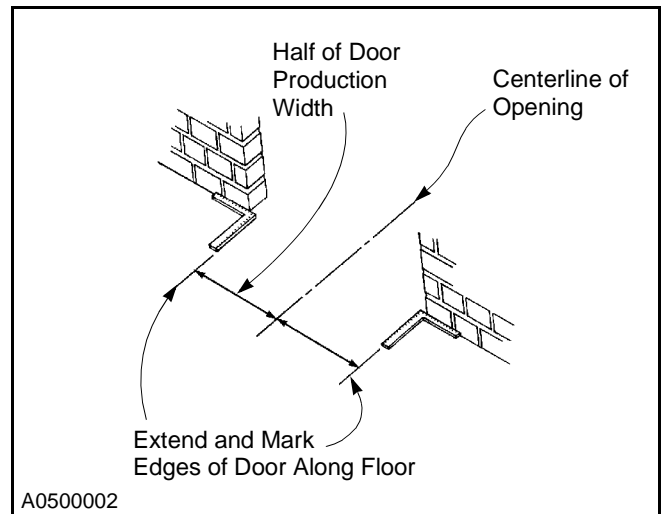


Figure 7

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 panel will be required.

Figure 8 and Figure 9 show two methods that can be used to ensure level side columns.

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

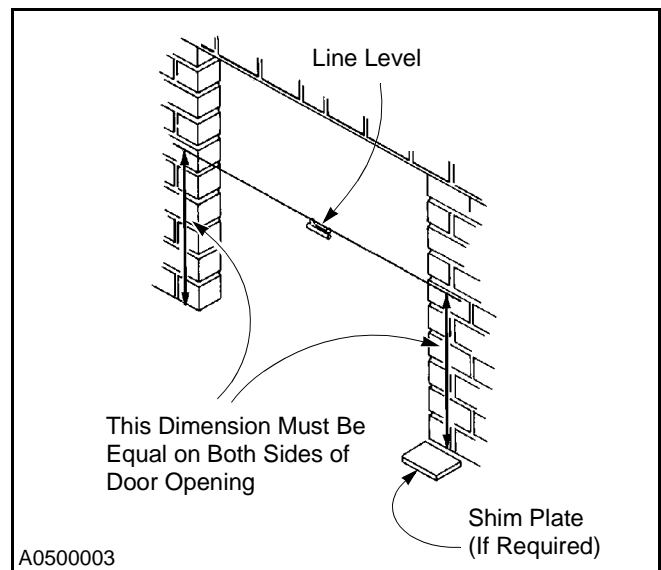


Figure 8

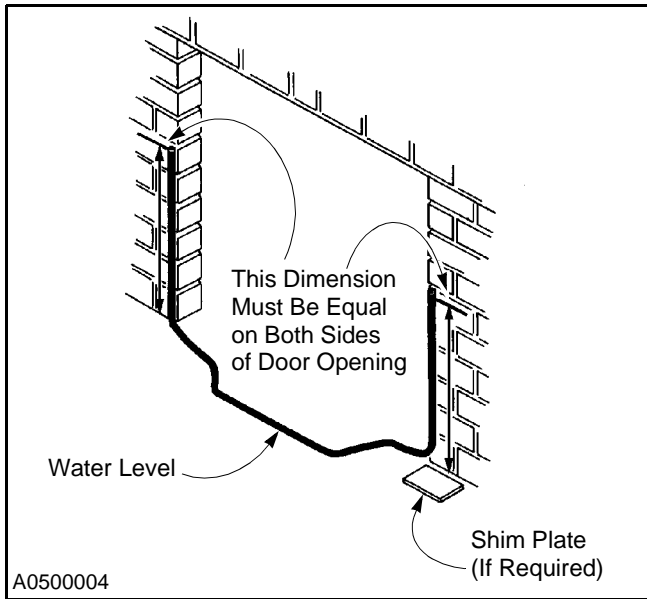


Figure 9

SIDE COLUMNS

IMPORTANT: If pullouts were shipped with the door, refer to “SIDE COLUMNS (WITH PULLOUTS)” on page 6. Otherwise, follow the steps outlined below. (The use of pullouts was determined at the time the door was ordered. Pullouts are only included when a door must be moved away from the opening because of a wall obstruction.)

NOTE: DO NOT change the location of the drive motor without first contacting your Rytec representative or the Rytec Customer Support Department at 800-628-1909.

1. Remove the drive motor side column from the shipping crate. The drive motor side column is identified by the wire access holes along its outside edge. (See Figure 10.)

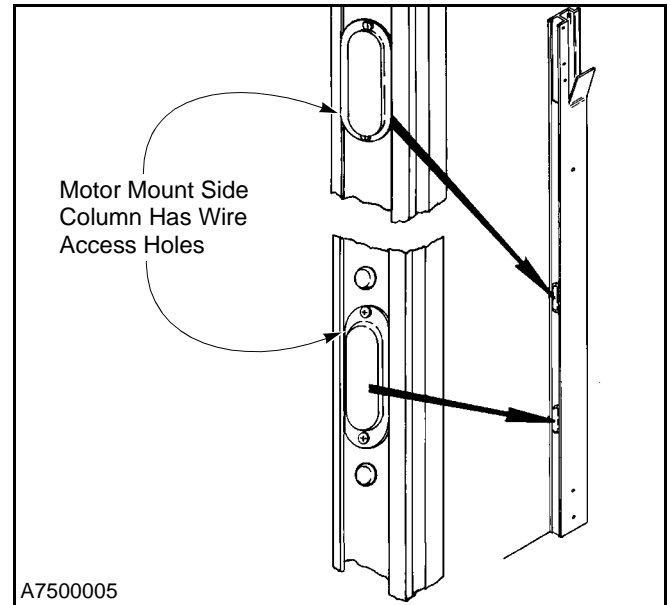


Figure 10

2. Stand the drive motor side column on the floor and tight against the wall. To determine which side of the door to place the side column, the access holes should face away from the door opening.
3. Align the inside edge of the side column with the production width line laid out earlier on the floor. The side column must be located on the outside edge of the layout line. (See Figure 11.)

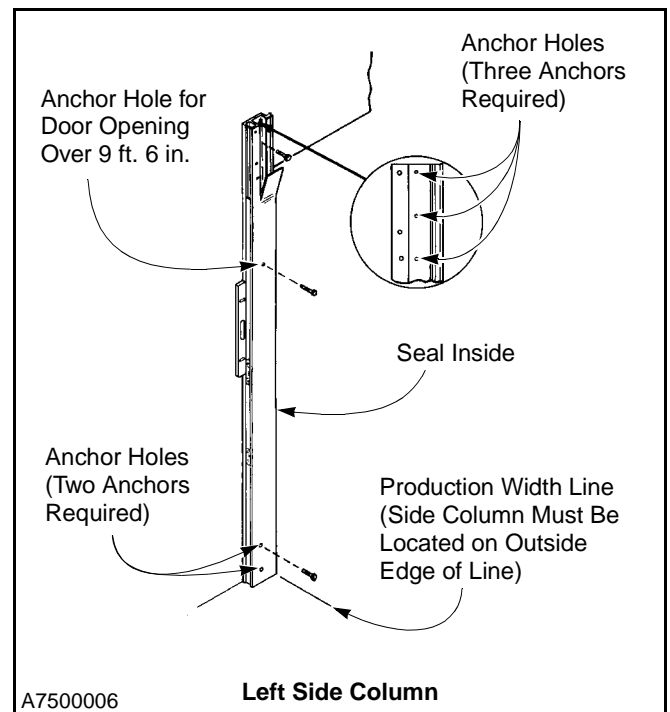


Figure 11

CAUTION

It is critical that the side columns are mounted level and square to the wall and floor, both vertically and horizontally. A 4-ft. level and carpenter's square are recommended for this procedure.

The use of bar clamps to secure the side columns to the wall during installation is recommended, as these hold the columns securely in place, while allowing for slight adjustments of either side column during the installation of the head assembly.

NOTE: All necessary anchor hardware and material is the responsibility of the door owner.

- Once the side column is properly positioned, secure it to the wall using the appropriate anchors. (See "ANCHORING METHODS" on page 3.) Anchor holes have been provided in the side column. (See Figure 11.) DO NOT tighten the anchor hardware at this time.

NOTE: Use 1/2-in. diameter expansion shell stud-type anchors for concrete walls or 1/2-in. diameter threaded through bolts for brick walls and other applications where expansion bolts are not acceptable.

Use a tape measure to ensure that proper width alignment is maintained between the side columns, at the top and bottom ends of each column. DO NOT tighten the anchors at this time.

- Mount the other side column to the wall in the same manner as outlined above for the first side column.

SIDE COLUMNS (WITH PULLOUTS)

NOTE: DO NOT change the location of the drive motor without first contacting your Rytec representative or the Rytec Customer Support Department at 800-628-1909.

- Remove the two side columns and pullouts from the shipping crate.
- Identify the drive motor side column by the wire access holes along the outside edge. Then identify the pullout associated with each side column.

To identify the left from the right pullout, the upper end of each pullout has three support brackets along the outside edge, the bottom end has two brackets. With each pullout stood in place, the support brackets will face away from the door opening. (See Figure 12.)

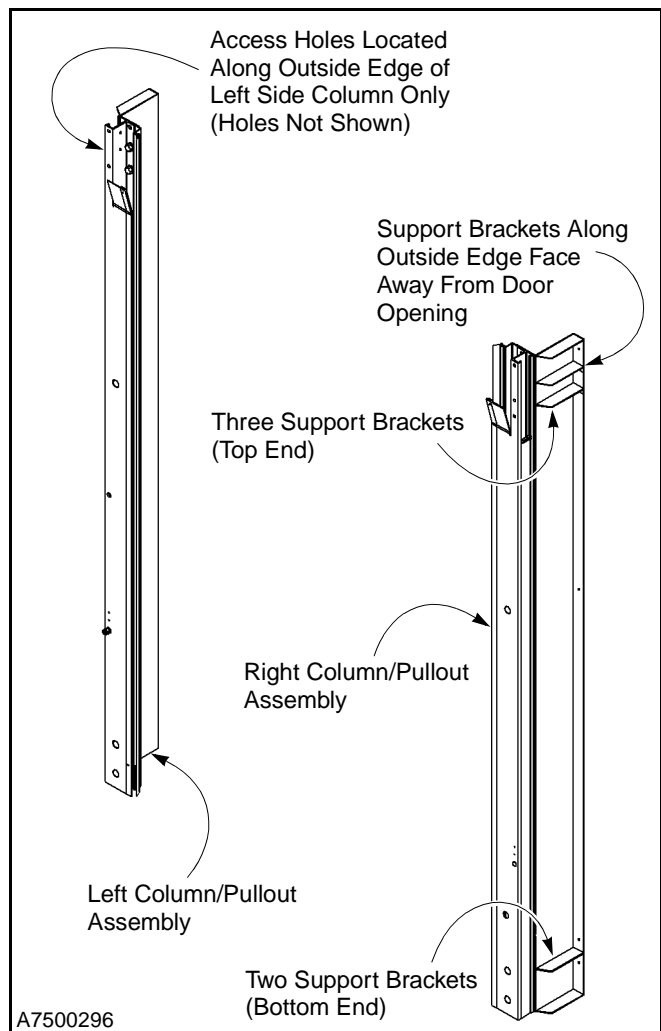


Figure 12

- Attach each pullout to its respective side column using six 1/2-13 x 1 1/4-in. serrated-flange hex screws and nuts for each assembly. (See Figure 13.)

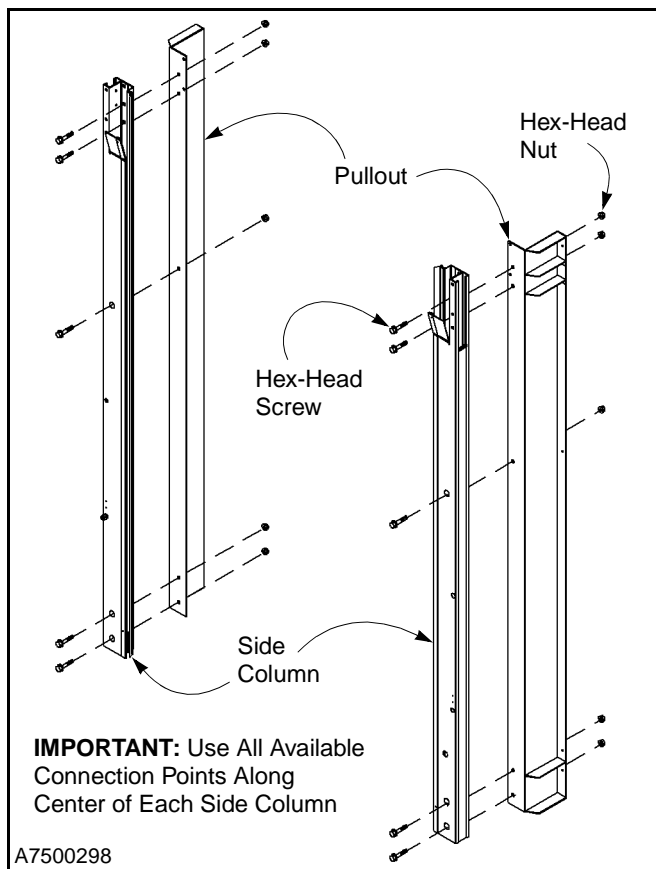


Figure 13

- Install two 1/2-13 x 6-in. serrated-flange hex screws, 1/2-in. flat washers and nuts through the top of each pullout/side column assembly. As each screw is passed through the side column, reverse thread a nut on the end of each screw. (See Figure 14.)

NOTE: Because of the tight space, it will be easier for you to install the bottom screw, washer and nut first.

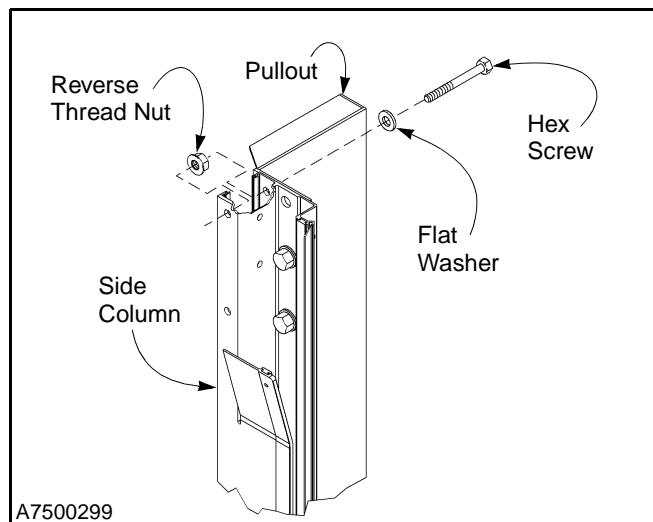


Figure 14

- Continue threading the nut until the screw is through the side column, with the flange on the nut flush against the column. (See Figure 15.)

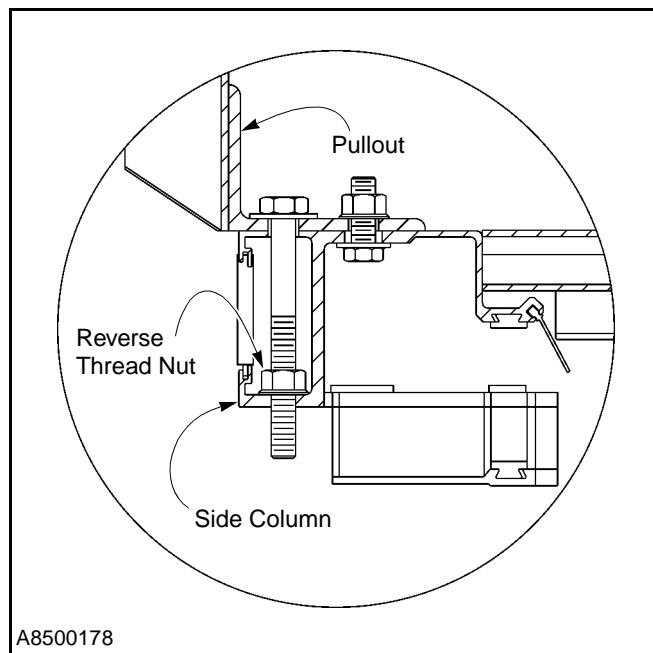


Figure 15

INSTALLATION—SIDE COLUMNS (WITH PULLOUTS)

- Stand the pullout/side column assembly on the floor, with it tight against the wall. Align the inside edge of the side column with the production width line laid out earlier on the floor. The side column must be located on the outside edge of the layout line. (See Figure 16.)

IMPORTANT: Do not align the pullouts to the production width lines — failure to properly align either side column to the layout lines will result in the side columns having been incorrectly installed.

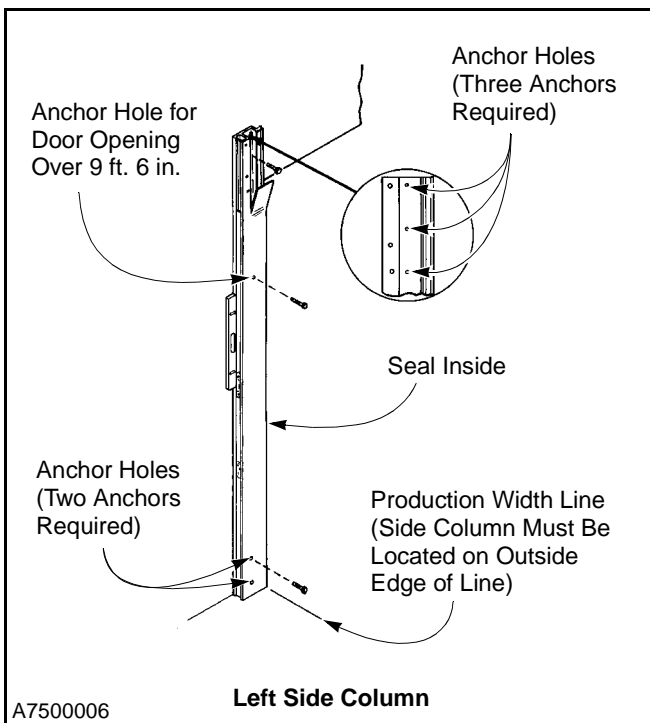


Figure 16

CAUTION

It is critical that the pullout/side column assemblies are mounted level and square to the wall and floor, both vertically and horizontally. A 4-ft. level and carpenter's square are recommended for this procedure.

The use of bar clamps to secure each pullout/side column assembly to the wall during installation is recommended, as these hold the assemblies securely in place, while allowing for slight adjustments of either assembly during the installation of the head assembly.

NOTE: All necessary anchor hardware and material is the responsibility of the door owner.

- Once the pullout/side column assembly is properly positioned, secure it to the wall using the appropriate anchors. (See "ANCHORING METHODS" on page 3.) Anchor holes have been provided in the pullout. (See Figure 11.) DO NOT tighten the anchor hardware at this time.

NOTE: Use 1/2-in. diameter expansion shell stud-type anchors for concrete walls, or 1/2-in. diameter threaded through bolts for brick walls or other applications where expansion bolts are not applicable.

Use a tape measure to ensure that proper width alignment is maintained between the top and bottom ends of each side column. DO NOT tighten anchors at this time.

- Mount the other pullout/side column assembly to the wall in the same manner as outlined above.

SPREADER ASSEMBLY

Door without Hood Assembly

1. Attach an L-shaped support bracket to each end of the spreader extrusion using two $\frac{3}{8}$ -16 x $1\frac{1}{4}$ -in. serrated-flange hex screws and nuts. The brackets and mounting hardware were shipped in the small parts carton. (See Figure 17.)

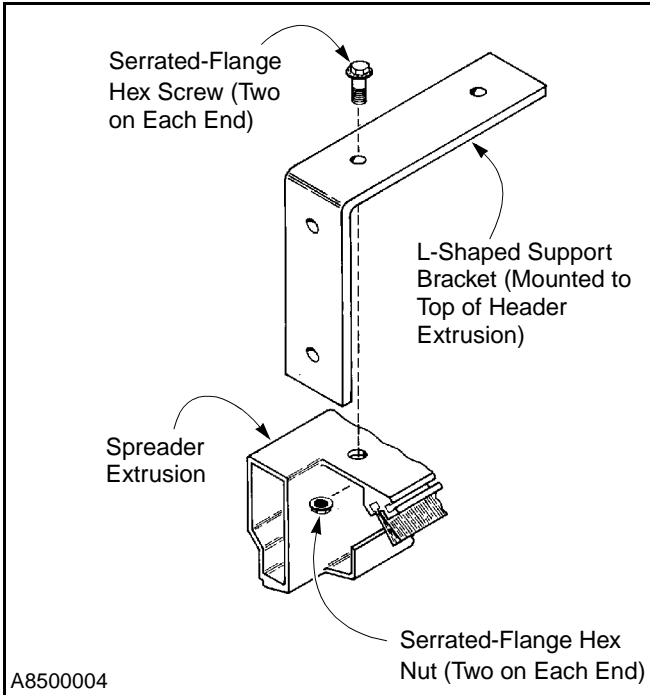


Figure 17

2. Attach the spreader assembly to the inside face of each side column using two $\frac{3}{8}$ -16 x $1\frac{1}{4}$ -in. serrated-flange hex screws and nuts at each end of the assembly. Face the spreader so the brush is toward the front of the door. (See Figure 18.)

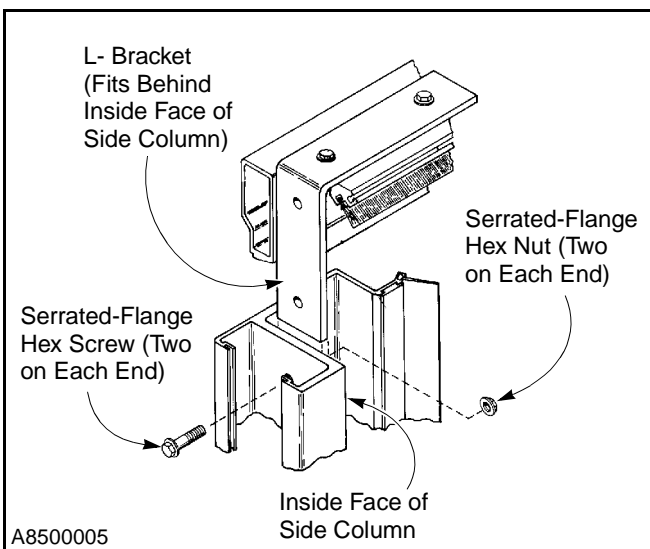


Figure 18

3. Check that the side columns are plumb and square with the floor and wall.
4. Tighten all anchor hardware securing both side columns (or pullouts) to the wall.
5. Remove any bar clamps that may have been used to temporarily hold the side columns (or pullouts) to the wall.

Door with Hood Assembly

NOTE: DO NOT change the location of the drive motor without first contacting your Rytec representative or the Rytec Customer Support Department at 800-628-1909.

1. Identify the drive motor side column by the wire access holes along its outside edge. This is important for the proper installation of the spreader assembly.
2. Attach a spreader assembly U-bracket on the outside face of each side column using two $\frac{3}{8}$ -16 x $1\frac{1}{4}$ -in. serrated-flange hex screws and nuts for each bracket. The U-brackets and mounting hardware were shipped in the small parts carton. (See Figure 19.)

IMPORTANT: Attach the large U-bracket to the drive motor side column with the screw hole located $6\frac{3}{4}$ -in. from the end of the bracket, nearest to the outside face of the side column. (See Figure 19.)

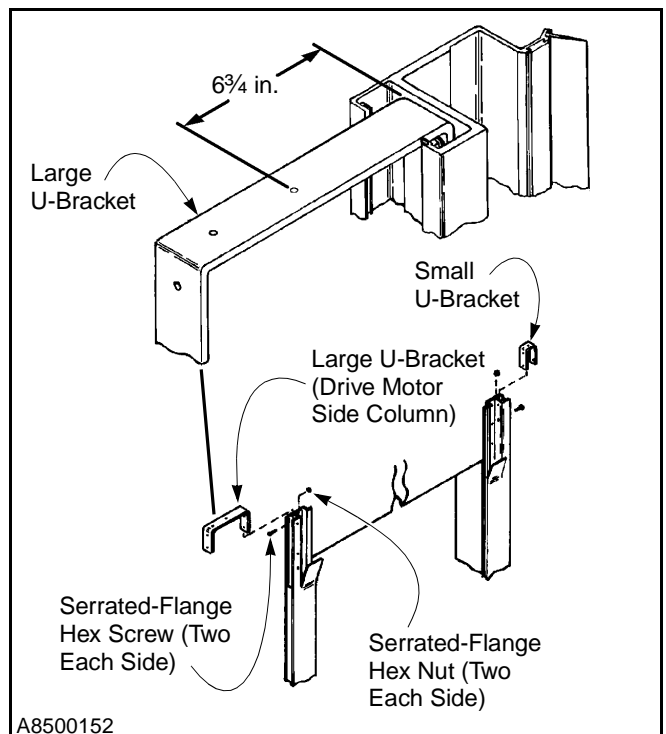


Figure 19

INSTALLATION—FABRIC ROLL ASSEMBLY

3. Attach the spreader assembly to the U-brackets using two $\frac{3}{8}$ -16 x $1\frac{1}{4}$ -in. serrated-flange hex screws and nuts at each end of the assembly. Face the spreader so the brush is toward the front of the door. (See Figure 20.)

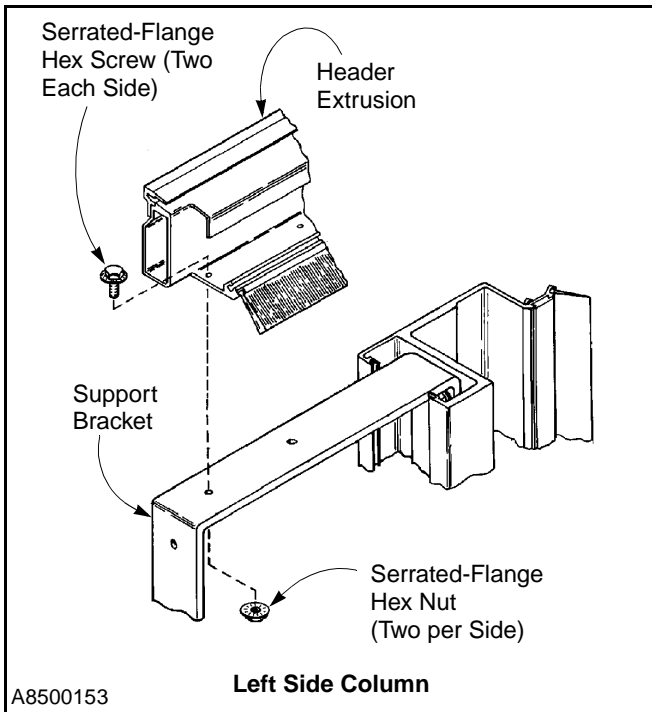


Figure 20

4. Check that the side columns are plumb and square with the floor and wall.
5. Tighten all anchor hardware securing both side columns (or pullouts) to the wall.
6. Remove any bar clamps that may have been used to temporarily hold the side columns (or pullouts) to the wall.

FABRIC ROLL ASSEMBLY

1. Before removing the fabric roll assembly from the shipping crate, locate four $\frac{1}{2}$ -13 x $1\frac{1}{4}$ -in. serrated-flange hex screws and four $\frac{1}{2}$ -13 serrated-flange hex nuts in the small parts carton.

NOTE: On a door configured with pullouts, the four $1\frac{1}{4}$ -in. long serrated-flange hex screws mentioned above in step 1 were not shipped with the door. Instead, the longer $\frac{1}{2}$ -13 x 6-in. hex screws that were installed earlier will be used to attach the fabric roll to the side columns.

Also, some oversized doors (with or without pullouts) require a steel spacer between both side columns and the head assembly. If your door is oversized, locate two 9-in. x $1\frac{3}{4}$ -in. steel spacers shipped in the small parts carton. (The spacers are further identified by a hole at each end.)

If spacers were included in the small parts carton, but the door does not include pullouts, four $\frac{1}{2}$ -13 x 2-in. serrated-flange hex screws were substituted for the slightly shorter $\frac{1}{2}$ -13 x $1\frac{1}{4}$ -in. screws mentioned above in step 1. The 2-in. screws were shipped in the small parts carton.

2. Remove the head/fabric roll assembly from the shipping crate.

WARNING

Before the head/fabric roll assembly is lifted into place, make sure both side columns are secured to the building wall.

Also, the head/fabric roll assembly must be secured to the forklift before lifting it in place. Failure to properly secure the side columns or the head/fabric assembly can result in serious personal injury and property damage. **DO NOT** remove the forklift from under the head/fabric roll assembly until it is secured to both side columns.

CAUTION

Use care when handling the fabric roll to ensure that the fabric is not torn or damaged. **DO NOT** remove the shipping bands holding the fabric to the roll.

IMPORTANT: Install the fabric roll assembly with the bottom bar coming off the back side of the drum.

3. Using a forklift, lift the fabric roll assembly in place.
4. Position the flange bearing assembly located on each end of the fabric roll assembly in front of the upper pair of holes at the top of each side column.
5. Align the slotted holes in both flange bearing assemblies with their associated holes in each side column. (If pullouts were used, slide the flange bearing mounting brackets over the 6-in. screws installed earlier.) (See Figure 21.)

IMPORTANT: If your door is oversized, two large spacers were included in the small parts carton. Failure to install these spacers between their associated flange bearing mounting bracket and side column could result in damage to the door. (See Figure 21.)

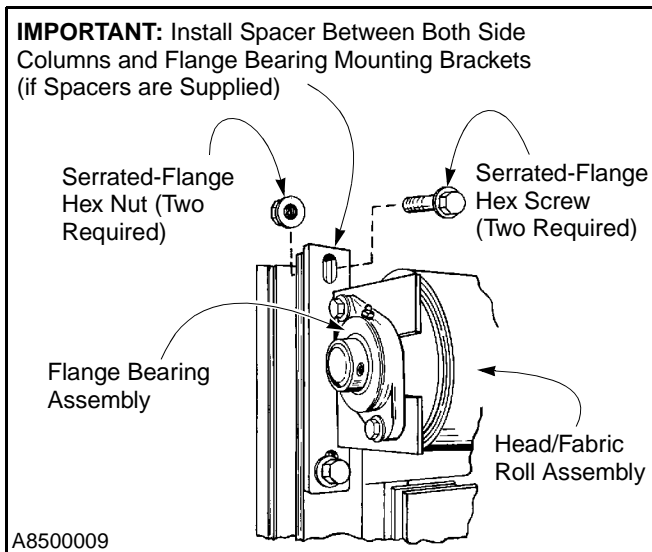


Figure 21

6. Bolt each flange bearing assembly to the side column using two ½-13 x 1¼-in. serrated-flange hex screws and nuts (or two ½-13 x 2-in. screws and nuts if spacers are required, or nuts only if 6-in. screws were installed earlier). DO NOT tighten the hex nuts at this time.

IMPORTANT: If the fabric roll assembly cannot be made level by adjusting either flange bearing mounting brackets up or down, verify that the side columns are plumb, square and level and make any necessary adjustments.

7. Place a carpenter's level along the length of the fabric roll assembly and adjust the appropriate flange bearing mounting bracket up or down, as required, until the fabric roll assembly is level.

Then tighten the hardware securing the flange bearing mounting brackets to the side columns. (See Figure 22 and Figure 23.)

CAUTION

For a door with pullouts, verify that the two hex nuts threaded on each 6-in. screw are tight against their associated side column and flange bearing assembly. Failure to properly tighten all eight nuts could result in the side column becoming damaged. (See Figure 23.)

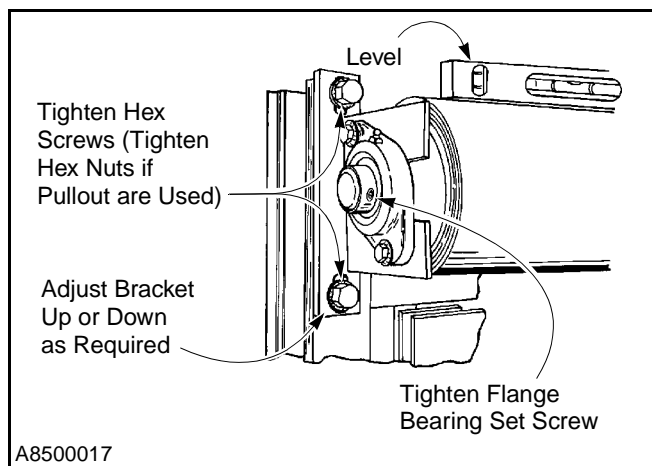


Figure 22

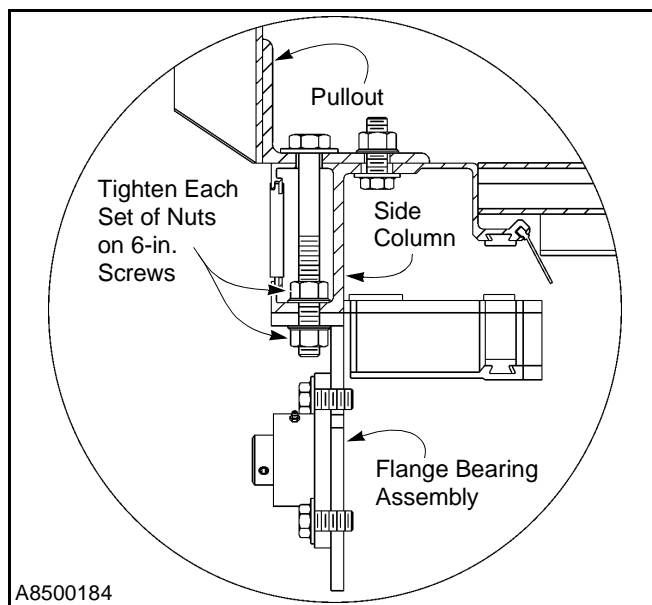


Figure 23

CAUTION

DO NOT remove the shipping bands holding the fabric material to the drum roll assembly at this time.

8. Do not remove the shipping bands securing the fabric material to the drum roll. Only remove the fasteners securing the drum assembly to the forklift. Then lower and move the forklift out of the way.

MOTOR MOUNTING BRACKET

Install the motor mounting bracket on the side column adjacent to the sprocket end of the fabric roll. The flat end of the bracket is attached to the side column using two 1/2-13 x 1 1/4-in. serrated-flange hex screws and nuts. (Figure 24.)

The angled end of the bracket is secured to the wall using the appropriate wall anchors. (See “ANCHORING METHODS” on page 3.)

NOTE: *If pullouts were used, a pullout extension must be installed between the door operator mounting bracket and the wall. The extension is attached to the motor bracket using two 1/2-13 x 1 1/4-in. serrated-flange hex screws and nuts. The angled end is secured to the wall using the appropriate wall anchors. (See “ANCHORING METHODS” on page 3.)*

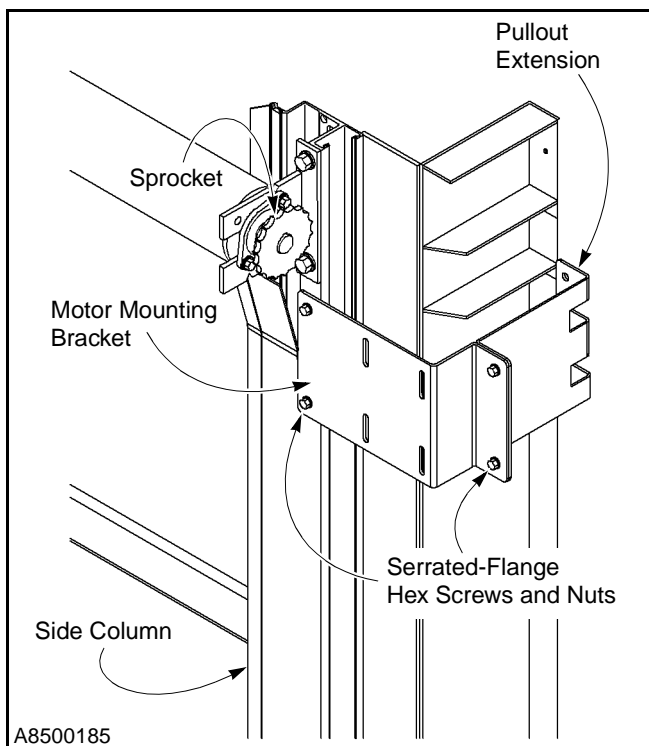


Figure 24

MOTOR

Mount the LiftMaster door opener on the motor mounting bracket using four 3/8-16 x 1 1/4-in. serrated-flange hex screws and nuts provided in the small parts carton.

NOTE: *The slotted holes in the motor mounting bracket make it possible to properly tension the drive chain once it's installed.*

Refer to the LiftMaster Industrial Duty Door Operator owner's manual for complete, detailed instructions on mounting the door operator, sprocket, and drive chain. That manual was included with the LiftMaster.

Break Release Disconnect Chain and Chain Keeper

Install the break release disconnect chain and the chain keeper. Refer to the LiftMaster Industrial Duty Door Operator owner's manual for complete, detailed instructions on mounting the chain and keeper.

BOTTOM BAR

1. Disconnect the motor brake by pulling and locking the brake disconnect chain. To lock the chain, hook it over the chain keeper. (See Figure 25.)

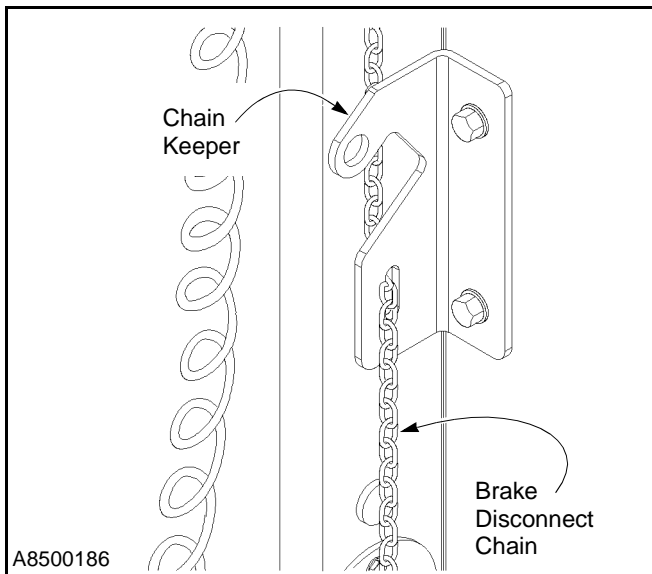


Figure 25

NOTE: When released, the motor brake will default to the ENGAGED position.

2. Cut and remove the shipping bands holding the fabric to the roll.
3. Insert the plastic tabs on the bottom bar into the slot of each side column. (See Figure 26.)

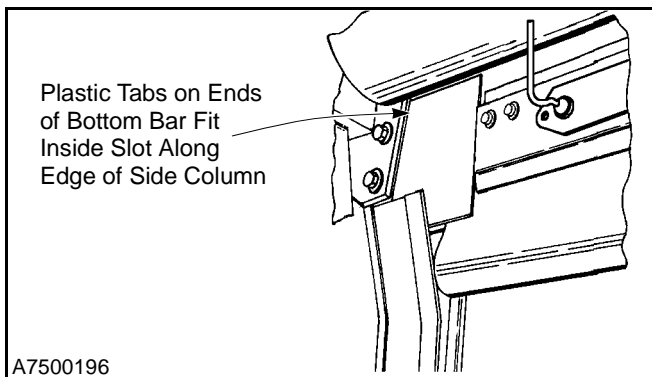


Figure 26

ELECTRICAL WIRING ROUTING

1. Locate the push-button control station and fused disconnect as shown in Figure 27.

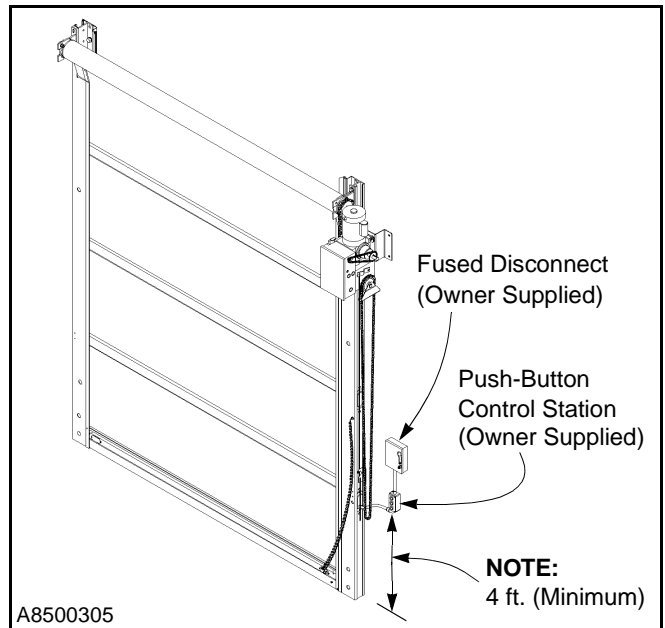


Figure 27

⚠ WARNING

The fused disconnect must be in the OFF position and the fuses removed before any electrical work on the door can begin.

2. Locate and remove the access covers and hole plugs from the side column. (See Figure 28.)

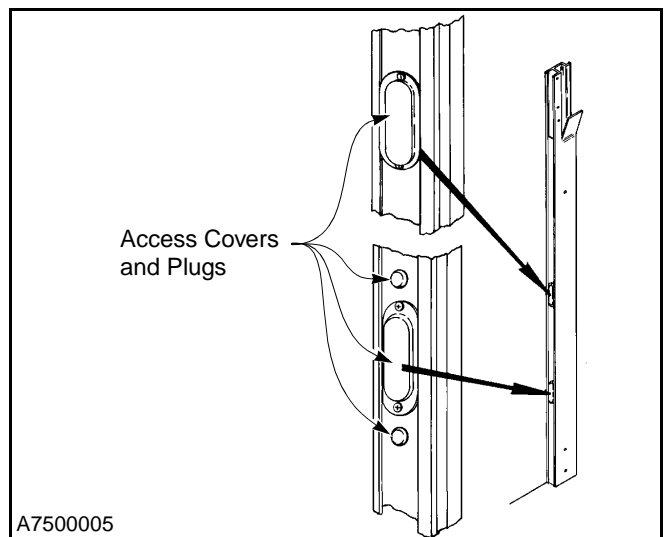


Figure 28

3. Pass the LiftMaster door operator control wires down through the side column. (See Figure 29.)

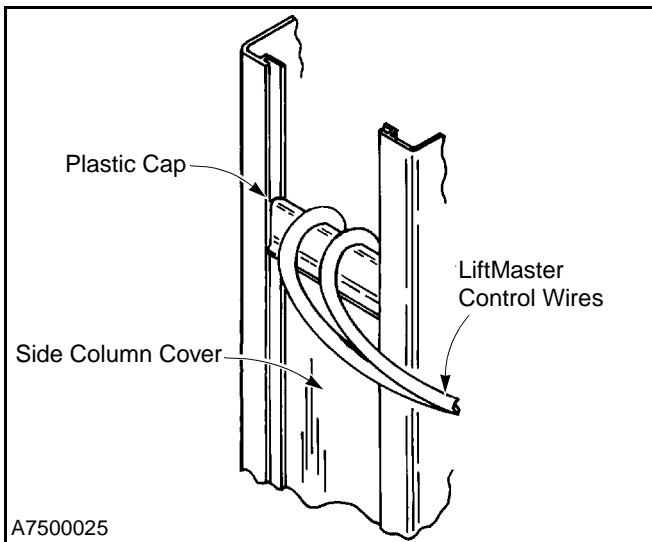


Figure 29

Coil Cord

CAUTION

The cord grip has been factory installed at the correct location on the coil cord. **DO NOT** pull any more cord through the grip or twist the cord during installation. Shortening or twisting the coil cord will cause it to tangle or fail, leading to serious problems.

1. Manually open the door to allow the coil cord to hang free to remove any twists in the cord.
2. Feed the coil cord and the cord grip through the hole located midway up the motor mount side column. (See Figure 30.)

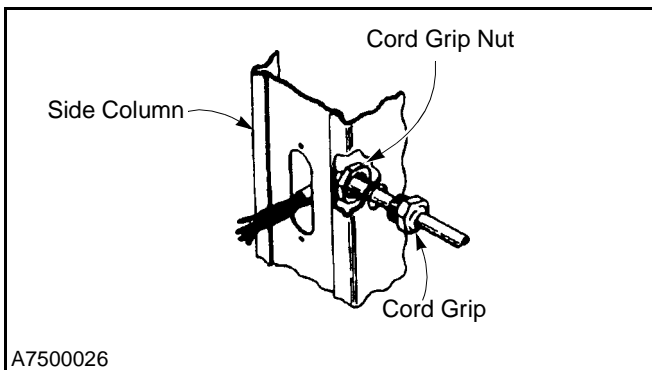


Figure 30

3. Place the cord grip nut over the end of the coil cord. The nut was shipped in the small parts carton.
4. Tighten the nut to attach the cord grip to the side column

ELECTRICAL CONNECTIONS

The Rytec Bantam door is equipped with a LiftMaster Industrial Duty Door Operator. An owner's manual for the door operator was included with the LiftMaster. Refer to the electrical schematics and wiring diagrams in that manual when making all electrical connections.

LIMIT SWITCH ADJUSTMENT

CAUTION

Before operating the door, the upper and lower limit positions of the door panel must be set. If the door is operated before the limit switch is adjusted, damage to the door will result.

Refer to the LiftMaster Industrial Duty Door Operator owner's manual for the limit switch adjustment information. That manual was included with the LiftMaster.

After the limit switch is properly adjusted, perform the following procedure.

PNEUMATIC REVERSING EDGE SWITCH TEST AND ADJUSTMENT

A pneumatic reversing edge switch is mounted in the bottom bar assembly. The purpose of this switch is to reverse the direction of the door and move it to the full-open position should the bottom bar come in contact with an object as the door is closing.

The reversing edge switch has two adjustments: an air bleed adjustment and a sensitivity adjustment. The air bleed adjustment was set at that factory and generally does not require adjustment. The reversing edge switch sensitivity may require adjustment after the door is installed and fully operational.

WARNING

Do not stand under the door panel when making check. If reversing edge switch is not working properly, panel could strike person performing check.

To check the reversing edge switch, run the door through the down cycle. As the door closes, tap the bottom of the reversing edge. If the reversing edge switch is operating properly, the door will immediately reverse and run to the full-open position.

Push the control station push-button to close the door after the test is complete.

If the door does not reverse direction, check the air

bleed setting and the sensitivity adjustment of the reversing edge switch.

To verify the air bleed setting, refer to “Air Bleed Adjustment” below.

To adjust the reversing edge switch sensitivity, refer to “Reversing Edge Switch Sensitivity Adjustment” below.

Air Bleed Adjustment

1. Raise or lower the door, as necessary, until the bottom bar is approximately head or chest height. (See Figure 31.)

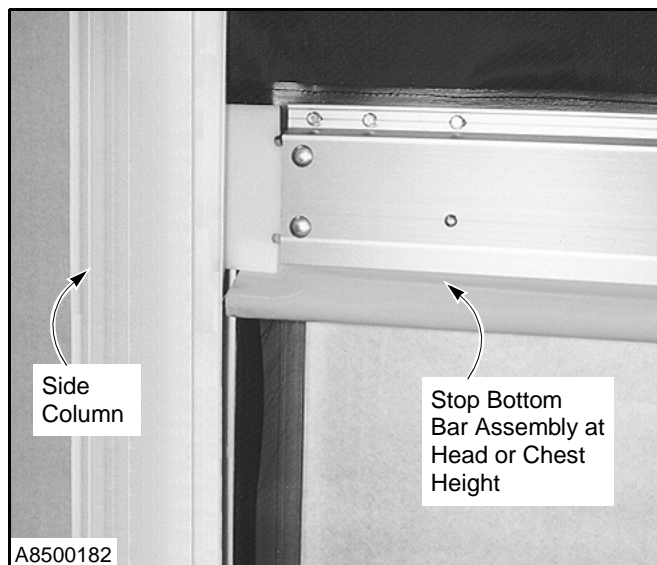


Figure 31

2. Remove the reversing edge switch access cover. The reversing edge switch is mounted behind the access cover at the end of the bottom bar, opposite the coil cord. (See Figure 32.)

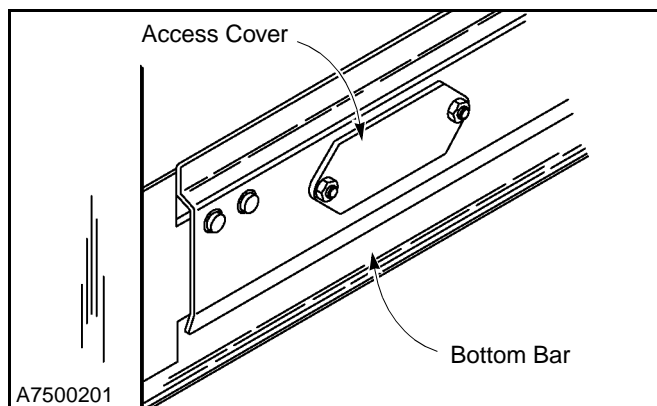


Figure 32

3. Make sure the PVC hose is tight on the lower air input post to prevent air leakage and to ensure the hose will not vibrate off the post. Also make sure the hose is not kinked. (See Figure 33.)

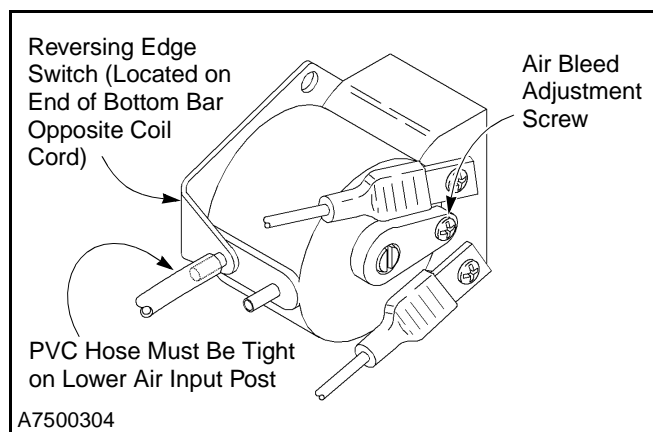


Figure 33

4. Adjust the air bleed by first turning the air bleed adjustment screw located on the front and back side of the switch fully clockwise — do not overtighten either screw. Then turn each screw counterclockwise one full turn.

Reversing Edge Switch Sensitivity Adjustment

1. Remove the wires from the two contact terminals and attach an ohmmeter across the terminals. (See Figure 34.)

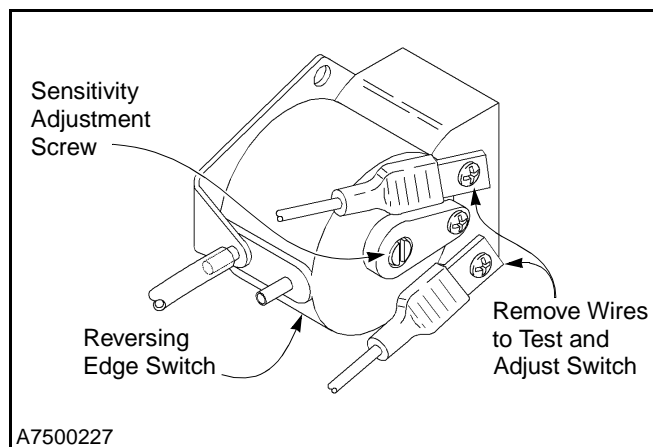


Figure 34

2. To adjust the switch, first turn the small adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved across the ohmmeter.

Then turn the screw $\frac{3}{4}$ -turn counterclockwise. The ohmmeter should no longer show continuity. Turning the screw counterclockwise decreases sensitivity, turning it clockwise increases sensitivity.

NOTE: The reversing edge switch is a normally open contact.

INSTALLATION—PNEUMATIC KILL SWITCH TEST AND ADJUSTMENT

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

3. Reconnect each wire to its appropriate contact terminal on the reversing edge switch.
4. Replace the access cover on the bottom bar.

PNEUMATIC KILL SWITCH TEST AND ADJUSTMENT

A kill switch is mounted in the bottom bar assembly. The purpose of this switch is to stop the door if the bottom bar becomes separated from either side column during a door open or close cycle.

CAUTION

The kill switch does not prevent the door from being operated. The kill switch only stops the door when the bottom bar separates from either side column. Only operate the door after the bottom bar is returned to its normal operating position. Otherwise, serious damage to the door can result if the door is operated with the bottom bar disconnected from either side column.

The kill switch has two adjustments: an air bleed adjustment and a sensitivity adjustment. The air bleed adjustment was set at that factory and generally does not require adjustment. The kill switch sensitivity does require adjustment after the door is installed and fully operational.

To verify the air bleed setting, refer to “Air Bleed Adjustment” below.

To adjust the sensitivity of the kill switch, refer to “Kill Switch Sensitivity Adjustment” on page 17.

Air Bleed Adjustment

1. Raise or lower the door, as necessary, until the bottom bar is approximately head or chest height. (See Figure 35.)



Figure 35

CAUTION

Take precautions to prevent the door from being opened or closed while performing the following procedure.

2. Remove the kill switch access cover at the end of the bottom bar assembly. The kill switch is mounted behind the access cover holding the coil cord. (See Figure 36.)

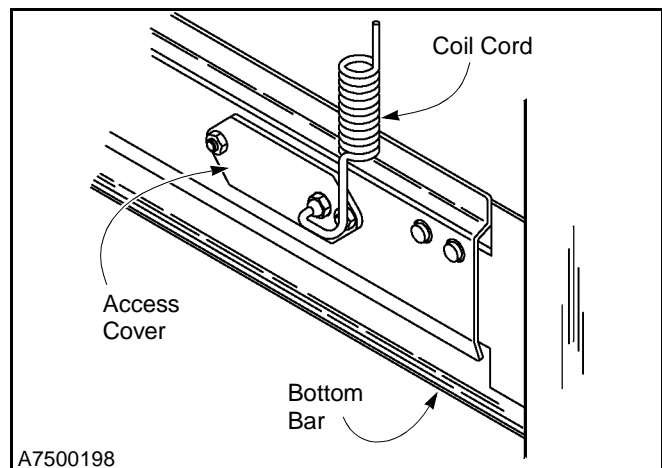


Figure 36

3. Make sure the PVC hose is tight on the upper air input post to prevent air leakage and to ensure the hose will not vibrate off the post. Also make sure the hose is not kinked. (See Figure 37.)

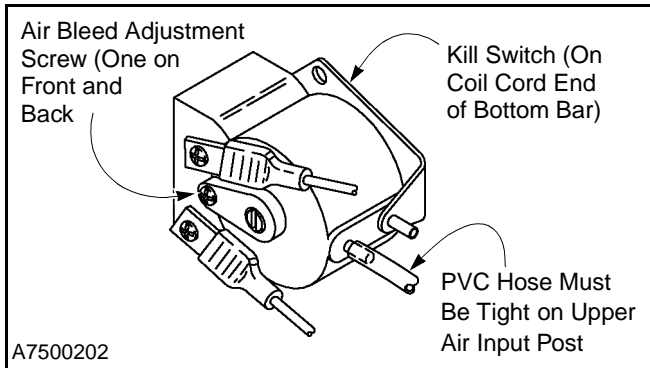


Figure 37

4. Adjust the air bleed by first turning the air bleed adjustment screw located on the front and back side of the switch fully clockwise — do not overtighten either screw. Then turn each screw counterclockwise one full turn.

Kill Switch Sensitivity Adjustment

1. Raise or lower the door, as necessary, until the bottom bar is approximately head or chest height. (See Figure 38.)

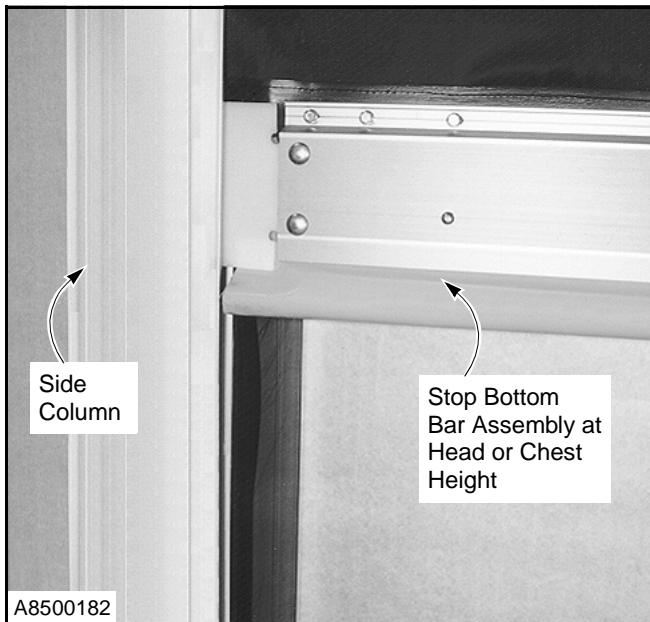


Figure 38

CAUTION

Take precautions to prevent the door from being opened or closed while performing the following procedure.

2. Remove the kill switch access cover at the end of the bottom bar assembly. The kill switch is mounted behind the access cover holding the coil cord. (See Figure 39.)

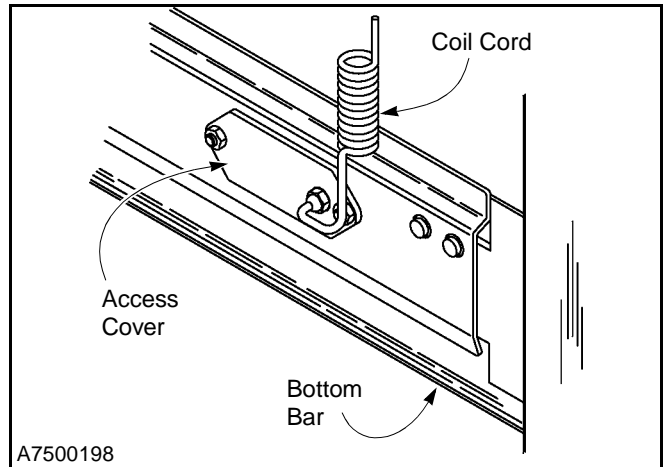


Figure 39

3. Make sure the PVC hose is tight on the upper air input post to prevent air leakage and to ensure the hose will not vibrate off the post. Also make sure the hose is not kinked. (See Figure 40.)

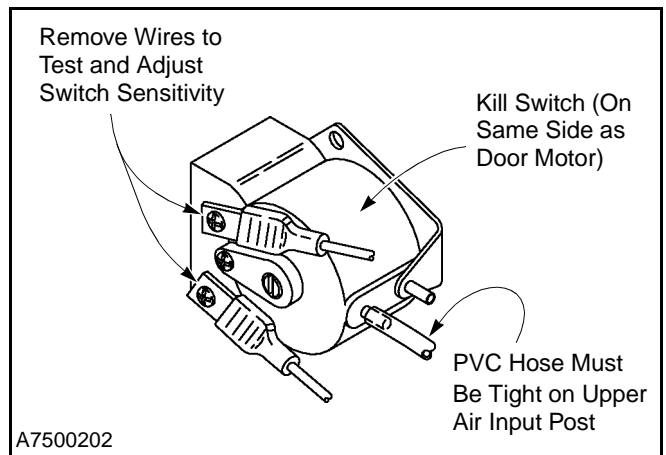


Figure 40

4. Remove the wires from the two contact terminals and attach an ohmmeter across the terminals.

INSTALLATION—PNEUMATIC KILL SWITCH TEST AND ADJUSTMENT

5. To adjust the switch, first turn the small adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved across the ohmmeter. (See Figure 41.)

Then turn the screw two turns clockwise for the final adjustment. The ohmmeter should continue to show continuity. Turning the screw clockwise decreases sensitivity, turning it counterclockwise increases sensitivity.

NOTE: The kill switch is a normally closed contact.

If the kill switch is too sensitive, it may cause the door to stop during a normal open or close cycle. If this occurs, readjust the switch sensitivity.

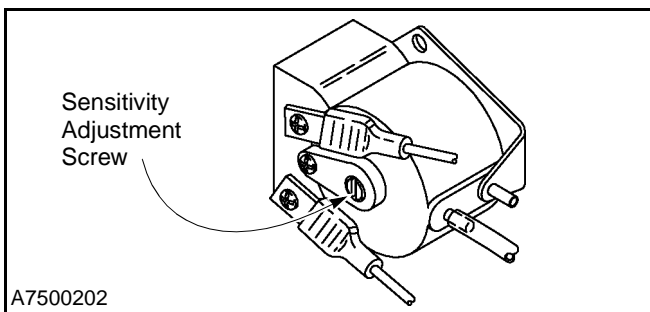


Figure 41



The kill switch must be adjusted so that both air switches installed in the ends of the bottom bar assembly are detected when the breakaway bottom bar is pushed out of either side column. If the kill switch is not adjusted properly, damage to the door could result.

6. To verify the kill switch system is operating properly, with the ohmmeter across both terminals, gently tap on one end of the bottom bar, near the breakaway tabs to activate the air switch at that end of the bottom bar. (See Figure 42.)

When the air switch is activated, there should be an interruption of continuity across the ohmmeter indicating the kill switch detected movement in the air switch. If continuity is not interrupted, readjust the kill switch sensitivity.

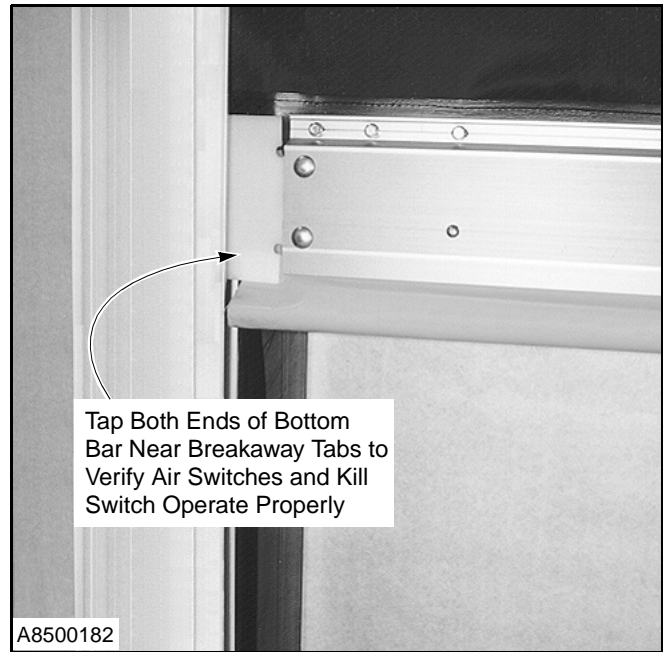


Figure 42

7. Verify the air switch at the other end of the bottom bar also displays an interruption in continuity when that end of the bottom bar is gently tapped.
8. Reconnect each wire to its appropriate contact terminal on the kill switch.
9. Replace the access cover on the bottom bar.

RESETTING BOTTOM BAR ASSEMBLY



Turn off power to the door. Make sure power is locked off and properly tagged.

1. Position the breakaway tabs on one end of the bottom bar assembly in the side column channel. Lift the other end of the bottom bar and position the breakaway tabs in the channel of the opposite side column. (See Figure 43.)

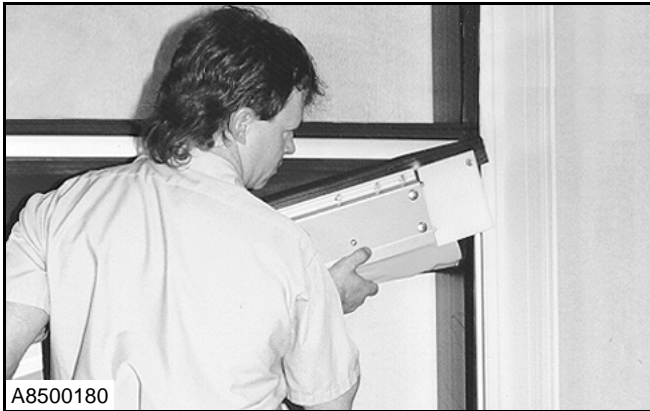


Figure 43

2. Check that the fabric is inside each channel. (See Figure 44.)



Figure 44

3. Turn power ON.

NOTE: It should not be possible to restart the door until the door has been reassembled and the control system reset.

4. Check operation of door.

HOOD (OPTIONAL ITEM)

NOTE: The following procedure is required only if the door includes an optional hood.

A door up to 8-ft. 3-in. in width will have a one-piece hood. A door wider than 8-ft. 3-in. will have a three-piece hood. Both styles of hoods will include two end covers and a cover extrusion. The installation procedure is the same for either style of hood, except where noted.

1. Attach the hood end covers to their respective U-bracket installed earlier on the side columns. Use two $\frac{3}{8}$ -16 x $1\frac{1}{4}$ -in. serrated-flange hex screws and nuts for each end cover. (See Figure 45.)

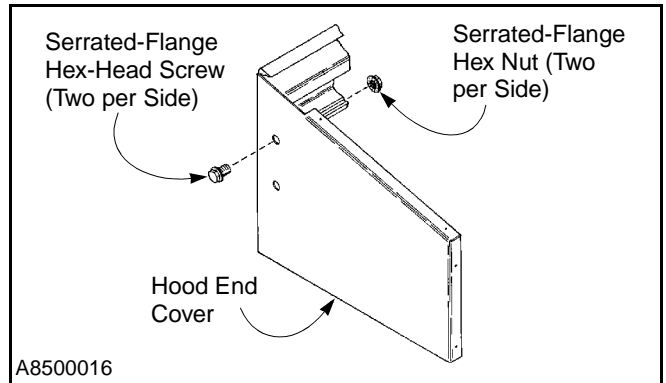


Figure 45

2. Attach the cover extrusion to the wall using the appropriate anchor hardware. Center the extrusion between the end covers, with the lip of the extrusion just above the upper corner of each end piece. (See Figure 46.)

IMPORTANT: Install the cover extrusion with the lip of the extrusion slightly above the upper edge of both end covers. The hood cover(s) installed in the next step must be able to slip under the lip of the extrusion while overlapping the upper edge of the end covers.

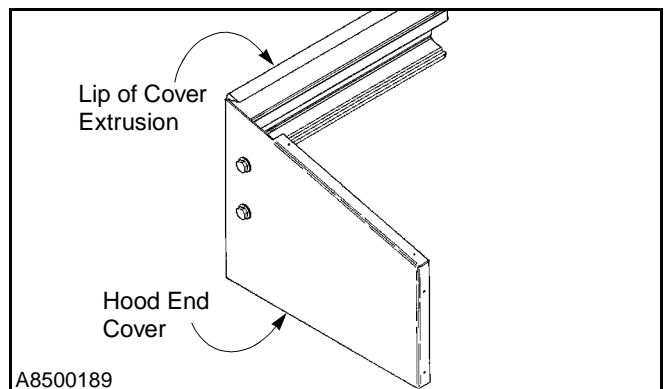


Figure 46

INSTALLATION—HOOD (OPTIONAL ITEM)

3. Insert the back edge of the hood cover(s) into the lip of the cover extrusion. Then secure the cover(s) to the end covers and extrusion using #12 x 3/4-in. self-tapping sheet metal screws. (See Figure 47.)

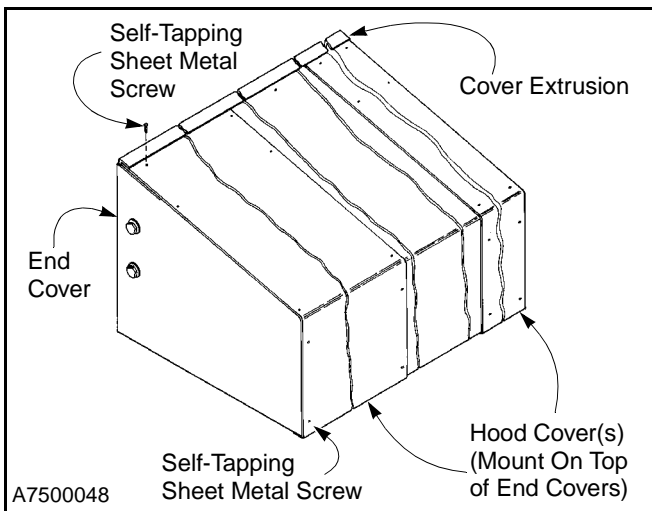


Figure 47

4. Three-Piece Hood Only: Center the hood center section across the inside ends of both hood covers. Then attach the center section using #12 x 3/4-in. self-tapping sheet metal screws. (See Figure 48.)

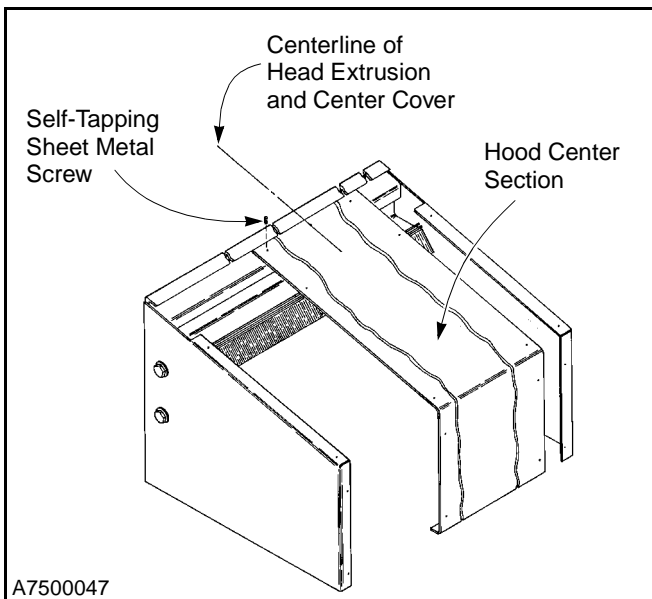


Figure 48

Filler Sheet (Optional Item)

NOTE: A door configured with pullouts might also include a filler sheet to extend the hood to the wall. If a filler sheet was included with your door, an optional brush might also be included.

The inclusion of the filler sheet and the brush was determined at the time the door was ordered.

IMPORTANT: If a brush is included, it will be easier for you to first attach it to the back edge of the filler sheet before attaching the filler sheet to the pullouts. Use the 1-in. self-tapping sheet metal screws located in the small parts carton.

1. Center the filler sheet across each pullout, between the hood and wall. The lip along the front edge of the filler sheet faces the floor — the lip along the back edge faces the ceiling. (See Figure 49.)
2. Attach the ends of the filler sheet to the pullouts using the 1/4 x 1-in. self-tapping sheet metal screws located in the small parts carton. The screws pass through the holes in the sheet and into the pullouts.

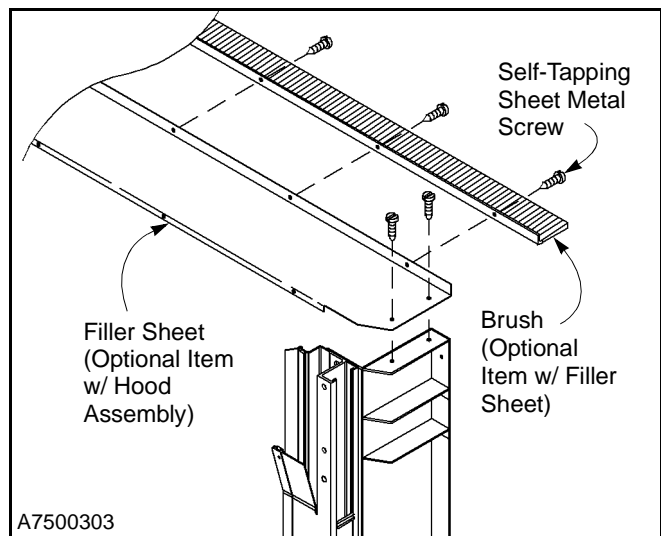


Figure 49

3. Attach the front lip of the filler sheet to the upper, back edge of the hood assembly using 1/4 x 1-in. self-tapping sheet metal screws. The screws pass through pre-drilled holes in the filler sheet and into the hood.
4. Attach the filler sheet to the wall (if optional brush is not used) using the appropriate mounting hardware for your particular wall. When laying out the anchor points on the wall, make sure the filler sheet is not sagging — it should be flat from end to end.

FINAL CHECKS

Side Columns: Check that the side columns are plumb and square, and that all anchor bolts are securely fastened.

Header Assembly: Check that all mounting hardware is tight.

Head Assembly: Fabric roll must be level. All mounting hardware tight.

Caulking: Make sure the side columns and head assembly have been caulked where they meet the wall of the building.

Bottom Bar: Must travel up and down in side column without binding.

Open and Close Limits: Set properly. Downward travel of door panel must stop when the vinyl loop seals against the floor as shown in Figure 66. Upward travel should be as shown in Figure 67.

Door Operator: The door operator cycles the door in proper direction when the control station push-buttons are pressed. Refer to the LiftMaster Industrial Duty Door Operator owner's manual for motor operation and system testing instructions. The LiftMaster owner's manual was included with the door.

Reversing Edge Switch: Working properly. Door should return to full-open position if reversing edge on the bottom bar comes in contact with an object during the down travel of the door panel. See "PNEUMATIC REVERSING EDGE SWITCH TEST AND ADJUSTMENT" on page 14 for test and adjustment procedures.

Kill Switch: Working properly. Door travel should stop when the bottom bar is disengaged from one or both side columns. See "PNEUMATIC KILL SWITCH TEST AND ADJUSTMENT" on page 16 for test and adjustment procedures.

Coil Cord: Run the door through two or three open and close cycles. Check the coil cord when the door is in the closed position. The cord must not contact the floor.

OPERATION

GENERAL ARRANGEMENT OF DOOR PARTS

Figure 50 shows the location of the major components of the door and the general placement of the associated door operator sub-assemblies for a typical installation.

This illustration is provided to you for general information purposes only. It should not be relied upon solely for the operation and maintenance of your door and its sub-assemblies.

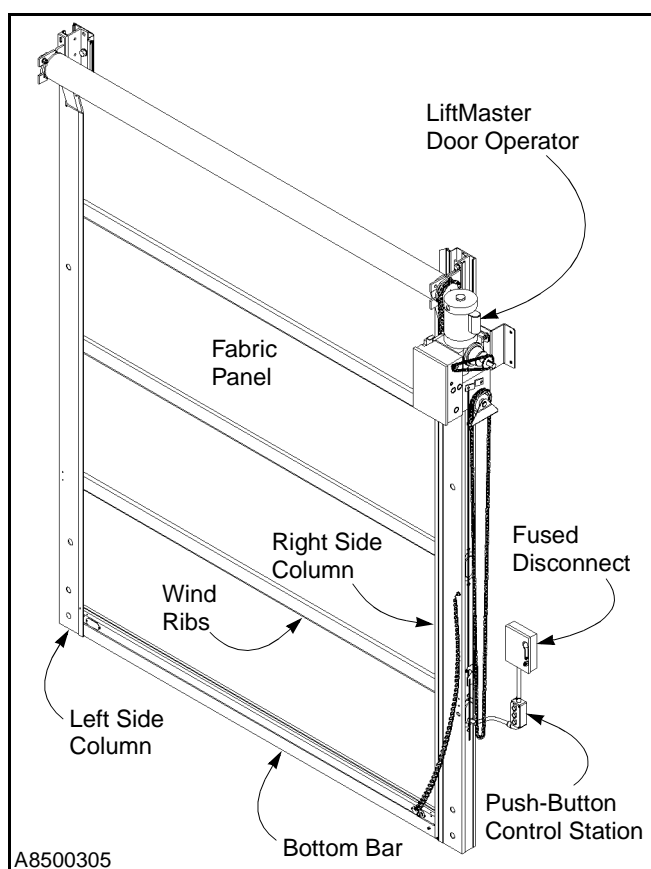


Figure 50

NOTE: The illustration above shows the front of the door. Left and right are determined as seen facing the front of the door.

CONTROL STATION

The Rytec Bantam door is equipped with a LiftMaster Industrial Duty Door Operator. The door operator is controlled by a push-button control station.

For complete information on operating and maintaining the door operator and the control station, refer to the owner's manual included with the LiftMaster.

Manual Operation

Refer to the LiftMaster owner's manual included with the door for instructions on manually operating the door during a power loss or an emergency situation.

OPERATION—BOTTOM BAR ASSEMBLY

BOTTOM BAR ASSEMBLY

The bottom bar assembly provides two functions: breakaway capability and reversing edge.

Breakaway Capability

IMPACT

Plastic tabs mounted at each end of the bottom bar provide adequate strength to keep the assembly in contact with the side columns during normal operation. The tabs, however, are flexible enough to allow the bottom bar to separate from either or both of the side columns should the bottom bar be struck by a vehicle or load passing through the door. (See Figure 51.)

A kill switch assembly made up of air bladders and a pressure switch mounted in the bottom bar will stop the door if the bottom bar is separated from either side column. This feature prevents the bottom bar from being bent or damaged if struck by a vehicle or load.



DO NOT continue to operate the door if either end of the bottom bar assembly is disconnected from a side column.

If the **OPEN** or **CLOSE** buttons on the control station are pushed with the bottom bar disconnected from either side column, at any time, serious damage to the door could result.

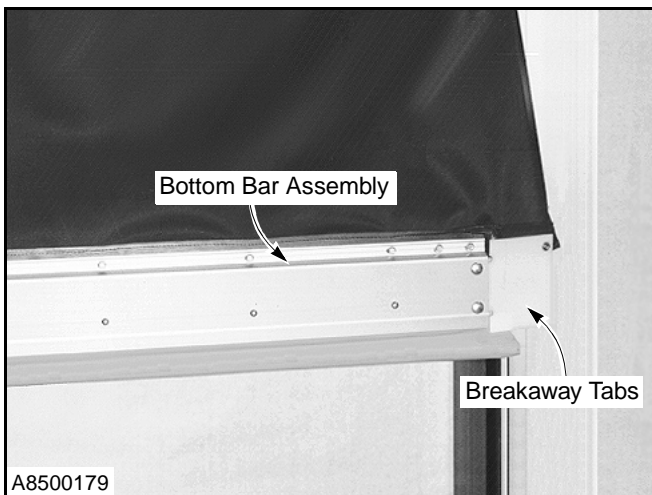


Figure 51

REPAIR (RETURN TO OPERATING POSITION)



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

1. Position the breakaway tabs on one end of the bottom bar assembly in the side column channel. Lift the other end of the bottom bar and position the breakaway tabs in the side column channel. (See Figure 52.)

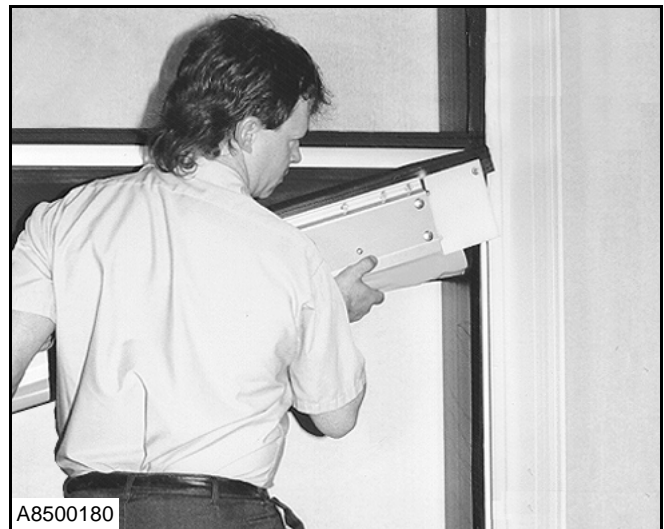


Figure 52

2. Check to make sure that the fabric is inside each channel. (See Figure 53.)



Figure 53

3. Turn power ON.
4. Check the operation of the door by operating the push-button control station.

For complete information on operating the door, refer to the LiftMaster Industrial Duty Door Operator owner's manual included with the door.

Reversing Edge

An electrically-operated pneumatic reversing edge is mounted along the bottom edge of the door. If this pressure sensitive edge comes in contact with an object as the door is closing, the door will immediately reverse direction and move to the fully-open position where it will remain parked until the close push-button on the control station is pushed. (See Figure 54.)

If the pneumatic reversing edge is activated, clear the object from the path of the door before operating the control station.

For complete information on operating the door, refer to the LiftMaster Industrial Duty Door Operator owner's manual included with the door.

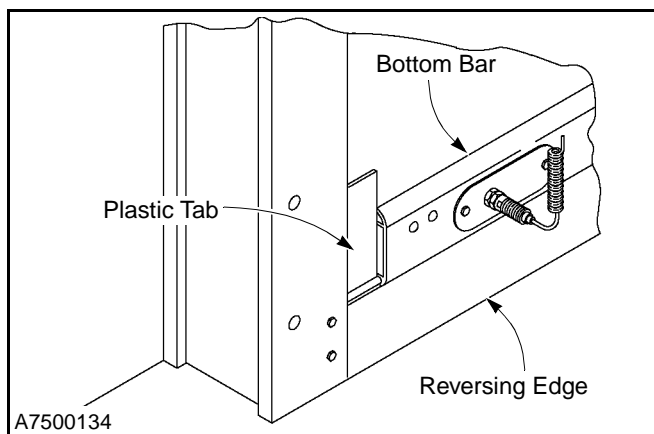


Figure 54

PLANNED MAINTENANCE

RECOMMENDED SCHEDULE

	Daily	Quarterly
Damage Inspection		
Door Operation		
Reversing Edge Inspection		
Mounting Hardware Inspection		
Fabric Inspection		
Door Limit Inspection		
Motor Brake Inspection		
Bottom Bar Inspection		
Kill Switch Inspection		
Lubrication		
Weather Seal Inspection		
Door Operator and Push-Button Control Station Inspection		
Electrical Connection Inspection		

DAILY INSPECTION

Damage Inspection

Inspect the door for damaged components such as bent bottom bar, torn vinyl loop seal, torn fabric panel, damaged side columns, etc. (See Figure 55.)

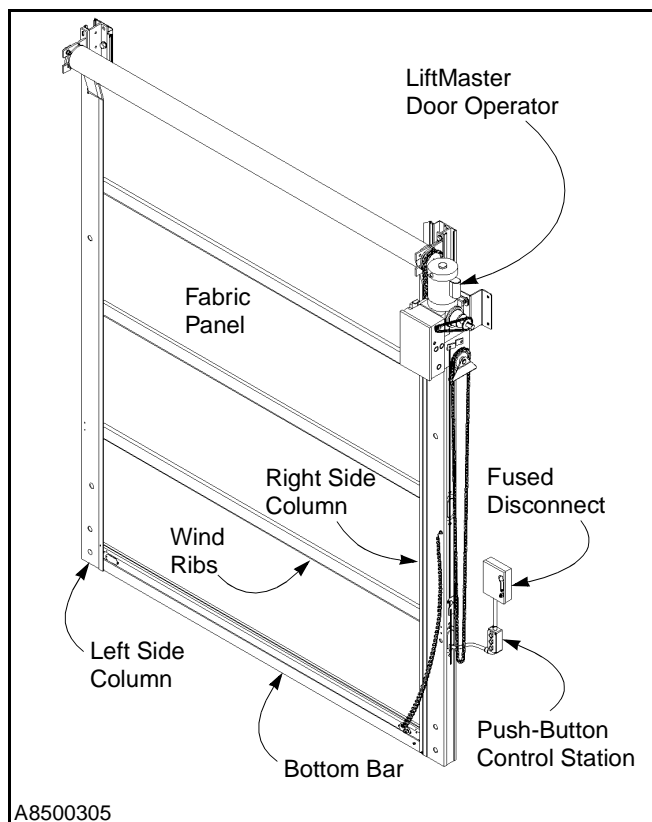


Figure 55

Door Operation

Run the door through four or five complete cycles to make sure the door is operating smoothly and efficiently. Also make sure there is no binding or unusual noises.

DO NOT continue to operate the door if it is not working properly as this could further complicate the problem.

Reversing Edge Inspection

WARNING

DO NOT stand under the door panel when performing the following inspection. If the reversing edge is not working properly, the bottom bar could strike the person performing the inspection. **DO NOT** use the door if the reversing edge does not operate properly. If the door does not reverse properly, see “PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT” on page 29..

While the door is running through the down cycle, tap the bottom of the reversing edge. If the reversing edge is operating properly, the door should immediately reverse and move to the fully-open position.

Press the close push-button on the control station after the inspection is complete. If the reversing edge does not work properly, see “PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT” on page 29 for the complete adjustment procedures.

QUARTERLY INSPECTION

Mounting Hardware Inspection

Check all mounting hardware to ensure all nuts, bolts, and set screws are tight. Example: motor mounting hardware, anchor or through wall bolts, bearing block, and mounting hardware, etc. (See Figure 56–Figure 58.)

DOOR OPERATOR MOUNTING HARDWARE

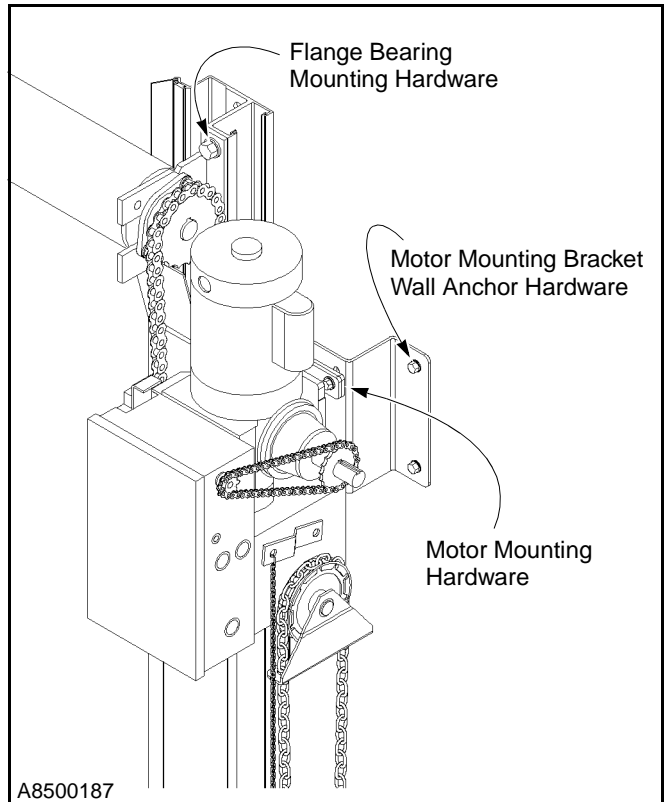


Figure 56

1. Tighten four bracket-to-gearbox screws to 15–20 foot-pounds.
2. Tighten the two bracket-to-side column socket head cap screws, if loose.

SIDE COLUMN HARDWARE

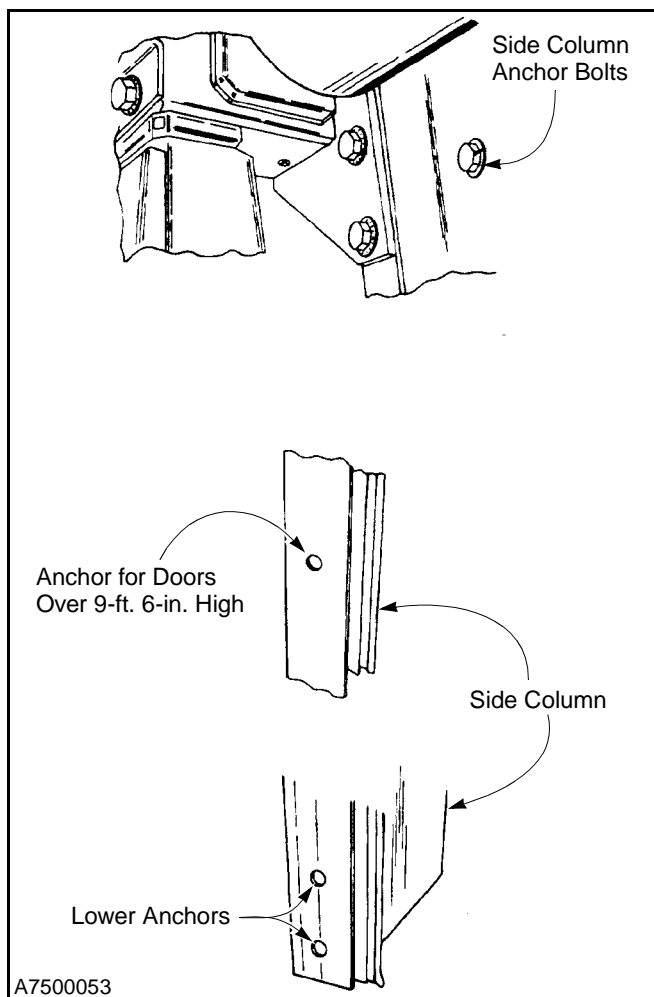


Figure 57

BEARING BLOCK HARDWARE

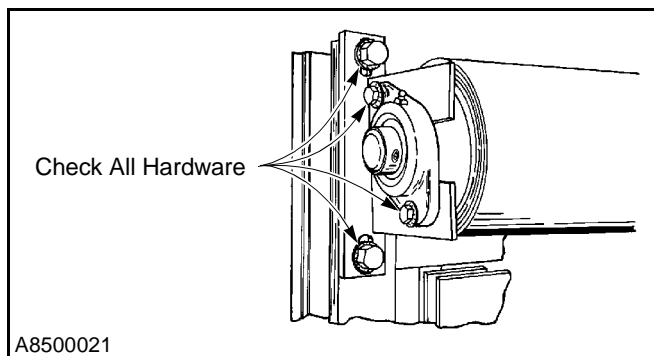


Figure 58

Fabric Inspection

1. Check fabric panels for tears. Replace if required.
2. Check all panels to ensure they are tightly enclosed in the wind ribs and pins are in place in wind ribs. (See Figure 59.)

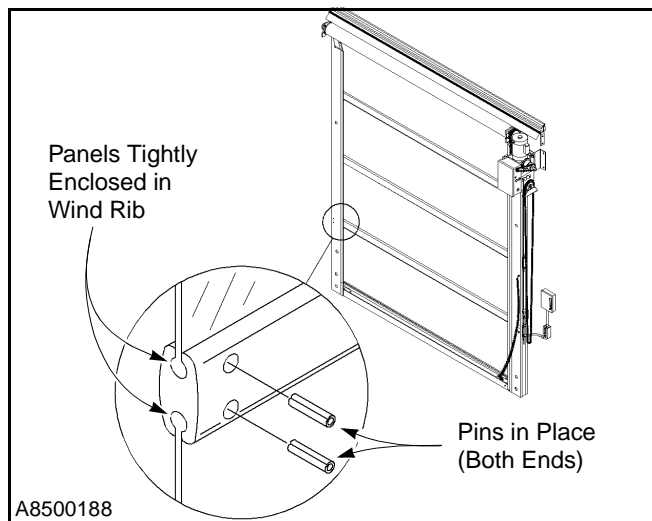


Figure 59

3. Check the vision panel for clarity. Clean or replace the panel as required.

IMPORTANT: Use any good brand of window cleaner and a clean, soft cloth to clean vision panel. DO NOT use an abrasive cleaner or a petroleum-based solvent.

4. Check lower panel to ensure that it is fastened to the plastic tab at each end of the bottom bar. Tighten or replace hardware, if required. If fabric is torn and cannot be re-bolted to the plastic tab, replace panel.
5. Run the door through two or three cycles. Check that the panels are tracking properly in the side columns. If the panels do not track properly, see "FABRIC ROLL ADJUSTMENT" on page 33.

Door Limit Inspection

CLOSE LIMIT

1. With the door in the closed position, check the vinyl loop on the bottom bar. It should be in the position shown in Figure 60.



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. (See Figure 60.)

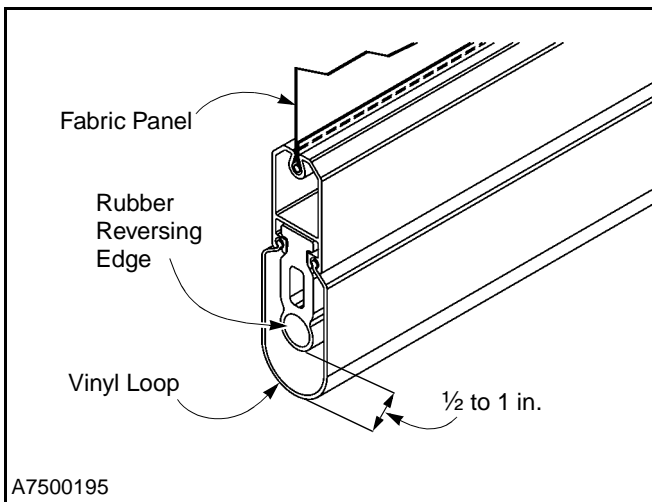


Figure 60

2. If the reversing edge does not seal properly against the floor, refer to the LiftMaster Industrial Duty Door Operator owner's manual for the adjustment procedure.

OPEN LIMIT

1. With the door in the open position, check the location of the vinyl loop on the bottom bar. It should be in the position shown in Figure 61.

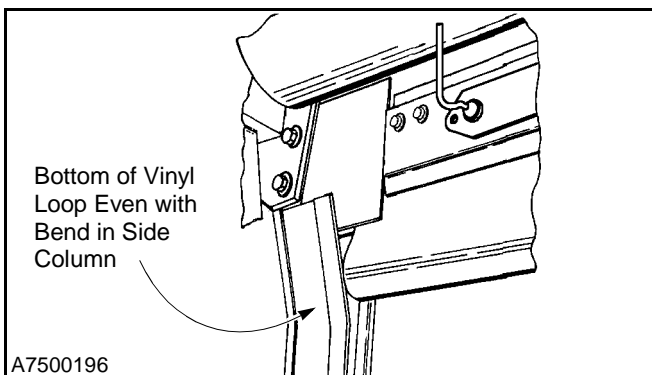


Figure 61

2. If the panel does not stop in the proper location along the side column, refer to the LiftMaster Industrial Duty Door Operator owner's manual for the adjustment procedure.

Motor Brake Inspection

The motor brake assembly is designed to stop the door panel travel at the locations indicated in the limit inspection section. If the limits are set properly and the door drifts past the set limits, adjust the brake. (See "MOTOR BRAKE ADJUSTMENT" on page 33 for procedures.)

Bottom Bar Inspection

1. Inspect the roll pins securing the bottom bar to the fabric. It is critical that hardware is tight to prevent shifting of the fabric in the bottom bar. (See Figure 62.)

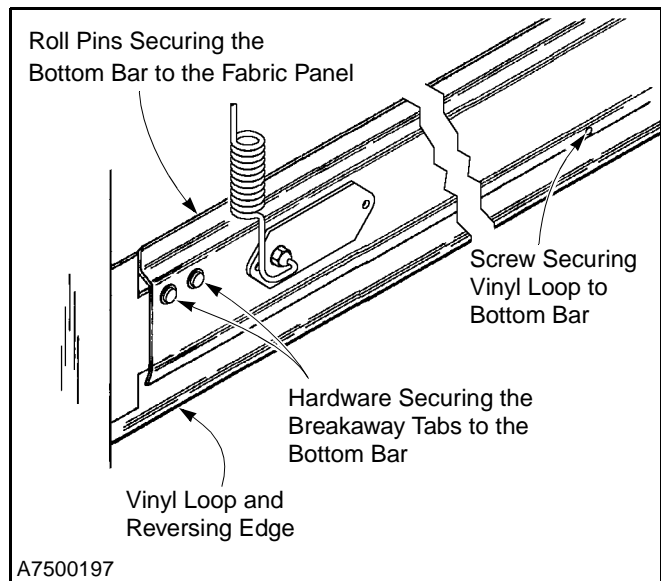


Figure 62

2. Check the hardware used to secure the bottom bar breakaway assembly at both ends. Tighten the hardware as required.
3. Check the reversing edge to make sure it is tightly secured in the bottom bar.
4. Inspect the vinyl loop of the reversing edge for abrasions or tears. Replace if required. Make sure the screw securing the vinyl loop is in place and tight.

Kill Switch Inspection

A kill switch is mounted in the bottom bar assembly. The purpose of this switch is to stop the door if the bottom bar becomes separated from either side column during a door open or close cycle.



The kill switch must be adjusted so that both air switches installed in the ends of the bottom bar assembly are detected when the breakaway bottom bar is pushed out of either side column. If the kill switch is not adjusted properly, damage to the door could result.

To test and adjust the kill switch, Refer to “PNEUMATIC KILL SWITCH TEST AND ADJUSTMENT” on page 16.

Lubrication

1. **Flanged Bearings:** Each end of the fabric roll shaft is supported by a flanged bearing assembly. At the grease fitting on each bearing, lubricate the bearings using a lithium-based grease conforming to NLGI, Grade 2 Standard. Use a medium-viscosity, low-torque grease with an approved operating temperature range of -30° to $+200^{\circ}\text{F}$. (See Figure 63.)

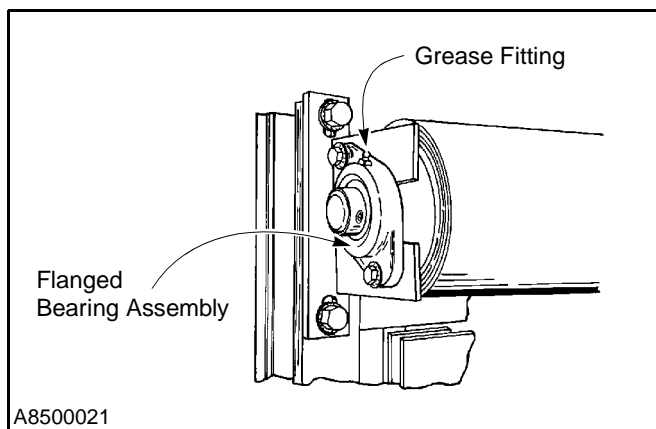


Figure 63

2. **Drive Chain and Door Operator:** For complete lubrication information on the drive chain and the door operator, refer to the maintenance schedule in the LiftMaster Industrial Duty Door Operator owner's manual included with the door.

Weather Seal Inspection

HEADER ASSEMBLY

Inspect header weather seal for wear or damage. (See Figure 64.) Replace if necessary. (See “WEATHER SEAL” on page 33.)



Figure 64

SIDE COLUMNS

Inspect side column weather seal for wear or damage. (See Figure 65.) Replace if necessary. (See “WEATHER SEAL” on page 33.)



Figure 65

ADJUSTMENTS

Door Operator and Push-Button Control Station Inspection

1. Inspect all warning/safety labels. All warning labels should be intact and clearly readable. Replace labels as needed.
2. Operate the door five or six complete cycles. Check the push-button control station for proper operation. If an adjustment or a repair is required. Refer to the LiftMaster Industrial Duty Door Operator owner's manual included with the door.

Electrical Connection Inspection



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

1. Inspect electrical connections to the power drive assembly and encoder assembly.
2. Inspect connections of wires in the side column.
3. Inspect the door operator wiring. Refer to the LiftMaster Industrial Duty Door Operator owner's manual when performing the inspection. That manual was included with the LiftMaster.

ADJUSTMENTS

OPEN AND CLOSE DOOR LIMIT POSITIONS

For complete adjustment information for the door open and close limits, refer to the LiftMaster Industrial Duty Door Operator owner's manual included with the door. The door open and close limit positions are detailed below.

Close Limit Position

The "close" limit position should be adjusted so that the door travel allows the vinyl loop on the bottom bar to gently seal against the floor. (See Figure 66.)

DO NOT allow the rubber reversing edge, enclosed in the 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.

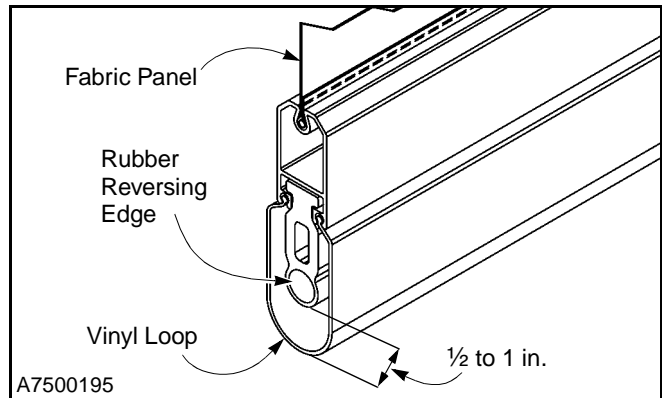


Figure 66

Open Limit Position

The "open" limit position should be adjusted so that the door travel allows the bottom bar assembly to stop at the position shown in Figure 67.

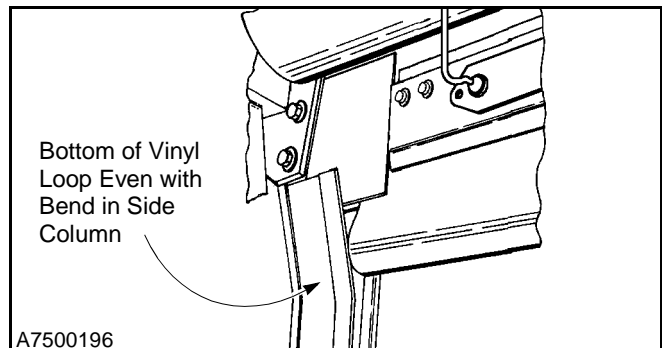


Figure 67

PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT

The reversing edge switch has two adjustments: an air bleed adjustment and a sensitivity adjustment. The air bleed adjustment was set at that factory and generally does not require adjustment. The reversing edge switch sensitivity may require adjustment if the door does not immediately reverse direction after coming in contact with an object in the path of the door.

⚠ WARNING

Do not stand under the door panel when making check. If reversing edge switch is not working properly, panel could strike person performing check.

To determine if an adjustment to the reversing edge switch is necessary, run the door through the down cycle. As the door closes, tap the bottom of the reversing edge. If the reversing edge switch is operating properly, the door will immediately reverse and run to the full-open position.

Push the control station push-button to close the door after the test is complete.

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

To verify the air bleed setting, see “Air Bleed Adjustment” below.

To adjust the reversing edge switch, see “Reversing Edge Switch Sensitivity Adjustment” on page 30.

Air Bleed Adjustment

1. Raise or lower the door, as necessary, until the bottom bar is approximately head or chest height. (See Figure 68.)

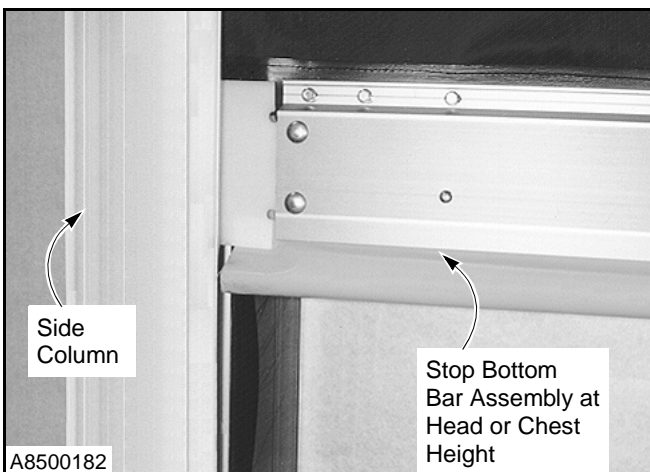


Figure 68

2. Remove the reversing edge switch access cover. The reversing edge switch is mounted behind the access cover at the end of the bottom bar, opposite the coil cord. (See Figure 69.)

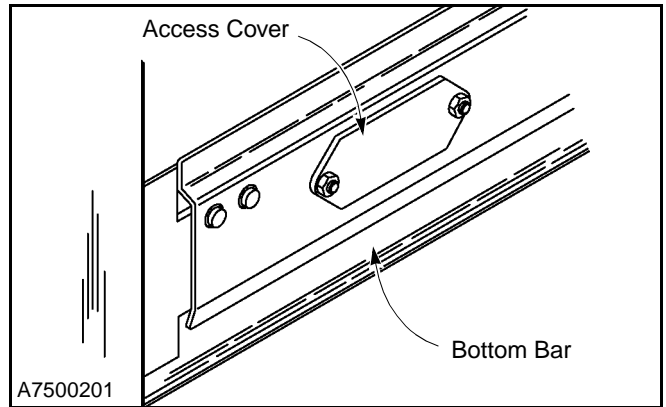


Figure 69

3. Make sure the PVC hose is tight on the lower air input post to prevent air leakage and to ensure the hose will not vibrate off the post. Also make sure the hose is not kinked. (See Figure 70.)

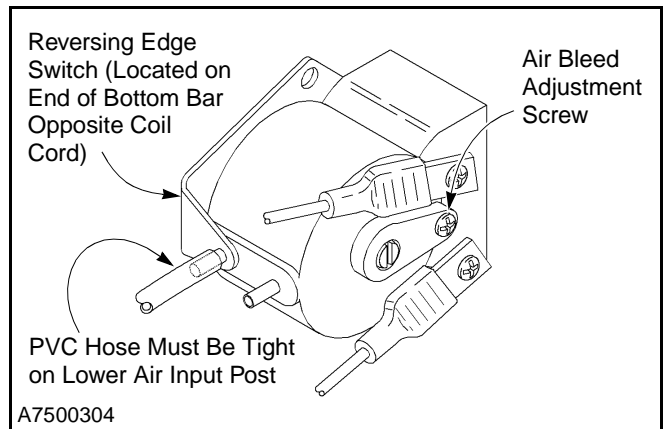


Figure 70

4. Adjust the air bleed by first turning the air bleed adjustment screw located on the front and back side of the switch fully clockwise — do not overtighten either screw. Then turn each screw counterclockwise one full turn.

ADJUSTMENTS—PNEUMATIC KILL SWITCH ADJUSTMENT

Reversing Edge Switch Sensitivity Adjustment

1. Remove the wires from the two contact terminals and attach an ohmmeter across the terminals. (See Figure 71.)

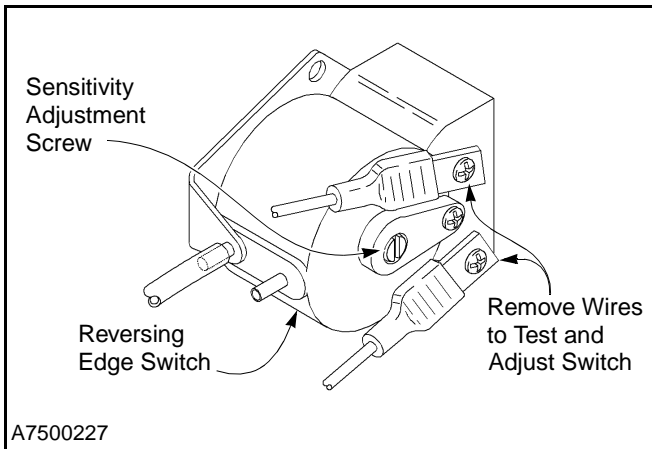


Figure 71

2. To adjust the switch, first turn the small adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved across the ohmmeter.

Then turn the screw $\frac{3}{4}$ -turn counterclockwise. The ohmmeter should no longer show continuity. Turning the screw counterclockwise decreases sensitivity, turning it clockwise increases sensitivity.

NOTE: The reversing edge switch is a normally open contact.

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

3. Reconnect each wire to its appropriate contact terminal on the reversing edge switch.
4. Replace the access cover on the bottom bar.

PNEUMATIC KILL SWITCH ADJUSTMENT



The kill switch does not prevent the door from being operated. The kill switch only stops the door when the bottom bar separates from either side column. Only operate the door after the bottom bar is returned to its normal operating position. Otherwise, serious damage to the door can result if the door is operated with the bottom bar disconnected from either side column.

The kill switch has two adjustments: an air bleed adjustment and a sensitivity adjustment. The air bleed adjustment was set at that factory and generally does not require adjustment. The kill switch sensitivity does require adjustment after the door is installed and fully operational.

To verify the air bleed setting, refer to “Air Bleed Adjustment” below.

To adjust the sensitivity of the kill switch, refer to “Kill Switch Sensitivity Adjustment” on page 31.

Air Bleed Adjustment

1. Raise or lower the door, as necessary, until the bottom bar is approximately head or chest height. (See Figure 72.)

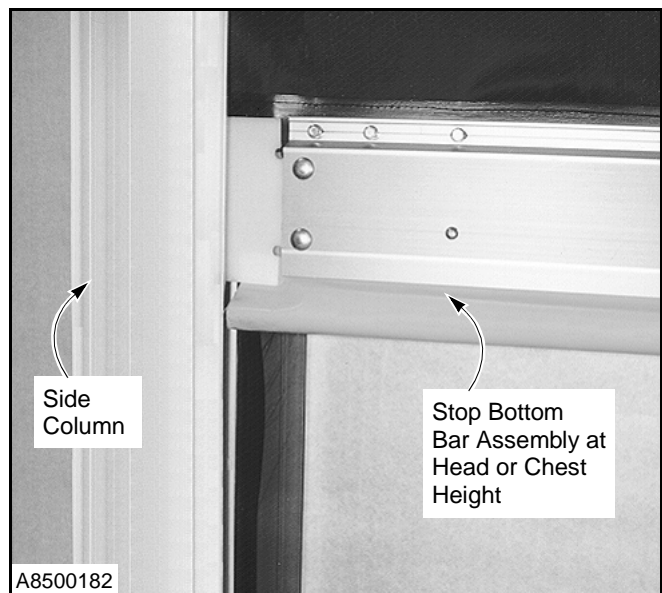


Figure 72

CAUTION

Take precautions to prevent the door from being opened or closed while performing the following procedure.

2. Remove the kill switch access cover at the end of the bottom bar assembly. The kill switch is mounted behind the access cover holding the coil cord. (See Figure 73.)

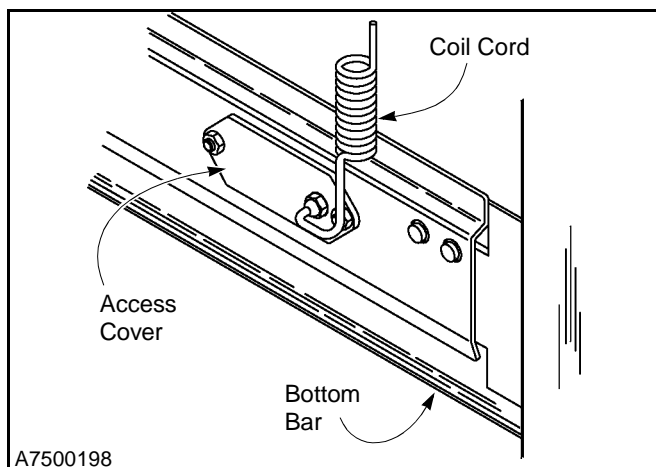


Figure 73

3. Make sure the PVC hose is tight on the upper air input post to prevent air leakage and to ensure the hose will not vibrate off the post. Also make sure the hose is not kinked. (See Figure 74.)

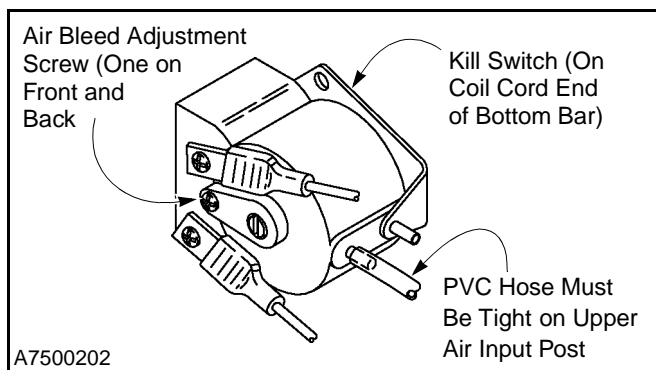


Figure 74

4. Adjust the air bleed by first turning the air bleed adjustment screw located on the front and back side of the switch fully clockwise — do not overtighten either screw. Then turn each screw counterclockwise one full turn.

Kill Switch Sensitivity Adjustment

1. Raise or lower the door, as necessary, until the bottom bar is approximately head or chest height. (See Figure 75.)

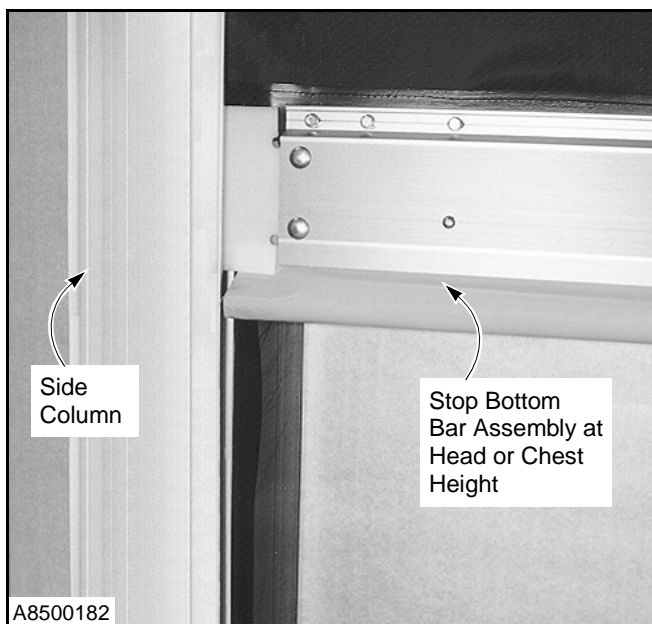


Figure 75

CAUTION

Take precautions to prevent the door from being opened or closed while performing the following procedure.

2. Remove the kill switch access cover at the end of the bottom bar assembly. The kill switch is mounted behind the access cover holding the coil cord. (See Figure 76.)

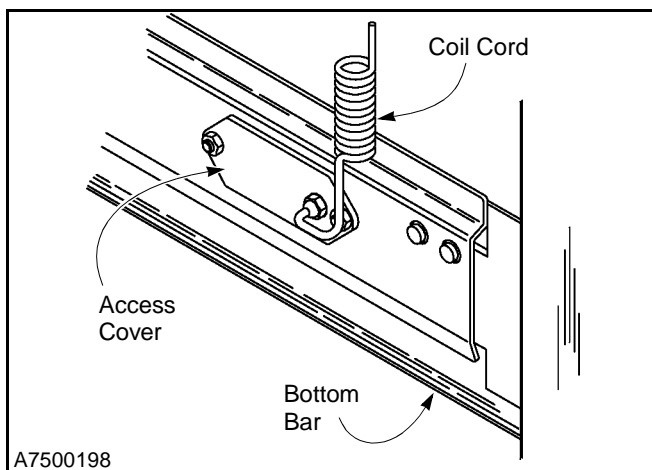


Figure 76

ADJUSTMENTS—PNEUMATIC KILL SWITCH ADJUSTMENT

3. Make sure the PVC hose is tight on the upper air input post to prevent air leakage and to ensure the hose will not vibrate off the post. Also make sure the hose is not kinked. (See Figure 77.)

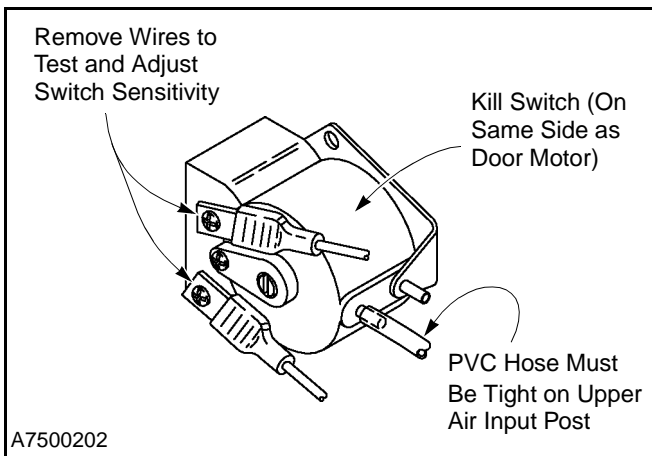


Figure 77

4. Remove the wires from the two contact terminals and attach an ohmmeter across the terminals.
5. To adjust the switch, first turn the small adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved across the ohmmeter. (See Figure 78.)

Then turn the screw two turns clockwise for the final adjustment. The ohmmeter should continue to show continuity. Turning the screw clockwise decreases sensitivity, turning it counterclockwise increases sensitivity.

NOTE: The kill switch is a normally closed contact.

If the kill switch is too sensitive, it may cause the door to stop during a normal open or close cycle. If this occurs, readjust the switch sensitivity.

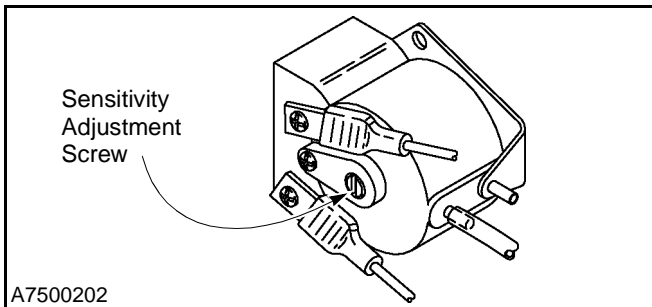


Figure 78

CAUTION

The kill switch must be adjusted so that both air switches installed in the ends of the bottom bar assembly are detected when the breakaway bottom bar is pushed out of either side column. If the kill switch is not adjusted properly, damage to the door could result.

6. To verify the kill switch system is operating properly, with the ohmmeter across both terminals, gently tap on one end of the bottom bar, near the breakaway tabs to activate the air switch at that end of the bottom bar. (See Figure 79.)

When the air switch is activated, there should be an interruption of continuity across the ohmmeter indicating the kill switch detected movement in the air switch. If continuity is not interrupted, readjust the kill switch sensitivity.

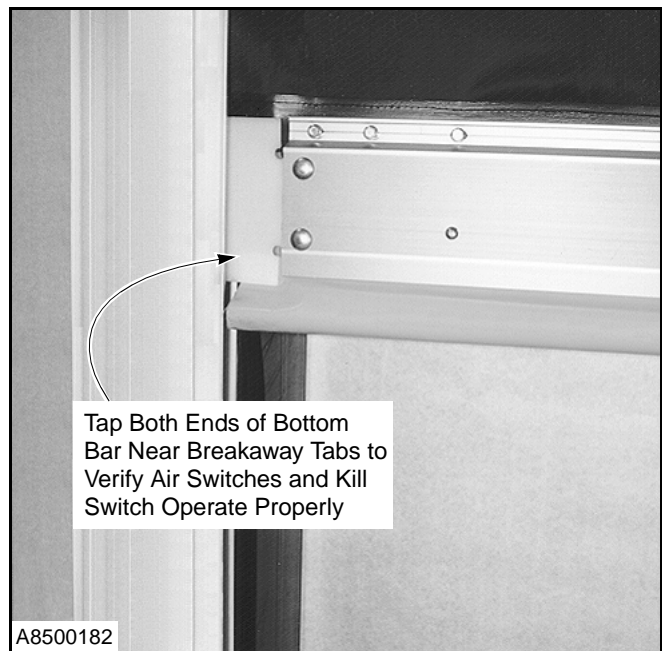


Figure 79

7. Verify the air switch at the other end of the bottom bar also displays an interruption in continuity when that end of the bottom bar is gently tapped.
8. Reconnect each wire to its appropriate contact terminal on the kill switch.
9. Replace the access cover on the bottom bar.

FABRIC ROLL ADJUSTMENT

If the fabric is not tracking properly, verify that the fabric roll is level. Adjust as required. (See Figure 80.)

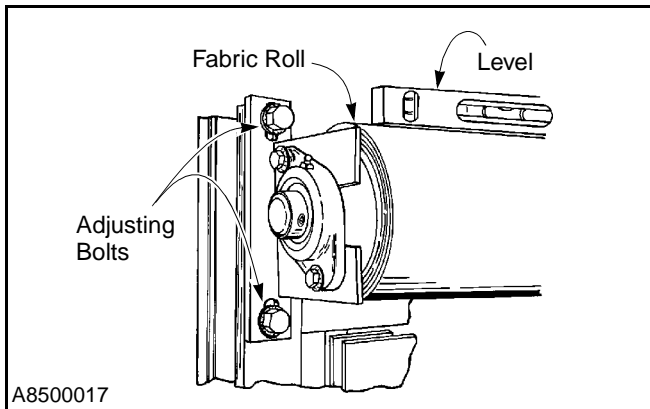


Figure 80

DRIVE CHAIN ADJUSTMENT

The drive chain should be adjusted with just enough slack so that the chain remains tight, but not too tight.

If the drive chain tension requires an adjustment, loosen the four $\frac{3}{8}$ -16 x $1\frac{1}{4}$ -in. serrated-flange hex screws and nuts that secure the drive motor to the motor mounting bracket. Loosen the screws and nuts just enough to allow the drive motor to be reposition along the slotted holes in the mounting bracket. Once the tension is properly set, tighten the hex screws and nuts to lock in the adjustment. (See Figure 81.)

Refer to the LiftMaster Industrial Duty Door Operator owner's manual for detailed instructions on the drive system. That manual was included with the door.

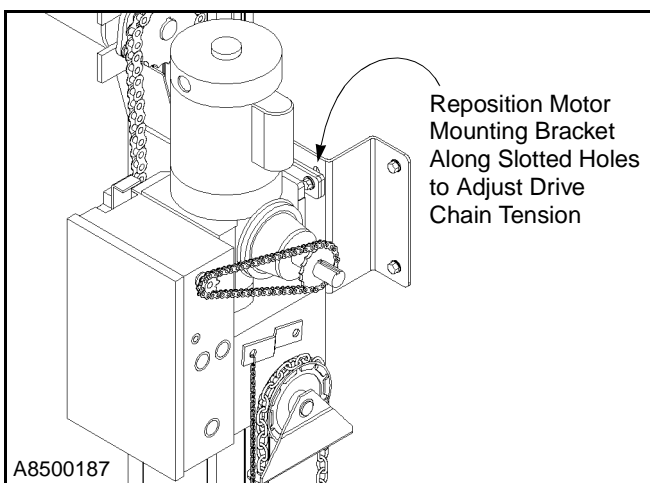


Figure 81

MOTOR BRAKE ADJUSTMENT

For complete information on the motor brake, refer to the LiftMaster Industrial Duty Door Operator owner's manual included with the door.

REPLACEMENT PROCEDURES

WEATHER SEAL

Header Assembly

NOTE: On doors equipped with a hood, the hood will have to be removed to gain access to the weather seal.

1. From either side, remove two serrated-flange hex screws and nuts securing header extrusion and support bracket to side column. (See Figure 82.)

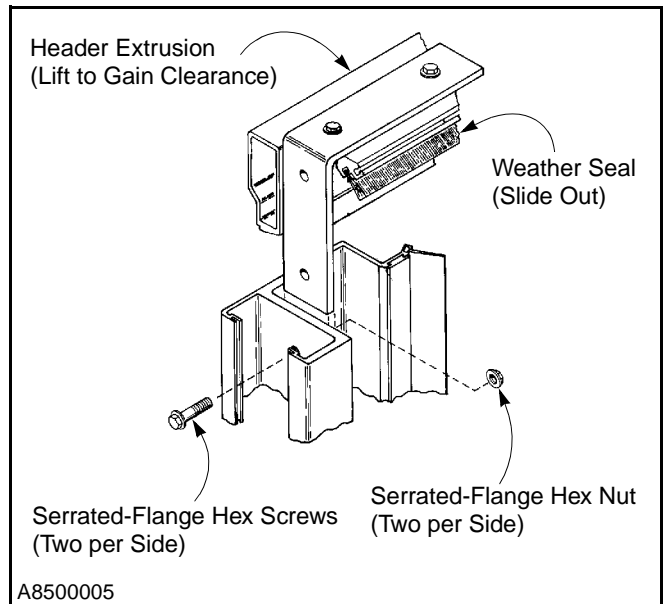


Figure 82

2. Lift header extrusion slightly to gain clearance, and remove damaged weather seal by sliding it out of the extrusion.
3. Insert new weather seal in channel. (See Figure 83 and Figure 84 for positions.)

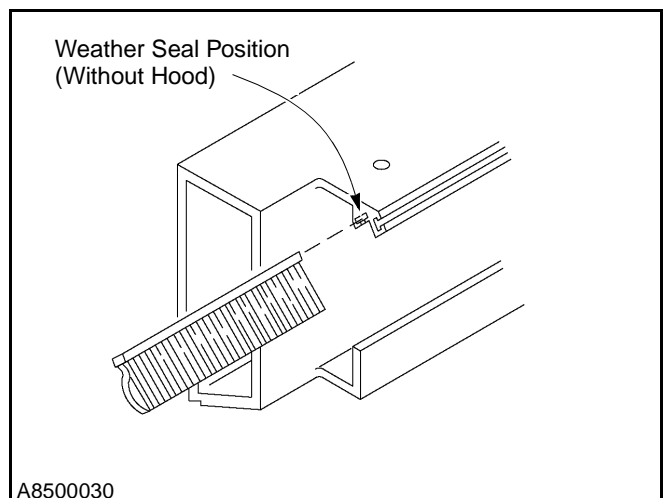


Figure 83

DOOR OPERATOR

For repair information on the door operator, refer to the LiftMaster Industrial Duty Door Operator owner's manual included with the door.

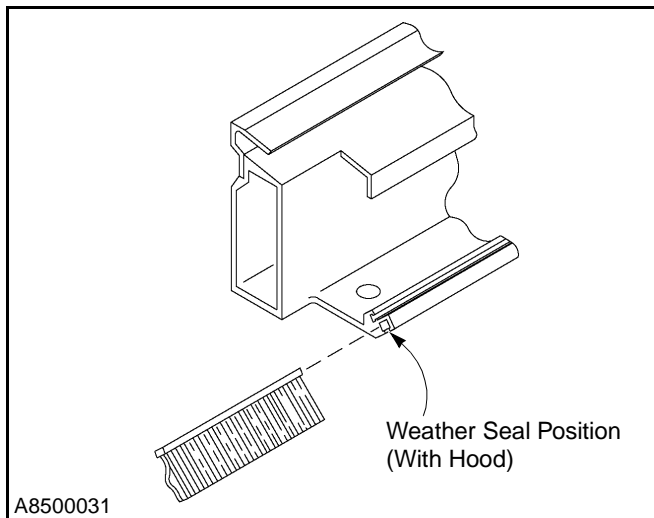


Figure 84

4. Lower header extrusion and secure to side column with serrated-flange hex screws and nuts.

Side Columns

1. Drill out rivets in side columns and remove old seal. (See Figure 85.)
2. Install new seals and rivet in place.

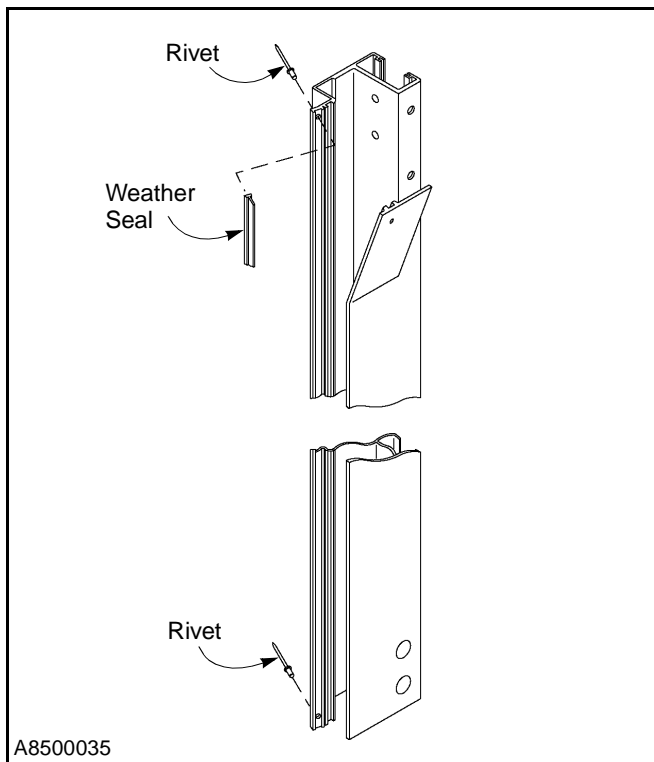


Figure 85

PARTS LIST

PARTS ORDERING INFORMATION

How To Order Parts

1. Identify the parts required by referring to the following pages for part numbers and part descriptions. For parts pertaining to the LiftMaster Industrial Duty Door Operator, refer to the LiftMaster owner's manual included with the door.
2. To place an order for all parts, including parts associated with the LiftMaster door operator, contact your local Rytec representative or the Rytec Customer Support Department at: 800-628-1909 or 262-677-2058 (fax).
3. To ensure the correct parts are shipped, please include the serial number of your door with the order. The serial number is located inside one of the side panels. (See Figure 86.)

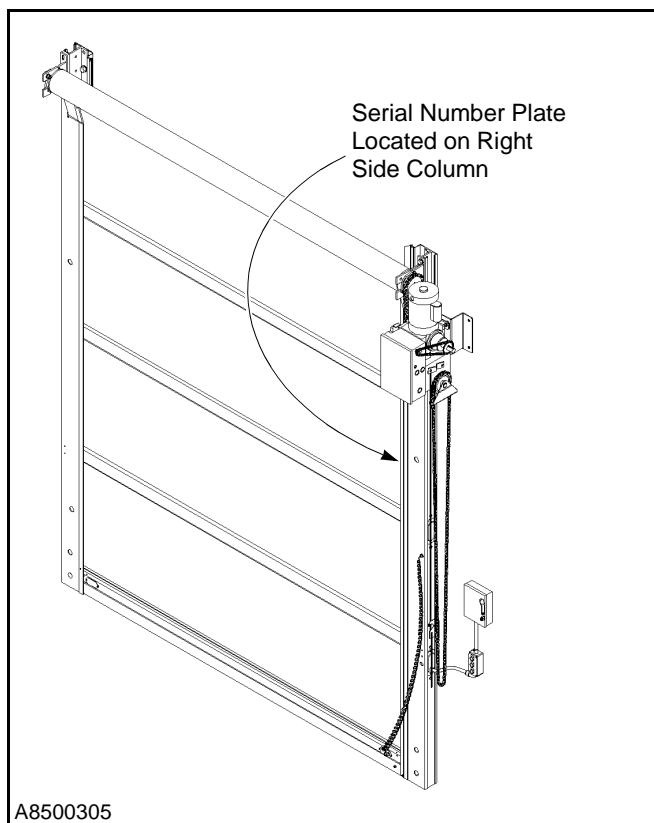


Figure 86

Substitute Parts

Due to special engineering and product enhancement, the actual parts used on your door may be different from those shown in this manual.

Also, if a part has been improved in design and bears a revised part number, the improved part will be substituted for the part ordered.

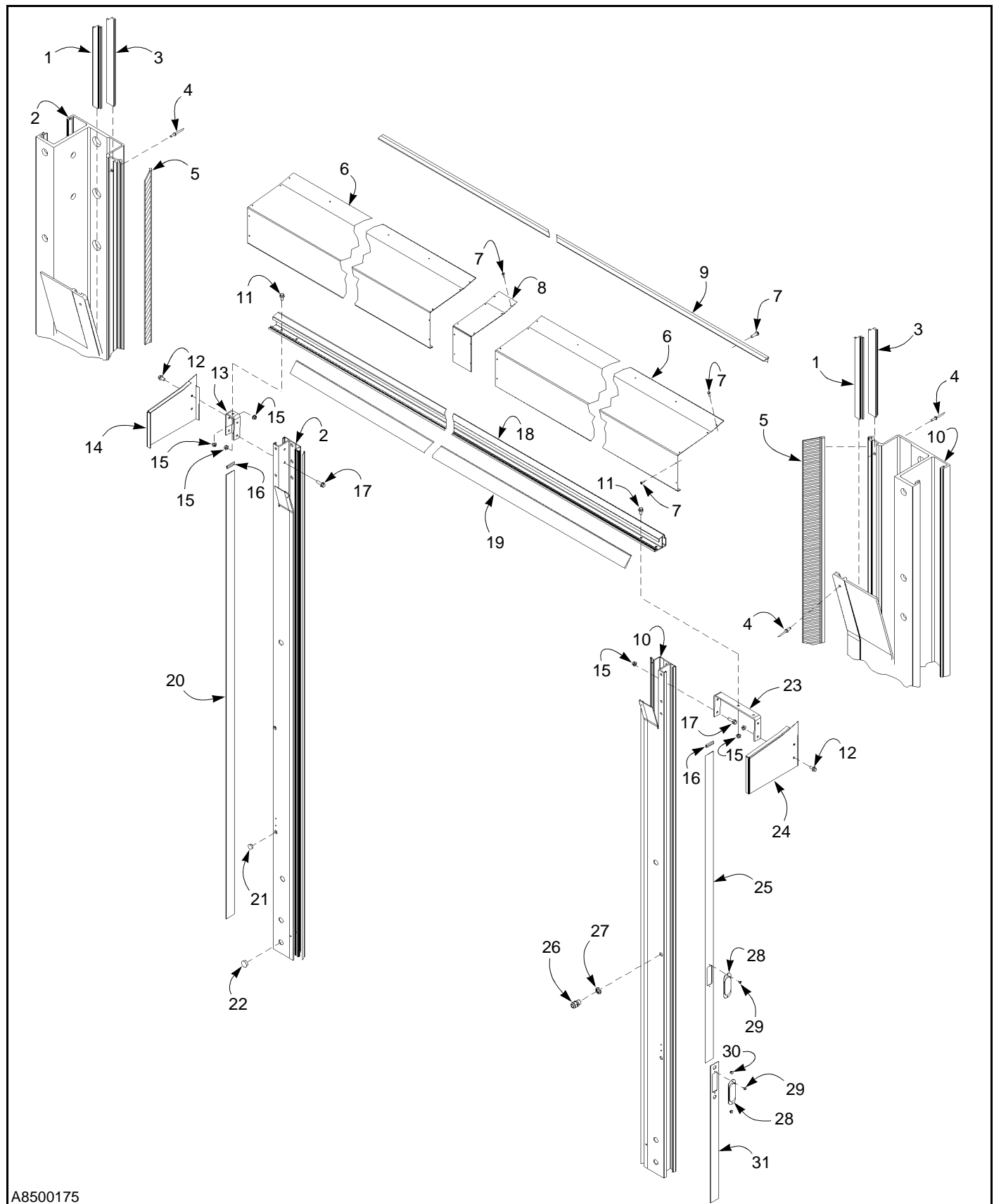
Return of Parts

Rytec will not accept the return of any parts unless they are accompanied by a Return Merchandise Authorization (RMA) Form.

Before returning any parts, you must first contact the Rytec Customer Support Department to obtain authorization and an RMA form.

PARTS LIST—SIDE COLUMNS AND HOOD

SIDE COLUMNS AND HOOD



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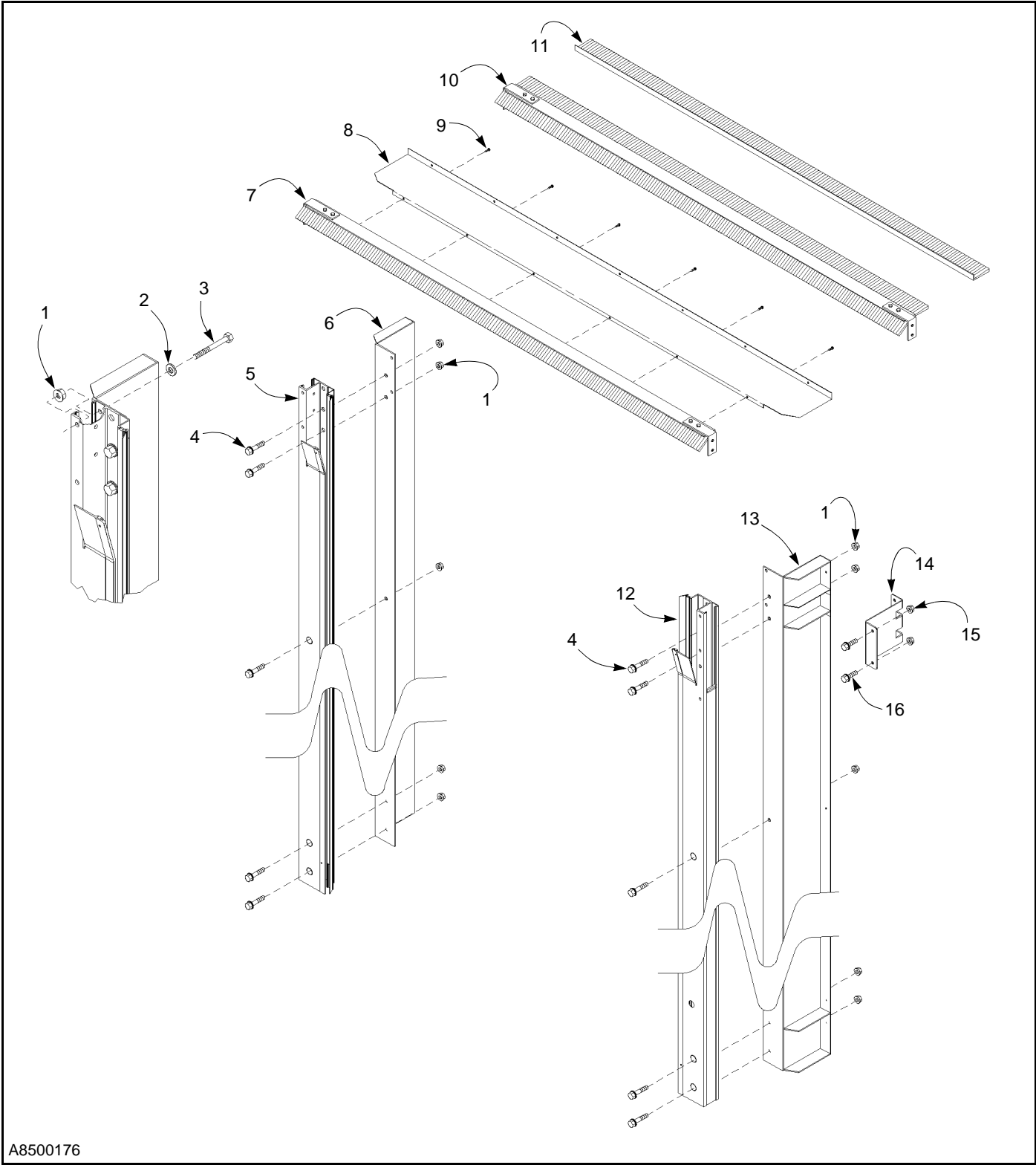
Figure 87

PARTS LIST—SIDE COLUMNS AND HOOD

ITEM	QTY.	PART #	DESCRIPTION
1	2	0-705-011*	Wear Strip, Front
2	1	0-899-883*	Side Column, Left (Right Drive)
	1	0-899-884*	Side Column, Left (Left Drive)
	1	0-703-916	Side Column, Left, used w/ Pullout (see page 38)
3	2	0-705-011*	Wear Strip, Rear
4	12	0-556-323	Rivet, 1/8-in. Dia.
5	2	0-007-178	Weather Seal
6	2	0-802-023	Hood Cover, End Section (optional – NOTE: If single piece hood is used, refer to item 32.)
7	A/R	0-551-050	Screw, 5/16-18 x 3/4-in. Self-Tapping Sheet Metal
8	1	0-802-024*	Hood Cover, Center Section (optional)
9	1	0-703-839*	Extrusion, Cover
10	1	0-899-917*	Side Column, Right (Right Drive)
	1	0-899-918*	Side Column, Right (Left Drive)
	1	0-703-917	Side Column, Right, used w/ Pullout (see page 38)
11	8	0-550-261	Screw, 3/8-16 x 1 1/4-in. Serrated-Flange
12	7	0-550-254	Screw, 3/8-16 x 3/4-in. Serrated-Flange
13	1	0-703-024	Support Bracket, Non-Drive Side (w/ optional hood)
14	1	0-802-020	Hood End Cover, Left (optional)
15	19	0-553-229	Nut, 3/8-16 Serrated-Flange
16	2	0-704-004	Liner, Edge

ITEM	QTY.	PART #	DESCRIPTION
17	4	0-550-261	Screw, 3/8-16 x 1 1/4-in. Serrated-Flange
18	1	0-703-035*	Extrusion, Spreader
	1	0-703-874	Extrusion, Spreader (used w/ right side motor w/ hood and thru beam emitter)
	1	0-703-875	Extrusion, Spreader (used w/ right side motor w/ hood and thru beam emitter)
19	1	0-009-177*	Weather Seal, Brush 3-in.
	1	0-009-178*	Weather Seal, Brush 4-in.
	1	0-009-179*	Weather Seal, Brush 5-in.
20	1	0-702-019*	Side Cover, Non-Drive Side
21	2	0-704-006	Plug, 0.53-in. Dia., Dome
22	A/R	0-704-005	Plug, 1 1/4-in. Dia., Dome
23	1	0-703-837	Support Bracket, Optional w/ Hood, Drive Side
24	1	0-802-019	Hood End Cover, Right (optional)
25	1	0-702-016*	Side Cover, Top, Drive Side
26	1	0-014-491	Cord Grip, 1/2-in. NPT
27	2	0-014-492	Lock Nut
28	2	0-004-004	Cover, Outlet Box
29	4	0-551-325	Screw, #10-16 x 1/2-in. Phillips Pan-Head, Self-Tapping, Serrated-Flange
30	A/R	0-704-008	Plug, 7/8-in. Dia., Dome
31	1	0-702-193	Side Cover, Bottom, Drive Side
32	1	0-802-022	Hood Center Section, One-Piece (not shown – optional item)

PULLOUTS



A8500176

Figure 88

ITEM	QTY.	PART #	DESCRIPTION
1	16	0-553-100	Nut, 1/2-13 Serrated-Flange Hex
2	4	0-555-145	Washer, 1/2-in. Flat
3	4	0-021-703	Screw, Hex, 1/2-13 x 6-in., Grade 5
4	10	0-550-303	Screw, 1/2-13 x 1 1/4-in. Serrated-Flange Hex, Grade 5
5	1	0-703-022*	Side Column, Left (see page 36)
6	1	0-799-504	Pullout, Left
7	1	0-799-507	Rear Spreader, Angle Z-Section Pullout, w/o Brush (optional item used w/ items 6 and 13)
8	1	0-702-804	Filler Sheet, Top, Angle Z-Section Pullout (optional item used w/ items 6 and 13)
9	10	0-551-014	Screw, 1/4-in. x 1-in. Self-Tapping Sheet Metal
10	1	0-799-507	Rear Spreader, Angle Z-Section Pullout, w/ Brush (optional item used w/ items 6 and 13)
11	1	0-009-129	Retainer Seal, 90° (optional item used w/ items 6 and 13)
12	1	0-703-021*	Side Column, Right (see page 36)
13	1	0-799-505	Pullout, Right
14	1	Consult Factory	Pullout Bracket, LiftMaster
15	2	0-553-100	Nut, 1/2-13 Serrated-Flange Hex
16	2	0-550-303	Screw, 1/2-13 x 1 1/4-in. Serrated-Flange Hex, Grade 5

DOOR PANEL AND FABRIC ROLL

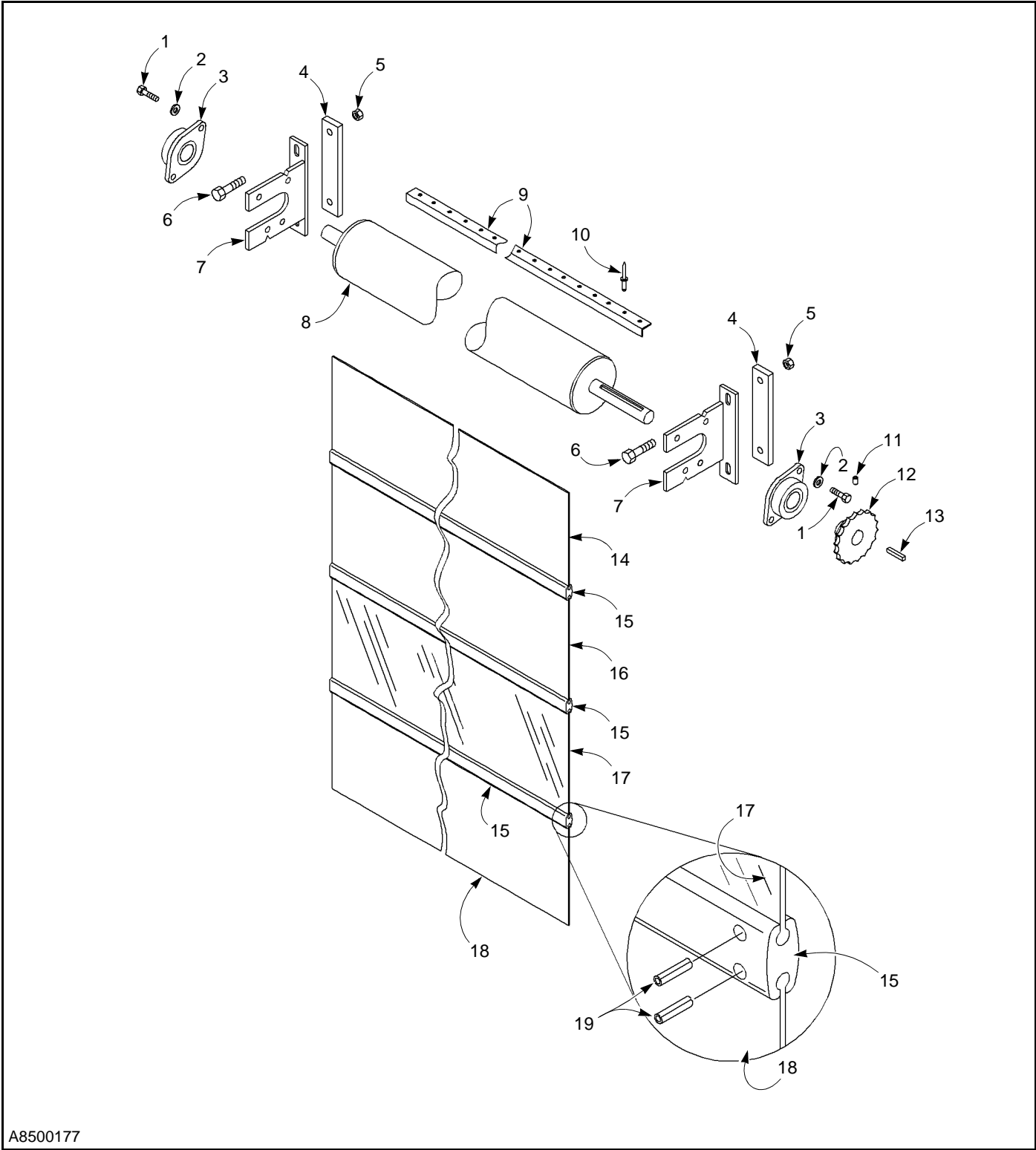


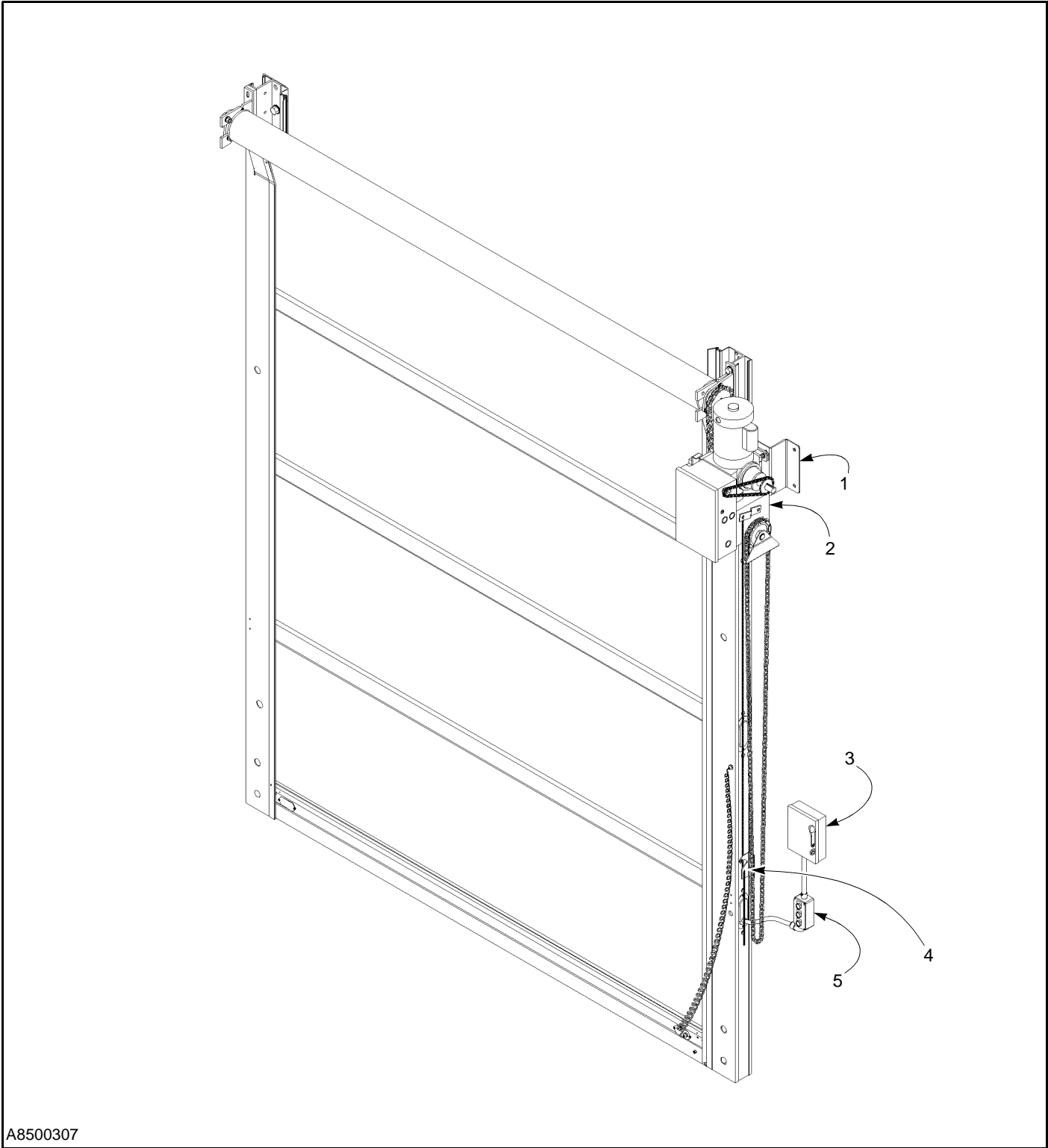
Figure 89

A8500177

PARTS LIST—DOOR PANEL AND FABRIC ROLL

ITEM	QTY.	PART #	DESCRIPTION
1	4	0-550-011	Screw, $\frac{7}{16}$ -14 x 1-in. Hex-Head Cap Screw
2	4	0-555-119	Lock Washer, $\frac{7}{16}$ -in.
3	2	0-704-010	Bearing
4	2	0-703-353	Spacer (required for over-sized doors only)
5	4	0-553-100	Nut, $\frac{1}{2}$ -13 Serrated-Flange Hex
6	4	0-550-303	Screw, $\frac{1}{2}$ -13 x $1\frac{1}{4}$ -in. Serrated Flange, Hex-Head
	4	0-550-024	Screw, $\frac{1}{2}$ -13 x 2-in. Serrated Flange, Hex-Head (used w/ item 4)
7	2	0-799-1238	Bracket, Bearing Mounting
8	1	0-899-650*	Weldment, Drum, 5-in. Dia.
	1	0-899-941*	Weldment, Drum, $5\frac{1}{4}$ -in. Dia.
9	1	0-702-010*	Strap, Clamp, Panel Mounting
10	A/R	0-556-167	Rivet, $\frac{3}{16}$ -in. Stainless
11	2	0-551-044	Set Screw, Cone Point, $\frac{5}{16}$ -18 x $\frac{3}{8}$ -in., Alloy, SHSS (not shown – used with items 12 and 13)
12	1	0-804-176	Sprocket, #50B21, Modified
13	1	0-804-008	Key, $\frac{1}{4}$ -in. x $\frac{1}{4}$ -in. x 1-in.
14	1	0-707-005*	Upper Panel, Vinyl
	1	Consult Factory*	Upper Panel, Rilon
	1	0-707-018*	Upper Panel, 2-Ply
15	A/R	0-703-010*	Extrusion, Wind Rib
16	1	0-707-003*	Intermediate Panel, Vinyl (4-panel door only)
	1	Consult Factory*	Intermediate Panel, Rilon (4-panel door only)
17	1	0-707-019*	Solid Vision Panel, Vinyl (optional)
	1	0-707-002*	Vision Panel, Standard
	1	0-707-022*	Solid Vision Panel, 2-Ply (optional)
18	1	0-707-001*	Lower Panel Section, Vinyl
	1	Consult Factory*	Lower Panel Section, Rilon
	1	0-707-014*	Lower Panel Section, 2-Ply
19	A/R	0-552-324	Roll Pin, $\frac{1}{8}$ -in. Dia. x $\frac{5}{8}$ -in.

DOOR OPERATOR AND CONTROL SYSTEM



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Figure 90

PARTS LIST—DOOR OPERATOR AND CONTROL SYSTEM

ITEM	QTY.	PART #	DESCRIPTION
1	1	0-804-381	Bracket, LiftMaster Vertical Mount
2	1	Consult Factory	LiftMaster Door Operator
3	1	Owner Supplied	Fused Disconnect
4	1	Consult Factory	Chain Keeper
5	1	Owner Supplied	Control Station, Three Push-Button

A/R = as required

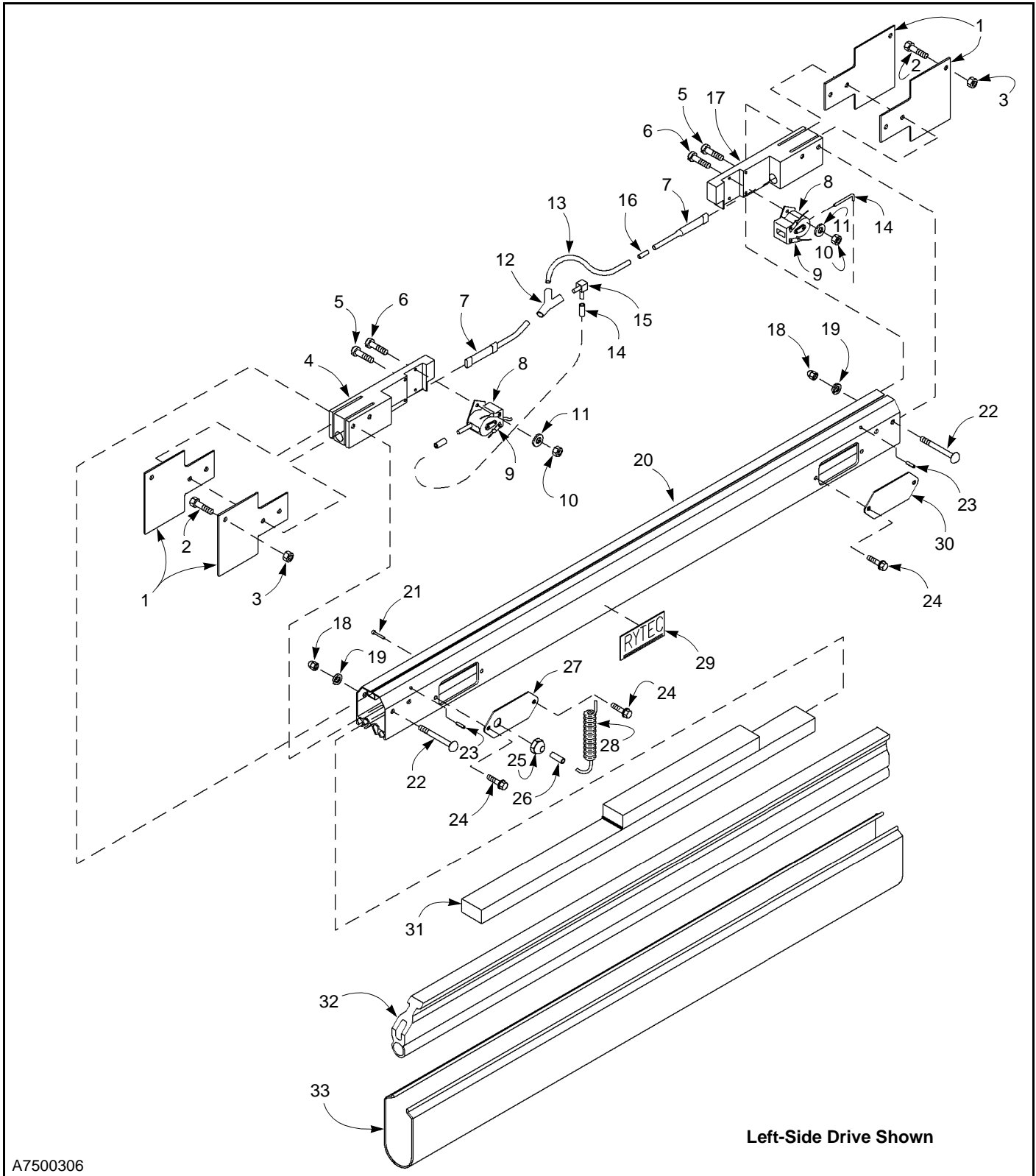
** Item is produced based on manufactured height and width of door.*

ALWAYS INCLUDE SERIAL NUMBER OF DOOR WHEN PLACING ORDER

To ensure you receive the correct parts when placing an order, always include the serial number of your door. Also, due to product enhancement, the actual parts on your door may be different from those shown in this manual.

PARTS LIST—BOTTOM BAR ASSEMBLY

BOTTOM BAR ASSEMBLY



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Figure 91

PARTS LIST—BOTTOM BAR ASSEMBLY

ITEM	QTY.	PART #	DESCRIPTION
1	4	0-705-094	Breakaway Tab
2	2	0-021-531	Screw, 1/4-20 x 3/8-in. Phillips Flat-Head
3	2	0-553-103	Nut, 1/4-20 Serrated-Flange Hex
4	1	0-705-014	End Block, Left
5	4	S-021-025	Screw, #10-12 x 3/4-in. Truss-Head, Stainless- Steel
6	4	0-021-029	Threaded Stud, 8-32 x 1/2-in.
7	2	0-713-000	Air Switch
8	2	0-211-397	Pressure Switch
9	4	0-014-483	Wire Terminal, Slip-on, Female
10	4	0-553-180	Nut, 8-32
11	4	0-554-179	Lock Washer, #8
12	1	0-804-336	Y-Connector Tube, 3/16-in.
13	1	0-804-219*	Tube, 3/16-in. I.D. Vinyl
14	2	0-007-321	Tube, 4 mm O.D. x 5-in. Vinyl
15	1	0-204-552	Hose Fitting, 90° Elbow
16	1	0-804-337	Connector Tube, 3/16-in. Union
17	1	0-705-013	End Block, Right
18	4	S-021-070	Nut, 3/8-16 UNC Acorn, Stainless-Steel
19	4	S-554-225	Washer, 3/8-in. Split Lock, Stainless-Steel

ITEM	QTY.	PART #	DESCRIPTION
20	1	0-703-807*	Bottom Bar
21	2	0-021-748	Screw, #6 x 1 1/2-in. Phillips Pan-Head
22	4	S-021-652	Screw, 3/8-16 UNC x 2 1/2-in. Hex-Head Stainless-Steel
23	2	0-021-093	Roll Pin
24	4	0-021-603	Screw, 1/4-20 x 3/4-in. Serrated-Flange
25	2	0-014-001	Cord Grip, 1/2-in. NPT
26	2	0-013-006	Tube
27	1	S-703-217	Cover, w/ Hole
28	A/R	0-704-075	Coil Cord Assembly, 4-Conductor, 24-in.
	A/R	0-704-035	Coil Cord Assembly, 4-Conductor, 36-in.
29	1	0-016-658	Decal, Rytec
30	1	S-703-009	Cover, w/o Hole
31	1	0-703-002*	Weight, Bottom Bar
32	1	0-799-1514*	Foam Reversing Edge Assembly
33	1	0-799-1752*	Loop Seal, Yellow Vinyl
	1	0-799-1753*	Loop Seal, White Vinyl
	1	0-799-1754*	Loop Seal, Screen Material
	1	0-799-1782*	Loop Seal, Black Vinyl
	A/R	0-799-1000*	Loop Seal, Hypalon, Low Profile
34	1	0-716-002	Warning Tag, Coil Cord (not shown – used w/ item 28)

