

R Y T E C

Pharma-Roll®

Owner's Manual



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WARRANTY

The Pharma-Roll High-Speed 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 Pharma-Roll High-Speed 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 contained in this manual will allow you to operate and maintain your Rytec Pharma-Roll® Door in a manner which will be sure 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 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 panels.

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

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 3 control panel. (See Figure 1.)

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

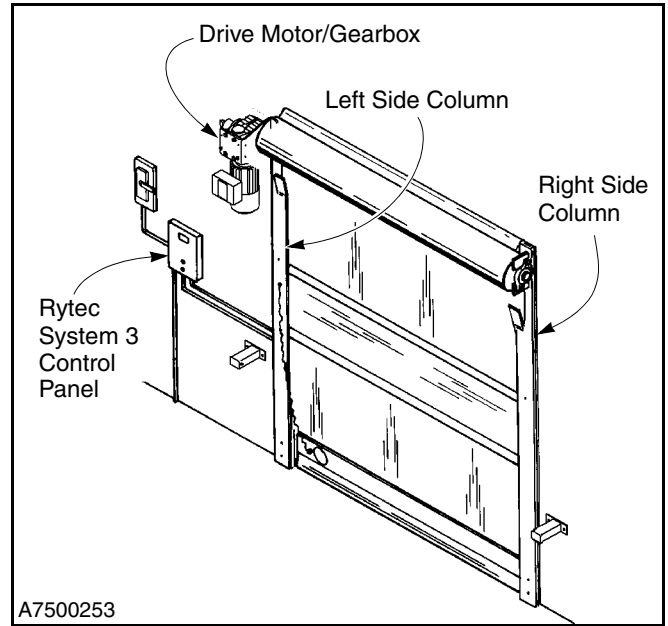


Figure 1

HOW TO USE MANUAL

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

⚠ WARNING

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

⚠ CAUTION

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.*

GENERAL ARRANGEMENT OF DOOR PARTS

Figure 2 shows the location of the major components of the door and the general placement of the associated control 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.

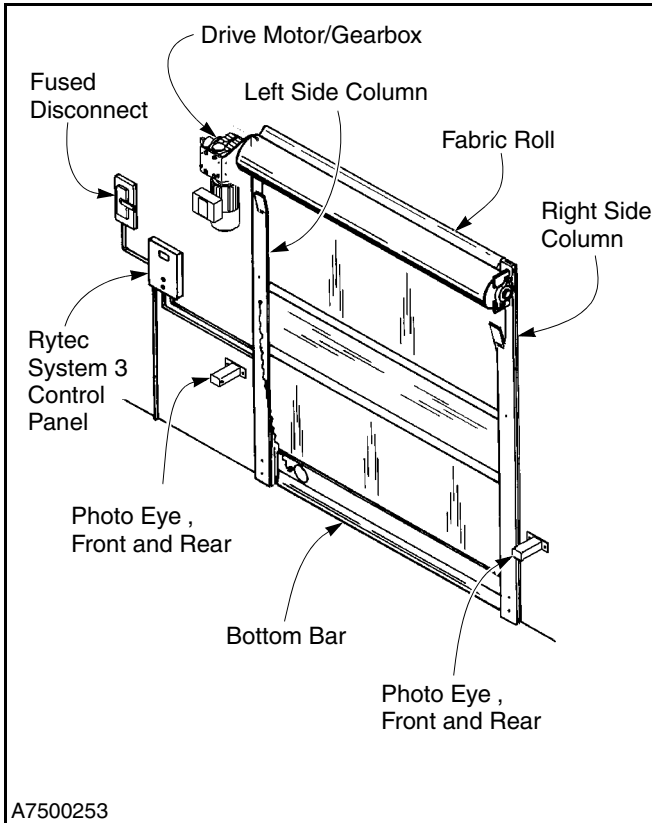


Figure 2

NOTE: The above illustration shows the front of the door. Left and right are determined when viewing the front of the door.

OPERATION

CONTROL PANEL

The Pharma-Roll door is equipped with the Rytec System 3 Drive & Control, a solid-state, micro-processor-based control system designed exclusively to operate Rytec high-performance doors. It provides connections for multiple activators, close-delay timers, and status indicators. All command functions to operate the drive and control system are software controlled. For information on control panel operation see the Rytec System 3 Drive & Control Installation & Owner's Manual.

PHOTO EYES

Your door is equipped with two sets of photo eyes in the side columns. One in front of the brush seal and one behind. Each set contains an emitter and receiver module. The purpose of these photo eyes is to hold the door open or, if the door is closing, reverse the door to the open position if a vehicle, person, or any object is in the path of the photo eye beam.

The photo eye is not active when the door is closed. After the obstruction breaking the photo eye beam is removed:

- The door will remain open if it was originally opened by a non-automatic activator until it is closed by a non-automatic activator.
- The door will close automatically if it was originally opened with an automatic activator.

BOTTOM BAR ASSEMBLY

The bottom bar assembly provides two functions: break-away 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. A kill switch assembly made up of air bladders and a pressure switch mounted in the bottom bar will turn off electrical power to the door if the bottom bar is separated from the side column. This feature prevents the bottom bar from being bent or damaged if struck by a vehicle or load. (See Figure 3.)

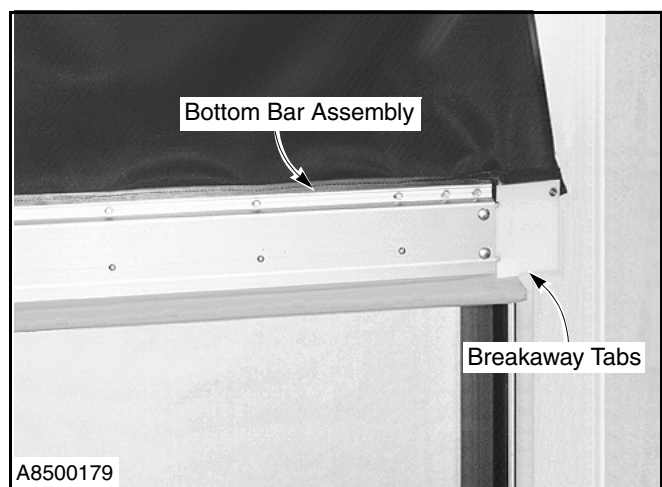


Figure 3

REPAIR (RETURN TO OPERATING POSITION)

WARNING

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 4.)

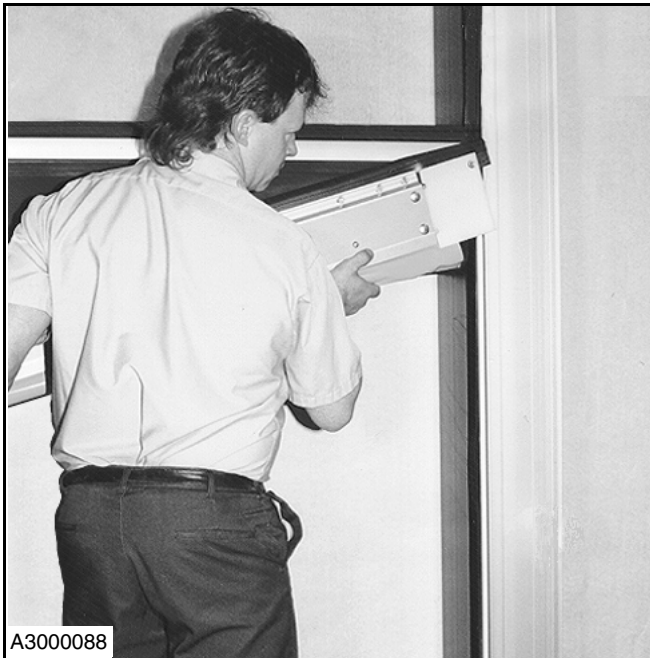


Figure 4

2. Check to make sure that the fabric is inside each channel. (See Figure 5.)

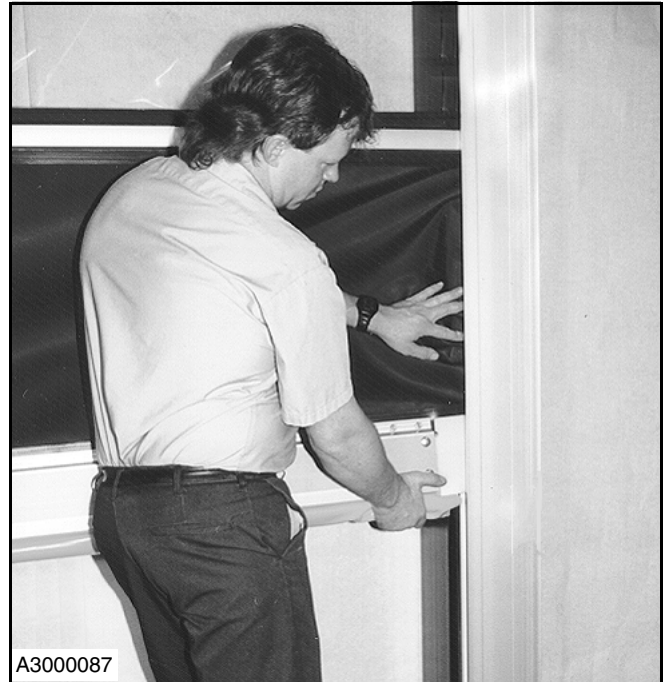


Figure 5

3. Turn power ON. Reset the control panel if required.
4. Check operation of door.

Reversing Edge

The door is equipped with a pneumatic reversing edge mounted at the bottom of the bottom bar assembly. If an object is left in the path of the door panel as it closes, the pressure-sensitive edge will sense the contact with the object and automatically reverse the door to the open position, thus preventing damage to the bottom bar. (See Figure 6.)

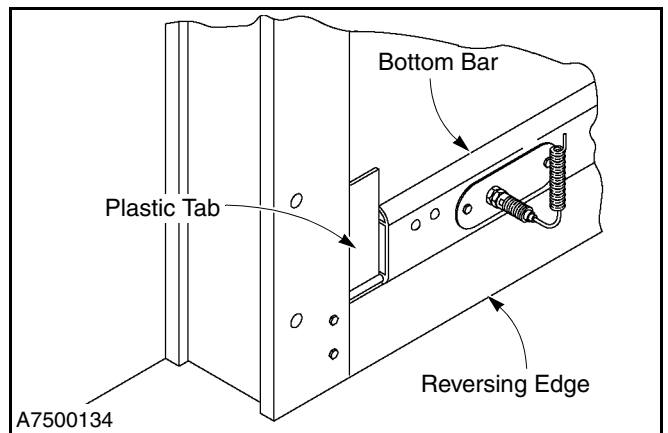


Figure 6

POWER DRIVE SYSTEM

The power drive system consists of an electric motor/brake system, reduction gear assembly, and encoder. The standard door is equipped with a variable-speed motor. The control system will vary the door speed depending on door position. The power drive system can be mounted on either the right or left end of the fabric roll.

The power drive system incorporates an electric brake used to stop the door travel when electrical power to the door is shut off. A manual brake release is provided for manual opening or closing of the door should there be a power failure, or when routine maintenance needs to be performed with the power disconnected. A hand crank (provided with your door) is used to manually open or close the door. (See Figure 7.)

An encoder, mounted on the end of the fabric drum shaft, generates electrical signals as the door panel moves. These signals are used by the control system to monitor the position of the door.

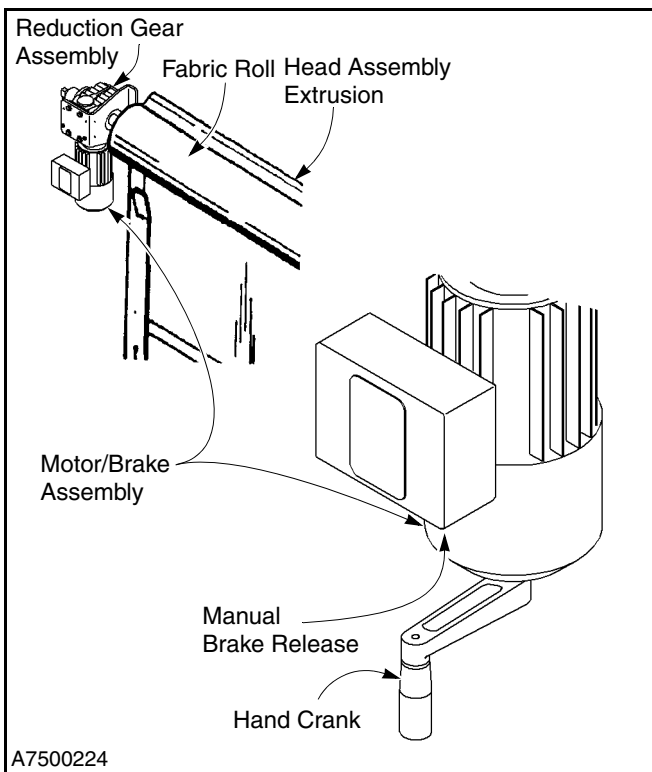


Figure 7

MOVE THE DOOR MANUALLY

WARNING

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

DO NOT stand under the door panel when moving the door.

1. Turn off power to the door.
2. **To Lower the Door:**

WARNING

The door panel will close very quickly if the brake is fully released. Releasing the brake partially will allow the door to close smoothly. Failure to restrict motor movement using the brake can result in the panel free-falling to the closed position, which can result in damage to the bottom bar, fabric panel, and/or personal injury.

- a. Partially pull down and hold the manual brake release to disengage the brake. Allow the door to close smoothly to the desired height. (See Figure 8)

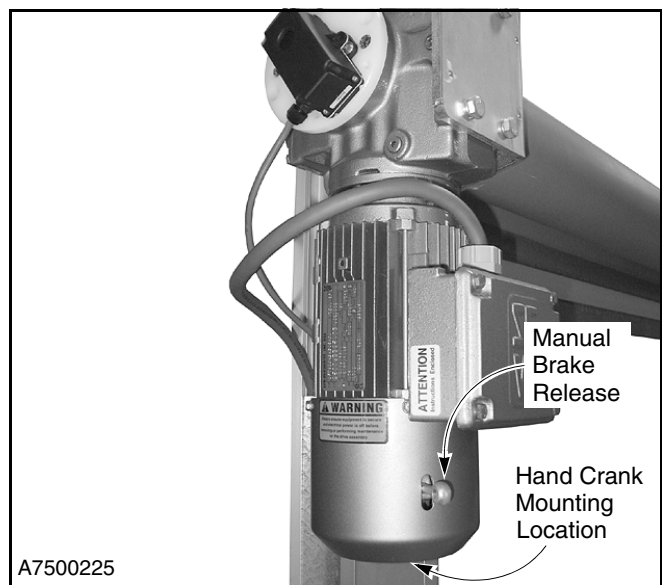


Figure 8

- b. Release the manual brake release to engage the brake and lock the door in place.

3. To Raise the Door:

- a. Place the crank handle on the shaft at the bottom of the motor.

NOTE: Hold the crank firmly while disengaging the brake to prevent the door from closing.

- b. Pull down and hold the manual brake release to disengage the brake.
- c. Using the crank, hand turn the motor shaft to raise the door as needed.
- d. Release the manual brake release to fully engage the brake.
- e. Repeat steps b–d until door is raised to the desired height.

! WARNING

Remove the crank handle before applying power to the door. Failure to remove the crank handle could result in personal injury and property damage.

- f. Remove crank.

4. Turn on the power to the door.

PLANNED MAINTENANCE RECOMMENDED SCHEDULE

	Daily	Quarterly
Damage Inspection		
Door Operation		
Reversing Edge Inspection		
Photo Eye Inspection		
Mounting Hardware Inspection		
Wall Anchor Inspection		
Fabric Inspection		
Door Limit Inspection		
Motor Brake Inspection		
Bottom Bar Inspection		
Kill Switch Inspection		
Lubrication		
Weather Seal Inspection		
Activator/Control Panel Inspection		
Electrical Connection Inspection		

DAILY INSPECTION

Damage Inspection

Inspect the door to see that components have not been damaged. Example: bent bottom bar, tear in fabric panel, damage to side column(s), etc. (See Figure 9.)

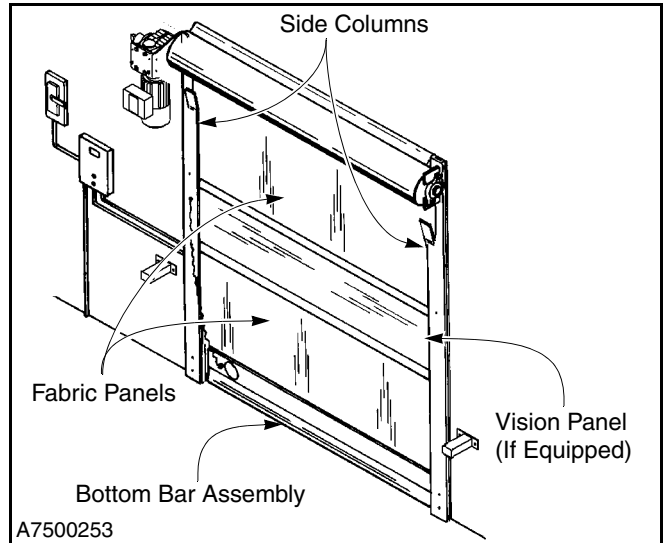


Figure 9

Door Operation

Run the door through four or five complete cycles to be sure the door is operating smoothly and efficiently and that binding or unusual noises do not exist. DO NOT continue to operate the door if it is not running properly, as this could cause additional damage.

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 11.

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 run to the full-open position. Press the control panel down key to close the door after the inspection is complete. If the reversing edge does not work properly, see “PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT” on page 11 for adjustment procedure.

PLANNED MAINTENANCE—QUARTERLY INSPECTION

Photo Eye Inspection

NOTE: Two photo eyes have been provided with the door. These photo eyes act as a safety device to prevent the door from closing if an object is within the photo eye beam. The safety photo eyes are not meant to be used as door activators.

1. Raise the door to the full-open position by pressing the up key on the front of the control panel.
2. Place an object in front of the photo eye in a position where it will break the photo eye beam.
3. Press the down key on the front of the control panel. The door should not operate.

⚠ WARNING

Personnel or objects being used for this inspection should not be in the path of the door panel when this check is made. If photo eye is not working properly the door panel will lower, striking personnel or objects in its path. **DO NOT** use the door if the photo eyes do not operate properly.

4. If the photo eye does not operate properly, the photo eye lens or reflector may be dirty. Clean as required using window cleaner and a clean, soft cloth. If cleaning does not solve the problem, see “PHOTO EYE ADJUSTMENT” on page 13 for adjustment procedures.

QUARTERLY INSPECTION

Mounting Hardware Inspection

Check all mounting hardware to be sure 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 10 through Figure 13.)

MOTOR MOUNTING HARDWARE

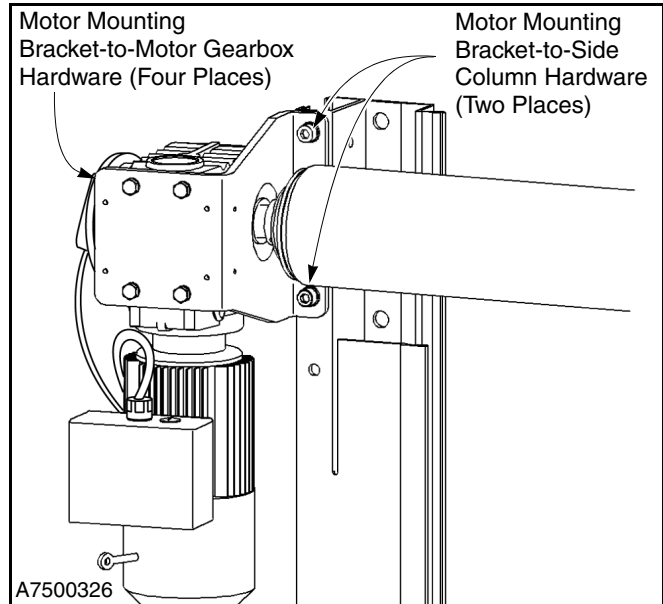


Figure 10

1. Tighten four bracket-to-gearbox screws to (15–20 ft.-lb.).
2. Tighten the two bracket-to-side column socket head cap screws, if loose.

ENCODER HARDWARE

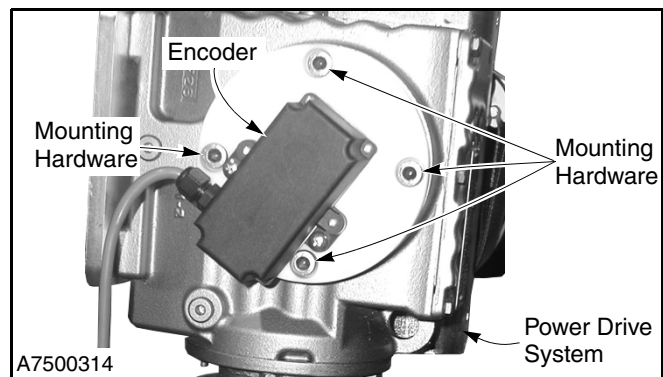


Figure 11

SIDE COLUMN HARDWARE

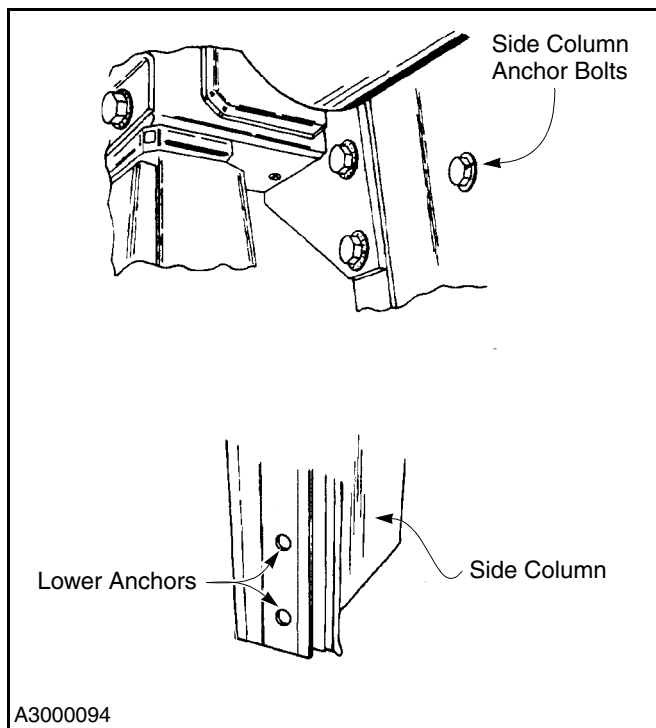


Figure 12

BEARING BLOCK HARDWARE

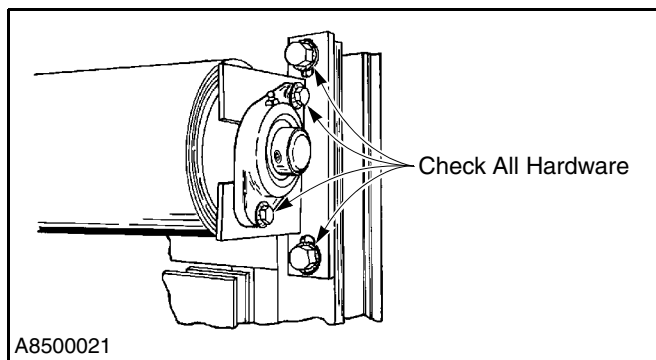


Figure 13

Wall Anchor Inspection

1. Turn off power to door.



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

2. Gain access to wall anchors.
3. Inspect for loose or worn wall anchor(s).
4. Tighten, repair, or replace wall anchor(s) as needed.

NOTE: Remove door from service if any repairs are needed. All repairs must be done in accordance with building code.

5. Restore power to the door and return to service.

Fabric Inspection

1. Check fabric panels for tears. Replace if required.
2. Check all panels to be sure they are tightly enclosed in the wind ribs and pins are in place in wind ribs. (See Figure 14.)

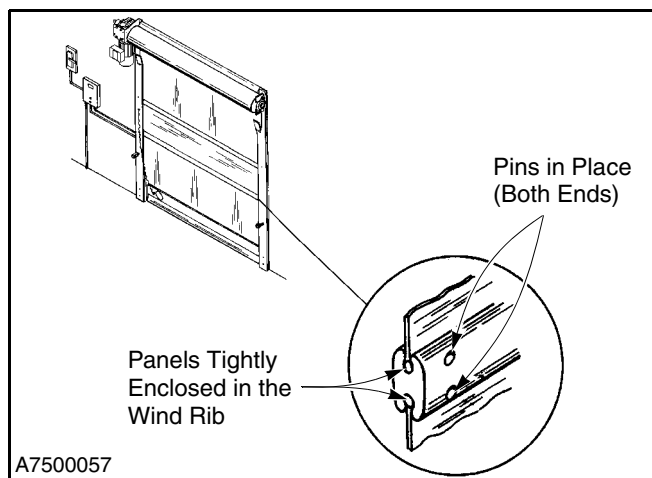


Figure 14

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.

PLANNED MAINTENANCE—QUARTERLY INSPECTION

4. Check lower panel to be sure 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 14.

Door Limit Inspection

CLOSE LIMIT

1. With the door in the closed position, check the yellow vinyl loop on the bottom bar. It should be in the position shown in Figure 15.



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 15.)

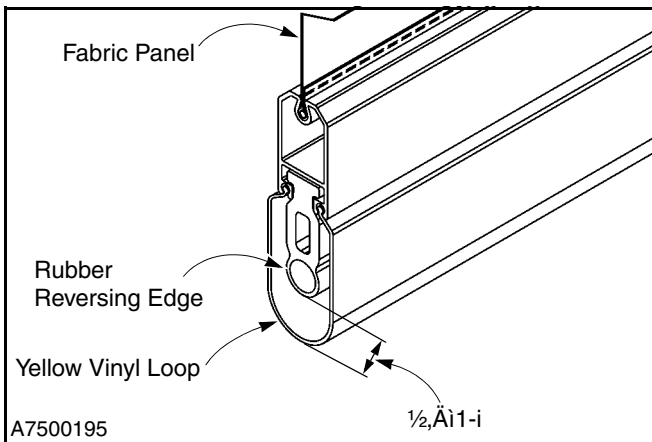


Figure 15

2. If the reversing edge does not seal properly against the floor, see the Rytec System 3 Drive & Control Installation & Owner's Manual for adjustment procedure.

OPEN LIMIT

1. With the door in the open position, check the location of the yellow vinyl loop on the bottom bar. It should be in the position shown in Figure 16.

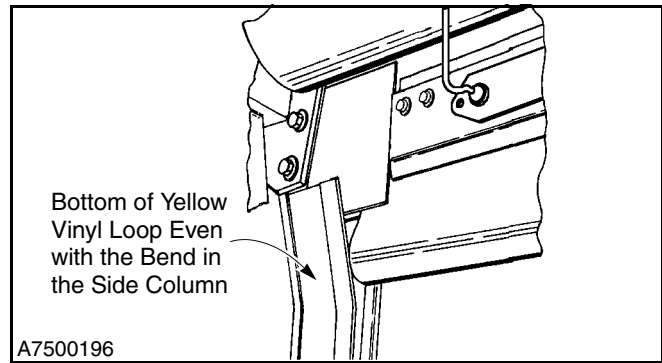


Figure 16

2. If the panel does not stop in the proper location, see the Rytec System 3 Drive & Control Installation & Owner's Manual for 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 14 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 17.)

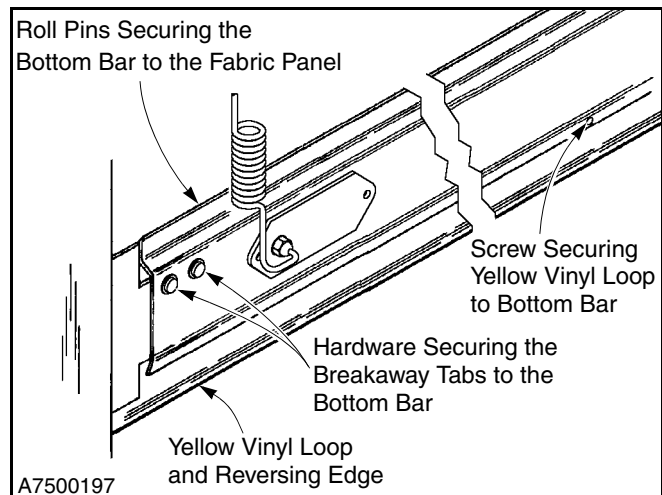


Figure 17

2. Check hardware used to secure the breakaway assembly to the bottom bar on both sides. Tighten as required.
3. Check the reversing edge to see that it is tightly secured in the bottom bar.
4. Inspect the yellow vinyl loop of the reversing edge for abrasion or tearing. Replace if required. Make sure screw securing vinyl loop is in place and tight.

Kill Switch Inspection

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

To check the kill switch assembly, proceed as follows:



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

1. Lower the door to approximately head or chest height, and stop the door.

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

2. Push the breakaway bottom bar out of one of the side columns. (See Figure 18.)

If the kill switch operated properly: Reinstall the bottom bar into the side column and repeat the procedure on the remaining column. (See “BOTTOM BAR ASSEMBLY” on page 2.)

If the kill switch did not operate properly: Check the switch for damage. Replace if required. Check all switch wiring. Adjust and replace as required. (See “PNEUMATIC KILL SWITCH ADJUSTMENT” on page 12.) Retest kill switch.

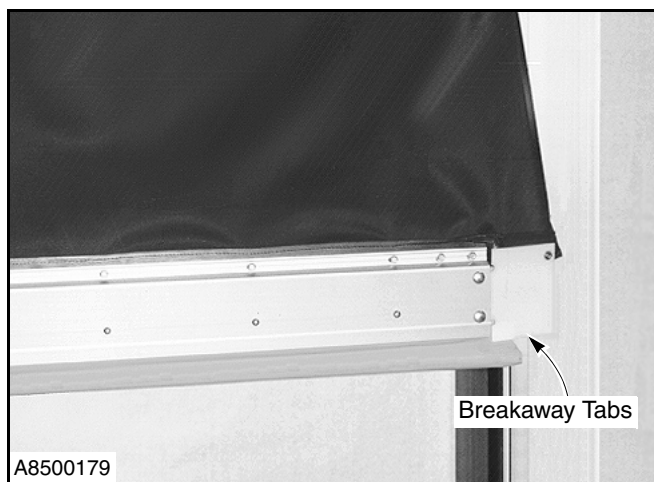


Figure 18

Lubrication

1. **Flanged Bearing:** The fabric roll is supported by a flanged bearing located on the roll shaft end opposite the motor/brake assembly. The flanged bearing is equipped with a grease fitting. Recommended lubrication is a lithium-base grease conforming to NLG1 Grade 2 standards. It should be medium viscosity, low torque, with an operating temperature range of -30°F to $+200^{\circ}\text{F}$. (See Figure 19.)

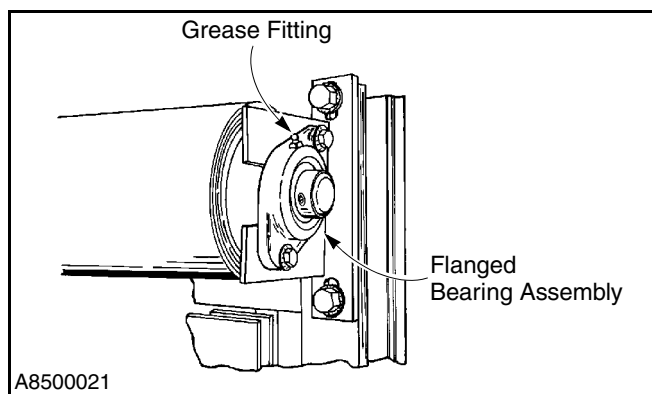


Figure 19

2. **Motor Gearbox Assembly:** The motor gearbox is filled with synthetic oil that does not need to be changed, but should be checked regularly for proper oil level. The level can be checked at the plug located on the lower section of the gearbox.

Recommended oil for refill is as follows:

- Mobil®¹ SHC 630 Synthetic Gear Oil (Mobilgear 630)

Fill the gearbox by removing the breather at the top of the gearbox and add oil through exposed hole. Add oil until it starts draining from the check plug hole. (See Figure 20.)

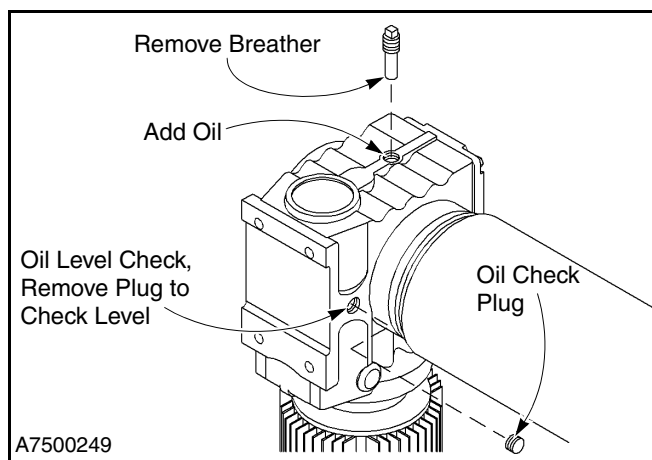


Figure 20

1. Mobil is a registered trademark of Exxon Mobil Corporation.

PLANNED MAINTENANCE—QUARTERLY INSPECTION

Weather Seal Inspection

HEADER ASSEMBLY

Inspect header weather seal for wear or damage. (See Figure 21.) Replace if necessary. (See “WEATHER SEAL” on page 15.)

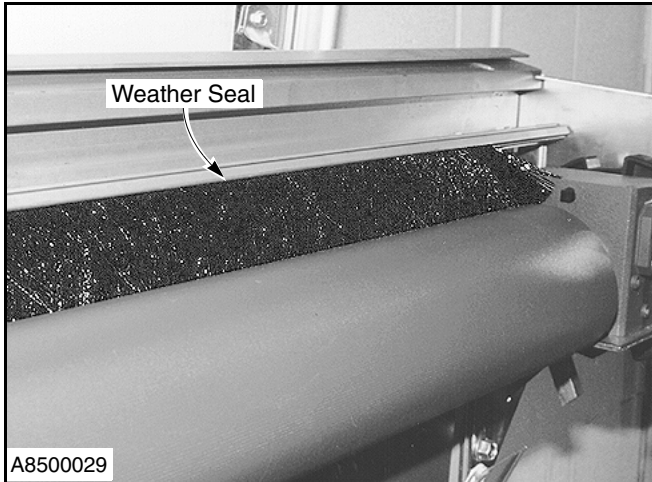


Figure 21

SIDE COLUMNS

Inspect side column weather seal for wear or damage. (See Figure 22.) Replace if necessary. (See “WEATHER SEAL” on page 15.)



Figure 22

Activator/Control Panel 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 with each activator that has been installed on the door. Check the control panel for proper operation. If adjustment or repair is required, see the activator instructions or Rytec System 3 Drive & Control Installation & Owner's Manual.

Typical activators may be floor loops, pull cords, push buttons, motion detectors, radio controls, photo eyes, etc. The opening is controlled by the activator and closing may be controlled by the activator or a timer in the control panel.

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 control panel wiring. See Rytec System 3 Drive & Control Installation & Owner's Manual for control panel inspection procedure.

ADJUSTMENTS

OPEN AND CLOSE DOOR LIMIT POSITIONS

See the Rytec System 3 Drive & Control Installation & Owner's Manual for the proper procedure for adjusting the open and close door limits. The open and close 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 23.)

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.

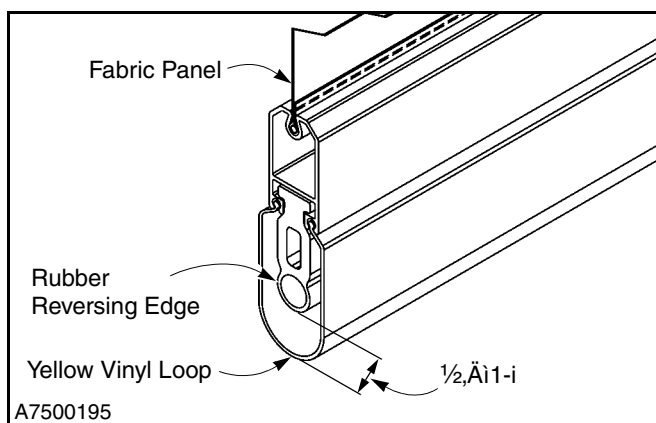


Figure 23

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 24.

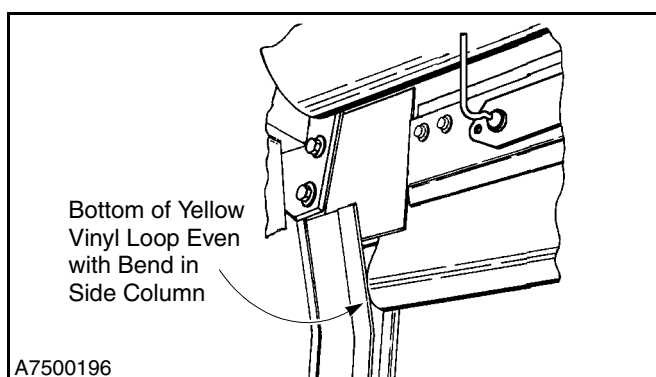


Figure 24

PNEUMATIC REVERSING EDGE SWITCH 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 the person performing the check.

To check the reversing edge switch, run the door through the down cycle. As the door is lowering, 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. Reset the control system after the check is completed.

If the door does not reverse, check the air bleed and sensitivity of the reversing edge switch. The switch is located in the bottom bar on the side opposite the door motor.

Reversing Edge Switch Air Bleed Check

1. The reversing edge switch is located inside the bottom bar assembly. To inspect or adjust the switch, remove the access cover from the face of the bottom bar assembly. (See Figure 25.)

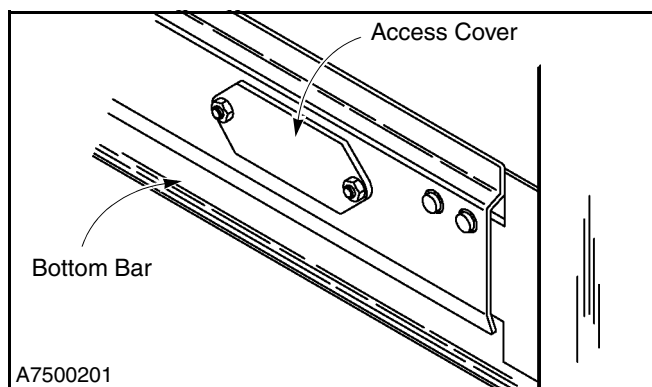


Figure 25

2. Make sure the clear PVC hose is tight on the air input post so that air leakage cannot occur and that vibration will not cause the hose to fall off. Make sure the hose is not kinked. (See Figure 26.)
3. The air bleed has been set at the factory and should not require adjustment. To check the air bleed, turn the air bleed adjustment screws located on the front and back of the switch fully clockwise but do not overtighten. Then turn the screws back counter-clockwise one full turn. (See Figure 26.)

ADJUSTMENTS—PNEUMATIC KILL SWITCH ADJUSTMENT

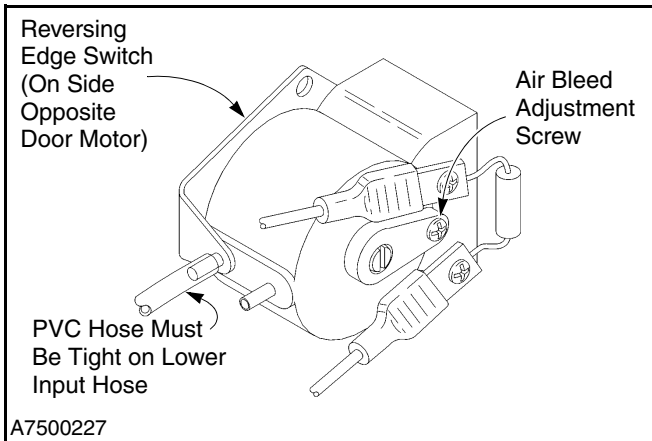


Figure 26

Reversing Edge Switch Sensitivity Adjustment

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 27.)
2. Turn the adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved. Then turn the screw 3/4 turn counterclockwise. Ohmmeter should no longer show continuity. Turning the screw counterclockwise decreases sensitivity. Turning the screw clockwise increases sensitivity. (See Figure 27.)

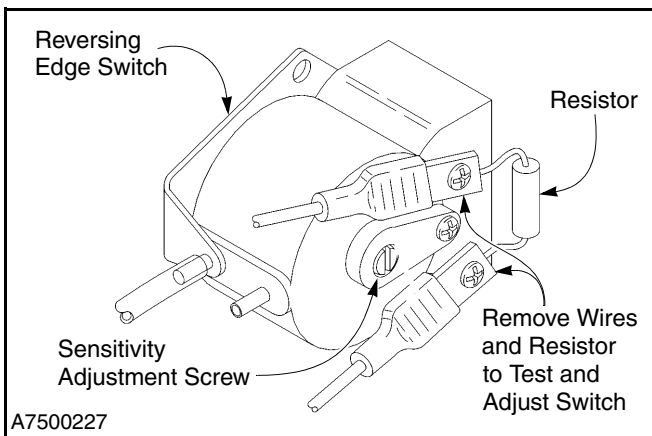


Figure 27

3. Attach resistor and wires and then replace the access cover on the bottom bar.

NOTE: Replace the resistor and mount to either the coil cord wires or the reversing edge switch. The reversing edge connection is dependent on the resistor being present on either the coil cord wires or the reversing edge switch.

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

PNEUMATIC KILL SWITCH ADJUSTMENT

1. With the bottom bar separated from the side columns, locate the kill switch assembly bladder at each end of the bottom bar, then inspect each bladder for damage. Replace if required. (See Figure 28.)

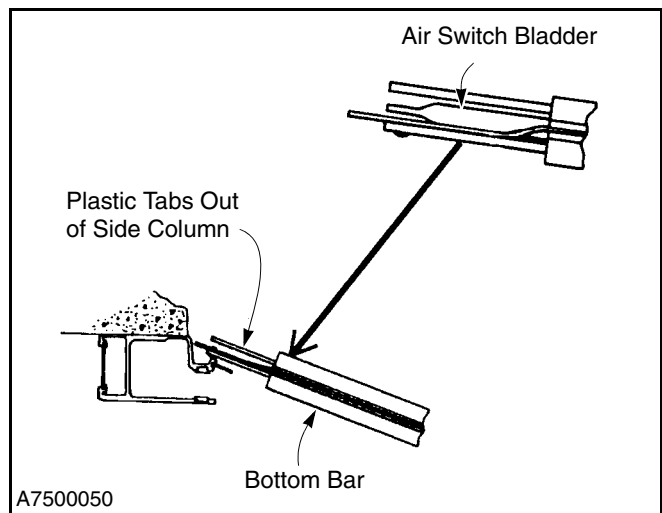


Figure 28

2. Remove the kill switch assembly access cover from the bottom bar. The kill switch is located on the same side as the door motor. (See Figure 29.)

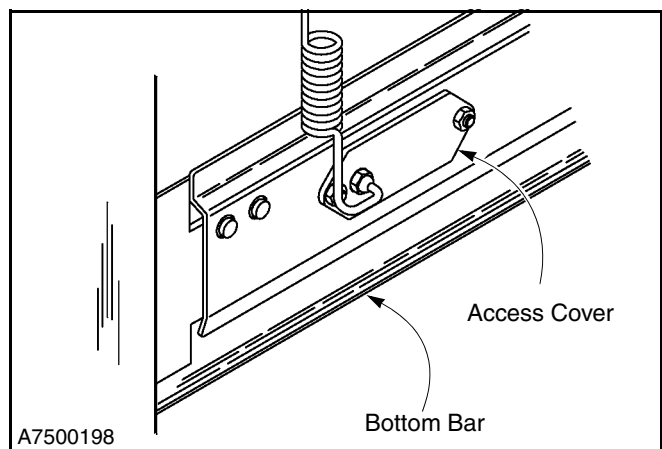


Figure 29

Kill Switch Air Bleed Check

1. 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. Make sure the hose is not kinked. (See Figure 30.)
2. The air bleed has been set at the factory and should not require adjustment. To check the air bleed, turn the air bleed adjustment screws located on the front and back of the switch fully clockwise, but do not overtighten. Then turn the screws back counter-clockwise one full turn. (See Figure 30.)

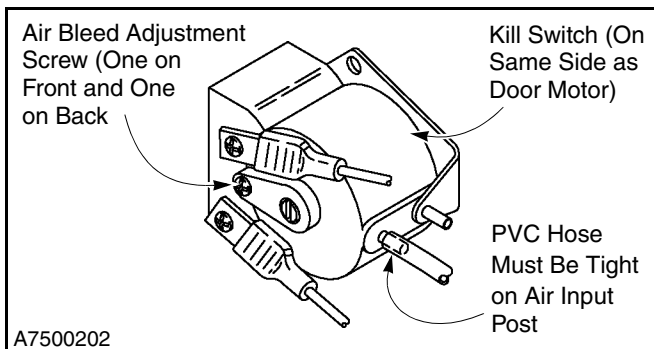


Figure 30

3. To adjust the kill switch sensitivity, See "Kill Switch Sensitivity Adjustment" below.

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 31.)

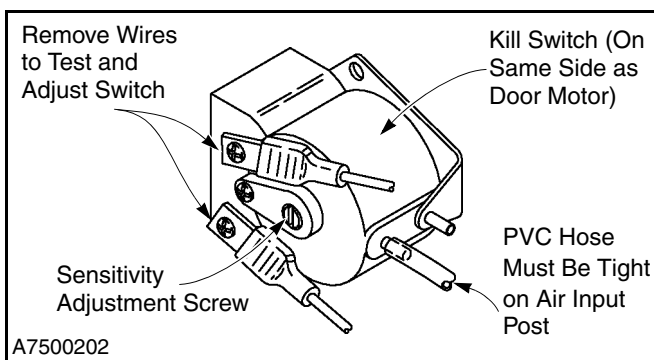


Figure 31

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. Turning the screw clockwise decreases sensitivity. Turning the screw counterclockwise increases sensitivity.

3. Reconnect the wires onto the switch. Replace the access cover on the bottom bar.

NOTE: If the kill switch assembly is too sensitive it may cause the door to stop during the open or closing cycles. If this occurs, re-adjust the kill switch.

PHOTO EYE ADJUSTMENT

Both sets of photo eyes consist of an emitter module and a receiver module. The emitter can be identified by the green light located along the top. The receiver has two lights, one is green and the other is yellow. (See Figure 32.)

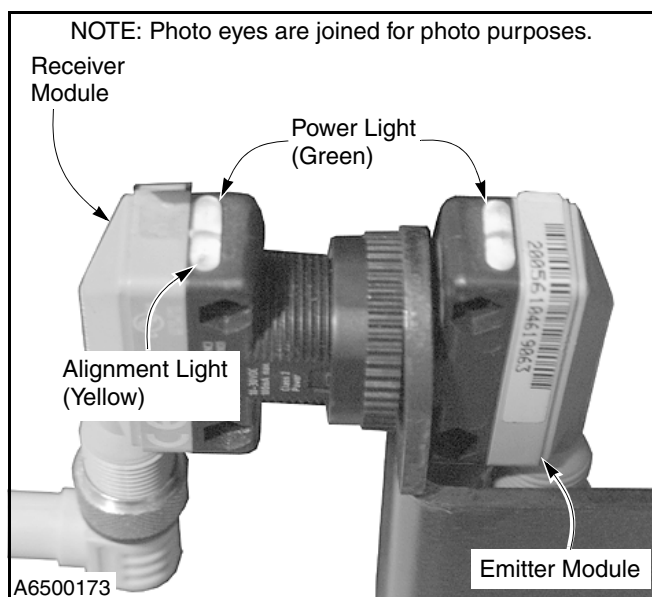


Figure 32

Testing Photo Eyes

With power on, the green light indicates the photo eye module is powered up. When the yellow light on the receiver module is also lit, the emitter and receiver modules 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 go back on.

Troubleshooting

If any of the green lights are not lit, check to make sure power is turned on, and that all wiring has continuity and is installed and connected correctly. If the green lights are on, but the yellow light is off, check the alignment of the emitter and receiver modules and clean each eye using window cleaner and a soft, clean cloth.

1. Turn on the power to the door.
2. Move the door to the half-open position.

WARNING

Take precautions to prevent the door from being operated as you perform the following procedure. Also, be cautious around moving parts exposed in side columns.

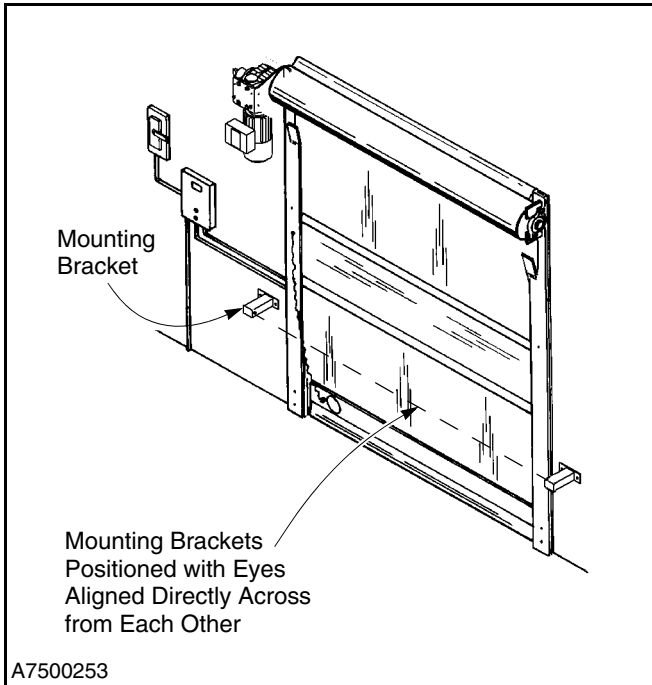


Figure 33

3. Inspect all four photo eyes. If a photo eye appears bent or out of position, readjust the eye or mounting bracket as required.
4. Check the factory settings of the adjustable switches on both receiver modules.

The switch farthest from the lens of the photo eye controls the light/dark mode. It should be set on the light mode (fully clockwise). The switch closest to the lens controls the gain/sensitivity setting. It should be set to maximum gain (fully clockwise).

5. Observe the indicator lights to verify that both sets of photo eyes are aligned. The green light indicates the photo eye modules are powered up. When the yellow light on the receiver module is also lit, the emitter and receiver modules are properly aligned.

FABRIC ROLL ADJUSTMENT

1. If the fabric is not tracking properly, verify that the fabric roll is level. Adjust as required.
(See Figure 34.)

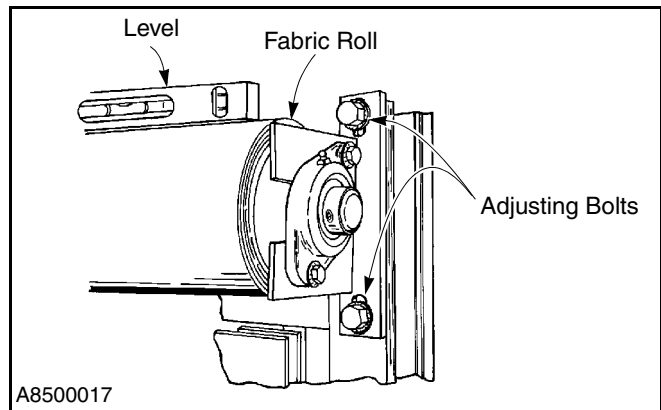


Figure 34

If the fabric roll is level and the fabric does not track properly, make sure side columns are plumb. Adjust as required.

MOTOR BRAKE ADJUSTMENT

1. Remove manual brake release lever.
2. Loosen hex head bolts retaining the dust cover to the motor assembly. Remove the cover.
(See Figure 35.)

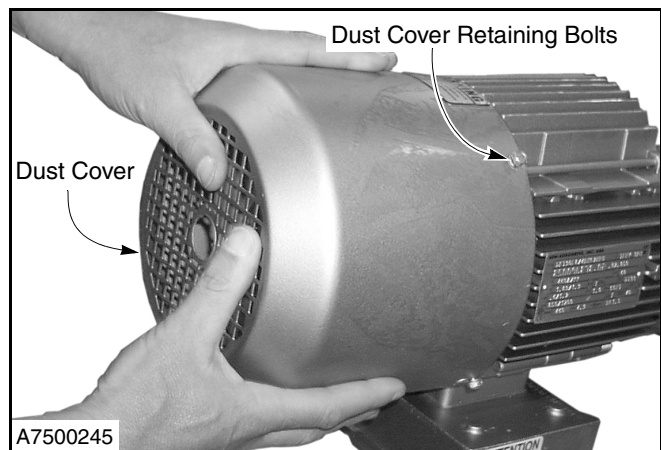


Figure 35

- Securely tighten all brake adjusting nuts.
(See Figure 36.)

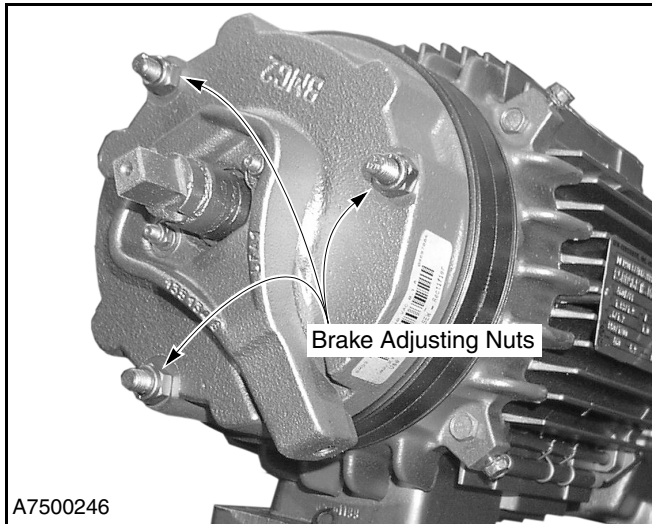


Figure 36



All adjusting nuts must be equally set or the brake parts will wear unevenly.

- Back off all brake adjusting nuts 1/2 turn.
- Reinstall the dust cover and the manual brake release lever.
- Turn on power to 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.

- From either side, remove two serrated-flange hex screws and nuts securing header extrusion and support bracket to side column. (See Figure 37.)

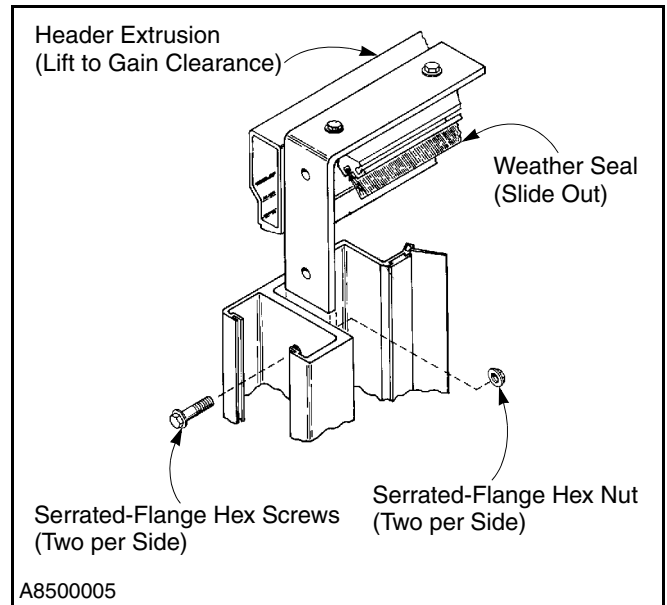


Figure 37

- Lift header extrusion slightly to gain clearance, and remove damaged weather seal by sliding it out of the extrusion.
- Insert new weather seal in channel.
(See Figure 38 and Figure 39 for positions.)

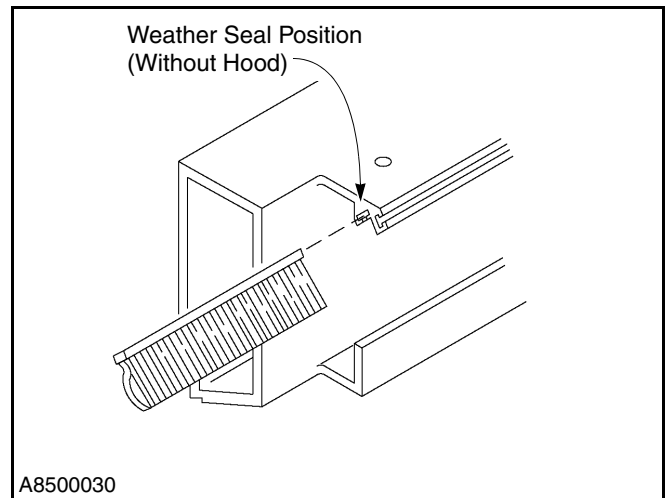


Figure 38

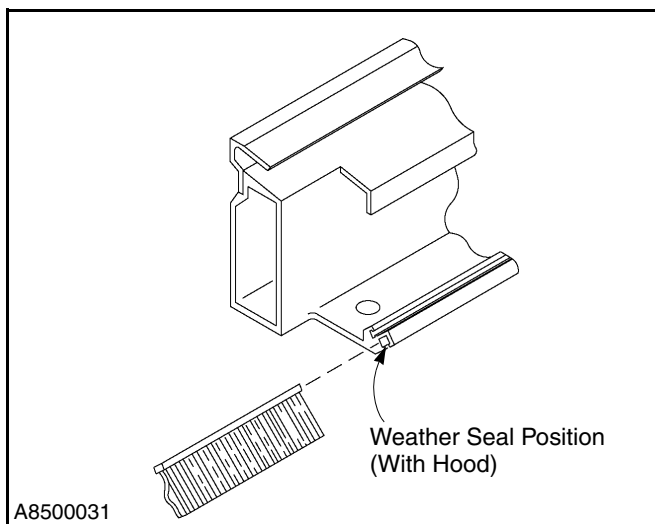


Figure 39

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

Side Columns

1. Drill out rivets in side column and remove old seal. (See Figure 40.)

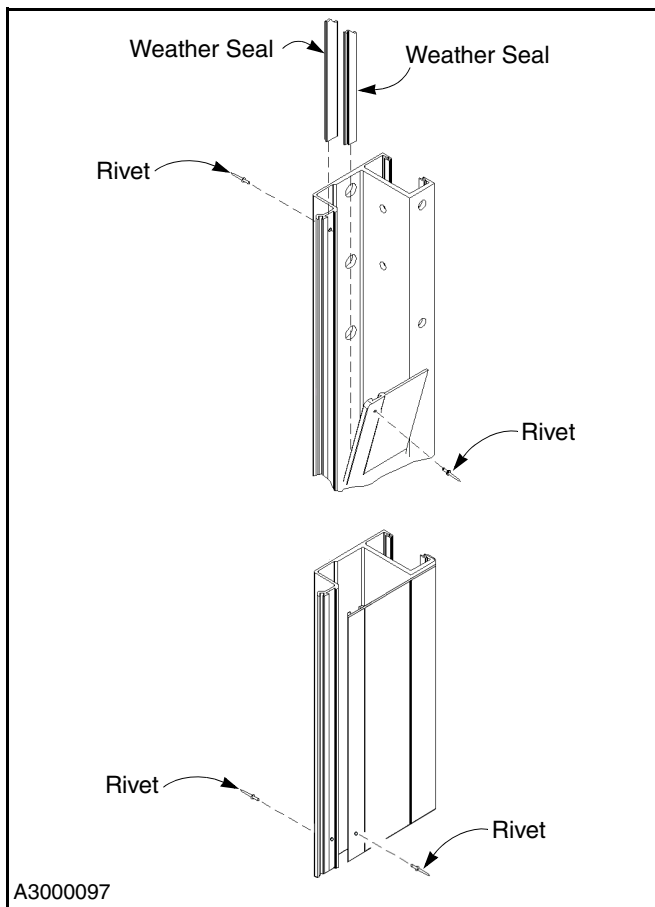


Figure 40

2. Install new seal and rivets in place.

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.
2. To place an order, 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.

DOOR SERIAL NUMBER(S)

To obtain your **DOOR SERIAL NUMBER**, there are three universal locations where this information can be found. These are at the inside of either side column (approximately eye level), on the drive motor, and on the inside of the System 3 control panel. (See Figure 40.)

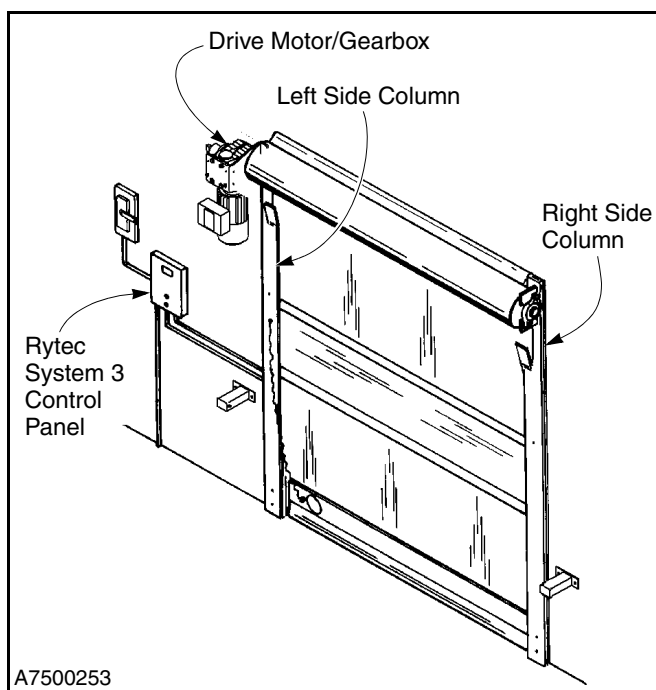


Figure 40

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

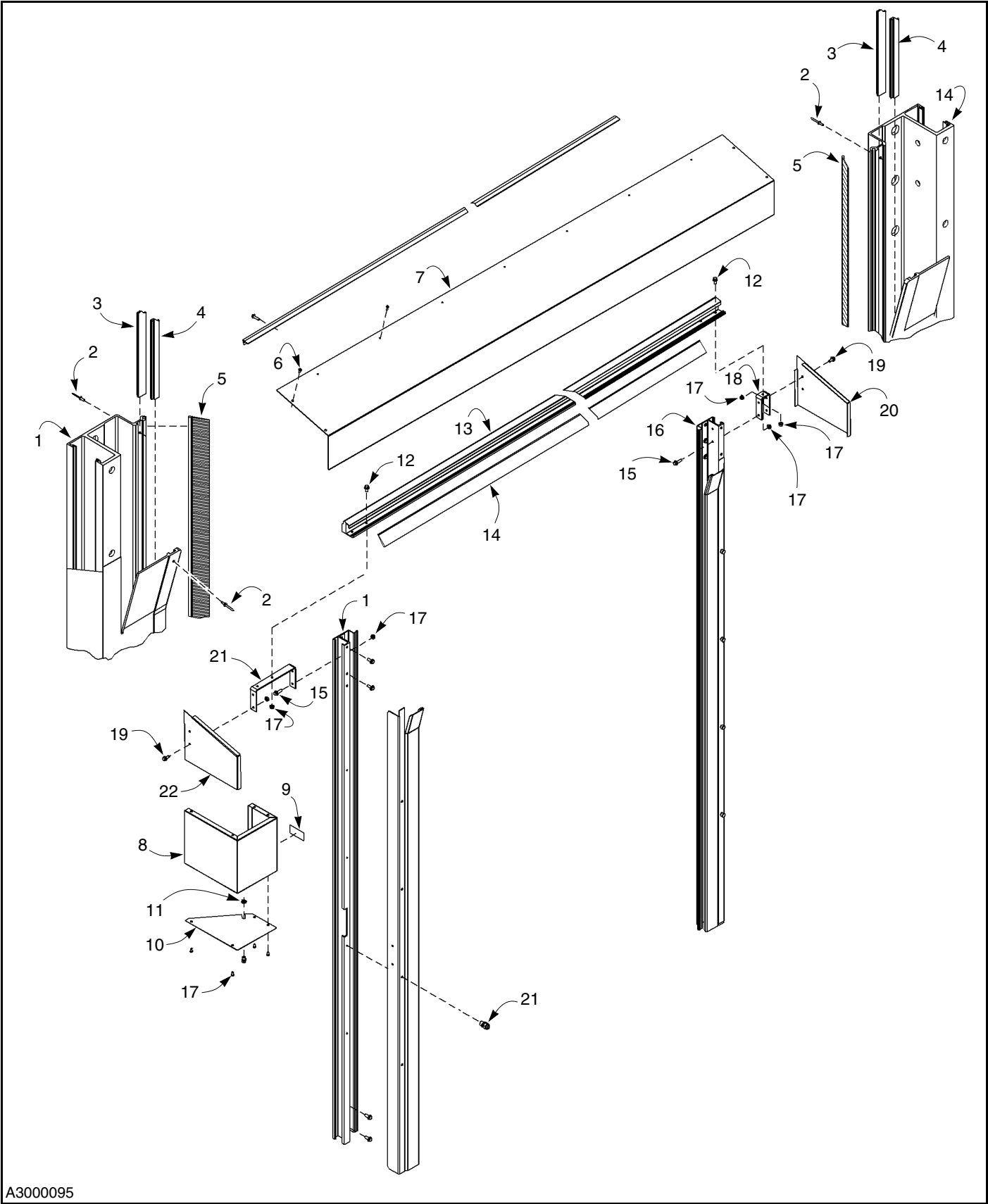


Figure 41

PARTS LIST—SIDE COLUMNS AND HOOD

ITEM	QTY.	PART #	DESCRIPTION				
1	1	0703022*	Side Column, Left	17	23	0553229	Nut, 3/8-16
2	12	0556323	Rivet, 1/8-in. Dia.				Serrated-Flange
3	2	0705011*	Wear Strip, Rear	18	1	0703024	Support Bracket,
4	2	0705011*	Wear Strip, Front				Non-Drive Side
5	2	0007178	Weather Seal				(w/ optional hood)
6	7	S550158	Screw, 1/4 -14 x 3/4-in. LG,	19	23	S550229	Screw, 3/8 -16 UNC x 3/4-in.
			410 SS				LG Button Head,
7	1	0702598*	Hood Cover, (optional)				18-8 SS
8	1	1150020-1	Assembly, Motor Cover,	20	1	0702012	Serrated-Flange
			Standard Motor, LH				Hood Cover, Right
		1150018-1	Assembly, Motor Cover,	21	1	0703837	(optional)
			Explosion Proof Motor, LH				Support Bracket, Optional
9	1	0716019	Label, Remove Motor	22	1	0702011	w/ Hood, Drive Side
			Cover, PR	23	8	0014491	Hood Cover, Left (optional)
10	1	1150021-0	Bottom Cover, Motor Cover	24	1	0016333	Cord Grip, 1/2-in. NPT
11	1	0014498	Nut, Cord Grip, 3/8 NPT				(Not Shown)
12	7	0553229	HLNSF, 3/8-16 in. STL ZN	25	1	07991829	Serial Number Plate
13	1	0703838*	Extrusion, Spreader	26	2	0014077	(Not Shown)
	1	0703874	Extrusion, Spreader	27		0014078	Side Column Motor Sup-
			(used w/ left side motor				port, LH (Not Shown)
			w/ hood and thru beam	28	4	0012154	Transmitter, Photoeye
			emitter)				(Not Shown)
	1	0703875	Extrusion, Spreader	29	4	---NA---	Receiver, Photoeye
			(used w/ right side motor				(Not Shown)
			w/ hood and thru beam				Cable, Photoeye
			emitter)				(Not Shown)
14	1	0009177*	Weather Seal, Brush 3-in.				Bracket, Photoeye
	1	0009178*	Weather Seal, Brush 4-in.				(Not Shown)
	1	0009179*	Weather Seal, Brush 5-in.				
15	4	0550261	Screw, 3/8-16 x 1 1/4-in.				
			Serrated-Flange				
16	1	0703021*	Side Column, Right				

A/R = as required

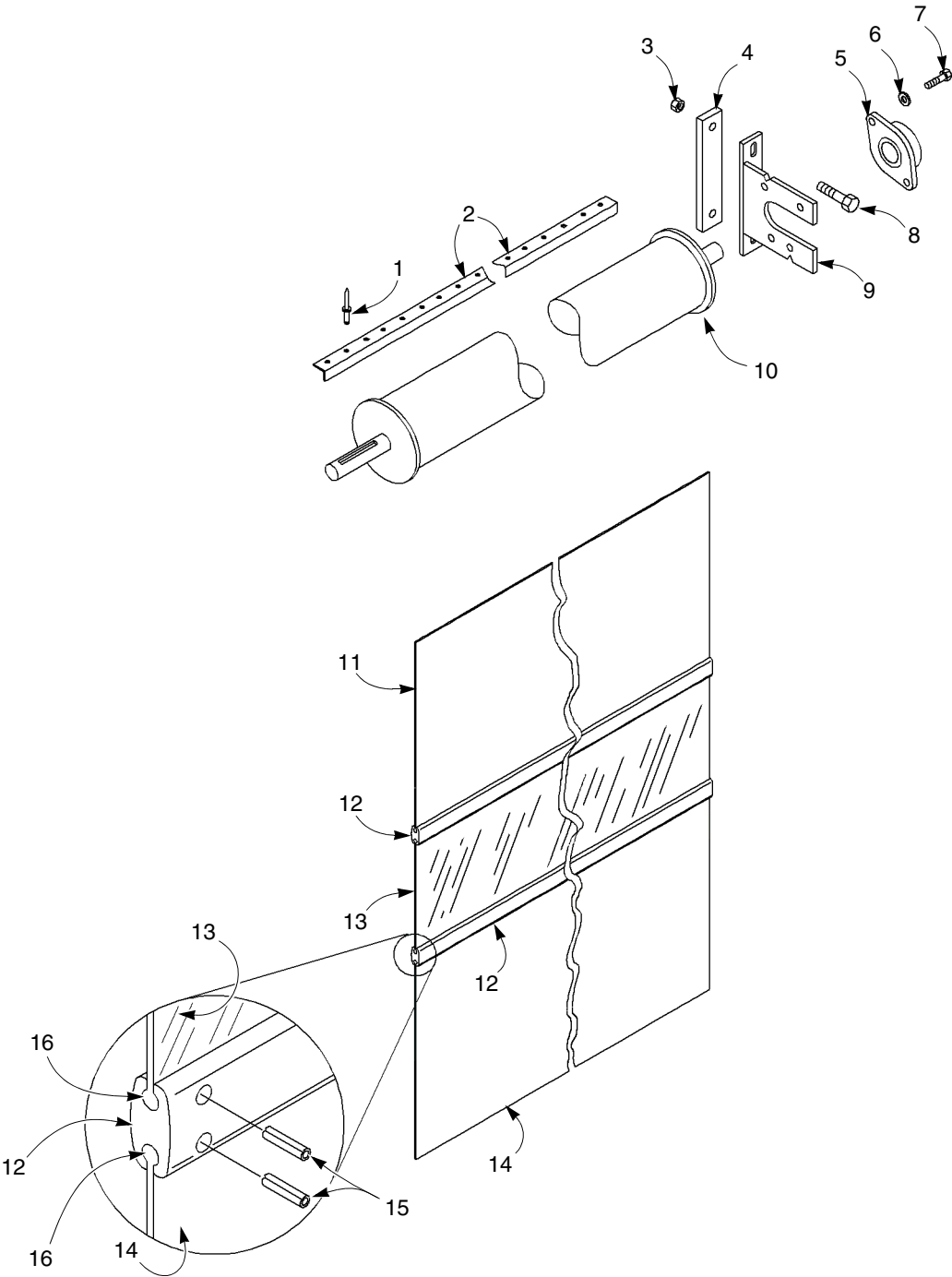
** Items are produced based on manufactured height and width of door.*

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—DOOR PANEL AND FABRIC ROLL

DOOR PANEL AND FABRIC ROLL



A3000089

Figure 42

PARTS LIST—DOOR PANEL AND FABRIC ROLL

ITEM	QTY.	PART #	DESCRIPTION
1	A/R	0556167	Rivet, 3/16-in. Stainless
2	1	0702010*	Strap, Clamp, Panel Mounting
3	2	0553100	Nut, 1/2-13 Serrated- Flange Hex
4	1	0703353	Spacer (required for over- sized doors only)
5	1	0704010	Bearing
6	2	0555119	Lock Washer, 7/16-in.
7	2	0550011	Screw, 7/16-14 x 1-in. Hex Head Cap Screw
8	2	0550303	Screw, 1/2-13 x 1 1/4-in. Serrated-Flange, Hex Head
	2	0550024	Screw, 1/2-13 x 2-in. Serrated-Flange, Hex Head (used w/ item 4)
9	1	07991238	Bracket, Bearing Mounting
10	1	07991732*	Weldment, Drum, 5-in. Dia.
	1	07991733*	Weldment, Drum, 5 1/4-in. Dia.
11	1	0707005*	Upper Panel, Vinyl
	1	Consult Factory*	Upper Panel, Rilon
	1	0707018*	Upper Panel, 2-Ply
12	A/R	0703010*	Extrusion, Wind Rib
13	1	0707019*	Solid Vision Panel, Vinyl (optional)
	1	0707002*	Vision Panel, Standard
	1	0707022*	Solid Vision Panel, 2-Ply (optional)
14	1	0707001*	Lower Panel Section, Vinyl
	1	Consult Factory*	Lower Panel Section, Rilon
	1	0707014*	Lower Panel Section, 2-Ply
15	A/R	0552324	Roll Pin, 1/8-in. Dia. x 5/8-in.
16	A/R	0705012	Cord, 1/4-in. Dia. x (length as required)

A/R = as required

** Items are 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—MOTOR/GEARBOX

MOTOR/GEARBOX

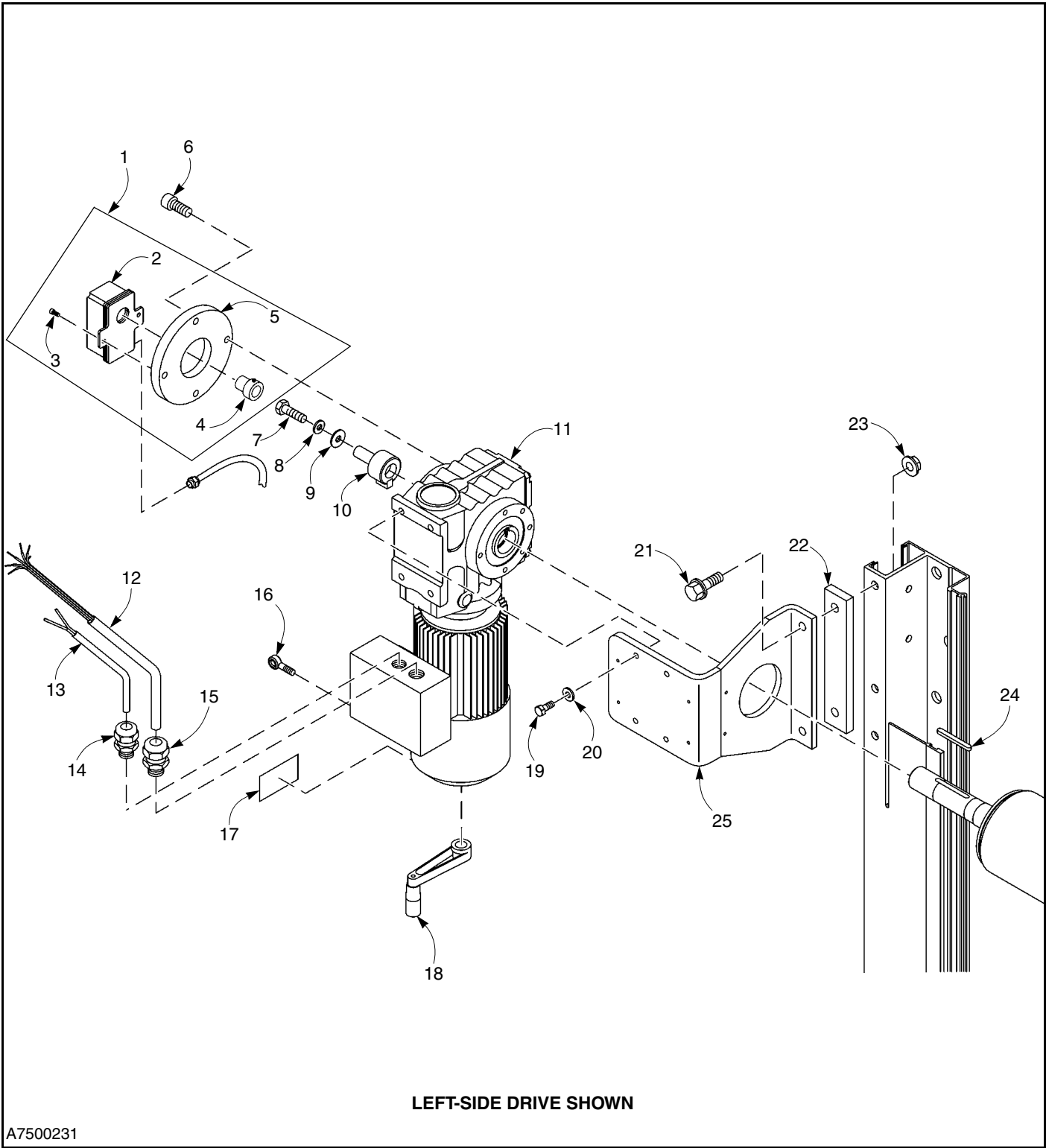


Figure 43

PARTS LIST—MOTOR/GEARBOX

ITEM	QTY.	PART #	DESCRIPTION	ITEM	QTY.	PART #	DESCRIPTION
1	1	07991603	Encoder and Shaft Assembly	17	1	0716001	Decal, Manual Door Operation
2	1	00141028	Encoder, Feig, TST PD, No Bearing	18	1	0704038	Crank Handle Assembly
3	1	0021690	Screw, M3-0.5 x 10 mm	19	4	0021670	Screw, M10-1.5 x 30 mm Hex Head Cap
4	1	S7991558	Shaft, Encoder Coupling	20	4	0021620	Washer, M10 Split Lock
5	1	0705090	Encoder Mounting Plate	21	2	0550303	Screw, 1/2-13 x 1 1/4-in. Serrated-Flange, Hex Head
6	1	S021059	Screw, M8 x 1.25 x 18 mm Stainless-Steel, Socket Head Cap Screw		2	0550024	Screw, 1/2-13 x 2-in. Serrated-Flange, Hex Head (used w/ item 22)
7	1	0021096	Screw, 1/2-13 x 1-in., Hex Head Cap Screw	22	1	0703353	Spacer (required for oversized doors only)
8	1	0554121	Washer, 1/2-in. Split Lock	23	2	0553100	Nut, 1/2-13, Serrated-Flange, Hex
9	1	0021095	Washer, Eurodrive	24	1	0704094	Key, 5/16 x 5/16 x 3.98-in., Round Ends, SS
10	1	00141030	Feig Encoder Hub	25	1	0703475	Bracket, Motor Mounting, (w/ 3.63-in. centerline and rotary limit switch)
11	1	Consult Factory	Motor/Gearbox Assembly		1	0703908	Bracket, Motor Mounting (w/ 2.88-in. centerline and rotary limit switch)
12	1	0141007	Cable, 16/6, Shielded, Type SEOOW, 600V, 90°C, 20 ft.		1	0703911	Bracket, Motor Mounting, (w/ 2.88-in. centerline and System 3)
13	1	0014435	Cord, 18/2, SO (only on motors w/ brake heaters)		1	0703912	Bracket, Motor Mounting (w/ 3.63-in. centerline and System 3)
14	1	0014791	Cord Grip, 1/2-in. (only on motors w/ brake heaters)				
15	1	0014791	Cord Grip, 1/2-in. (1- and 2-hp motors)				
	1	0014734	Cord Grip, 3/4-in. 6 Conductor, (3-hp motor)				
16	1	0550278	Brake Release Eyebolt				

A/R = as required

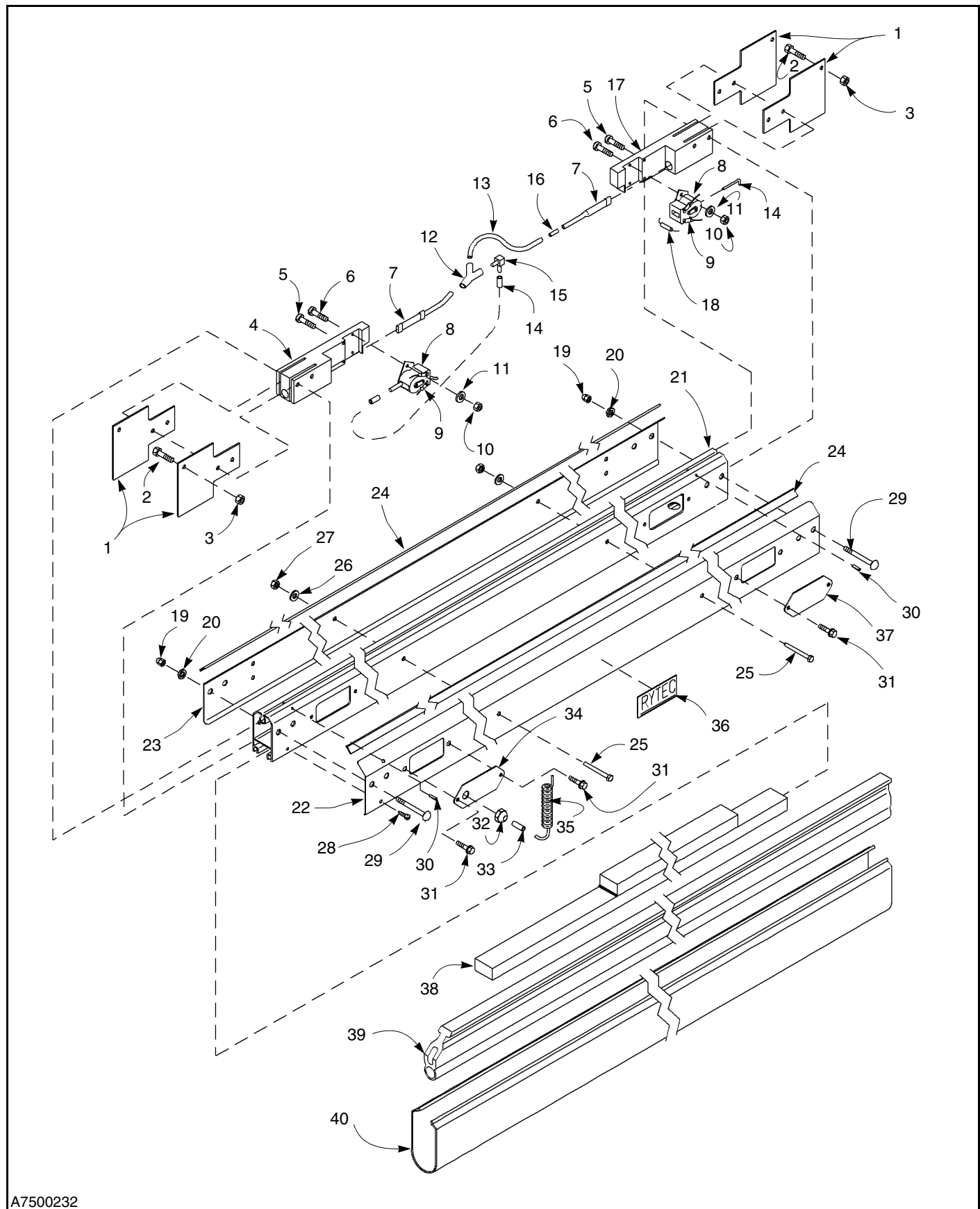
** Item is produced based on manufactured height and width of door.*

ALWAYS INCLUDE SERIAL NUMBER OF DOOR WHEN PLACING ORDER

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PARTS LIST—BOTTOM BAR ASSEMBLY

BOTTOM BAR ASSEMBLY



A7500232

Figure 44

PARTS LIST—BOTTOM BAR ASSEMBLY

ITEM	QTY.	PART #	DESCRIPTION	ITEM	QTY.	PART #	DESCRIPTION
1	4	0705094	Breakaway Tab	24	2)	0705107	Cap, Sheet Metal Edge
2	2	0021531	Screw, 1/4-20 x 3/8-in. Phillips Flat Head	25	2	S021692	Screw, 1/4-20 UNC x 2 1/2-in. Hex Head Cap, Stainless Steel
3	2	0553103	Nut, 1/4-20 Serrated-Flange Hex	26	2	S021044	Washer, 1/4-in. Split Lock, Stainless Steel
4	1	0705014	End Block, Left	27	2	S021590	Nut, 1/4-20 UNC Acorn, Stainless Steel
5	4	S021025	Screw, #10-12 x 3/4-in. Truss Head, Stainless Steel	28	1	S551230	Screw, #6 x 5/8 Tapping Pan Head, Stainless Steel
6	4	0021029	Threaded Stud, 8-32 x 1/2-in.	29	4	S021652	Screw, 3/8-16 UNC x 2 1/2-in. Hex Head Stainless Steel
7	2	0713000	Air Switch	30	2	0021093	Roll Pin
8	2	0211397	Pressure Switch	31	4	0021603	Screw, 1/4-20 x 3/4-in. Serrated-Flange
9	4	0014483	Wire Terminal, Slip-On, Female	32	2	0014001	Cord Grip, 1/2-in. NPT
10	4	0553180	Nut, 8-32	33	2	0013006	Tube
11	4	0554179	Lock Washer, #8	34	1	S703217	Cover, w/ Hole
12	1	0804336	Y-Connector Tube, 3/16-in.	35	A/R	0704075	Coil Cord Assembly, 4-Conductor, 24-in.
13	1	0804219*	Tube, 3/16-in. I.D. Vinyl		A/R	0704035	Coil Cord Assembly, 4-Conductor, 36-in.
14	2	0007321	Tube, 4 mm O.D. x 5-in. Vinyl	36	1	0016658	Decal, Rytec
15	1	0204552	Hose Fitting, 90° Elbow	37	1	S703009	Cover, w/o Hole
16	1	0804337	Connector Tube, 3/16-in. Union	38	1	0703002*	Weight, Bottom Bar
17	1	0705013	End Block, Right	39	1	07991514*	Foam Reversing Edge Assembly
18	1	00141005	Resistor	40	1	07991752*	Loop Seal, Yellow Vinyl
19	4	S021070	Nut, 3/8-16 UNC Acorn, Stainless Steel		1	07991753*	Loop Seal, White Vinyl
20	4	S554225	Washer, 3/8-in. Split Lock, Stainless Steel		1	07991754*	Loop Seal, Screen Material
21	1	0703743*	Bottom Bar, 1 Piece SS		1	07991782*	Loop Seal, Black Vinyl
	1	0703744*	Bottom Bar, 1 Spliced SS		A/R	07991000*	Loop Seal, Hypalon, Low Profile
22	1	S702843	Shell, Front 1 Piece SS	41	1	0716002	Warning Tag, Coil Cord (not shown, used w/ item 29)
	1	S7991878	Shell, Front Weldment, SS				
23	1	S702844	Shell, Rear 1 Piece SS				
	1	S7991879	Shell, Rear Weldment, SS				

A/R = as required

** Items are 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.

