R Y T E C

Fast-Fold®

Owner's Manual

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WARRANTY

The Fast-Fold 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. This warranty is applicable for all Fast-Fold models other than FF6CG and FF6RG.

Rytec Corporation (Seller) warrants that the Fast-Fold 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 warranty on the following items: BFGS track and rollers — nine (9) years and GS track and rollers — four (4) years. This extended warranty covers parts only. PVC knobs, rope ties, and Hypalon panel seals are considered wear items and, as such, are not covered under this warranty. Quartz heat lamps and sleeves are not covered under this warranty. 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 Fast-Fold® Door in a manner which will ensure maximum life and trouble-free operation.

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

DO NOT OPERATE OR PERFORM MAINTENANCE ON THIS DOOR UNTIL YOU HAVE READ AND UNDERSTAND ALL THE INSTRUCTIONS 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 your representative or Customer Support.

Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual for general information about wiring connections. The actual schematic for your particular door has been shipped with the door and is located inside the control panel.

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 door of the System 3 control panel.

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.

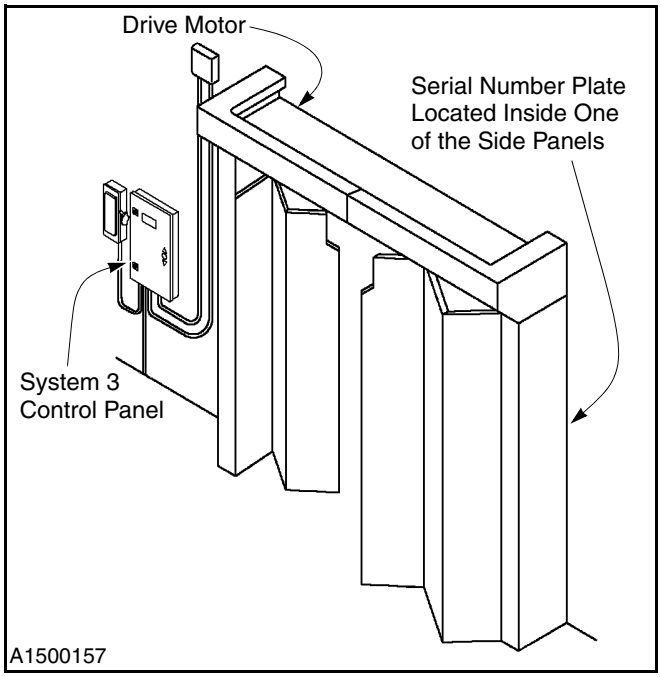


Figure 1

HOW TO USE MANUAL

Throughout this manual, the following key words are used to alert the reader of 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 COMPONENTS

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 informational purposes only. It should not be relied upon solely for the operation and maintenance of your door and its sub-assemblies.

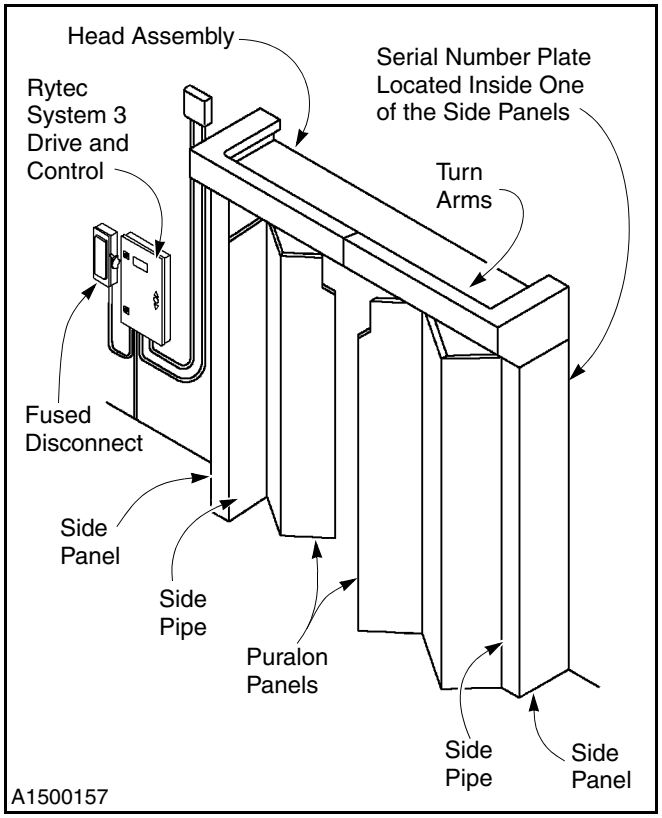


Figure 2

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

OPERATION

CONTROL PANEL

The Fast-Fold door is equipped with a Rytec System 3 Drive & Control. This is a solid-state, micro-processor-based, high-speed door control. It provides a means for programming and controlling the door and displays status and alarm messages.

Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual for complete instructions.

POWER DRIVE SYSTEM

The Fast-Fold power drive system is made up of the following components:

1. Power drive system — consists of an electric motor/brake and gearbox assembly. The electric brake stops the door when power to the motor is off. A manual brake release is provided to allow the door to be manually opened or closed during routine maintenance or a power failure.
2. Drive chain/connecting rod assembly and adjustment sprockets.
3. Drive motor and position encoder.
4. Long and short come-along brackets — secured at the upper and lower connecting rod system and turn-arm rollers. When the motor is energized, the upper and lower connecting rods are driven in opposite directions to drive the come-along brackets and turn-arm assemblies, which in turn opens or closes the door. (See Figure 3.)

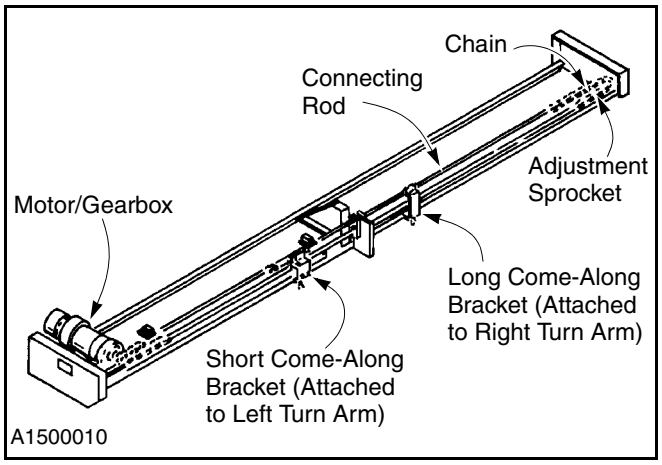


Figure 3

Encoder

The Fast-Fold door uses a position encoder mounted on the motor. The encoder provides the control box with digital information allowing the control box to know the exact position of the door and to control the fully-open and -closed positions.

Door Panel Material

Rytec Fast-Fold door panels use a specially formulated type of PVC called Puralon™[1]. Puralon panels can be extruded in different thicknesses and chemical make-ups for specific applications. A few examples:

- ⅜-in. thick — standard on most doors
- ½-in. thick — high-wind or large door applications
- ⅜-in. thick — low-temperature freezer applications

Also available for use in special freezer applications is an insulated, non-Puralon panel.

DEFROST SYSTEM (OPTIONAL SYSTEM)

Fast-Fold doors configured for freezer use, may use an optional defrost system to help prevent frost from building up on the warm side of the door. A freezer door can be equipped with one of three defrost systems:

- Heat lamp only.
- Heat lamp with unheated blower.
- Heated blower.

For additional information on how the defrost system operates, refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

PLANNED MAINTENANCE

RECOMMENDED SCHEDULE

NOTE: The following maintenance schedule is recommended for the Rytec Cycle-Plus™[2] maintenance program. (See Table 1.)

Table 1

	Daily	Quarterly
Visual Damage Inspection	■	
Door Operation Inspection	■	
Mounting Hardware Inspection		■
Door Panel and Seal Inspection		■
Door Open and Close Limit Inspection		■
Power Drive Brake Inspection		■
Power Drive System Inspection		■
Turn Arm and Come-Along Bracket Inspection		■
Side Pipe Inspection		■
Control Panel and Activator Inspection		■
Electrical Connections Inspection		■
Lubrication		■
Heat Lamp Inspection		■
Blower Inspection		■
Hard-Panel Door Limit Switch Inspection		■

DAILY INSPECTION

Visual Damage Inspection

Visually inspect the door components such as the Puralon panels, side panels, head assembly, side pipes, panel seals, rope ties, and turn-arm assemblies for damage. (See Figure 4.)

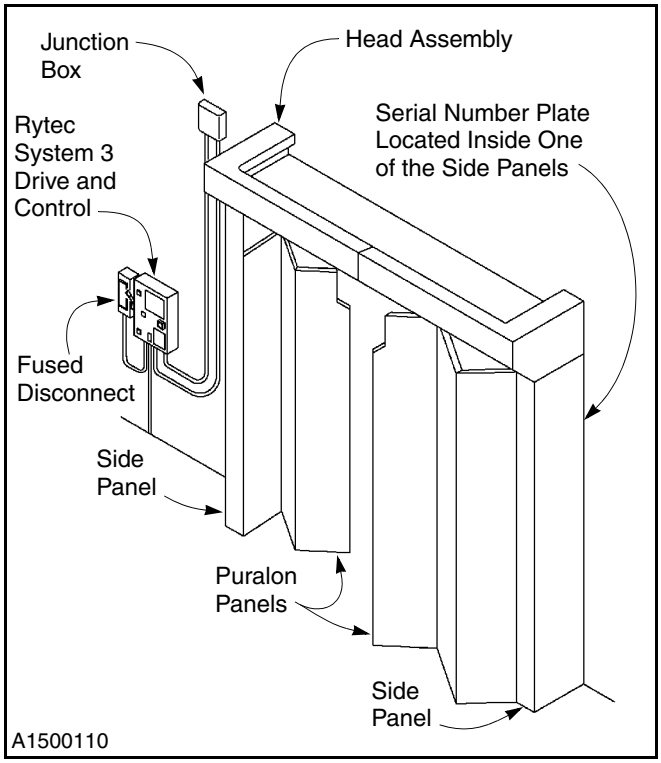


Figure 4

Head Assembly: Inspect for dents or damage that may prevent the door from opening or closing properly.

Door Panels: Make sure the panels are clean. Inspect for holes, tears, and worn areas. Clean or replace door panels as required.

Door Panel Seals: Inspect the seals between the door panels and between the panels and the left and right panels for holes, tears, and worn areas.

Side Panels and Covers: Inspect for damage that may prevent the door from operating properly.

1.Puralon is a trademark of Rytec Corporation.
2.Cycle-Plus is a trademark of Rytec Corporation.

Door Operation Inspection

Run the door through four or five complete open and close cycles to make sure that it is operating smoothly and efficiently. There should be no binding or unusual noises as the door moves. DO NOT continue to operate the door if it is not running properly, as this could further complicate any problem.

QUARTERLY INSPECTION

Mounting Hardware Inspection

1. Turn off power to the door.

⚠ WARNING

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

2. Check to make sure all nuts, bolts, and screws are tight throughout the door. Example: through-wall mounting bolts, floor anchors, etc. (See Figure 5 and Figure 6.)

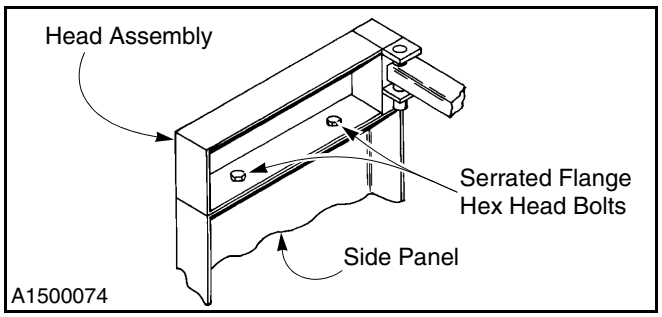


Figure 5

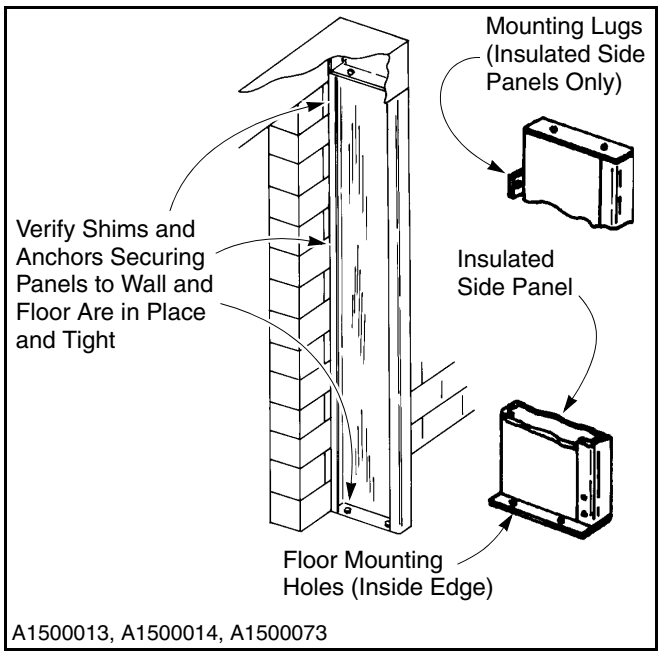


Figure 6

3. Turn on power to the door.

Door Panel and Seal Inspection

1. Turn off power to the door.

⚠ WARNING

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

2. Check that all panel mounting hardware is in place and tight. (See Figure 7.)

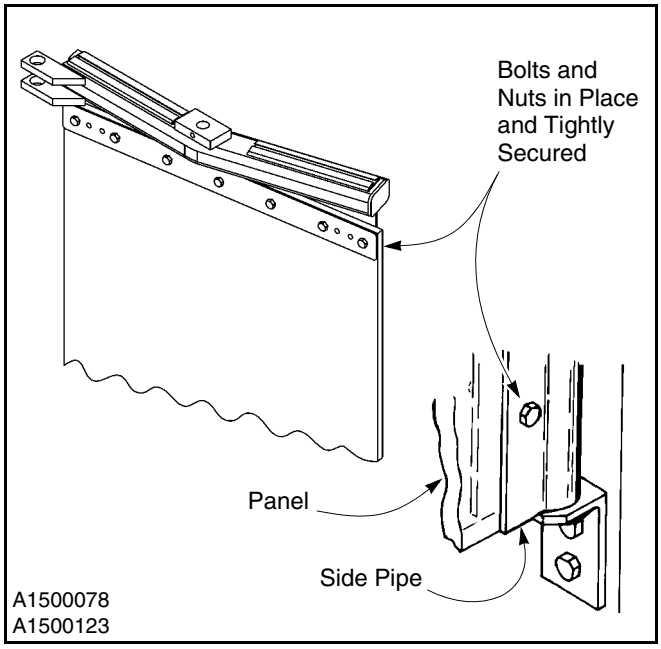


Figure 7

3. Check the door panels for wear, damage, and misalignment. If the panels are dirty, clean as required, using a household surface/glass cleaner and a clean, soft cloth.

NOTE: When cleaning the panels, DO NOT use an abrasive cleaner or petroleum solvent.

4. Check to make sure the seals are not torn or damaged. They should also be securely fastened to the door panels and side panels. (See Figure 8.)

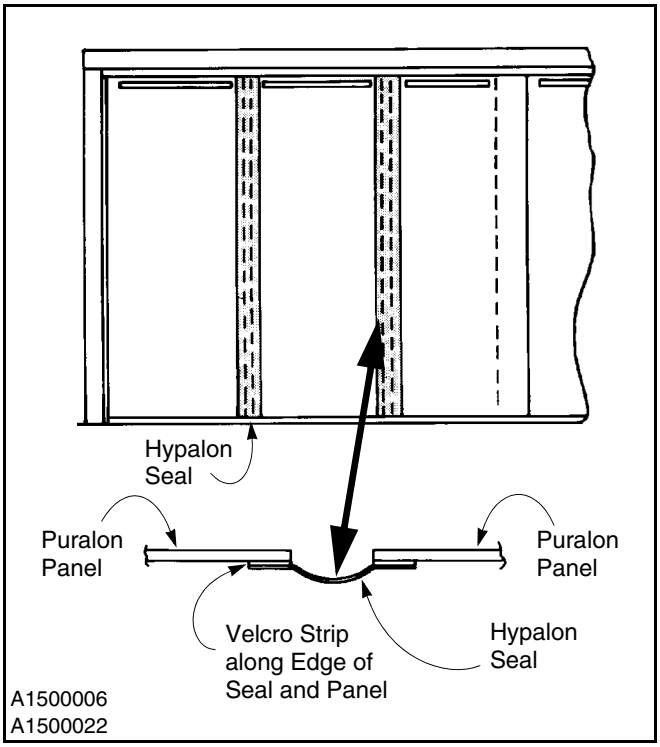


Figure 8

5. If the door uses rope ties, the knobs and rope should be in place and properly tied. (See Figure 9.)

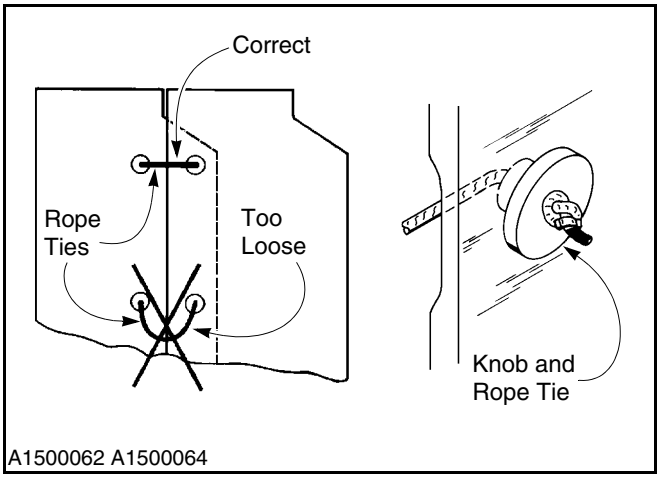


Figure 9

6. If the door is equipped with side-pipe weather seals or side seals, inspect the seals for tears or damage. Make sure the hardware securing the seals is in place and tight.
7. Turn on power to the door.

Door Open and Close Limit Inspection

The door should open and close completely, without traveling beyond either direction.

⚠ CAUTION

Improperly adjusted open and close limits can result in damage to the drive system.

CLOSE LIMIT

1. Turn on the power and close the door.
2. Check the spacing between each door panel. If the door is not closed completely, the leading panels will have a gap between them. If the door is closed too tightly, the rubber bumpers on the turn arms will be compressed. (See Figure 10.)

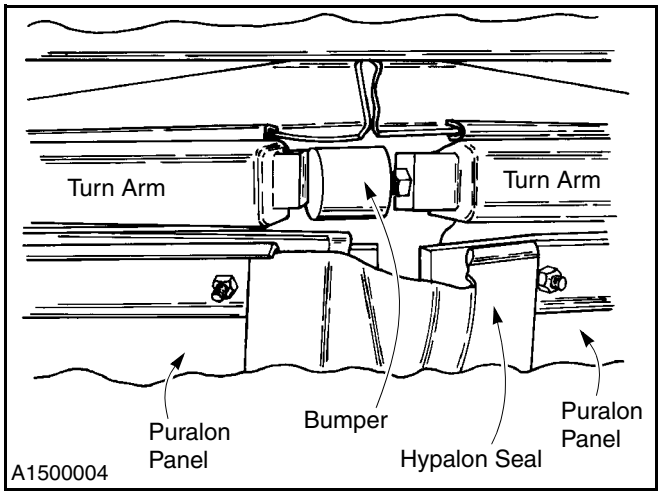


Figure 10

NOTE: To check if the door has closed too far, perform the following procedure.

3. With the door closed, turn off the power. Then manually release the brake. If the door springs back toward the open direction as the brake is released, the door is closing too far and the close limit should be readjusted. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

OPEN LIMIT

1. Turn on the power and open the door.
2. Check that the door is in the fully open position. If the door is not open all the way, the leading panels will be inside the door opening. If the door is open too far, the rubber bumpers between the turn arms will be compressed. (See Figure 11.)

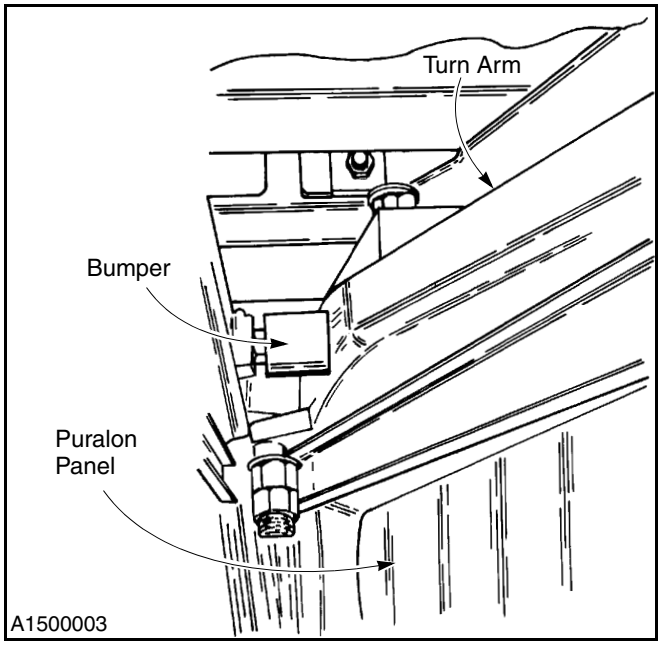


Figure 11

NOTE: To check if the door has opened too far, perform the following procedure.

3. With the door open, turn off the power. Then manually release the brake. If the door springs back toward the close direction as the brake is released, the door is opening too far and the open limit should be readjusted. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

Power Drive Brake Inspection

The power drive brake assembly is designed to stop the door at the positions indicated in the "Door Open and Close Limit Inspection" on page 5.

If the open and close limits are set properly and the door drifts past the set limits, the power drive brake should be adjusted. (See "MOTOR BRAKE" on page 12.)

Power Drive System Inspection

1. Turn off power to the door.

⚠ WARNING

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

2. Check that the motor mount and gearbox hardware are in place and tight. (See Figure 12.)

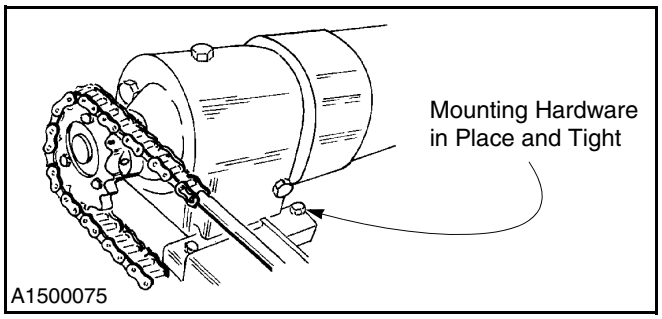


Figure 12

3. Check that the sprocket hardware and set screws are in place and tight. (See Figure 13.)

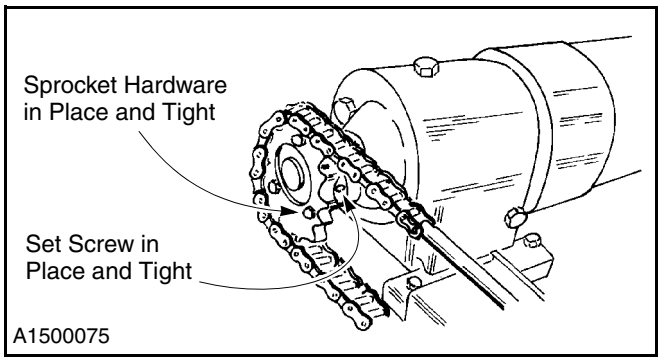


Figure 13

4. Make sure the master link between the drive chain and each connecting rod is securely fastened. (See Figure 14.)

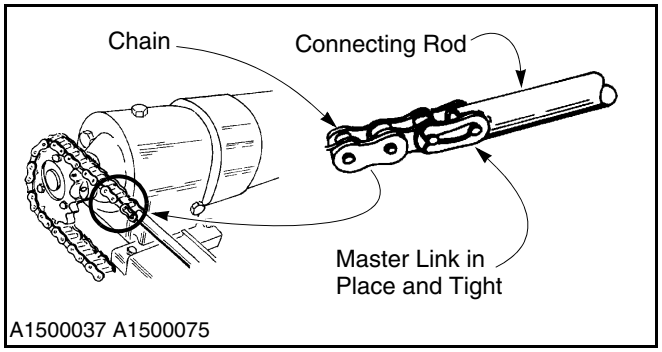


Figure 14

5. Check the drive sprocket, adjustment sprocket, drive chain, connecting rods, and guide blocks. They should all be aligned and the guide block should be tightly secured. (See Figure 15.)

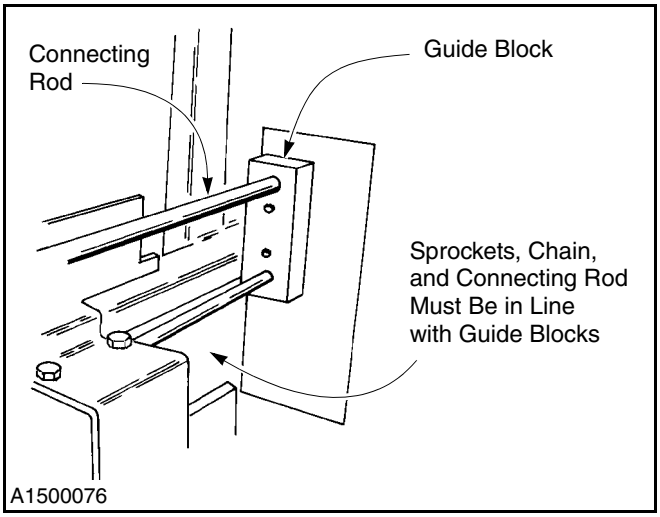


Figure 15

6. Check for proper chain tension. With the door in the fully open position, squeeze together the drive chain and connecting rod at the midpoint between the center plate and the adjustment sprocket. There should be a 2-in. gap between the chain and rod. (See Figure 16.)

   Adjust the chain as required. See “CHAIN TENSION” on page 12.

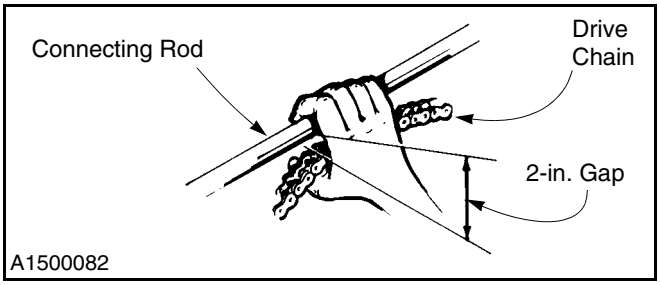


Figure 16

7. Turn on power to the door.

Turn Arm and Come-Along Bracket Inspection

1. Turn off power to the door.

⚠ WARNING

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

2. Inspect both come-along brackets to ensure all hardware is in place and tight. (See Figure 17.)
3. Check each track roller assembly. All hardware must be in place and tight. Rollers must move freely and be in firm contact with the track. The track should not be worn or damaged. (See Figure 17.)

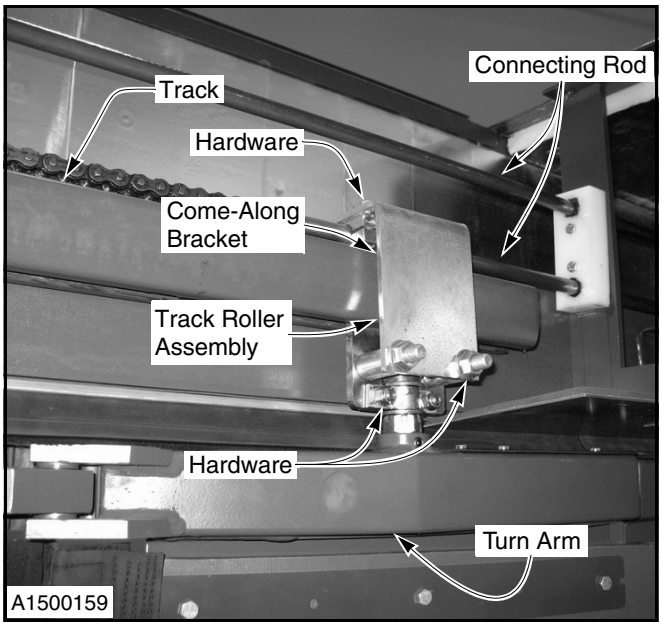


Figure 17

4. Inspect the hinge on each turn arm. The hinge pins, bushings, and set screws must be in place and tight. (See Figure 18.)

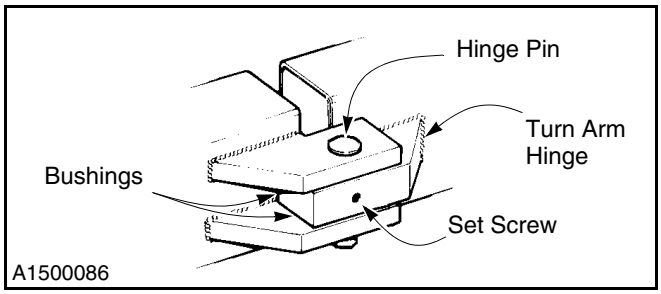


Figure 18

5. Turn on power to the door.

Side Pipe Inspection

1. Turn off power to the door.

⚠ WARNING

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

2. Check that the spacer and hardware securing the side pipe to the upper side pipe pivot pin are in place and tight. (See Figure 19.)

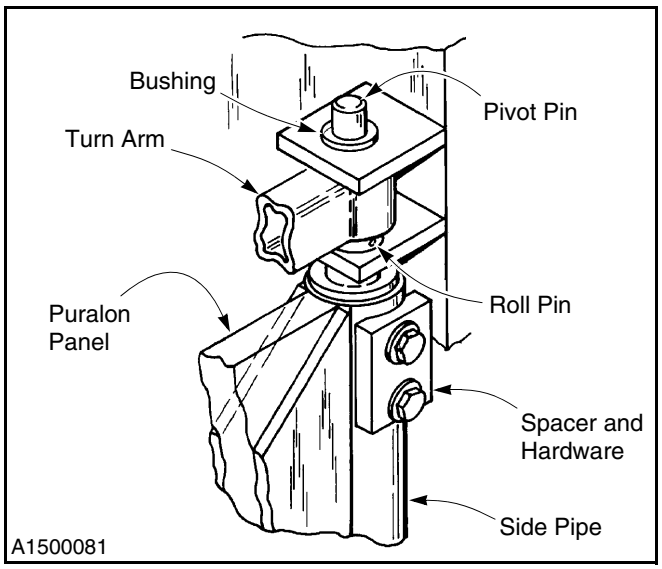


Figure 19

3. Check that the roll pin in the pivot pin and turn arm is securely in place.
4. Check the condition of the bushings. Replace any worn, missing, or damaged hardware.
5. Check the hardware securing the bottom mounting brackets to the side pipes. Also inspect the bushings. Replace any worn, missing, or damaged hardware as required. (See Figure 20.)

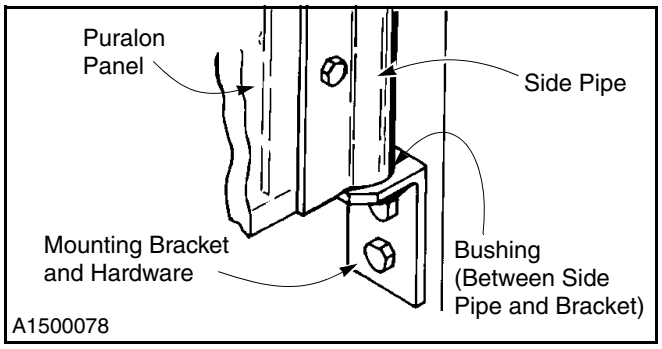


Figure 20

6. Turn on power to the door.

Control Panel and Activator Inspection

1. Be sure all associated warning and safety labels are intact, clean, and easy to read. Replace as needed.
2. Check the control panel for proper operation. If any adjustments or repairs are necessary, refer to the Rytec System 3 Drive & Control Installation & Owner's Manual. This manual was shipped with the control panel.
3. Operate the door five or six complete cycles with each activator installed and used with the door. A typical activator may be a floor loop, pull cord, push button, motion detector, radio control, etc.

NOTE: The door open cycle is controlled by an activator. The door close cycle is controlled by an activator or programmable timer internal to the control panel.

Electrical Connections Inspection

1. Turn off the power to the door.

⚠ WARNING

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

2. Inspect all wiring inside the control panel. All connections must be tightly secured.
3. Inspect all electrical connections inside the head assembly junction box. All connections must be tightly secured.
4. Inspect all electrical connections pertaining to the power drive system. All connections must be tightly secured.
5. Turn on power to the door.

Lubrication

1. Turn off power to the door.

⚠ WARNING

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

2. **Drive Chain:** Lubricate the drive chain with a good-quality grade of heavy lubricating oil. (See Figure 21.)

3. **Connecting Rods and Tracks:** Lubricate the connecting rods and tracks with a medium-viscosity, low-torque grease having an approved temperature rating of –30° to +200°F. (See Figure 21.)

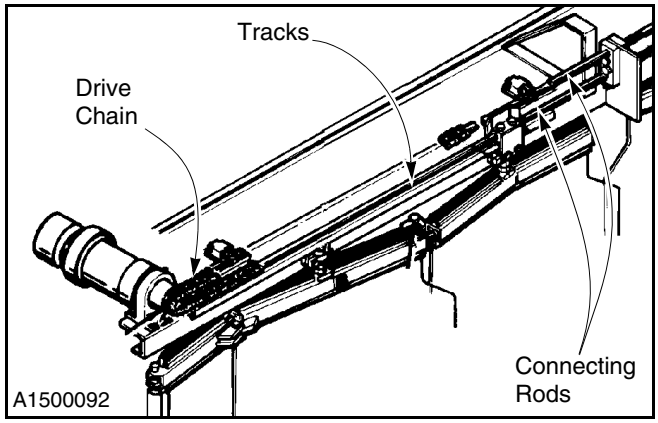


Figure 21

4. **Motor/Gearbox Assembly:** Check the gearbox oil level. Fill as required using the appropriate synthetic oil listed below. The oil in the gearbox does not need to be changed. However, it should be checked regularly at the overflow plug located on the lower section of the gearbox. (See Figure 22.)

   The gearbox is full when oil just begins to drip from the hole the overflow plug is threaded into.

   Recommended gearbox oil:

   • SHC 630 Synthetic Gear Oil

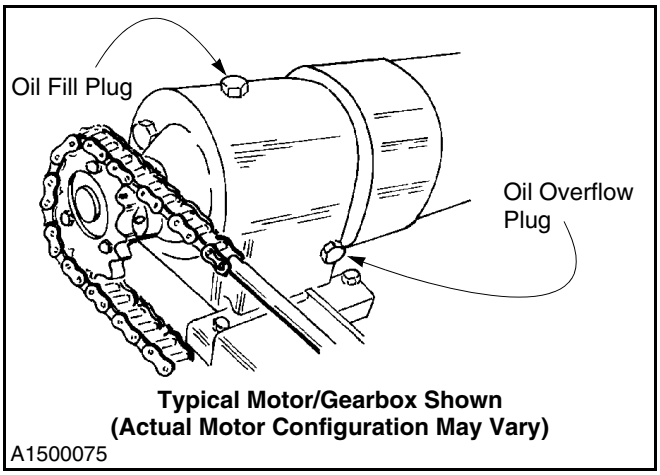


Figure 22

NOTE: To maintain a good, tight seal, change the O-rings on both plugs when necessary.

5. Turn on power to the door.

Heat Lamp Inspection (Optional System)

1. Turn off power to the door.

⚠ WARNING

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

⚠ CAUTION

Never touch the glass surface of the lamp bulb or the red sleeve with your bare fingers, and never handle them with a dirty or oily rag. Any debris or oil on the surface of the lamp will lead to a "hot spot" which will reduce the life of the lamp — and possibly cause it to fail immediately.

2. Inspect the top of each heat lamp fixture for dirt and dust. Clean as required. (See Figure 23.)
3. Inspect each lamp bulb. The bulbs should not be damaged and the red sleeves should be in place. Replace bulbs and sleeves as required.

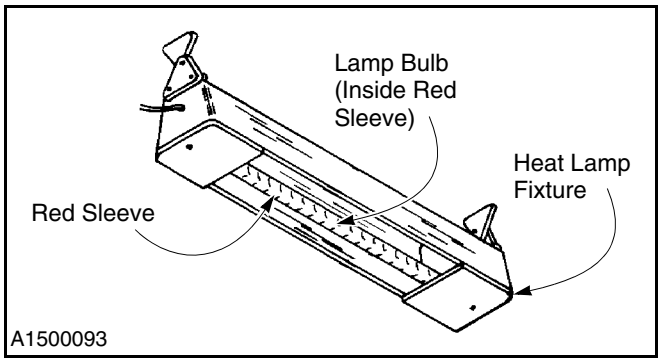


Figure 23

4. Turn on power to the door.
5. Activate the defrost system and place the defrost system timer in the MANUAL (not AUTO) mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual. The lamps should light.

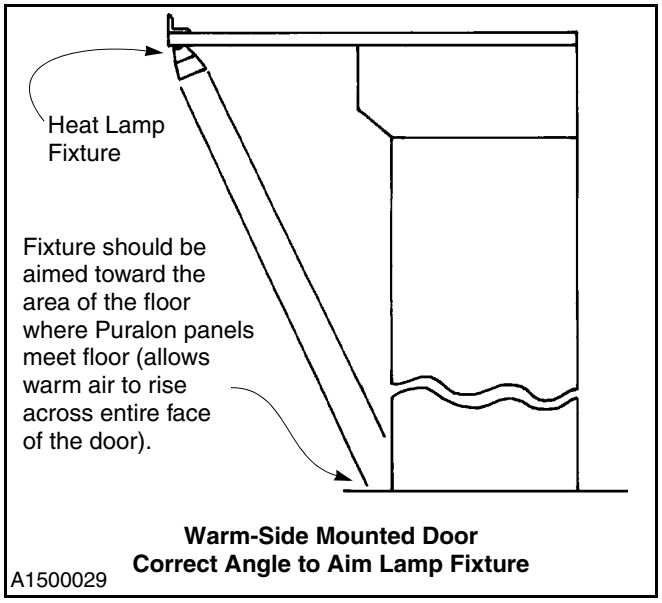
   If a lamp fails to light: Replace the lamp bulb. (See "HEAT LAMP BULB AND RED SLEEVE REPLACEMENT (OPTIONAL DEFROST SYSTEM)" on page 28.) Or, if necessary, inspect and troubleshoot the lamp circuit and make any necessary repairs.

6. Place the defrost system timer in the AUTO mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual. The lamps should light. Then once the automatic timer that is internal to the control panel times out, the lamps should automatically turn off.

   If the lamps do not cycle on and off: Make sure the defrost system parameters are properly set. (See the Rytec System 3 Drive & Control Installation & Owner's Manual.)

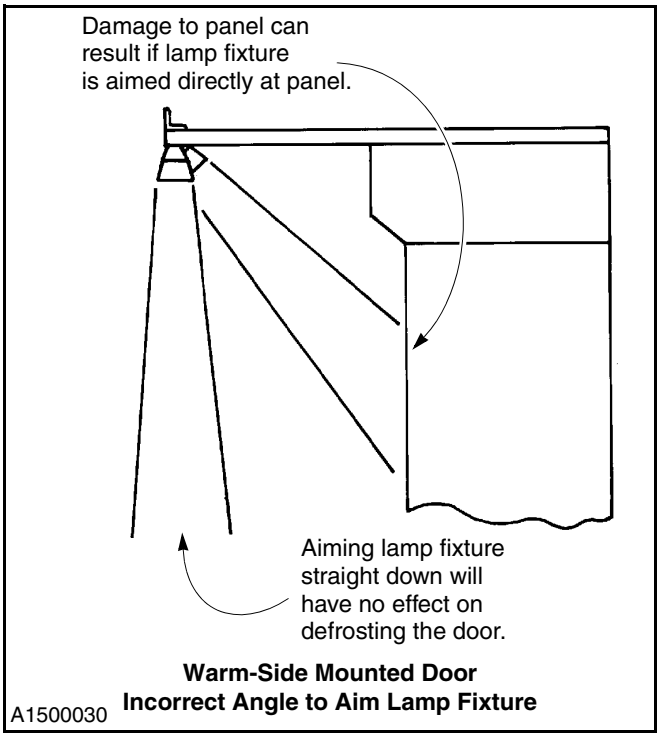
7. With the heat lamps on, make sure they are properly aimed at the door panel.

   Figure 24 and Figure 26 show the correct angle to aim a heat lamp. Figure 25 and Figure 27 show two angles not to use. If the heat lamps require adjustment, see "Heat Lamp Adjustment (Warm-Side and Cold-Side Mounted Doors)" on page 13.



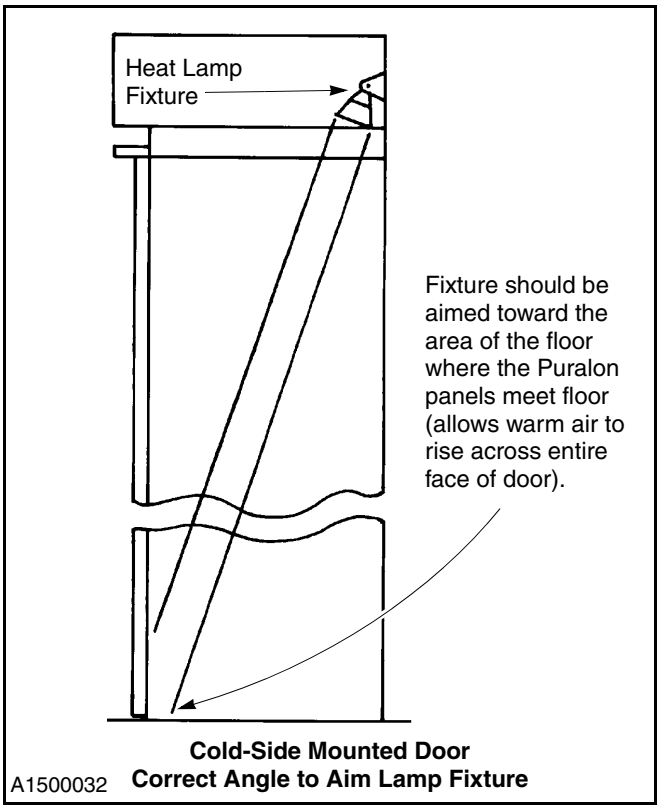
Warm-Side Mounted Door
Correct Angle to Aim Lamp Fixture
A1500029

Figure 24



Warm-Side Mounted Door
Incorrect Angle to Aim Lamp Fixture
A1500030

Figure 25



Cold-Side Mounted Door
Correct Angle to Aim Lamp Fixture
A1500032

Figure 26

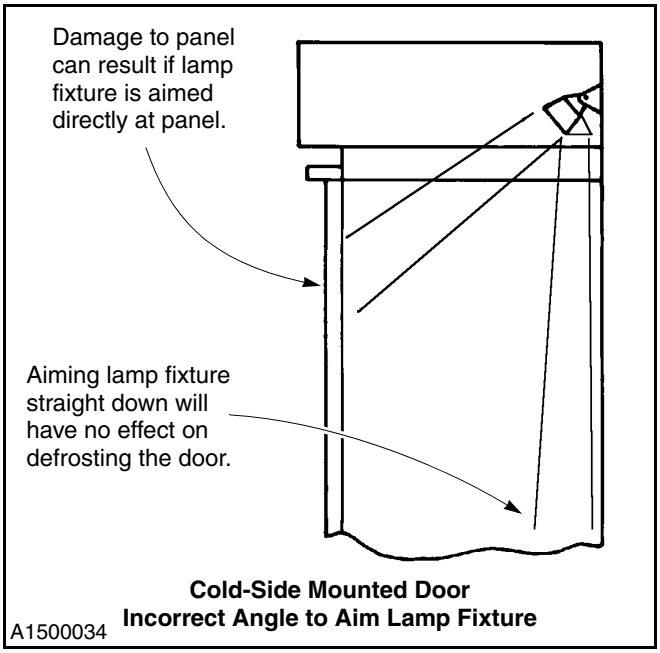


Figure 27

8. Once the heat lamp inspection is complete, place the defrost system in the desired mode of operation. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

Blower Inspection (Optional System)

1. Turn off power to the door.

⚠WARNING

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

2. Inspect the air inlet screen, blower wheels and motor, heater (heater blower only), and the air exhaust fins for dirt and signs of damage. Vacuum out all dirt and dust from all components and make any necessary repairs.
3. Turn on power to the door.
4. Place the blower in the HIGH mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.
5. The blower should operate at high speed.
6. Check the direction of the air flow out of the blower unit — it should be directed toward the lower part of the door when it is closed (similar to what is shown in Figure 24 and Figure 26). If the air deflection fins on the blower unit require adjustment, see "Blower Air Deflection Fin Adjustment" on page 15.
7. Cycle the door one time. The blower should operate at high speed regardless of the position of the door.
8. Place blower in the LOW mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.
9. Cycle the door one time. The blower should operate at low speed regardless of the position of the door.
10. Place blower in the AUTOMATIC mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.
11. Cycle the door several times to verify the blower shifts from high speed to low speed when the door is opened and closed.
12. Once the blower inspection is complete, place the blower in the desired operating mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

Hard-Panel Door Limit Switch Inspection (Optional System)

If an optional, hard-panel door is installed with your Rytec Door, to prevent heat build-up between the two doors, the defrost system must be controlled by a limit switch installed on the hard-panel door. The limit switch is installed to allow the defrost system to operate only when the hard-panel door is in the fully open position.

⚠WARNING

Take precautions to prevent the door from being operated as you perform the following procedure.

1. Close the hard-panel door and place the defrost system in the STAGE 1 mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual. The defrost system should not operate.
2. Open the hard-panel door. The defrost system should operate.
3. Once the hard-panel door limit switch inspection is complete, close the hard-panel door and return the defrost system to its previously set operating mode. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

ADJUSTMENTS

CHAIN TENSION

1. Open the door to the fully open position.

⚠ WARNING

The disconnect must be in the OFF position and properly locked and tagged before adjusting the chain.

2. Turn off the power to the door.
3. Squeeze the chain and connecting rod together at the center of the door. There should be a 2-in. gap between the chain and the rod. (See Figure 28.) If the chain requires adjustment, proceed to step 4 below. Otherwise, go to step 6.

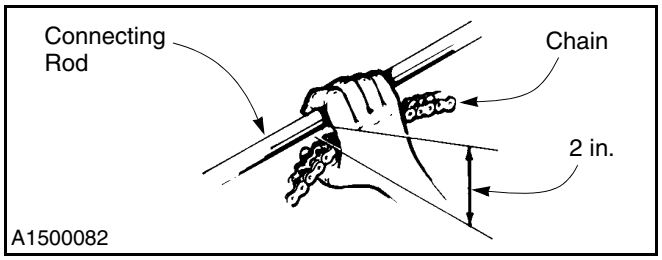


Figure 28

4. Loosen the two ⅝-in. nuts which secure the adjustment sprocket. (See Figure 29.)

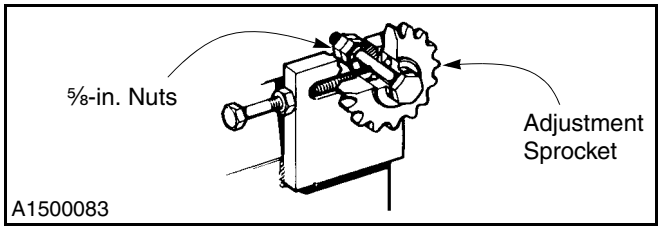


Figure 29

5. Loosen the ⅜-in. nut securing the sprocket adjustment bolt. Turn the sprocket adjustment bolt clockwise or counterclockwise to adjust the chain tension. Tighten the nuts securing the sprocket and sprocket adjustment bolt. (See Figure 30.)

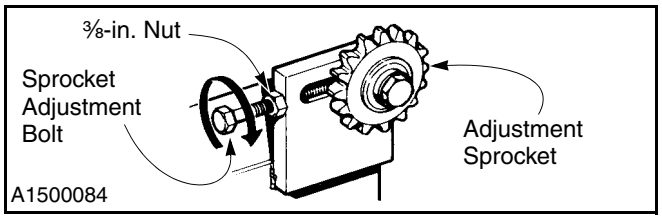


Figure 30

6. Turn on power to the door.

MOTOR BRAKE

1. Turn off the power to the door.

⚠ WARNING

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

2. Loosen the retaining bolts securing the brake dust cover to the motor assembly. Remove the cover. (See Figure 31.)

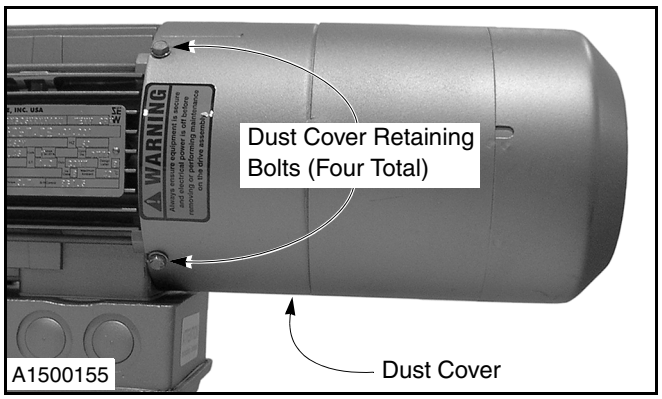


Figure 31

3. To adjust the brake, first securely tighten all brake adjustment nuts. Then back off each nut ½ turn counterclockwise. (See Figure 32.)

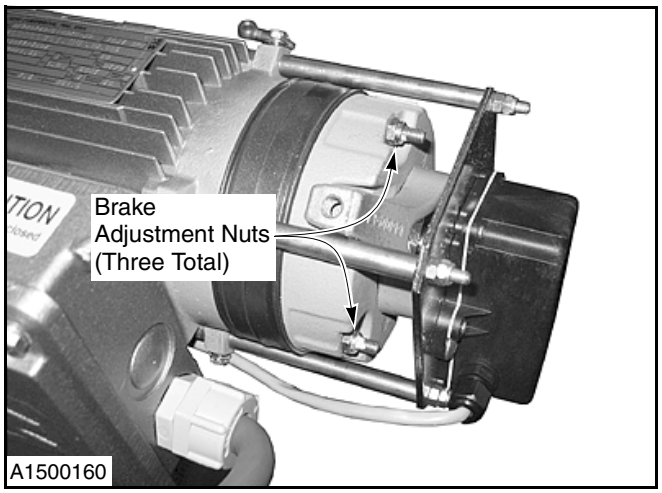


Figure 32

⚠ CAUTION

All nuts must be adjusted equally or the brake mechanism will wear unevenly.

4. Attach the dust cover and tighten all retaining bolts.

DEFROST SYSTEM ADJUSTMENT (OPTIONAL SYSTEM)

Heat Lamp Controls

If your door is equipped with heat lamps, they are controlled by the control panel. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

With the defrost system in the MANUAL mode, the heat lamps will immediately power up. When in the AUTO mode, the heat lamps are operated automatically by the control system. An automatic timer function can be set to periodically cycle the lamps on and off. Placing the defrost system in the OFF mode turns off the lamps and disables the automatic timer function.

If an optional hard-panel door is installed with your Rytec Door, the lamps must be controlled by a limit switch installed on the hard-panel door to prevent heat build-up between the two doors. (See "Hard-Panel Door Remote Limit Switch" on page 16.)

⚠ CAUTION

If an optional hard-panel door is installed with your Rytec Door, a limit switch to override automatic control must be installed on the optional door.

When installed in accordance with the schematic that was shipped with the door, the limit switch allows the heat lamps to turn on only when the hard-panel door is in the fully open position.

AUTOMATIC TIMER FUNCTION

An automatic timer function is provided by the control panel to operate the heat lamps at various timed intervals. The amount of time the heat lamps are on and off needs to be set according to environmental conditions (temperature, humidity, etc.) of the installation site.

It is suggested to start with the lamps on all the time. If this prevents frost and moisture from building up on the face of the door panel, the lamps can be cycled off for a short time duration. The idea is to prevent frost and moisture from building up on the door panel with the lamps on for the shortest amount of time. To adjust the defrost system, refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

Heat Lamp Adjustment (Warm-Side and Cold-Side Mounted Doors)

⚠ WARNING

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

⚠ CAUTION

Excessive heat can severely damage the Puralon panels.

1. Turn off the power to the door.
2. To redirect a heat lamp, first loosen the nuts that lock the lamp fixture in place. (See Figure 33.)

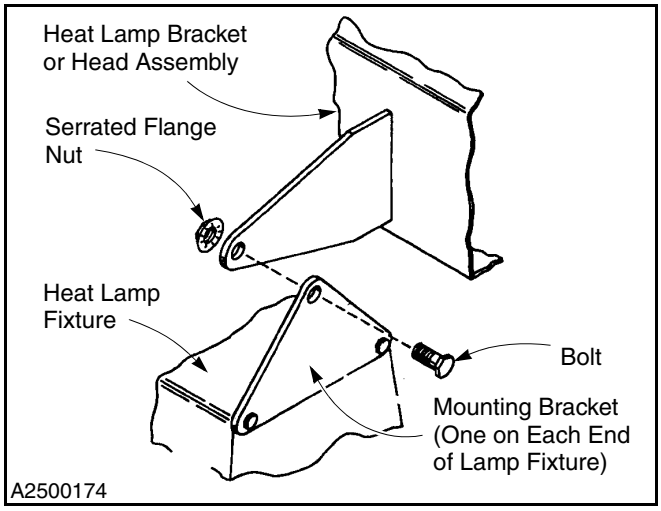
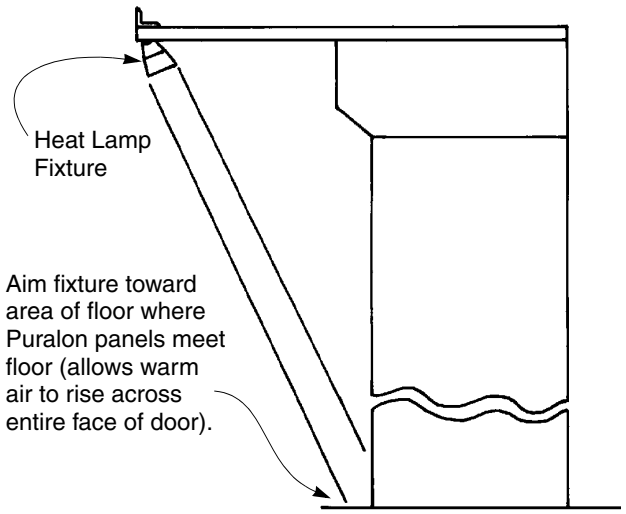


Figure 33

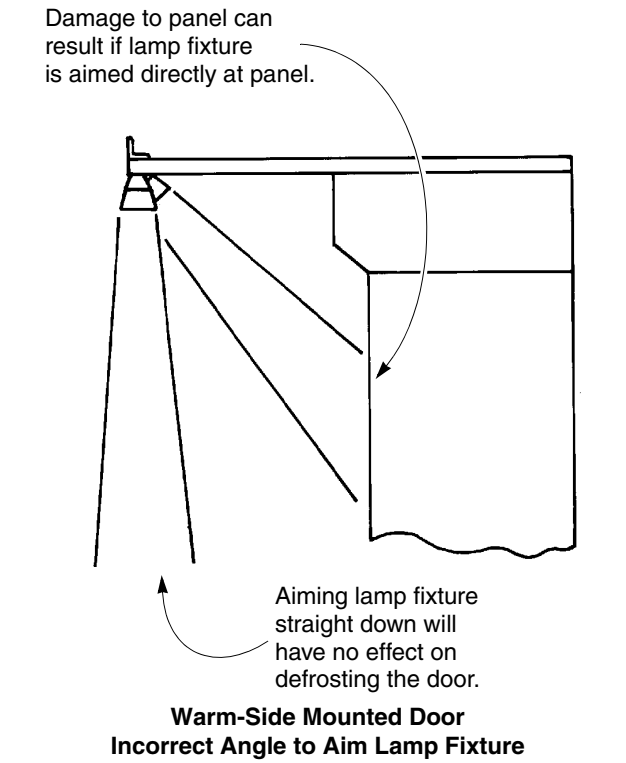
3. Direct the heat lamp fixture(s) to aim at the area of the floor where the panels of the door meet the floor. (See Figure 34 through Figure 37.)

   Figure 34 and Figure 36 show the correct method for aiming a lamp fixture. Figure 35 and Figure 37 show the incorrect method.



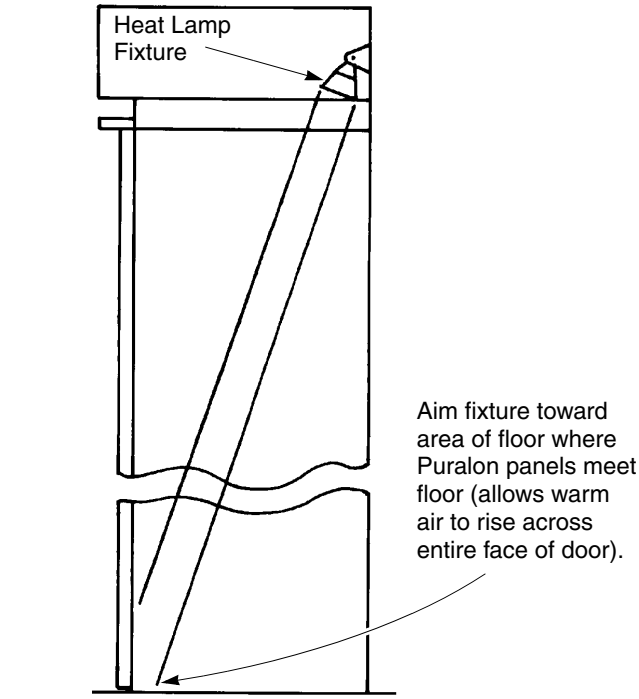
Warm-Side Mounted Door
Correct Angle to Aim Lamp Fixture
A1500029

Figure 34



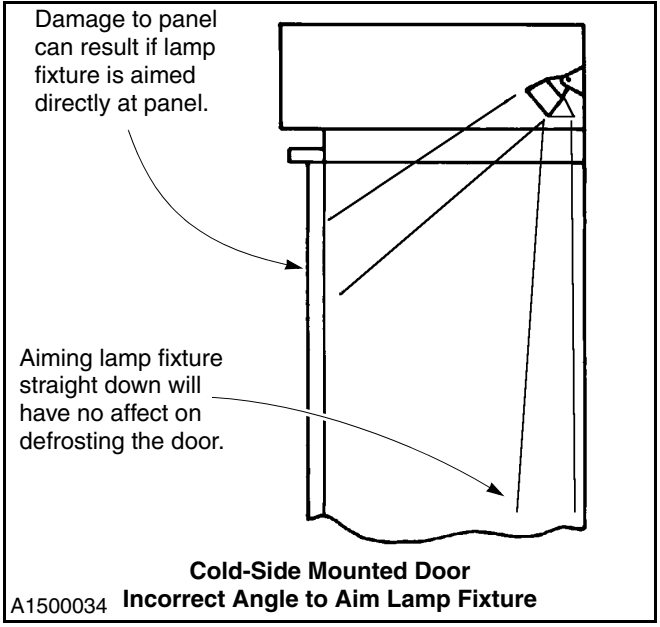
Warm-Side Mounted Door
Incorrect Angle to Aim Lamp Fixture
A1500030

Figure 35



Cold-Side Mounted Door
Correct Angle to Aim Lamp Fixture
A1500032

Figure 36



Cold-Side Mounted Door
Incorrect Angle to Aim Lamp Fixture
A1500034

Figure 37

4. Tighten the nuts on the mounting brackets to lock the lamps at the adjusted angle.
5. Turn on the power to the door.

Blower Controls

BLOWER SPEED

If your door is equipped with a blower (unheated or heated), the blower fan speed has four modes of operation (OFF, LOW, HIGH, and AUTO). Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

With the blower speed in the AUTO mode and the door closed, the blower will run at low speed. When the door is open, the blower will operate at high speed. With the blower in the LOW mode, the blower will run at low speed regardless of the position of the door.

The blower speed you select will need to be set according to the environmental conditions (temperature, humidity, etc.) of the installation site. Placing the blower speed in the OFF mode prevents the blower from turning on, regardless of door position.

BLOWER HEATER

If the blower is equipped with an internal heater (heated blower), the heat level is controlled by the control panel. Refer to the Rytec System 3 Drive & Control Installation & Owner's Manual.

The standard heated blower has two heating levels. An optional heated blower is available with three heating levels.

The heat level you select will need to be set according to the environmental conditions of the installation site. Placing the blower heater in OFF mode will prevent the heater from turning on.

If an optional, hard-panel door is installed with your Rytec Door, the heater must be controlled by a limit switch installed on the hard-panel door to prevent heat build-up between the two doors. (See "Hard-Panel Door Remote Limit Switch" on page 16.)

⚠ CAUTION

If an optional, hard-panel door is installed with your Rytec Door, a limit switch to override the defrost system must be installed on the optional door.

When installed in accordance with the schematic that was shipped with the door, the limit switch will allow the heater to turn on only when the hard-panel door is in the fully open position.

Blower Air Deflection Fin Adjustment

Heated and unheated blowers are equipped with air deflection fins that are located along the bottom of the blower unit.

1. Turn off the power to the door.

⚠ WARNING

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

2. To redirect the airflow, loosen the nuts that lock the fins in place and reposition the fins. Tighten the nuts to lock in the adjustment. Then apply power. (See Figure 38.)

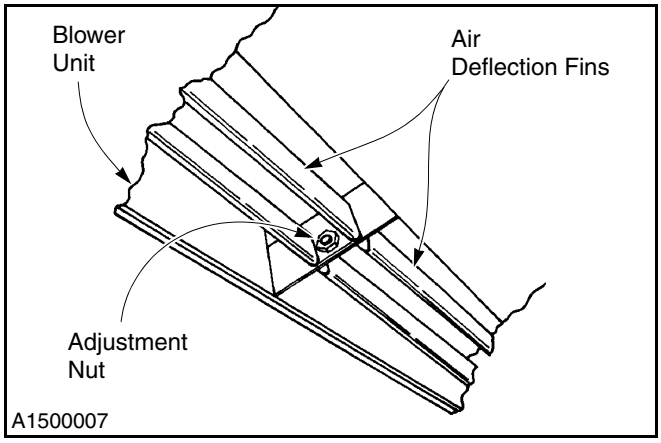
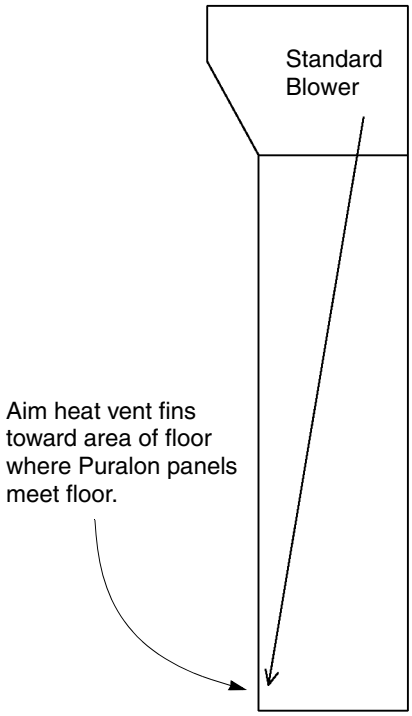


Figure 38

Figure 39 shows the correct angle to direct the air flow for a standard blower.

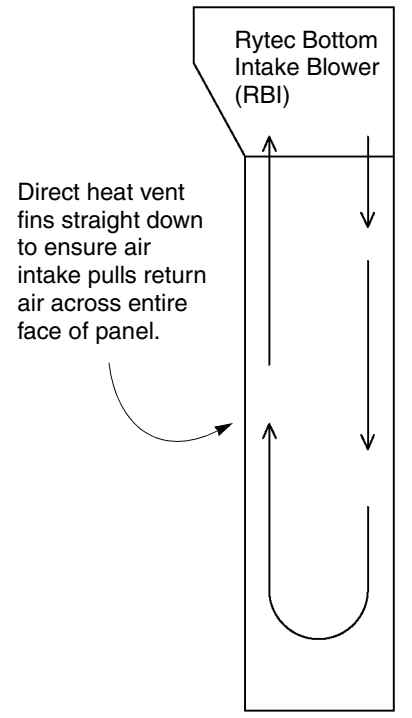
Figure 40 shows the correct angle to direct the air flow for a Rytec bottom intake (RBI) blower.



Cold-Side Mounted Door
Correct Angle to Aim Standard Blower

A1500154

Figure 39



Cold-Side Mounted Door
Correct Angle to Aim RBI Blower

A1500153

Figure 40

Hard-Panel Door Remote Limit Switch

⚠ WARNING

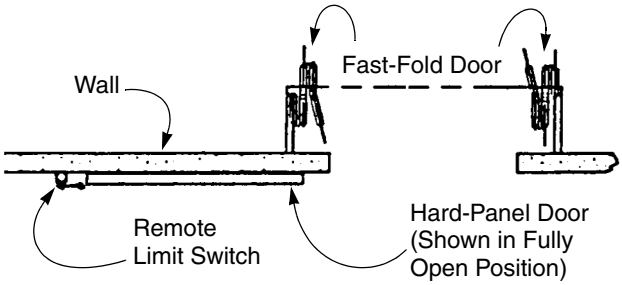
The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

⚠ CAUTION

Excessive heat can severely damage the Puralon panels. If a hard-panel door is installed with your Rytec Door and the defrost system (heat lamps or blower) is located between the two doors, the defrost system must be turned off any time the hard-panel door is not in the fully open position to prevent heat from building up between the two doors. To automatically control the defrost system, a remote limit switch must be installed and located as shown in Figure 41.

Adjust the remote limit switch (Rytec part number 0-114-031) so that the hard-panel door will activate the defrost system only when the hard-panel door is in the fully open position. The installation of this limit switch and the method in which it is adjusted, may vary from one application to another. Consult the Rytec Customer Support Department if you have any questions.

Figure 41 shows the general layout of the remote limit switch.



CAUTION: The remote limit switch must be adjusted so that the defrost system will power up only when the hard-panel door is in the fully open position.

A1500112

Figure 41

REPLACEMENT PROCEDURES

HYPALON PANEL/SEAL REPLACEMENT

Hypalon Panel Construction — Freezer Door

Except for the serviceable center seal, this freezer door is composed of multiple panels bonded as one. Because of technological advancements in adhesion and bonding of panels, engineering has been able to construct a high-quality door panel for the freezer application. Damage to any part of the panel(s) that will render the door unserviceable will require replacement of the entire door section.

Panel Replacement

The panels are mounted to the head assembly with a specially designed hanger system. A flat mounting strap, with a series of holes for bolts, attaches each panel to its respective mounting turn arm. This allows each panel to be adjusted horizontally, side-to-side.

Original and replacement panels are tagged with an identification number to indicate their position in the door. The tag is near the bottom of each panel. When facing the front side of the door, the panels (and their associated mounting brackets) are numbered from left-to-right, with panel #1 on the far, left-hand side of the door. (See Figure 47.)

IMPORTANT: To ensure that a door seals properly, it is critical that each panel be hung in its numbered order, with the natural curve of each panel facing the direction indicated below. (See Figure 42.)

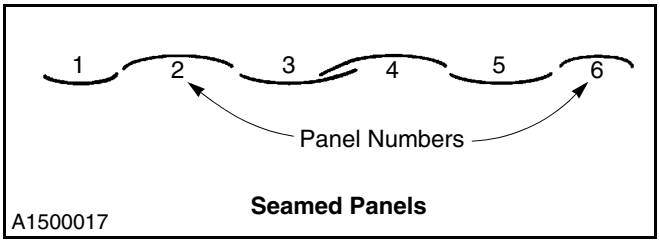


Figure 42

1. Using the System 3 control panel, joggle the door to access hardware for the center seal mounting strap. (See the System 3 Drive & Control manual.)
2. Turn off power to the door.

⚠WARNING

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

3. Remove the center seal. (See “Center Seal – Puralon” on page 24.)
4. Remove and retain self-tapping screws and clamp strip.

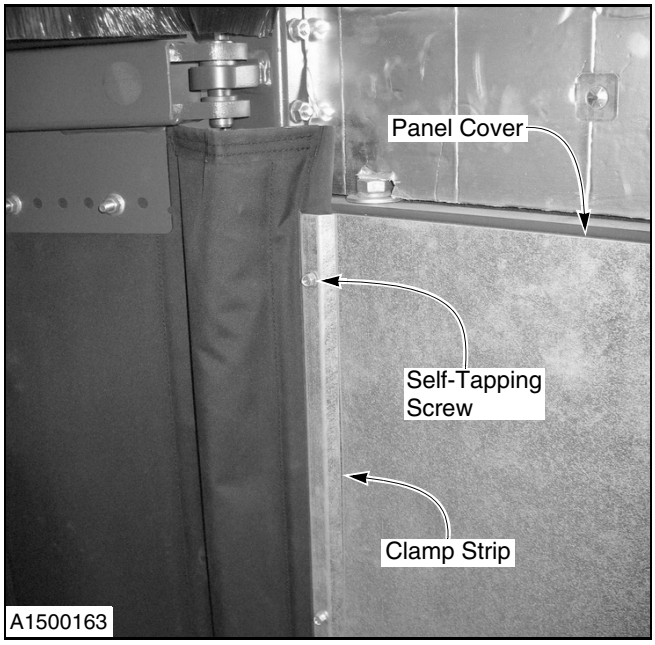


Figure 43

5. Take off the remaining hex head cap screws, nuts and panel mounting straps from the turn arms and remove door panel.

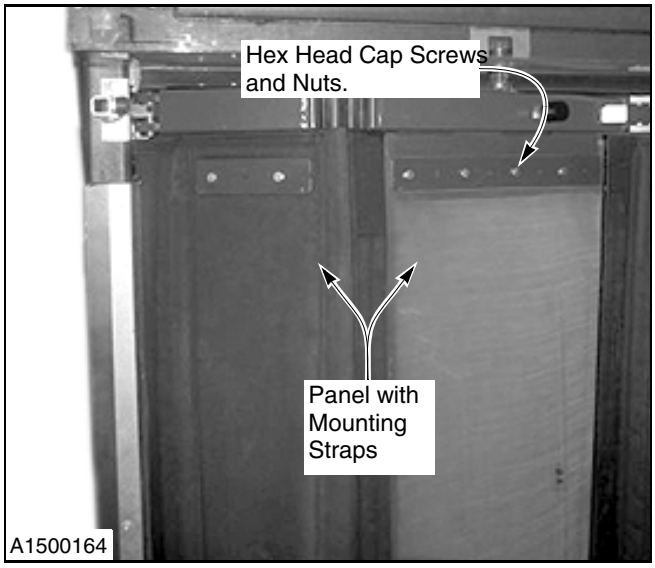


Figure 44

6. Inspect turn-arm assemblies, panel mounting straps, and associated hardware for wear and tear. Replace as necessary.

⚠CAUTION

If door parts are found to be worn and need replacing, DO NOT return door back to service until they have been replaced. Serious injury or further damage to the door may result.

7. Align the associated mounting strap to its panel section. Using the saved hardware, attach the new panel to the turn arm.

NOTE: An assistant will be required to aid in the installation of the door panel.

8. After the door panel is hung and the hardware snug, fine tune any adjustments and tighten the hardware.
9. Align the holes of the clamp strip with the pre-existing holes in the side panel assembly and clamp down the side seal with self-tapping screws.

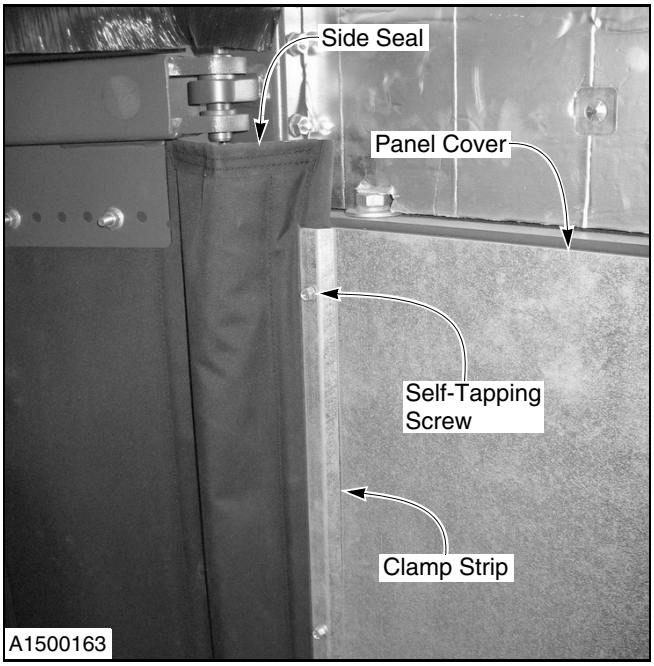


Figure 45

10. Install center seal. (See “Center Seal – Puralon” on page 24.)

NOTE: The metal mounting strap used with the center panel each take an extra-long bolt in the center hole. This longer bolt will make it easier to hang these bulkier, heavier panels. It will also allow the panel to be centered horizontally along the bracket before having to install the remaining bolts.

11. Restore power to the door.
12. Perform operational check on door. Make adjustments as needed and return back to service.

PURALON PANEL REPLACEMENT

Handling Puralon Panels

Depending on their size, replacement Puralon panels can be shipped in crates, cardboard boxes, or shrink wrapped.

⚠ CAUTION

Incorrect storage of a Puralon panel can flatten the natural curvature of the panel, which can result in the panel not sealing properly once it is installed. If storing a panel flat, store it with the curved side facing down (label side down). If rolled, roll the panel with the curved side up (label side up) — DO NOT allow a panel to remain rolled for an extended period of time.

1. Remove the replacement panel from its shipping container. If the panel was shipped flat, face it with the curved side down (label side down).

   If the panel was shipped rolled, roll it out flat and face it with the curved side down (label side down). Allow a rolled panel to relax prior to its installation. (See Figure 46.)

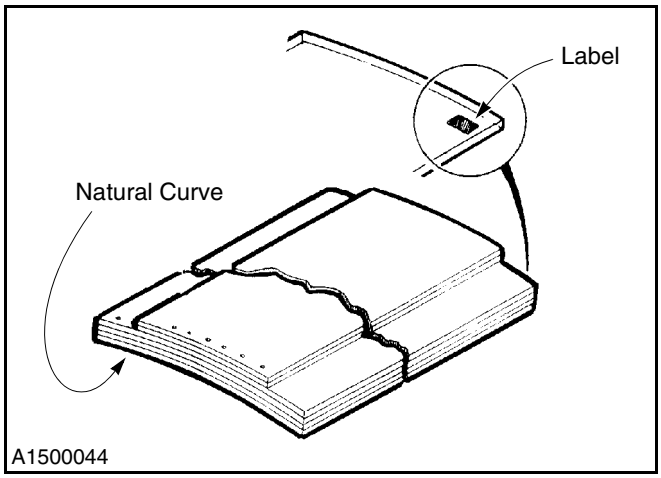


Figure 46

Panel Replacement

The Puralon panels are mounted to the head assembly with a specially designed hanger system. A flat mounting strap, with a series of holes for bolts, attaches each panel to its respective mounting bracket. This allows each panel to be adjusted horizontally, side-to-side.

Designed into the two center mounting brackets is a series of vertical slots to receive the bolts passing through the strap and panel. These slots allow the vertical angle of the two center panels to be adjusted (tilted) to the left or right. An oversized horizontal slot in the two center brackets makes it easier to adjust these heavier, bulkier panels.

IMPORTANT: Follow the instructions outlined below in the order presented. Do not cut replacement panels to finished length until they have been installed and adjusted.

Original and replacement panels are tagged with an identification number to indicate their position in the door. The tag is near the bottom of each panel. When facing the front side of the door, the panels (and their associated mounting brackets) are numbered from left-to-right, with panel #1 on the far, left-hand side of the door. (See Figure 47.)

IMPORTANT: To ensure that a door seals properly, it is critical that each panel be hung in its numbered order, with the natural curve of each panel facing the direction indicated below. (See Figure 47.)

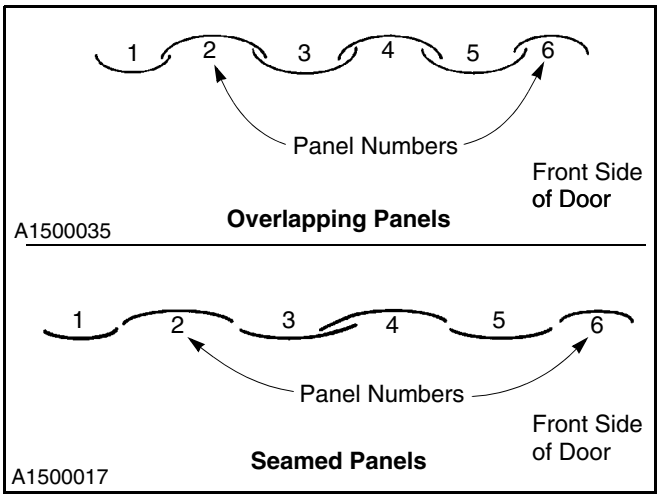


Figure 47

1. With the door in the fully closed position, turn off power to the door.

⚠ WARNING

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

2. Remove the panel to be replaced from the turn-arm assembly. The panel is held in place with a strap that is bolted to a mounting bracket along the bottom of the turn arm. Save all hardware for later use. (See Figure 48.)

NOTE: For an outer panel on a side pipe door, you will first need to remove the screws and nuts securing the panel to the side pipe mounting flange, and save all hardware. For panels joined with rope ties, you will first have to cut the ties to separate the panels. For panels joined with Hypalon seals, you will first need to separate the seals from the panel.

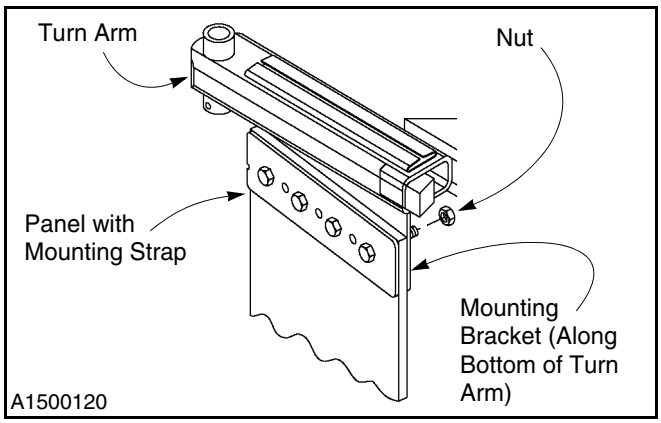


Figure 48

3. Place the new panel on a clean, flat surface, with the curved side of the panel facing down (label side down). Then stack the old panel, curved side down, on top of the new panel.
4. Align the top and side edges of both panels. If the new panel is wider than the old panel, center the old panel across the width of the new panel.
5. Drill the mounting holes for the strap bracket through the new panel, using the holes in the old panel as a template. The new holes must be the same diameter as the original holes. (For an outer panel on a side pipe door, DO NOT drill the holes along the side of the panel at this time.)

6. Using the saved hardware, attach the new panel to the turn arm. Center the mounting strap on the panel, as indicated in Figure 48, for your particular type of door. The position of the panel within the door determines on which side of the panel the strap is mounted.

   When hanging the panel on the turn arm, make sure the strap is centered along the length of the mounting bracket. Later, if necessary, the panel (strap) can be repositioned along the bracket. (See Figure 48.)

NOTE: The metal mounting strap used with the center panel each take an extra-long bolt in the center hole. This longer bolt will make it easier to hang these bulkier, heavier panels. It will also allow the panel to be centered horizontally along the bracket before having to install the remaining bolts. (See Figure 49.)

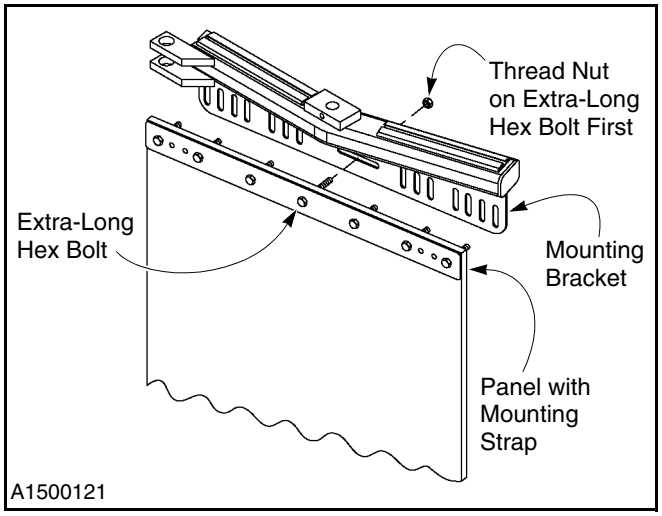


Figure 49

Panel Alignment

1. With the door in the fully closed position, turn off power to the door.

⚠ WARNING

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

2. Stand far enough away from the door to visually inspect the overlap and alignment of each panel. The panels should hang straight, with the overlap even along the entire length of each adjoining panel. Adjust the panels as necessary. (See Figure 50 and Figure 51.)

NOTE: Because replacement panels are shipped from the factory slightly longer than necessary, it is important that you lift (roll up) the bottom edge of a new panel just enough so that it will not drag on the floor when it is checked for level and square. Later on, it will be trimmed to finished length.

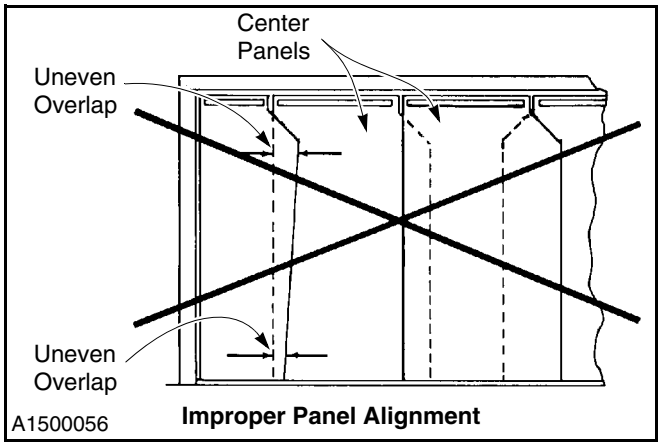


Figure 50

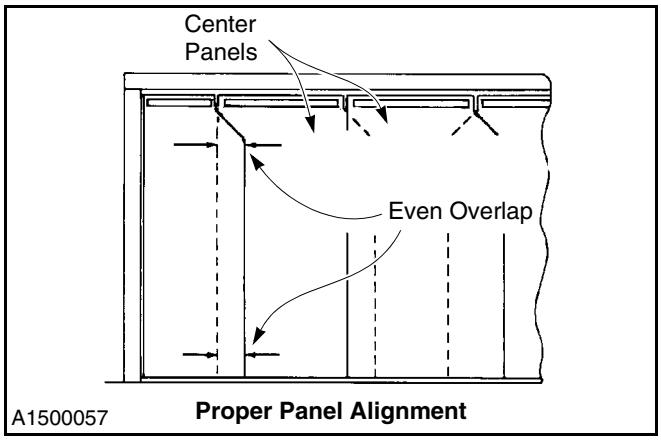


Figure 51

IMPORTANT: ***If a panel requires any side-to-side adjustment, it is acceptable to index that panel one hole in either direction. Repositioning a panel more than one hole could cause the extended mounting strap to bind and become damaged once the door is activated.***

If you find it necessary to reposition a panel, you may need to move the overhanging bolt to ensure the panel is fully supported from behind by the mounting bracket. If a bolt is moved, drill a new hole adjacent to the old hole to fit that bolt.

3. Once the adjustments are complete, tighten each nut on every mounting bracket to ensure all panels are secure.

Attaching Outer Panel to Side Pipe (Side Pipe Doors Only)

1. Move the door to the fully closed position.

⚠ WARNING

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

2. Insert the outside edge of the outer panel into the mounting flange of the adjoining side pipe. Seat the panel all the way into the flange. (See Figure 52.)

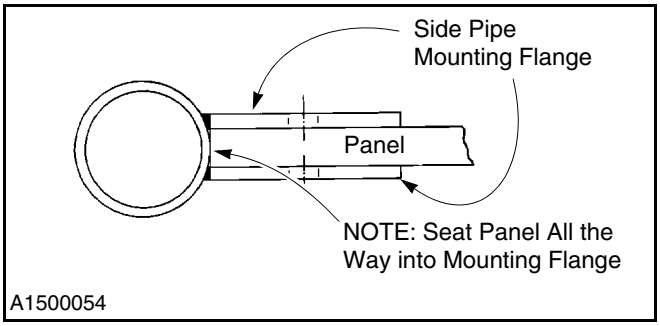


Figure 52

3. Using the holes along the edge of the flange as a template, drill a series of matching holes along the outside edge of the panel. Then fasten the panel to the flange using the saved hardware.

   The procedure is the same for both outer panels.

Trimming Bottom Edge (Puralon Panels Only)

⚠ CAUTION

If the panels on your particular door include a Hypalon sweep along the bottom edge, DO NOT trim the panels.

IMPORTANT: ***Over time, Puralon panels may stretch and require retrimming. Failure to keep them trimmed to length, may cause them to drag across the floor, which can result in the door not sealing.***

1. With the door in the fully closed position, turn off power to the door.

⚠ WARNING

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

2. Using a sharp utility knife, trim the bottom edge of the Puralon panel to within ¼ in. of the floor. To make it easier to move your knife through the material, pull the excess material away from the blade as you make the cut. (See Figure 53.)

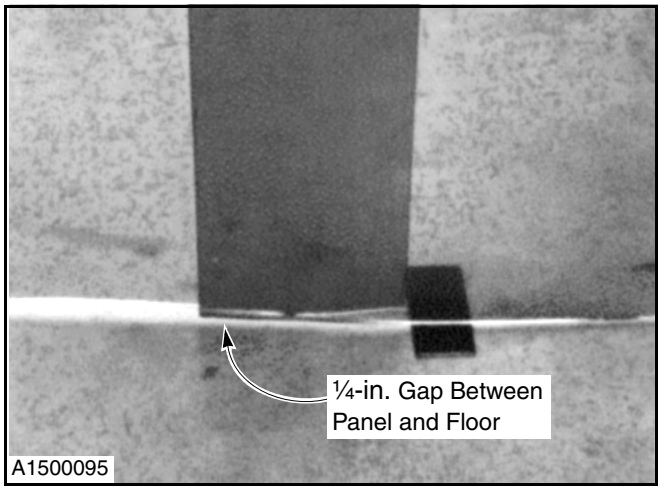


Figure 53

KNOB AND ROPE TIE REPLACEMENT

Rope Tie Doors Only

1. With the door in the fully closed position, turn off power to the door.

⚠ WARNING

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

2. Using Table 2 below, determine how many rows of knobs and ties are required for the panels on your particular door.

Table 2

Door Height (Feet)	Distance from Floor (Inches)			
	Row 1	Row 2	Row 3	Row 4
6	24	48	–	–
7	24	60	–	–
8	24	72	–	–
9	24	72	–	–
10	24	72	–	–
11	24	72	–	–
12	24	72	120	–
13	24	72	120	–
14	24	72	120	–
15	24	72	120	–
16	24	72	120	168
17	24	72	120	168
18	24	72	120	168
19	24	72	120	168
20	24	72	120	168

3. Once the number of rows is determined, the next step is to lay out a column of holes along each overlapping pair of panels. For example, panels 1 and 2, 2 and 3, and so on. (See Figure 54.)

   Note that each panel has a straight, vertical edge along one side and a 45° cut near the top of the opposite edge. When laying out a column of holes, measure off the straight, vertical edge for all the holes in that column. The two, 1-in.-diameter holes used for each knob and rope tie are both centered 2 in. from the same vertical edge. (Refer to the detail view in Figure 54.)

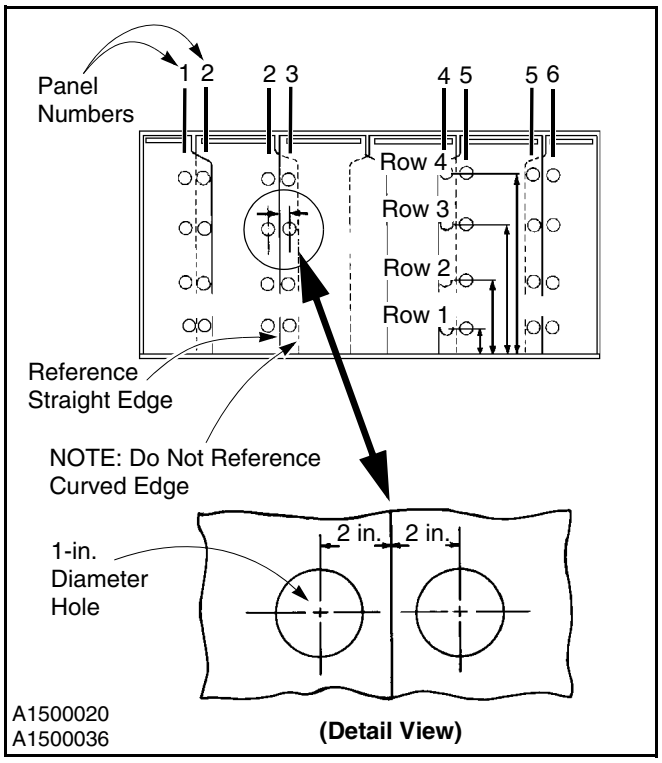


Figure 54

4. Using a 1-in. hole saw or wood spade bit, drill the holes for the knob and rope ties. Each hole should be drilled from the same direction the knob will be installed. Using the turn-arm hinge for reference, drill the holes toward the turn-arm side of the panel as shown in Figure 55.

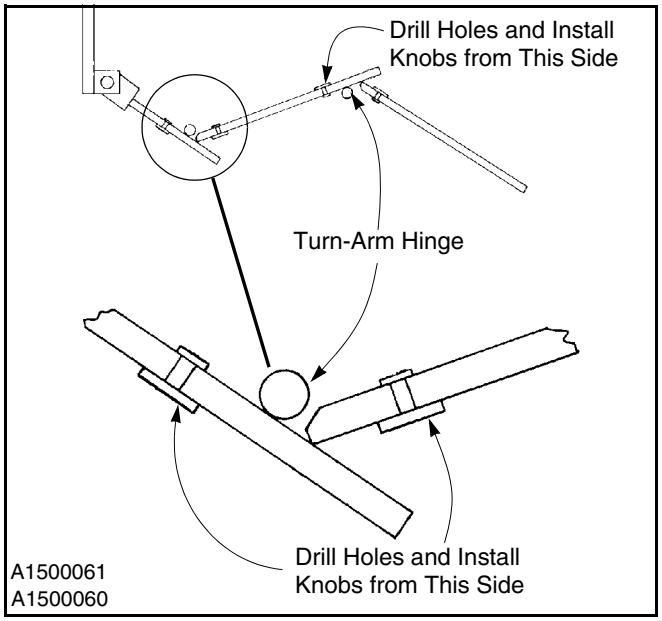


Figure 55

5. Insert the small end of each knob into the hole from the side opposite the turn-arm hinge. Press each knob firmly in place.

6. Tape approximately ½ to 1 in. of both ends of the rope supplied to prevent the rope from fraying.
7. Install a crimp close to one end of the rope. Lock it in place by crimping the two sides with a side cutter or other suitable tool.
8. Tie a knot next to the crimp.
9. Feed the other end of the rope through the wide face of the first knob (the first knob is sandwiched between the overlapping panels with the door closed). Then feed the rope through the back of the adjoining knob in the opposite panel and pull the rope tight (with the panels closed). (See Figure 56.)

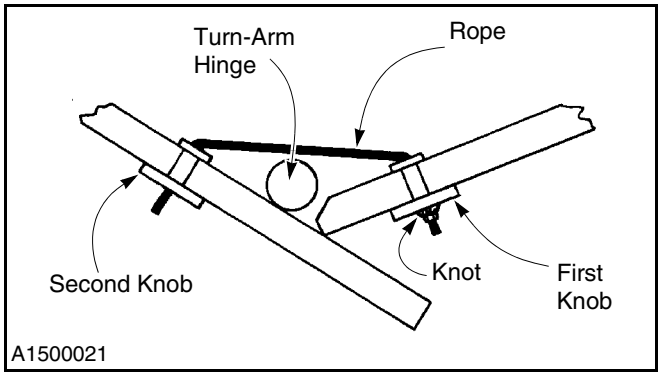


Figure 56

10. To secure the rope tie, tie a knot close to the wide face of the second knob. There should be no slack in the rope tie when the door is fully closed. (See Figure 57 and Figure 58.)

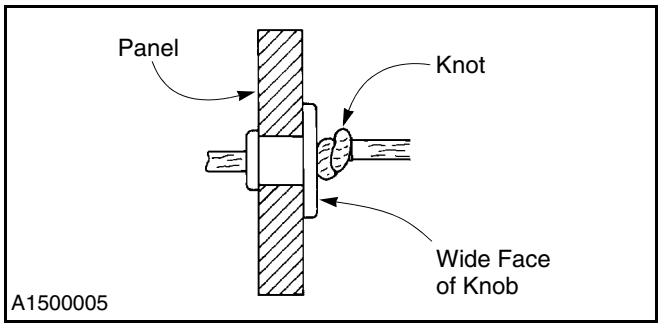


Figure 57

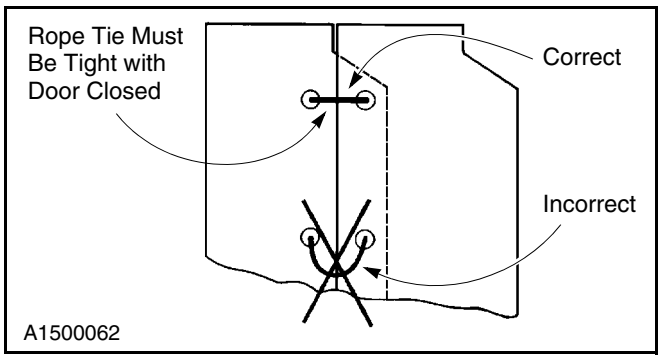


Figure 58

11. To prevent the other end of the rope tie from fraying once it is cut to length, wrap a length of tape around the rope near the second knot. Then cut the rope tie to length — cutting across the middle of the taped section. Install a crimp over the taped end. (See Figure 59.)

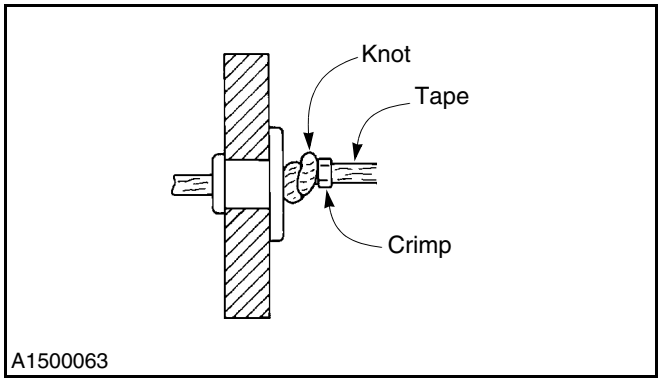


Figure 59

12. Repeat the above steps for each pair of knobs. Figure 60 shows a complete set of knobs with a knot and a crimp at each end of the tie. Figure 61 illustrates a complete rope tie on both sides of the door.

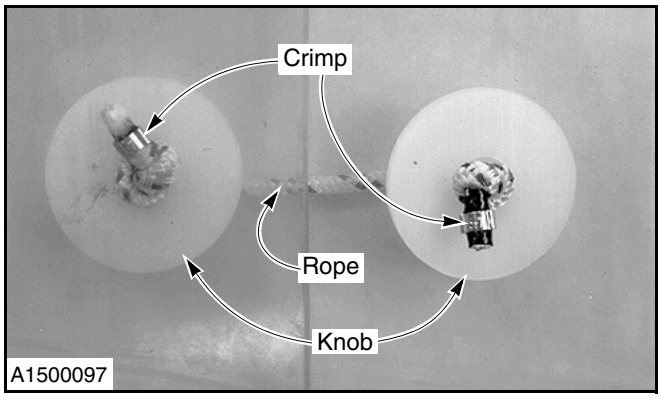


Figure 60

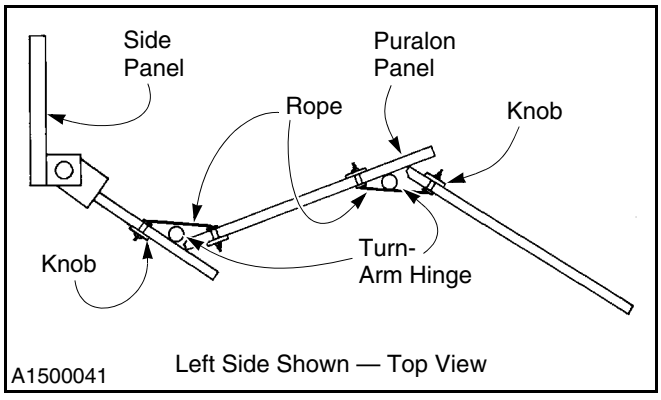


Figure 61

13. To prevent the Puralon panels from cutting into the rope ties as the door is opened and closed, cut (shave) a slight bevel, about 4 in. long, along the edge of each panel where it makes contact with each rope tie. (See Figure 62.)

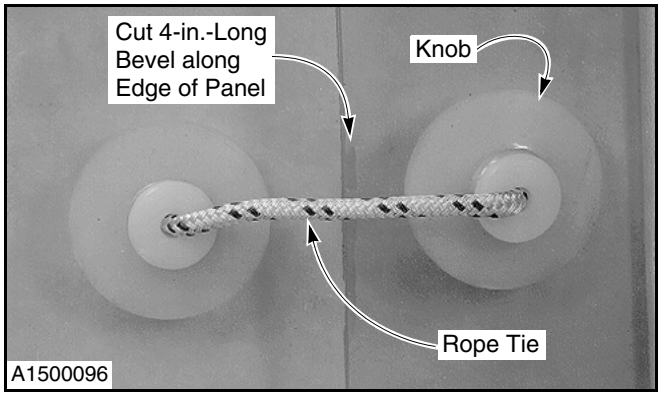


Figure 62

SEAL REPLACEMENT

Center Seal – Puralon

1. Using the System 3 control panel, joggle the door to access hardware for the center seal mounting strap. (See the System 3 Drive & Control manual.)
2. Turn off power to the door.

⚠ WARNING

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

3. Remove hex head cap screws, nuts and panel mounting strap from turn arm. Retain hardware.

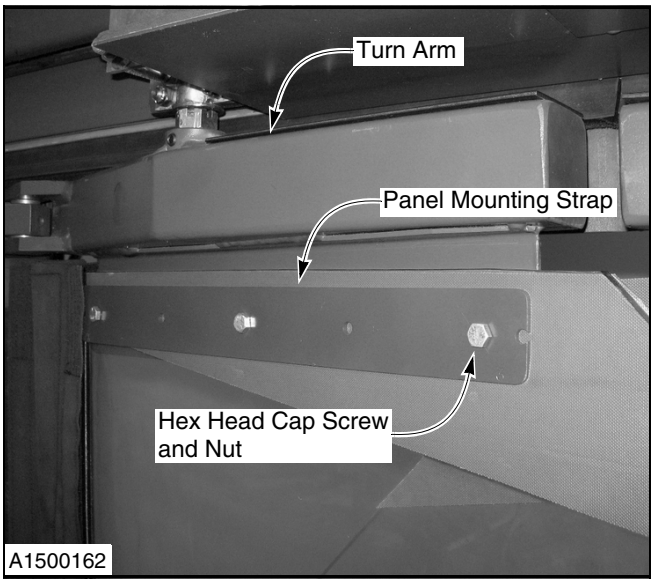


Figure 63

4. Remove the old center seal from the Velcro®[1] Hypalon hinge.

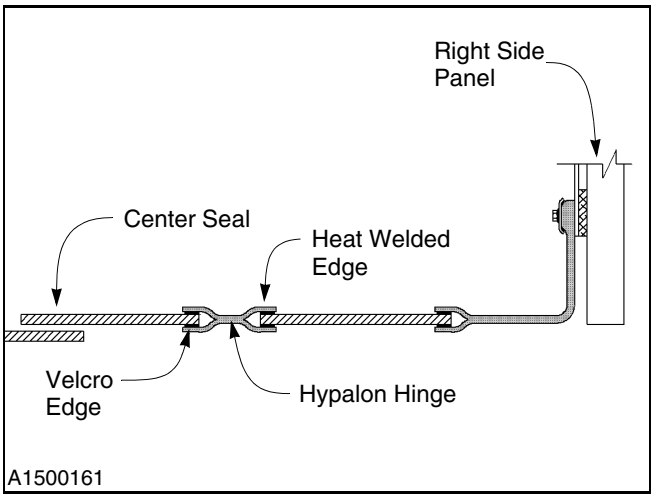


Figure 64

5. Inspect Velcro edge for any wear or tear. Replace if necessary. (See “HYPALON PANEL/SEAL REPLACEMENT” on page 17.
6. Clean Velcro edge of any dirt and grime.
7. Install new center seal. Mounting holes must be positioned at the top.
8. Install mounting strap, hex head cap screws and nuts to turn arm.
9. Restore power to the door.

1. Velcro® is a registered trademark of Velcro Industries B.V.

Center Seal – Hypalon

NOTE: A center seal is used to close the opening between two adjacent panels. This seal is wider at the top than it is at the bottom.

1. Turn off power to the door.

⚠ WARNING

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

2. Remove the old center seal.
3. Install the new center seal. The wide end of the seal is positioned at the top. (See Figure 65.)

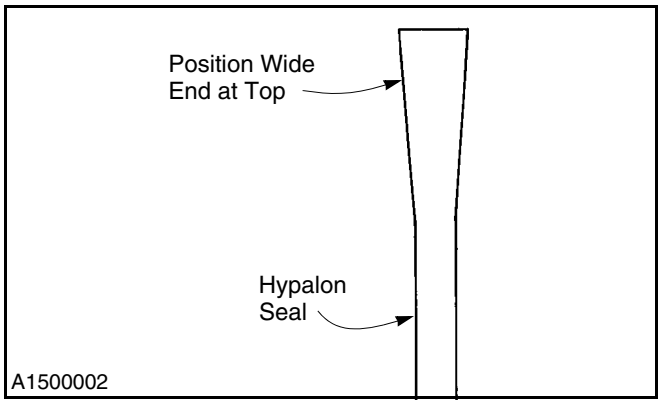


Figure 65

4. Attach a center seal to the edge of each adjoining panel using the Velcro®[1] strips provided on the seal and panels. When attaching a center seal, start at the bottom and work your way toward the top. (See Figure 66.)

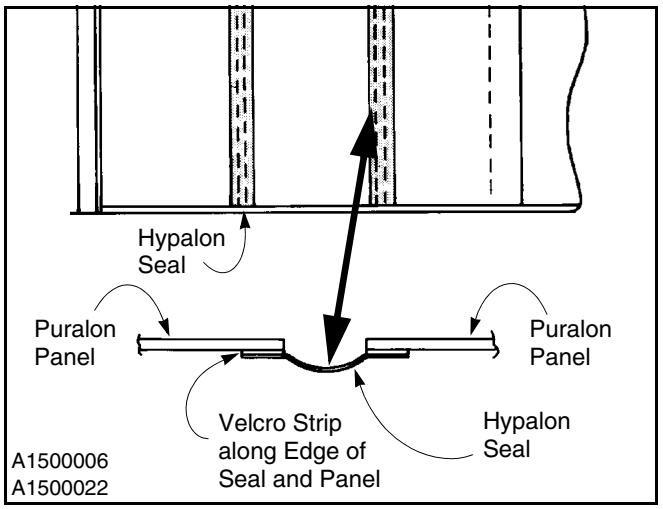


Figure 66

5. Restore power to the door.
6. Check door for operation and make adjustments as required.

Side Seals

NOTE: A side seal is used to close the opening between the side panel and the outside panel. This seal is rectangular in shape.

DOORS WITH INSULATED SIDE PANELS AND SEALED PURALON PANELS

1. Turn off power to the door.

⚠ WARNING

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

2. Detach the Velcro strip between the side seal and the panel. (See Figure 67.)

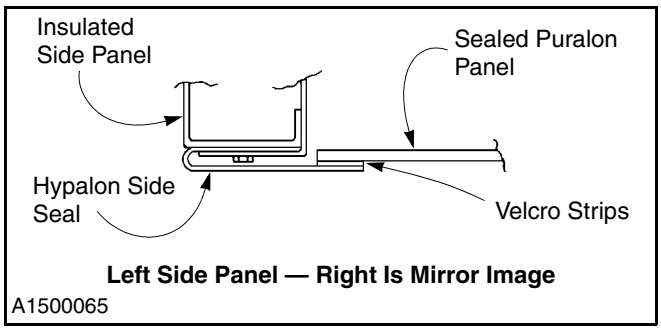


Figure 67

3. Remove the sheet metal side panel cover and save all hardware. Remove the side seal.
4. Install the new side seal and sheet metal side panel cover using the saved hardware.
5. Attach the Velcro strip on the side seal with the Velcro strip on the panel. (See Figure 67.)
6. Return power to the door.
7. Check door for operation and make adjustments as required.

1. Velcro® is a registered trademark of Velcro Industries B.V.

DOORS WITH STANDARD SIDE PANELS AND SEALED PURALON PANELS

1. Turn off power to the door.

⚠ WARNING

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

2. To replace a side seal, first remove the turn-arm stop from the side panel. The stop is held in place by two hex head cap screws, flat washers, and serrated flange nuts. Save all hardware for later use. (See Figure 68.)

NOTE: As you remove the turn-arm stops, note that the right stop is along the back side of the door and the left stop is along the front side of the door. Also note that the cap screws holding both stops in place are installed from the front side of the door. It will be critical, later on, to reinstall the stops and hardware as originally found.

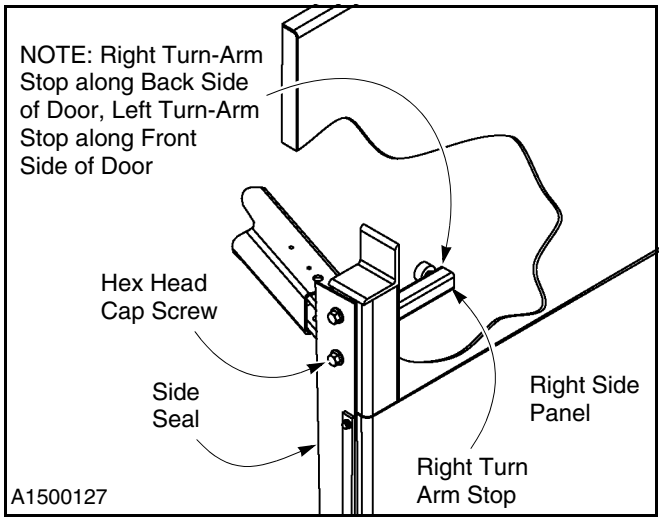


Figure 68

3. To release the side seal, remove the bolting bar from the side panel. Self-tapping screws hold the bar in place. Save all hardware. (See Figure 69.)

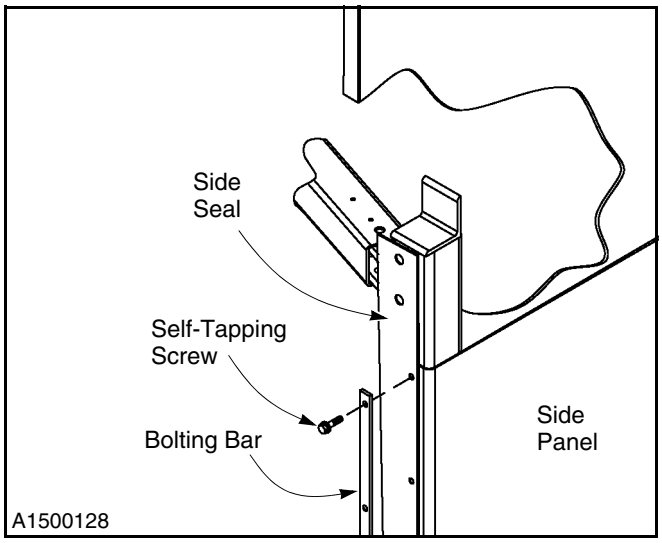


Figure 69

4. Install the new seal on the side panel using the bolting bar and saved hardware. Make sure to face the Velcro strip on the back of the side seal, toward the Puralon panel. (See Figure 70.)

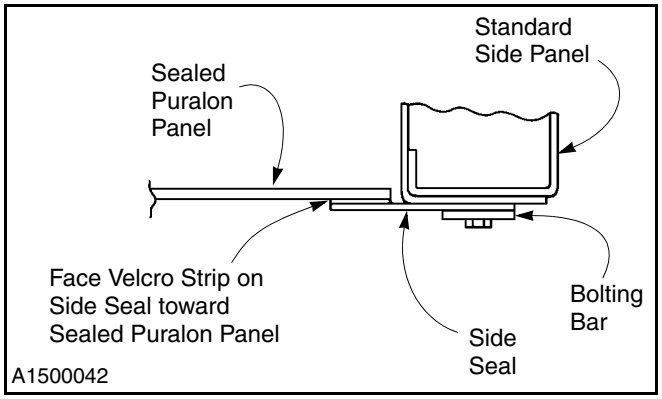


Figure 70

5. Drill two ⅜-in. holes in the new side seal to receive the cap screws that hold the turn arm stop in place. The holes must align with the holes in the side panel. (If possible, use the old seal as a template to locate the holes in the new seal.) (See Figure 71.)

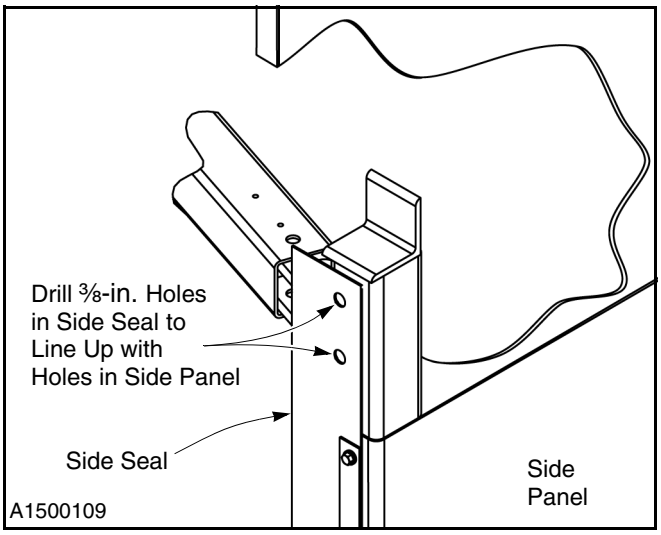


Figure 71

6. Using the saved hardware, reattach the turn arm stop on the side panel. Make sure to orient the stop on the side panel in the direction it was originally found, while facing the rubber bumper on the stop toward the center of the door opening.
7. Return power to the door.
8. Check door for operation and make adjustments as required.

FREEZER DOOR SIDE SEAL

The side seal on a freezer door is held in place with a clamp strip and self-tapping screws.
(See Figure 72 and Figure 73.)

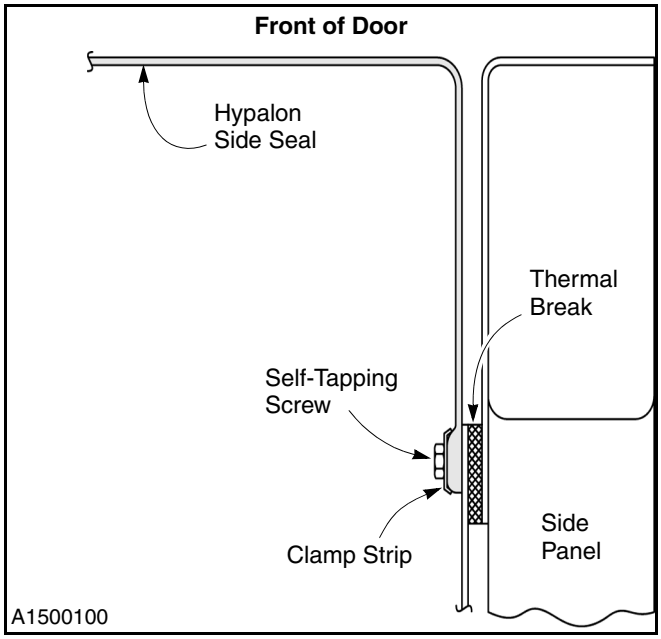


Figure 72

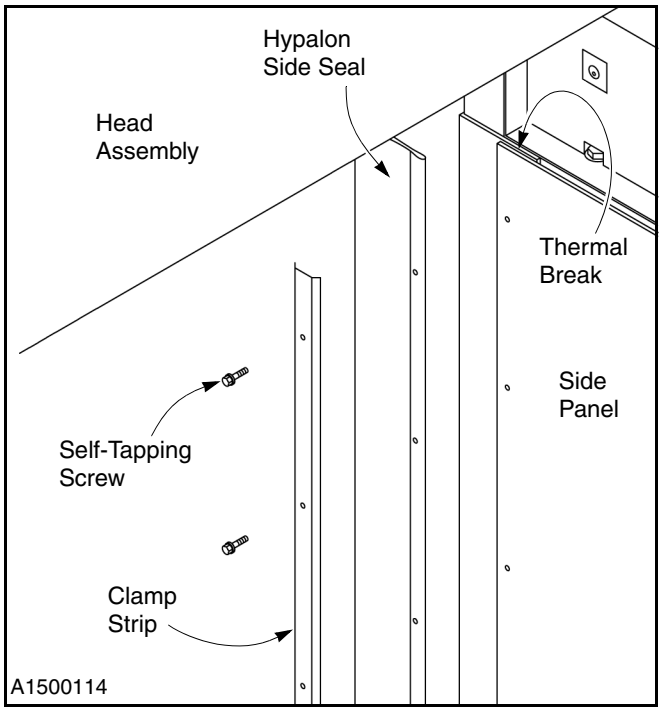


Figure 73

HEAT LAMP BULB AND RED SLEEVE REPLACEMENT (OPTIONAL DEFROST SYSTEM)

1. Turn off the power to the door.

⚠ WARNING

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

⚠ CAUTION

Never touch the glass surface of the lamp bulb or the red sleeve with your bare fingers, and never handle them with a dirty or oily rag. Any debris or oil on the surface of the lamp will lead to a "hot spot" which will reduce the life of the lamp — and even cause it to fail immediately.

2. Remove the end cover plate from each end of the lamp fixture. Retain all hardware. (See Figure 74.)

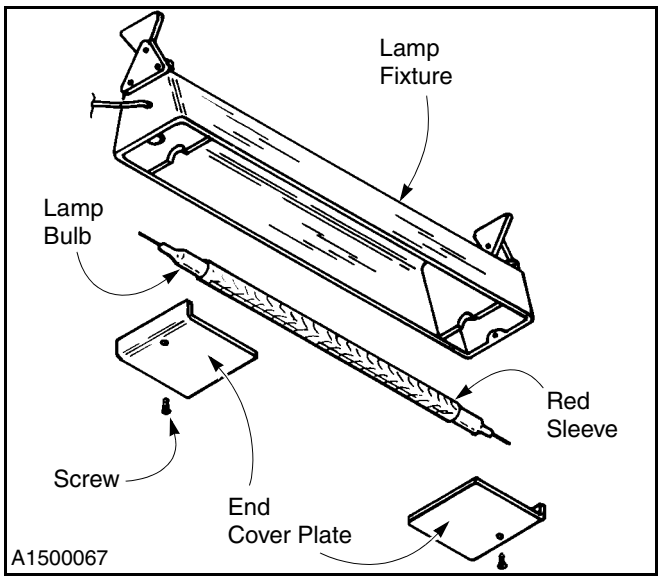


Figure 74

3. To release the lamp bulb, loosen the screw terminal located at each end of the fixture. (See Figure 75.)
4. Carefully remove lamp bulb and red sleeve from the fixture and slide the red sleeve off the bulb. Inspect the red sleeve and replace as required.
5. Slide the red sleeve over the new lamp bulb before installing the lamp in the fixture. (The sleeve blocks most of the radiant light from the lamp but does not affect the radiant heat output.)
6. Connect the wire on the ends of the lamp to the screw terminal located on each end of the fixture. (See Figure 75.)

⚠ CAUTION

Leave a ¼-in. loop on the end of the wire as shown in Figure 75. If the loops are not made, the bulb can become damaged when the fixture expands as a result of the heat output from the lamp.

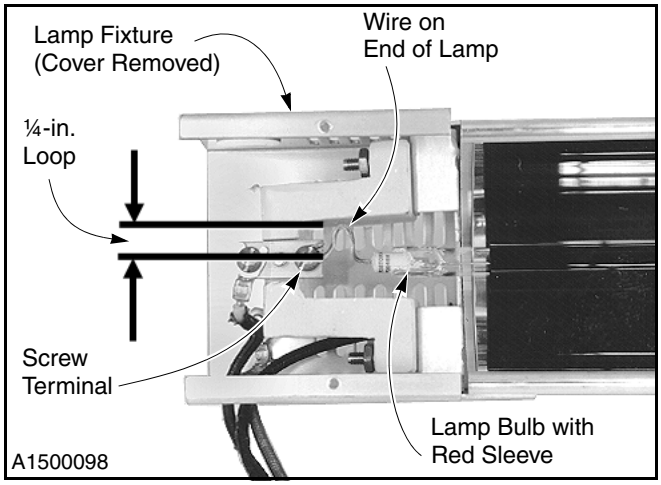


Figure 75

7. After the lamp bulb is wired in place, cut off the excess wire leading away from each screw terminal.
8. Reattach the end cover plates using the saved screws. Then reposition the heat lamp as required. (See "DEFROST SYSTEM ADJUSTMENT (OPTIONAL SYSTEM)" on page 13.)
9. Turn on the power to the door.

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. The serial number is located inside one of the side panels. (See Figure 76.)

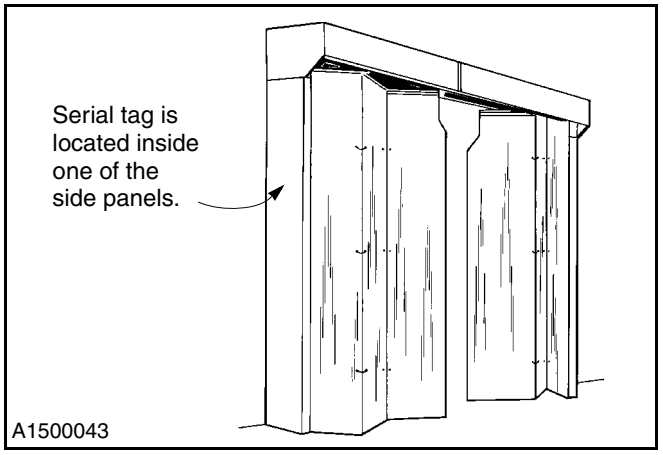


Figure 76

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.

HEAD ASSEMBLY

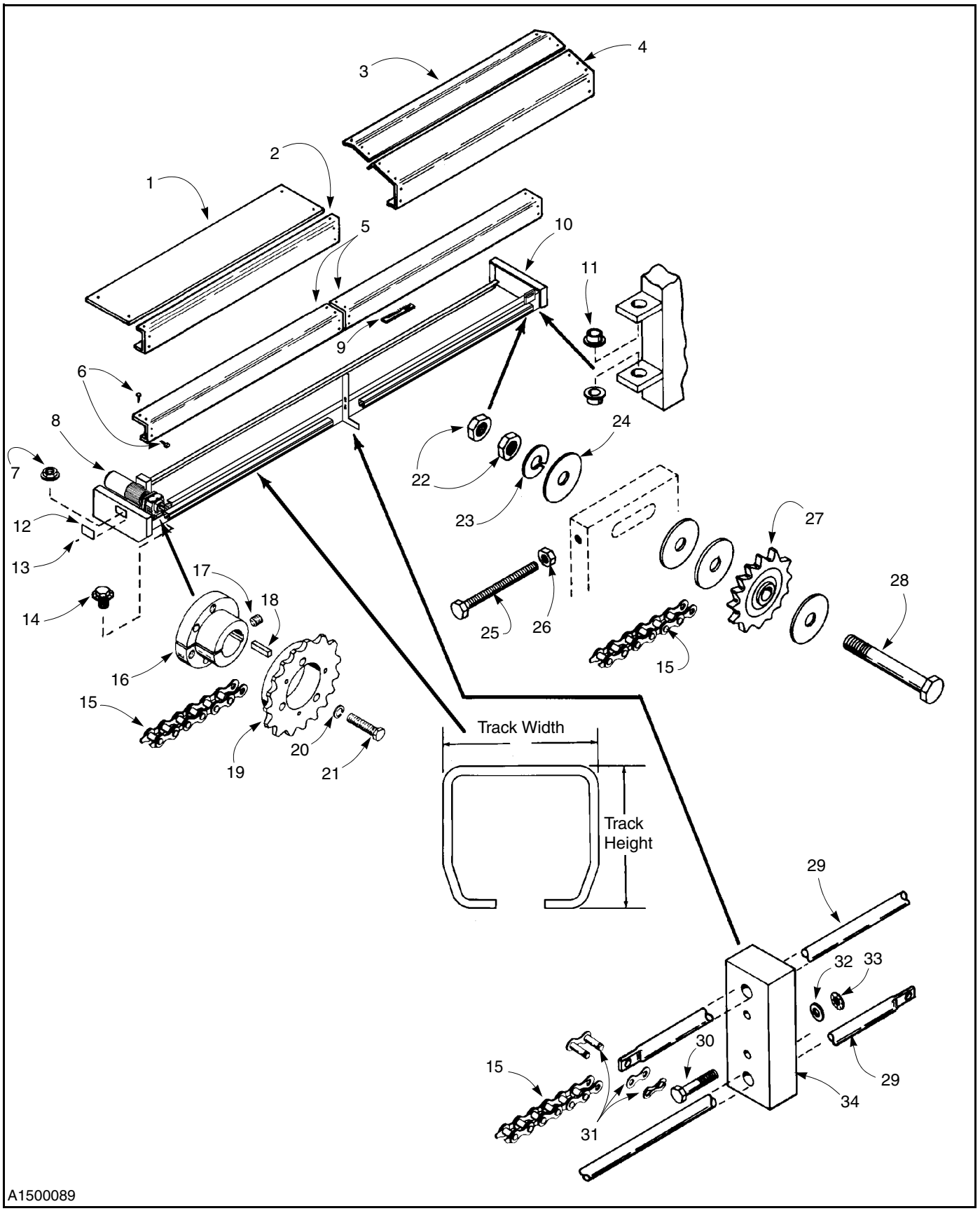


Figure 77

ITEM	QTY.	PART #	DESCRIPTION
1	A/R	Consult Factory*	Cover, Top (Flat Hood)
2	A/R	Consult Factory*	Cover, Front (Flat Hood)
3	A/R	Consult Factory*	Cover, Top (Slant Hood)
4	A/R	Consult Factory*	Cover, Front (Slant Hood)
5	A/R	Consult Factory*	Cover, Front (Short Hood)
6	A/R	0550158	Screw, Self-Tapping, #14 x ¾-in.
7	4	0553104	Nut, 5⁄16-18 Hex
8	1	Consult Factory*	Drive Assembly (See Page 32 for Illustrated Parts Breakdown)
9	1	0016105	Decal, Rytec
10	1	Consult Factory*	Head Assembly
11	4	0003067	Bushing, Brass ¾-in. ID
12	1	0102541	Cover, Head Side
13	A/R	0550158	Screw, Self-Tapping, #14 x ¾-in.
14	2	0550060	Screw, 5⁄16-18 x 1-in.
15	A/R	0001020*	Chain Assembly
16	1	0004437	Bushing, Taperlock SH 1-in. (Includes Items 17, 20, & 21)
17	1	-	Set Screw ¼-20 x 5⁄16-in.
18	1	-	Key, ¼-in. x ¼-in. x 1⅝-in.
19	1	0004436	Sprocket, Taperlock, 18-Tooth
20	3	-	Washer, Lock ¼-in.
21	3	-	Screw, ¼-20 x 1⅜-in.
22	2	0553092	Nut, Hex ⅝-11
23	1	0554120	Washer, Lock ⅝-in.
24	4	0555143	Washer, Flat ⅝-in.
25	1	0550010	Screw, Hex ⅜-16 x 2¾-in.
26	1	0553091	Nut, Hex ⅜-16
27	1	0004023	Adjustment Sprocket
28	1	0550013	Screw, Hex ⅝-11 x 3½-in.
29	A/R	0001021*	Connecting Rod
30	2	0550006	Screw, Hex ¼-20 x 2 in.
31	4	0004038	Master Link, #50
32	2	0555141	Washer, Flat ¼-in.
33	2	0553103	Nut, Hex ¼-20
34	1	0105019	Bushing, Connecting Rod Center (Door Width Less Than 150-in.)
	2	0105019	Bushing, Connecting Rod Center (Door Width Greater Than 150-in.)
35	1	0199744	Brake Release Kit (Not Shown)

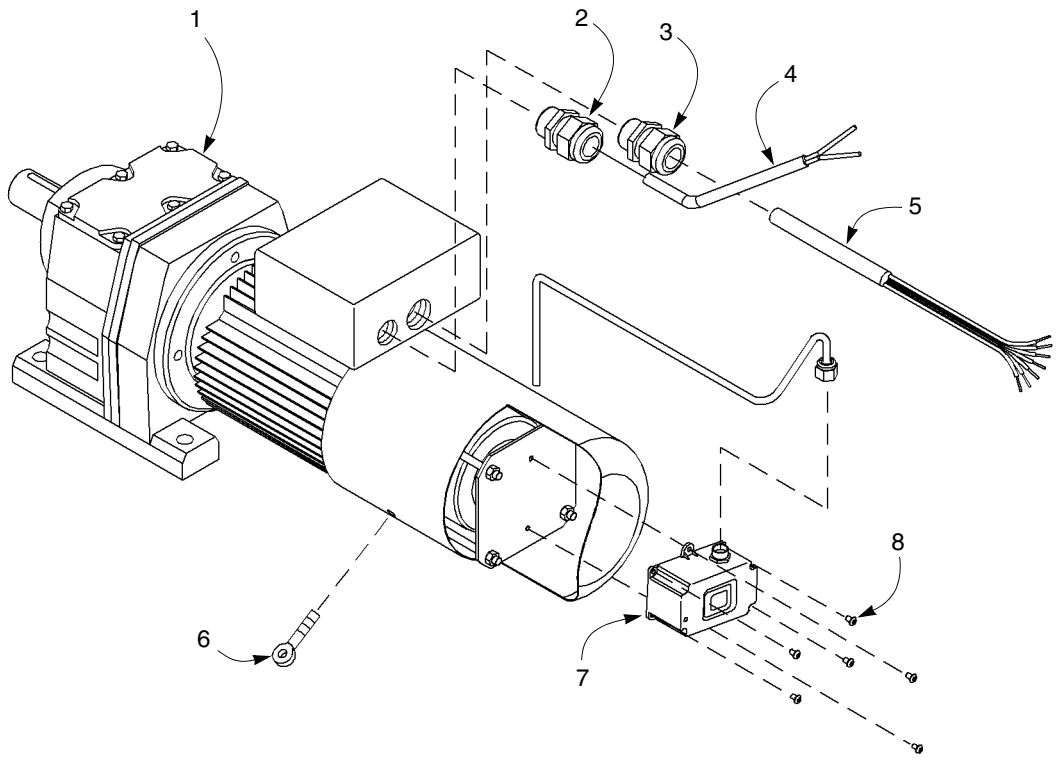
A/R = As Required

** 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.

DRIVE ASSEMBLY



A1500158

Figure 78

ITEM	QTY.	PART #	DESCRIPTION
1	1	Consult Factory*	Motor Assembly
2	1	0014491	Cord Grip, ½-in.
3	1	0014174	Cord Grip, ¾-in.
4	1	0014268	Cord, 16-2, SO
5	1	00141003	Cable, 16-4, Sheilded, SOOW, 600 V, 90•C
6	1	00550278	Eyebolt, Brake Release, Eurodrive
7	1	00141028	Encoder, FEIG
8	4	0021690	Screw, M3-0.5 x 10 mm LG, BHCS

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.

TURN ARM ASSEMBLY (STANDARD DOOR)

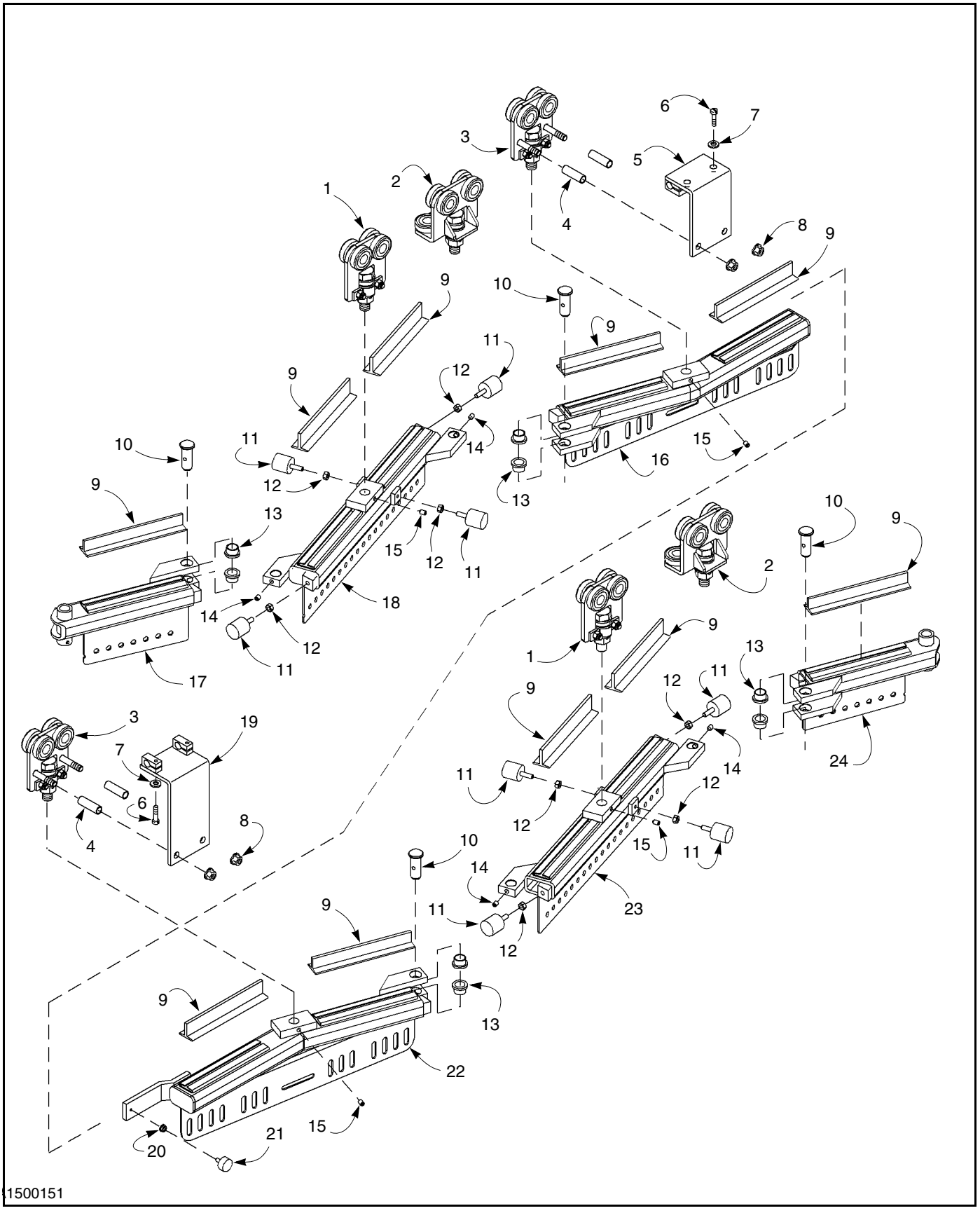


Figure 79

ITEM	QTY.	PART #	DESCRIPTION
1	1	0004290	Track Roller Assembly, G Series (Roller Dia. 1 5/16-in.)
	1	0004292	Track Roller Assembly (GS Series), (Roller Dia. 1 7/8-in.)
	1	0004294	Track Roller Assembly (BFGS Series), (Roller Dia. 2 1/4-in.)
2	1	0004295	Track Roller Assembly (GS/G Series), Tek Track II (Roller Dia. 1 7/8-in./1 5/16-in.)
	1	0004296	Track Roller Assembly (BFGS/GS Series), Tek Track II (Roller Dia. 2 1/4-in./1 7/16-in.)
3	1	0199090	Come-Along Roller Assembly (G Series), (Roller Dia. 1 5/16-in.)
	1	0199091	Come-Along Roller Assembly (GS Series), (Roller Dia. 1 7/8-in.)
	1	0199092	Come-Along Roller Assembly (BFGS Series), (Roller Dia. 2 1/4-in.)
4	4	0101201	Tube, Standoff GS
	4	0101202	Tube, Standoff BFGS
5	1	01992174	Short Come-Along Bracket, (G/GS Series)
	1	01992175	Short Come-Along Bracket, (GS/2 Series)
	1	01992176	Short Come-Along Bracket, (BFGS & BFGS/2 Series)
	1	01992177	Short Come-Along Bracket, (GS4 Series)
6	4	0550014	Screw 3/8-16 x 1 1/4-in.
7	4	0554118	Lock Washer, 3/8-in.
8	4	0553100	Nut, 1/2-13 UNC
9	A/R	0013126	T-Seal, Rubber
10	4	0103094	Pin Turn-Arm Hinge
11	8	0013013	Bumper, Rubber
12	8	0553090	Nut, 5/16-18
13	8	0003067	Bushing, Brass 3/4-in. ID
14	4	0551044	Set Screw, Cone Point 5/16 - 18 x 3/8-in.
15	4	0551057	Set Screw, Cone Point 5/16-18 x 5/8-in.
16	1	01992025*	Turn-Arm Weldment, DF-Tube #3 Panel, Strap
17	1	01991754*	Turn-Arm Weldment, C-Tube #1 Panel, Strap
18	1	01991760*	Turn-Arm Weldment, B-Tube #2 Panel, Strap
19	1	0199040	Long Come-Along Bracket, G/GS
	1	0199045	Long Come-Along Bracket, GS/2
	1	0199176	Long Come-Along Bracket, BFGS/2
	1	0199043	Long Come-Along Bracket, GS4
20	1	0553103	Nut, 1/4-20 UNC Serrated Flange
21	1	0404058	Bumper, Rubber
22	1	01992026*	Turn-Arm Weldment, DF-Tube #4 Panel, Strap
23	1	01992011*	Turn-Arm Weldment, B-Tube #5 Panel, Strap
24	1	01992009*	Turn-Arm Weldment, C-Tube #6 Panel, Strap

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.

TURN ARM ASSEMBLY (FREEZER DOOR)

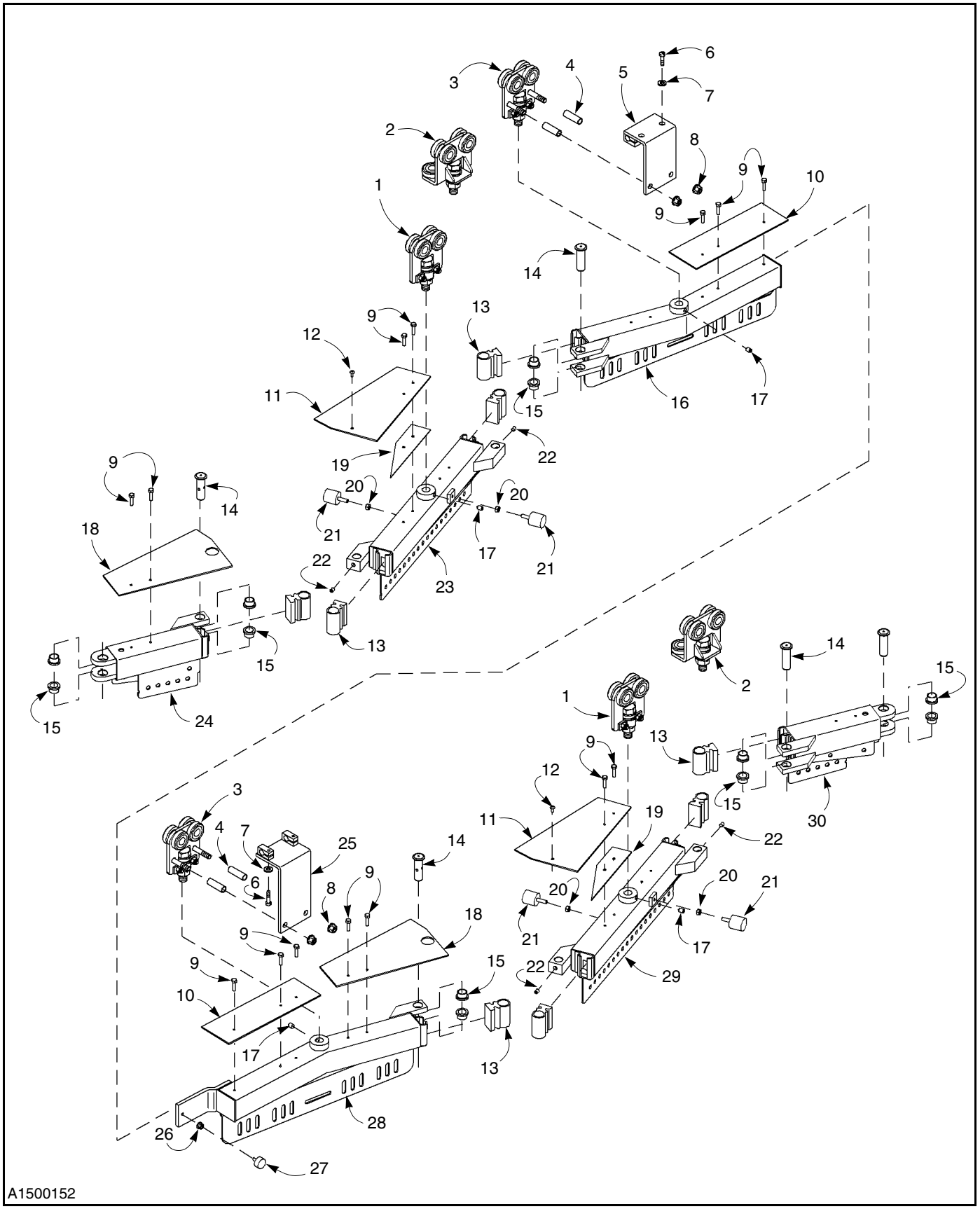


Figure 80

ITEM	QTY.	PART #	DESCRIPTION
1	1	0004290	Track Roller Assembly, G Series (Roller Dia. 1 5/16-in.)
	1	0004292	Track Roller Assembly (GS Series), (Roller Dia. 1 7/8-in.)
	1	0004294	Track Roller Assembly (BFGS Series), (Roller Dia. 2 1/4-in.)
2	1	0004295	Track Roller Assembly (GS/G Series), Tek Track II (Roller Dia. 1 7/8-in./1 5/16-in.)
	1	0004296	Track Roller Assembly (BFGS/GS Series), Tek Track II (Roller Dia. 2 1/4-in./1 7/16-in.)
3	1	0199090	Come-Along Roller Assembly (G Series), (Roller Dia. 1 5/16-in.)
	1	0199091	Come-Along Roller Assembly (GS Series), (Roller Dia. 1 7/8-in.)
	1	0199092	Come-Along Roller Assembly (BFGS Series), (Roller Dia. 2 1/4-in.)
4	4	0101201	Tube, Standoff GS
	4	0101202	Tube, Standoff BFGS
5	1	01992174	Short Come-Along Bracket, (G/GS Series)
	1	01992175	Short Come-Along Bracket, (GS/2 Series)
	1	01992176	Short Come-Along Bracket, (BFGS & BFGS/2 Series)
	1	01992177	Short Come-Along Bracket, (GS4 Series)
6	4	0550014	Screw 3/8-16 x1 1/4-in.
7	4	0554118	Lock Washer, 3/8-in.
8	4	0553100	Nut, 1/2-13 UNC
9	14	0551041	Screw, 1/4-20 x 1-in.
10	2	0107271*	Seal, Turn Arm, Panels #3 and #4
11	2	0107270*	Seal, Turn Arm, Panels #2 and #5
12	2	0550317	Screw, 10-24 x 1/2-in. Phillips Head
13	8	0113001	End Seal, Turn Arm
14	4	0103699	Pin, Turn-Arm Hinge
15	12	0003067	Bushing, Brass 3/4-in. ID
16	1	01991883*	Turn-Arm Weldment, DF-Tube #3 Panel, Strap, w/End Seal, GSR, GS/2R
17	4	0550074	Set Screw, Cone Point 3/8-16 x 5/8-in.
18	2	0107269*	Seal, Turn Arm, Panels #1 and #4
19	2	0104061	Insulation, 8 3/4 x 2 x 1/4-in. Thick Adhesive-Backed
20	4	0553090	Nut, 5/16-18
21	4	0013013	Bumper, Rubber
22	4	0551044	Set Screw, Cone Point 5/16 - 18 x 3/8-in.
23	1	01991882*	Turn-Arm Weldment, B-Tube #2 Panel, Strap, w/End Seal, GSR, GS/2R
24	1	01991881*	Turn-Arm Weldment, C-Tube #1 Panel, Strap, w/End Seal, GSR, GS/2R
25	1	0199040	Long Come-Along Bracket, G/GS
	1	0199045	Long Come-Along Bracket, GS/2
	1	0199176	Long Come-Along Bracket, BFGS/2
	1	0199043	Long Come-Along Bracket, GS4
26	1	0553103	Nut, 1/4-20 UNC Serrated Flange
27	1	0404058	Bumper, Rubber
28	1	01991884*	Turn-Arm Weldment, DF-Tube #4 Panel, Strap, w/End Seal, GSR, GS/2R
29	1	01991885*	Turn-Arm Weldment, B-Tube #5 Panel, Strap, w/End Seal, GSR, GS/2R
30	1	01991886*	Turn-Arm Weldment, C-Tube #6 Panel, Strap, w/End Seal, GSR, GS/2R

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.

DOOR PANELS AND SIDE PANELS

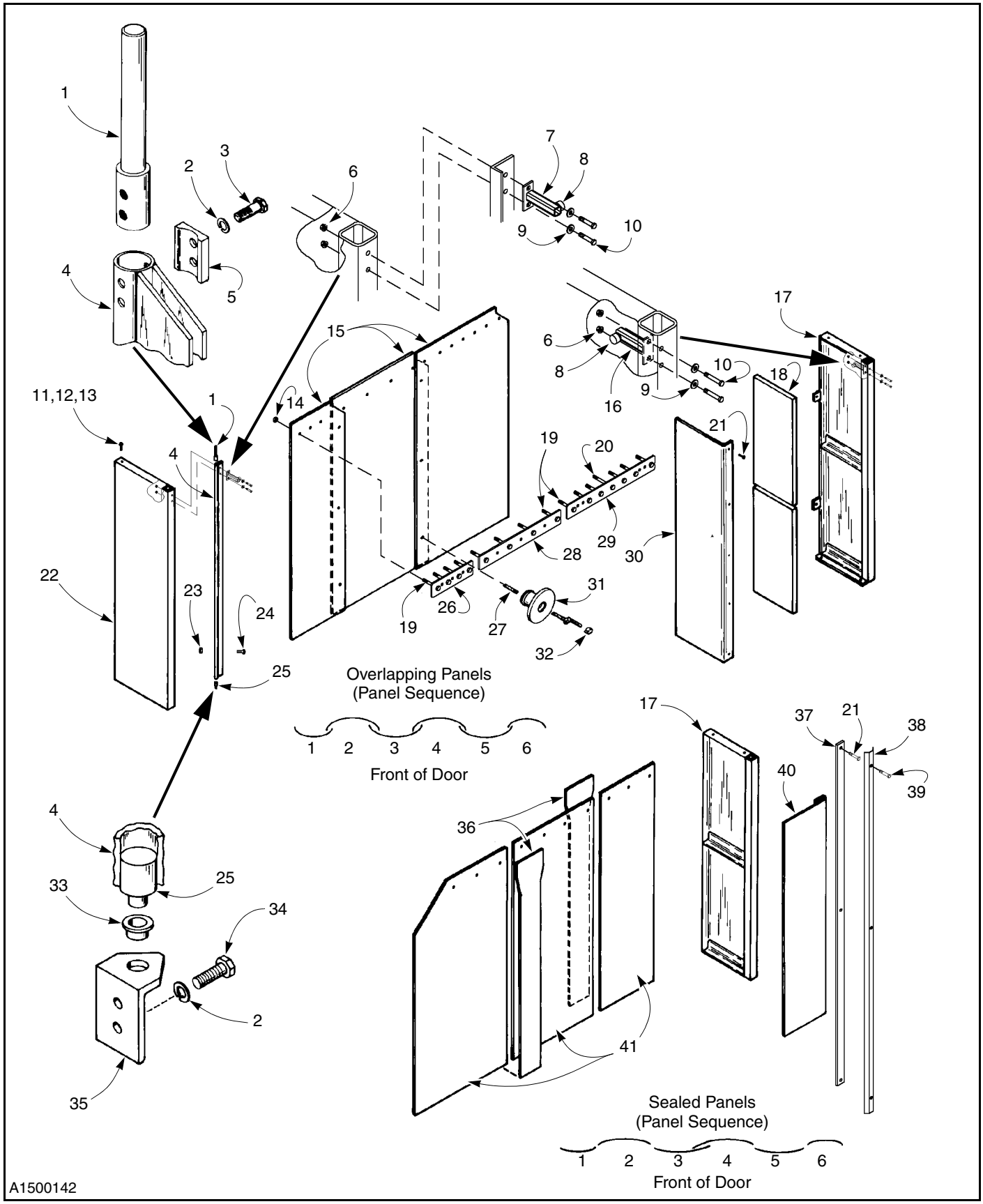


Figure 81

ITEM	QTY.	PART #	DESCRIPTION
1	2	0103225	Upper Side Pivot Post
2	8	0554119	Washer, Lock 7/16-in.
3	4	0555058	Screw, 7/16-14 x 1 1/4-in.
4	2	Consult Factory*	Side Pipe Assembly
5	2	0103224	Bracket, Clamp Upper Side Pipe Mtg.
6	4	0553229	Nut, 3/8-16
7	1	01991895	Turn-Arm Stop Assembly, Left (Includes Item 8)
8	2	0404058	Rubber Bumper
9	4	0555146	Flat Washer, 3/8-in.
10	4	0550123	Hex Screw, 3/8-16 x 3 1/4-in.
11	4	0550012	Screw, 5/8-11 x 1 1/2-in.
12	4	0555143	Washer, Flat 5/8-in.
13	4	0554120	Washer, Lock 5/8-in.
14	A/R	0021673	Nut, 5/16-18 Large Flange
15	A/R	Consult Factory*	Puralon Panel, Overlap (Reference Panel Number)
16	1	01991930	Turn-Arm Stop Assembly, Right (Includes Item 8)
17	2	Consult Factory*	Side Panel, Insulated
18	A/R	0021458	Insulation, 2 1/2-in.
19	A/R	0550008	Screw, 5/16-18 x 1 1/4-in. Hex
20	2	0550084	Screw, 5/16-18 x 2-in. Hex
21	A/R	0550158	Screw, Self-Tapping, 14 x 3/4-in.
22	2	Consult Factory*	Side Panel, Non-Insulated
23	A/R	0553104	Nut, Serrated 5/16-18
24	A/R	0550007	Screw, Hex 5/16-18 x 1 1/4-in.
25	2	0103074	Lower Side Pipe Pivot Post
26	2	Consult Factory*	Strap, Panel Mounting
27	A/R	0007140	Rope, Panel Ties
28	2	Consult Factory*	Strap, Panel Mounting
29	2	Consult Factory*	Strap, Panel Mounting
30	2	Consult Factory*	Cover, Insulated Side Panel
31	A/R	0107120	Knob, PVC
32	A/R	0004181	Crimp, Rope
33	2	0003067	Bushing, Brass 3/4-in. ID
34	4	0550011	Screw, 7/16-14 x 1 in.
35	2	0103072	Bracket, Lower Side Pipe
36	4	Consult Factory*	Seal, Mushroom
37	A/R	0201055	Strip, Retaining 1/8-in. x 1/2-in.
38	2	0103701*	Strip, Clamp
39	A/R	0021609	Screw, 1/4-in. x 1/4-in. Self-Tapping Sheet-Metal
40	2	Consult Factory*	Seal, Rectangular
41	A/R	Consult Factory*	Puralon Panel, Sealed (Reference Panel Number)

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.

HEAT LAMP ASSEMBLY

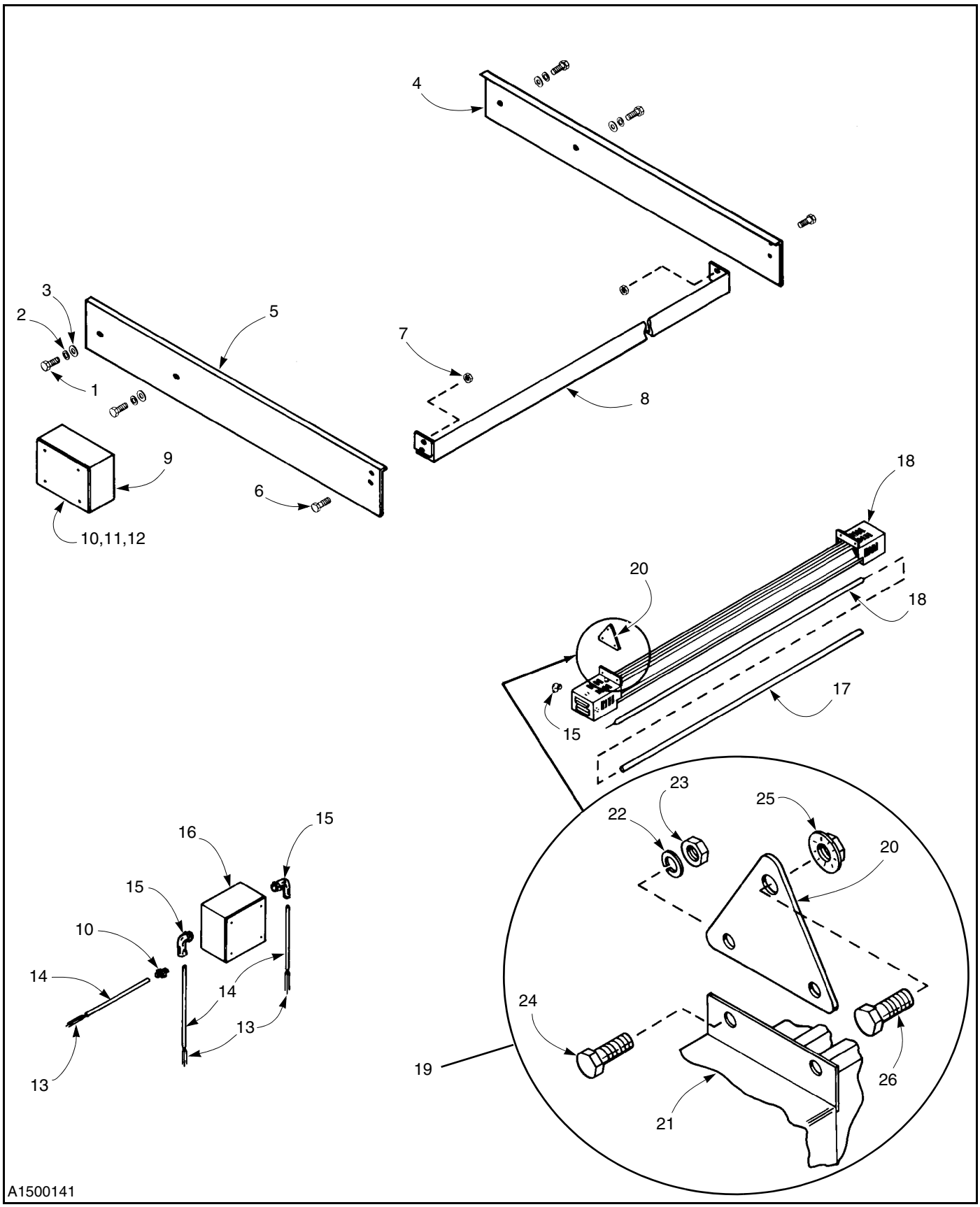


Figure 82

ITEM	QTY.	PART #	DESCRIPTION
1	4	0550011	Screw, 7/16-14 x 1-in.
2	4	0554119	Washer, Lock 7/16-in.
3	4	0554231	Washer, Flat 7/16-in.
4	1	01021019	Bracket, Front Mount Heat Lamp Support, Right
5	1	01021018	Bracket, Front Mount Heat Lamp Support, Left
6	4	0550261	Screw, 3/8-16 x 1 1/4-in. Serrated
7	4	0553229	Nut, 3/8-16 Serrated
8	1	0199626	Angle, Front Mount Heat Lamp CH-200 Fixture
	1	0199311	Angle, Front Mount Heat Lamp, MM - 46 Fixture
9	1	0014837	Junction Box, 8 x 6 x 4
10	A/R	-	Connector, 3/8-in.
11	A/R	0014291	Cord Grip, 1/2-in. (Not Shown)
12	A/R	0014734	Cord Grip, 3/4-in. (Not Shown)
13	A/R	0114989	Wire, High Temperature, 12 ga. Black
	A/R	0114990	Wire, High Temperature, 12 ga. Red
	A/R	0114991	Wire, High Temperature, 12 ga. Green
14	A/R	-	Conduit, Flexible Aluminum
15	A/R	-	Connector, 3/8-in. 90° Elbow
16	A/R	0014150	Junction Box 6 x 6 x 6
17	A/R	0004114	Sleeve, Ruby Red, MM-46
		0004313	Sleeve, Ruby Red, CH-200
18	A/R	0004113	Lamp, Quartz Heat, 460V, MM-46
	A/R	0004312	Lamp, Quartz Heat, 230V, CH-200
	A/R	0004336	Lamp, Quartz Heat, 575V, MM-46
19		0899896	Hardware, Mounting, Heat Lamp Assembly (Includes Items 20 thru 26)
20	A/R	0103220	Fixture Bracket, Heat Lamp
	A/R	0299426	Fixture Bracket, Heat Lamp, CH-200 (Not Shown)
21	A/R	0004110	Fixture, Heat Lamp, MM-46, 460V
	A/R	0004030	Fixture, Heat Lamp, CH-200, 230V (Double Lamp Fixture Not Shown)
22	A/R	0554115	Washer, Lock #10
23	A/R	0553088	Nut, 10-24
24	A/R	0551054	Screw, 10-24 x 3/4-in.
25	A/R	0553229	Nut, 3/8-in.-16, Serrated
26	A/R	0550028	Screw, 3/8-in.-16 x 1-in.

A/R = As Required

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

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HEATED AND UNHEATED BLOWER UNIT

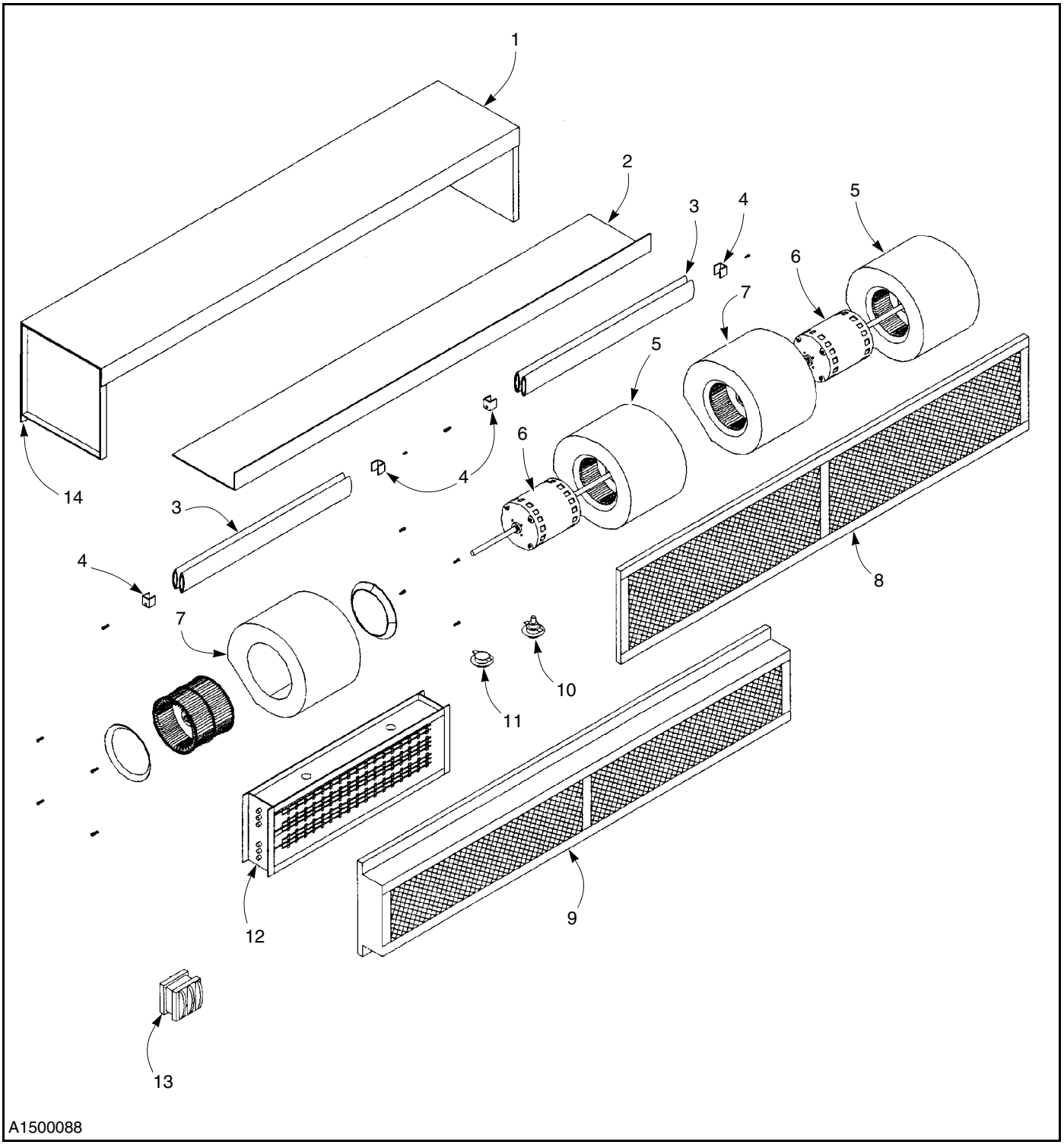

Figure 83

ITEM	QTY.	PART #	DESCRIPTION
1	A/R	Consult Factory	Welded Channel, Unheated Blower
	A/R	Consult Factory	Welded Channel, Heated Blower
2	A/R	Consult Factory	Cover, Front
3	A/R	Consult Factory	Vane, Outlet Nozzle
4	A/R	Consult Factory	Clip, Outlet Nozzle Vane
5	A/R	Consult Factory	Blower Wheel and Housing, Right
6	A/R	0004734	Motor, 115-Volt, ⅓-HP Blower
	A/R	0004735	Motor, 480-Volt, 1-HP, Two-Speed Blower
	A/R	0004736	Motor, 208/230-Volt, 1-HP, Two-Speed Blower
7	A/R	Consult Factory	Blower Wheel and Housing, Left
8	A/R	Consult Factory	Inlet Screen, Unheated Blower
9	A/R	Consult Factory	Inlet Screen, Heated Blower
10	A/R	Consult Factory	Thermal Cutout, Manual Reset
11	A/R	Consult Factory	Thermal Cutout, Auto Reset
12	A/R	Consult Factory	Heater, Electric 33-in. 460-Volt
	A/R	Consult Factory	Heater, Electric 36-in. 460-Volt
13	A/R	Consult Factory	Contactor
14	A/R	Consult Factory	Vibration Strip

A/R = As Required

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

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NOTES