

HUSSMANN®

INNOVATOR ***ALUMINUM DOOR SYSTEM*** ***FOR WALK-IN COOLERS***

INSTALLATION & SERVICE MANUAL



P/N 2402130_E
November 2013

Spanish 2402621
French 0538958

**INNOVATOR COOLER DOOR SYSTEM
(ALUMINUM) INSTALLATION AND SERVICE**

Table of Contents

Parts List	iv	Connect Wiring from Wireway	8
General	1	Heater Harnesses	9
Application	1	Field Wiring Connection	9
Electrical Specifications	2	Wiring Diagrams	9
Specifications for Opening	2	Conditioning Gasket	10
Shipping Damage	2	Service and Maintenance	10
Preparation	2	Replacing Doors	10
Install Frame	3	Replacing Door Hinge Spring	13
Apply Sealant	3	Replacing Magnetic Gasket	12
Check Frame and Opening for Square	3	Restoring Gasket Seal	13
Place Frame in Opening	3	Door Handle Replacement	15
Fasten Frame to Cooler Wall	4	EcoShine™ LED Fixture Replacement	16
Joining Frames	5	EcoShine™ LED Power Supply Replacement	18
Seal Inside Frame Perimeter	6	EcoShine™ LED Wiring Diagrams	19
Attach Door Handles	6	Fluorescent Lamp Replacement (Center Mullion)	22
Install Doors	7	Fluorescent Lamp Replacement (End Mullion)	24
Adjust Closing Torque	7	Ballast Replacement	24
Adjust Door Sag	8	Frame Heater Replacement	25
Connect Heaters	8	Fluorescent Lamp Wiring Diagrams	26
		Replacement Parts Chart	28

REVISION E

1. Added Metal Opening Cutting, Page 1.

REVISION D

1. Added EcoShine LED, Pages 18 through 23.
2. Added LED parts list, Pages 31

IMPORTANT
KEEP IN STORE FOR FUTURE REFERENCE

Quality that sets industry standards.

Hussmann Corporation
Corporate Headquarters

12999 St. Charles Rock Road • Bridgeton, MO 63044 U.S.A. • (314) 291-2000 • FAX (314) 298-4767

HUSSMANN/AMERICAN • Arroz 155 • Iztapalapa, México D.F. 09820 • Tel: 85 03 19 00

U.S. & Canada 1-800-922-1919 • Mexico 1-800-890-2900

©2013 Hussmann Corporation

PARTS LIST						
Item	Quantity					Description
	1 DOOR	2 DOOR	3 DOOR	4 DOOR	5 DOOR	
1.	1	1	1	1	1	Frame
2.	10	20	30	40	50	Screws
3.	1	1	1	1	1	Silicone
4.	1	2	3	4	5	Doors
Joining						
5.	1	1	1	1	1	Joint Molding
6.	5	5	5	5	5	Binder Post and Screw

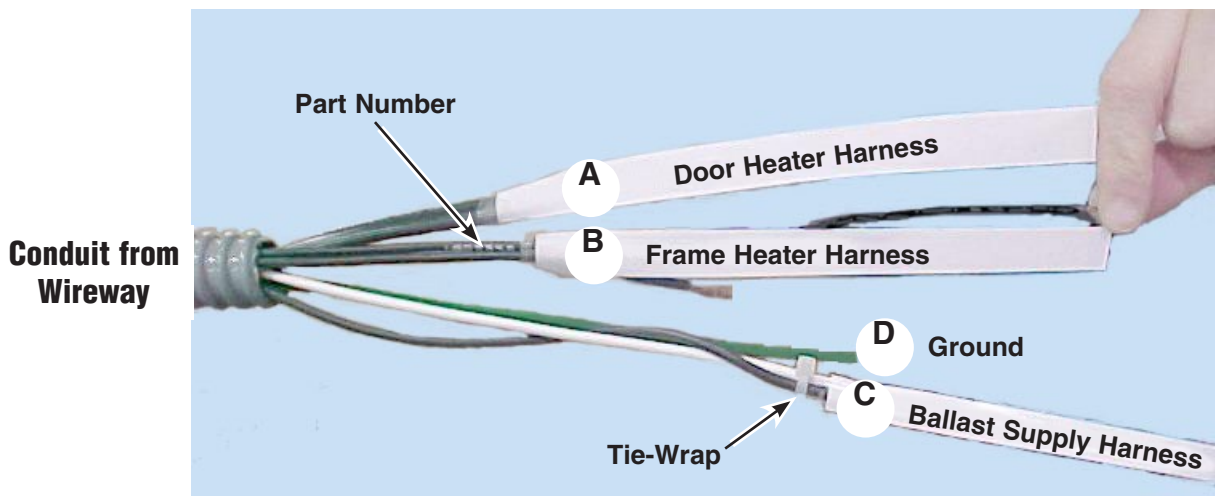
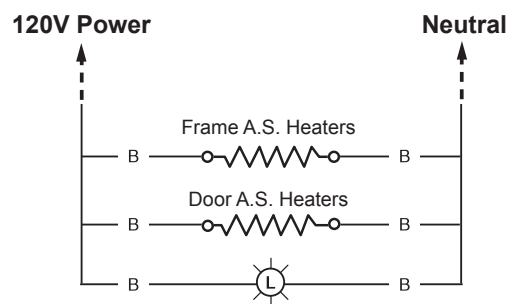
Conduit from Wireway

Each frame has the following wires in flexible conduit:

- A. LOW TEMPERATURE APPLICATION ONLY — The *Door Heater Harness* is made of two joined black wires.
- B. The *Frame Heater Harness* is made of two separate black wires **OR** one black and one white wire; one or both will have a part number stamped visibly along the length of the wire.
- C. The *Ballast Supply Harness* has one white wire and one black wire bound with Tiewrap.

D. The *Ground* wire is green.

This photo shows the wiring with labels added for clarity. The diagram shows how the wires must be connected.



GENERAL

Thank you for choosing Hussmann's *Innovator Cooler Door System*. This document provides information necessary for successful installation and operation of the door system.



Innovator Cooler Door System

The door nameplate is attached to the top of the door, handle side, behind the magnetic gasket. The frame nameplate is located on the top left near the switch.

ATTENTION

Interior metal skin of cooler/freezer must not extend more than 2 inches into the frame opening perimeter. Innovator doors and frame may not operate correctly if metal skin is in contact around Innovator frame opening. Cooler/freezer panel metal skin around the opening must be removed!

Door systems manufactured with Innovator or Innovator II doors have an anti-arc ballast. When re-starting fluorescent lamps, turn power off then on.

APPLICATION

The Innovator Cooler Door System is designed for installation in new medium temperature or low temperature walk-in coolers with insulated structural walls. To maintain structural integrity of the cooler wall and the door system, the cooler wall must be manufactured with a reinforced opening to match the door frame.



Standard Reinforced Opening

vertical outside frame flange.



Removal of Metal around Opening

ELECTRICAL SPECIFICATIONS

Appropriate electrical power must be available for the door system, including lighting and heaters. Check the nameplate for minimum circuit ampacity and maximum overcurrent protection device. Always follow NEC guidelines and local codes.

SPECIFICATIONS FOR OPENING

Each door frame is 1 to 5 doors wide. Several standard frame heights are available. Always compare the wall opening dimensions with the frames to be installed.

SHIPPING DAMAGE

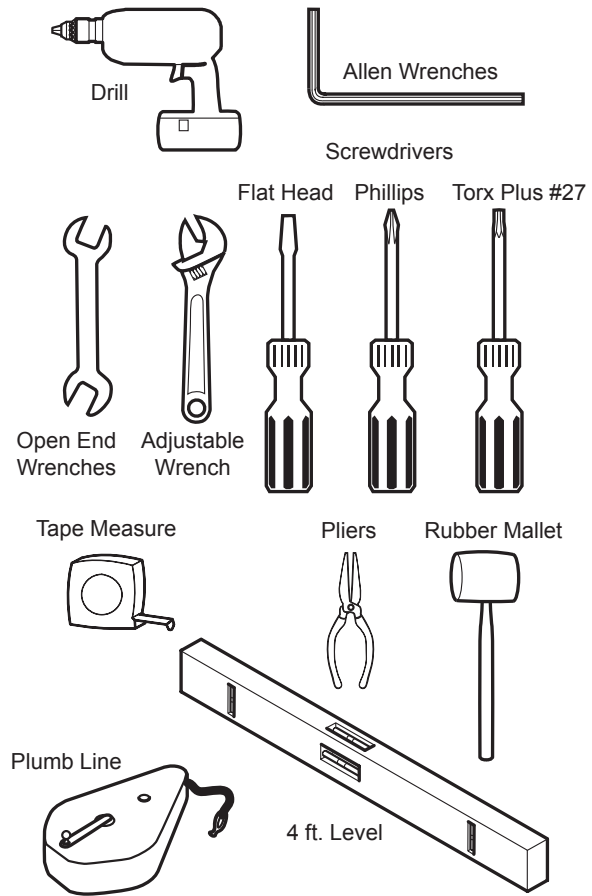
All equipment should be thoroughly examined for shipping damage before and during unloading.

This equipment has been carefully inspected at our factory. Any claim for loss or damage must be made to the carrier. The carrier will provide any necessary inspection reports and/or claim forms.

PREPARATION

Clear an area outside the wall opening to lay the frame flat and work around it. Gather tools needed for installation.

Doors are shipped separately from the frame. Set doors aside until frame is installed. Lay the frame face down. Remove all packing materials, packaged parts and tape. Take care not to scratch or otherwise damage frame face.



Typical Tools Needed to Install Innovator Cooler Door System



Unpack Frame and Lay Face Down

INSTALL FRAME

Apply Sealant

Apply field-supplied silicone sealant between edge of gasket and outside edge of frame.

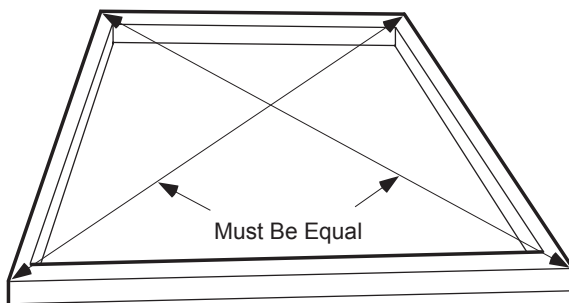


Apply Silicone Sealant

Check Frame and Opening for Square

Verify the frame is not racked (out of square) by measuring from one corner diagonally to the other. The measurements must be the same.

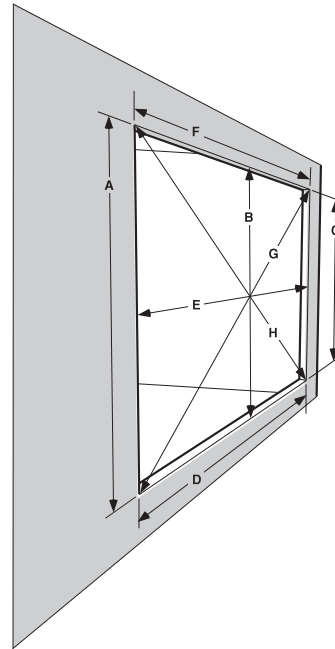
Verify that the opening is large enough for the frame. Use a long level (4 ft (1220 mm) or more) to determine if the opening is level side to side. If shims are needed, they must be used under the frame at the bottom of the opening, or at the sides.



Verify Square Frame

Place Frame in Opening

Lift frame by mullions to avoid gaskets and sealant. Position bottom of frame in opening and then tilt top of frame toward opening. Take care that wiring from wireway at top of frame is not damaged.



Verify Square and Level Opening



Place Frame in Opening

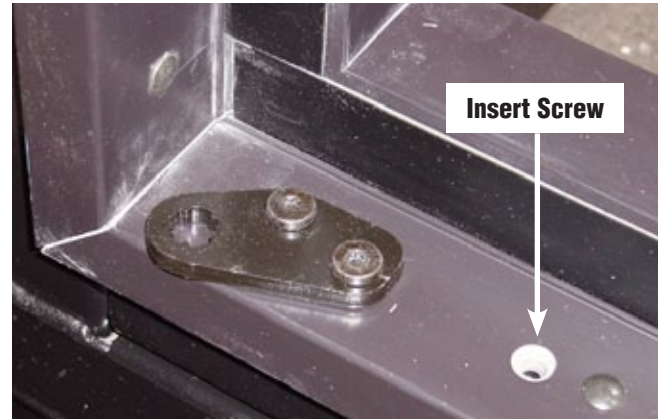
properly positioned, large clamps should be used to hold frame in position.



Use the Level

Fasten Frame to Cooler Wall

Use screws provided to fasten the bottom frame to the wall.



Insert Screw



Fasten the Frame Bottom

Verify frame is still square.

Fasten side frame to wall with screws provided. Use shims as necessary. Do not distort frame by excessive tightening.



Clamp the Frame



Keep Frame Level

Fasten top of the frame to wall with screws provided. Do not distort frame by excessive tightening. Use shims at each screw location to prevent distortion. Once screws are in, verify top of frame is straight and level from side to side.



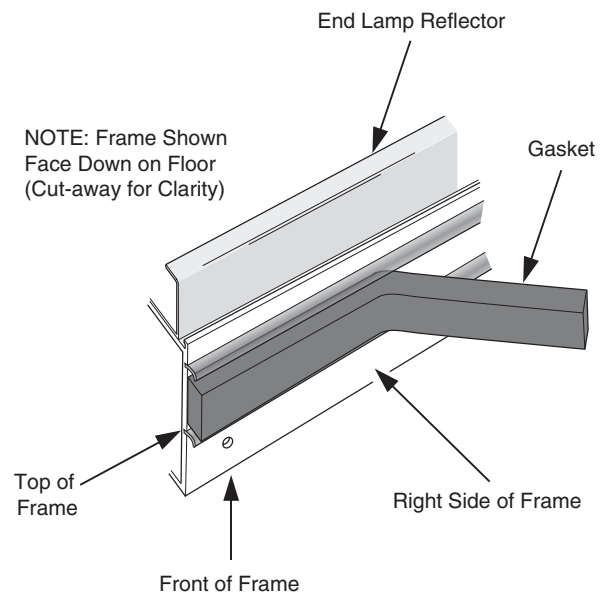
Fasten Frame Top Last

IMPORTANT!
DO NOT OVER-TIGHTEN

JOINING FRAMES

Frame sides to be joined will have no front face flange

Install the first frame as above, and prepare the second frame. Apply 1 in. wide gasket between wipes of each frame side to be joined. Lift the second frame into position and fasten the bottom as above.



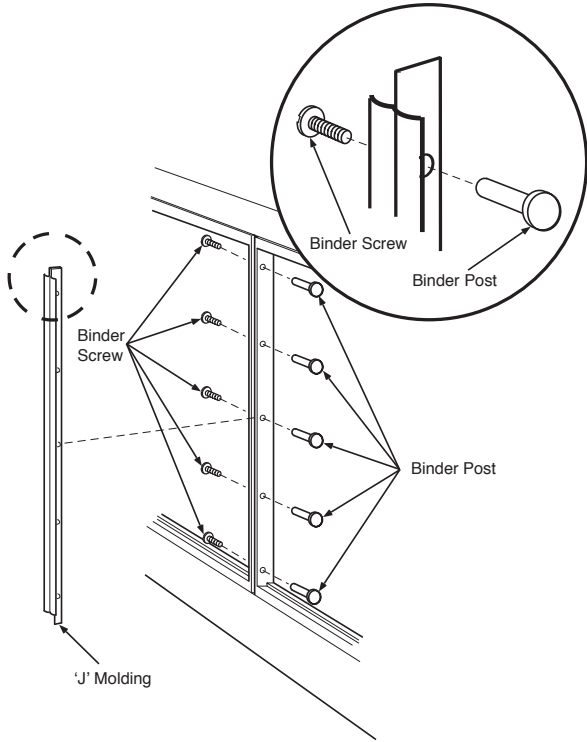
Install Gasket Between Wipes

Verify the second frame is still square.

If last frame in opening, fasten side frame to cooler wall opening.

Insert 'J' molding between frames. Fasten frames together with binding post and screw in five locations. Fasten top of frame to cooler wall opening. Do not distort frame sides or top.

Once all frames are installed, verify overall frame is square and plumb.



Install 'J' Molding Between Frames

SEAL INSIDE FRAME PERIMETER

Apply a small continuous bead of silicone sealant around the inside of the frame to seal the frame to the wall.

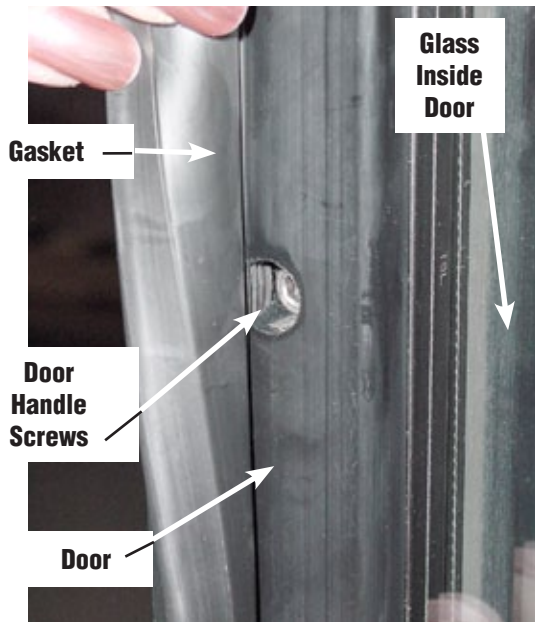


Apply Silicone Around Frame

ATTACH DOOR HANDLES

Carefully lift the magnetic gasket away from the frame nearest the handle location to expose the mounting screw holes as shown in below.

Install handle and screws carefully (*if gasket is damaged, it must be replaced*). After installing screws, gasket should again lie flat. If needed, use a mild soap and water solution to lubricate the gasket. Clean and dry the gasket to complete the door handle installation.



Lift Gasket at Handle Location

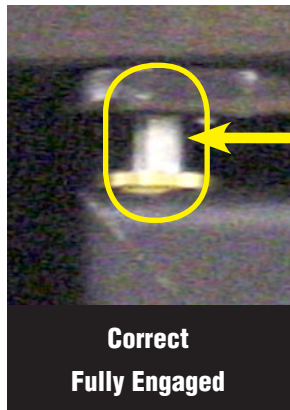
INSTALL DOORS

Insert the ball bearing, spring, bushing and pin in the top of door. Lift the door and insert the bottom hinge pin into the bottom hinge socket. Rotate the top of the door under the the top socket while holding down the top hinge pin. Once the hinge pin is under the top socket, maneuver the door until the hinge pin pops into the socket.

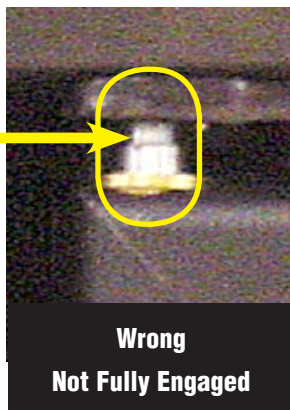


Ball Bearing, Spring, Pin and Bushing

Ensure the hinge pin is fully engaged into the hinge plate as shown below.



**Correct
Fully Engaged**



**Wrong
Not Fully Engaged**

Ensure Hinge Pin is Fully Engaged into Hinge Plate

blade screwdriver to lift the door retainer over the shoulder screw.

Open and close the door to verify hinge pins are fully seated and door is held in place.

Install remaining doors before adjusting doors.



Lift Door Retainer Over Shoulder Screw

ADJUST CLOSING TORQUE

Adjust closing torque by turning the bottom hinge pin in the direction the door closes. Use a 1/2 in. (13 mm) wrench. Turn the hinge pin until the door closes on its own, usually 3 to 4 clicks or 3/4 turn.

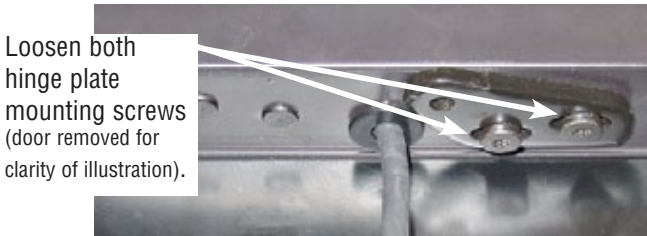
DO NOT over-torque the hinge spring assembly. Excessive torque (over 1 full turn) will result in damage to the spring assembly and/or door. If door does not close on its own after one full turn (5 clicks), look for obstructions causing the door to hang up.



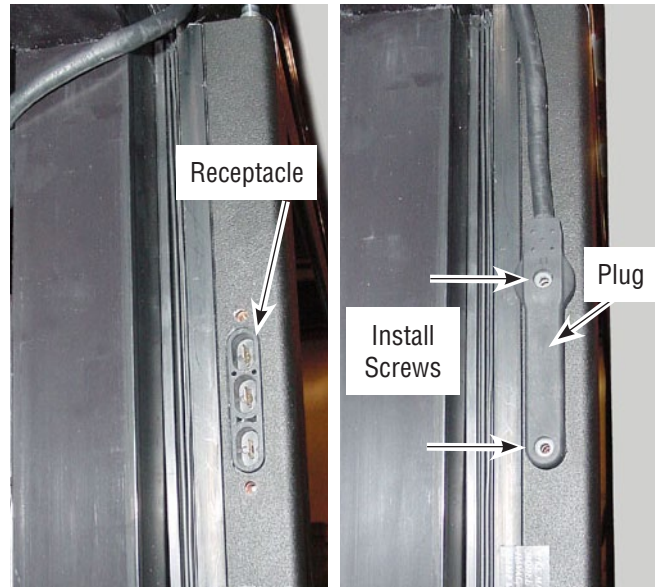
Adjust Closing Torque

ADJUST DOOR SAG

To adjust door sag (saw-tooth effect from door to door), loosen the two hinge plate mounting screws using a Torx Plus no. 27 bit. Adjust hinge plate as needed, then tighten the screws.



Adjust Door Sag



Connect Heater

⚠ WARNING

Always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

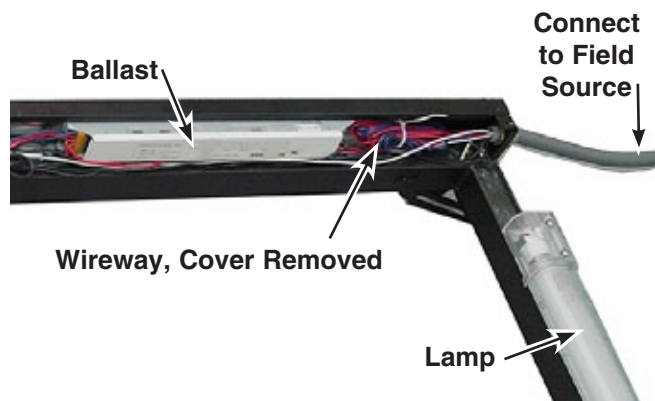
CONNECT WIRING FROM WIREWAY

Door system wiring is routed from the wireway through flexible conduit to be connected to the power source. Wiring diagrams for the heater harnesses follow. Wiring diagrams for the power supply and EcoShine LED lamps begin on page 19. Wiring diagrams for ballast and fluorescent lighting begin on page 26.

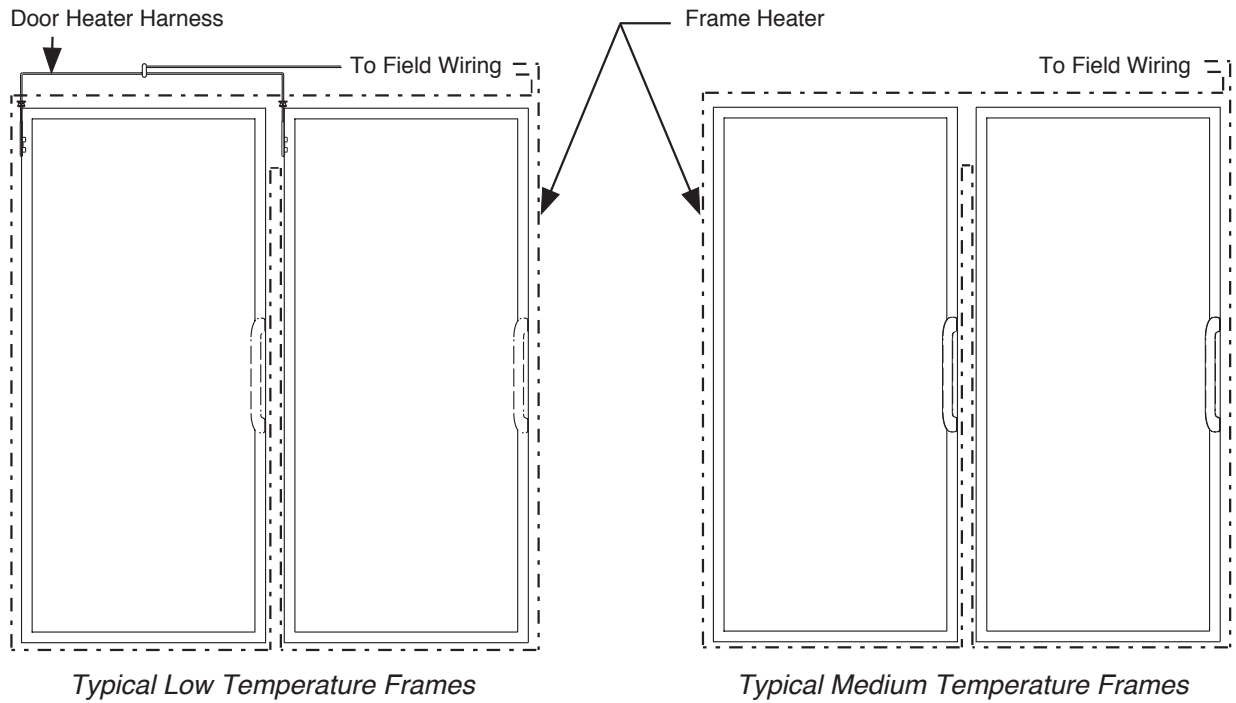
CONNECT HEATERS

NOTE: NOT ALL DOORS HAVE HEATER HARNESSSES.

Use screws supplied with the harness to attach the heater harness to the receptacle mounted in the door. **DO NOT** use other screws which may damage the door.



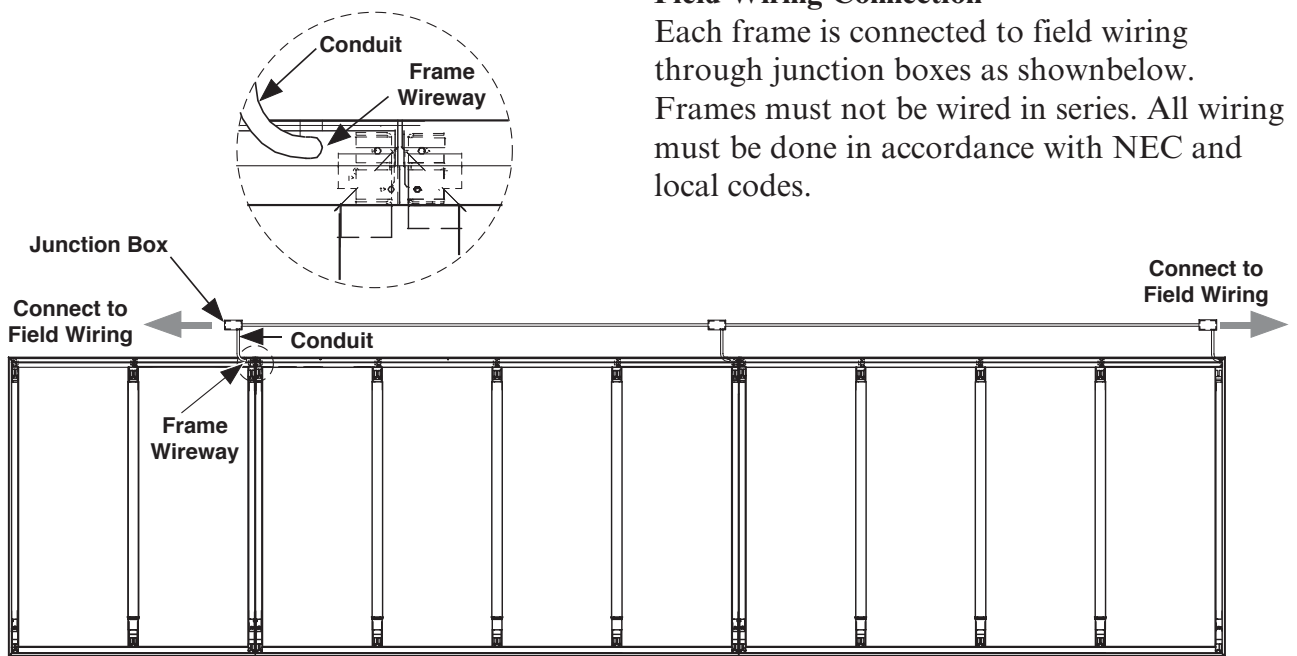
Connect Wireway Wiring to Power Source



Heater Harnesses

Field Wiring Connection

Each frame is connected to field wiring through junction boxes as shown below. Frames must not be wired in series. All wiring must be done in accordance with NEC and local codes.



Connect Frame to Field Wiring

CONDITIONING GASKETS

In the factory environment, gaskets can be fitted to seal properly. However, the manufacturer cannot control the environment surrounding components during shipment or installation. Temperature and humidity fluctuations promote gaps which prevent sealing between gasket and frame. This is not a warranty issue or defect.

Before refrigerating the walk-in space, follow this procedure which was developed to ensure gaps close and gaskets seal properly in most environments.

1. Install the frames and doors, connect all wiring, and make adjustments as directed in the preceding pages.
2. Close each door. Use a flashlight to identify any gaps between frame and gasket.
3. Energize all anti-sweat, fan and light circuits for at least two hours, but not more than four hours, prior to initiating the refrigeration cycle.
4. Monitor all gaps.
5. Initiate cooling sequence after four hours or once the gaps disappear, whichever comes first.

Do not exceed 8 hours of energized circuits without refrigeration. Doing so may cause damage to doors and frames and will void the warranty.

If gaps remain at the end of four hours, follow the procedure for *Restoring Gasket Seal*, beginning on page 13 of this manual.

ATTENTION

TO ENSURE PROPER DOOR GASKET SEAL — INSTALL DOORS AND FRAMES, THEN ENERGIZE ALL ANTI-SWEAT AND LIGHT CIRCUITS 2 TO 4 HOURS PRIOR TO INITIATING REFRIGERATION CYCLE.

DO NOT EXCEED 8 HOURS OF ENERGIZED CIRCUITS WITHOUT REFRIGERATION. DAMAGE OR PRODUCT FAILURE MAY OCCUR AND VOID THE WARRANTY. DO NOT REMOVE THIS LABEL UNTIL REFRIGERATION IS INITIATED.

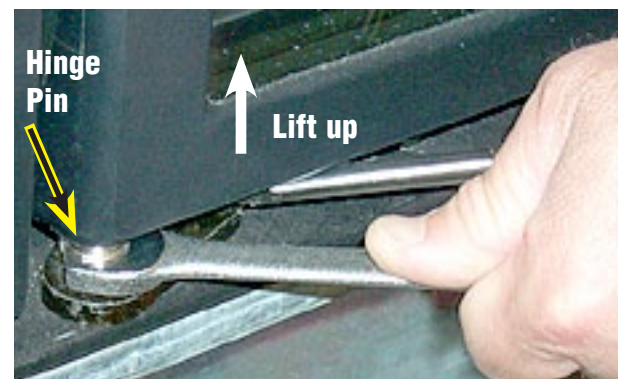
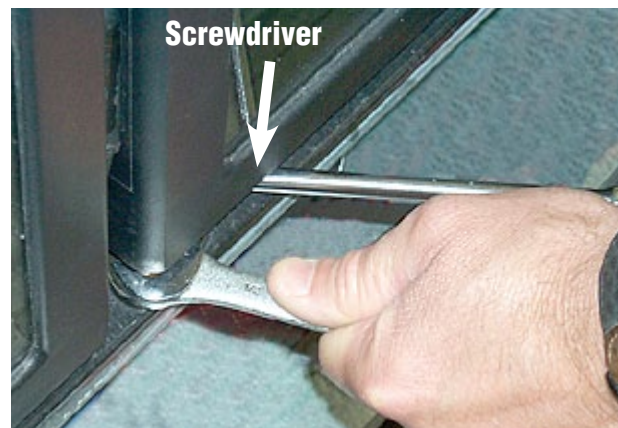
⚠ WARNING

Always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

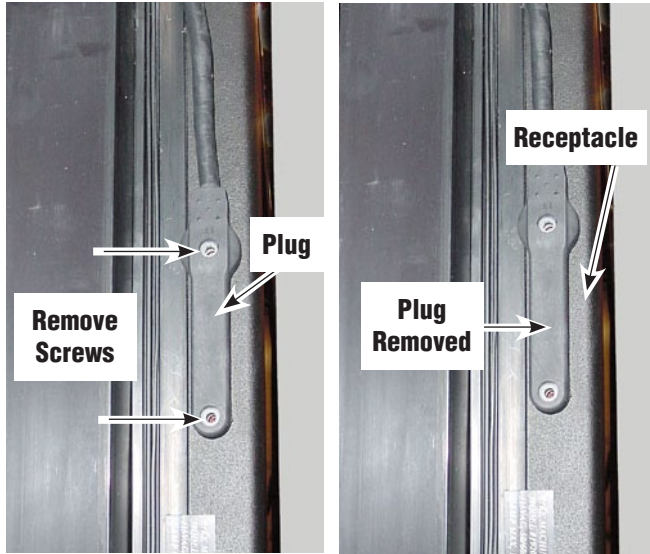
SERVICE AND MAINTENANCE

Replacing Doors

1. Loosen torque on door before removing the door. Wedge a screwdriver between the bottom of the door and the hinge socket, then lift the door up. This will lift the bottom hinge pin up and out of the bottom hinge socket. **Hold the hinge pin** with a 1/2 in. (13 mm) open end wrench to keep it from spinning out and stripping the socket.



Loosen Torque on the Door



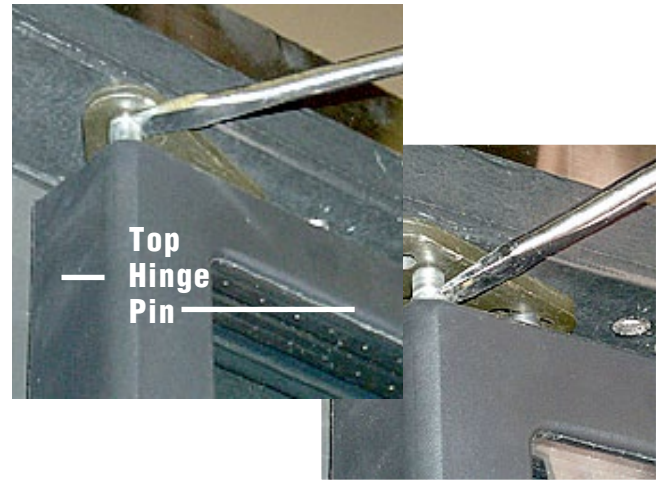
Disconnect Heater

2. Remove the two screws that hold the heater plug into the side of the door, then remove the plug.
3. Use a flat blade screwdriver as shown to lift the door retainer over the shoulder screw.



Lift Door Retainer

4. Push down the spring-loaded top hinge pin until it clears the top socket using a flat blade screwdriver. With finger, *hold the hinge pin in the door to keep it from popping out*. Tape may be used to temporarily hold the hinge pin once door is removed.
5. Rock the door out and pull the bottom hinge pin out from the bottom socket.



Remove Top Hinge Pin from Top Hinge Socket

6. Install the new door in reverse order.
7. Adjust the torque on the new door. If needed, adjust sag.

Replacing Door Hinge Spring

The door must be removed before replacing the door hinge spring.

Pull the hinge spring assembly out of the bottom of the door and replace with a new assembly. Note that there are right-hand and left-hand hinge spring assemblies.



Replace Door Hinge Spring

Replacing Magnetic Gasket

Carefully remove the old gasket from the groove in the back of the door. The new gasket will be easier to work with if it is at ambient temperature. Begin by lubricating the new gasket with a mild soap and water solution.



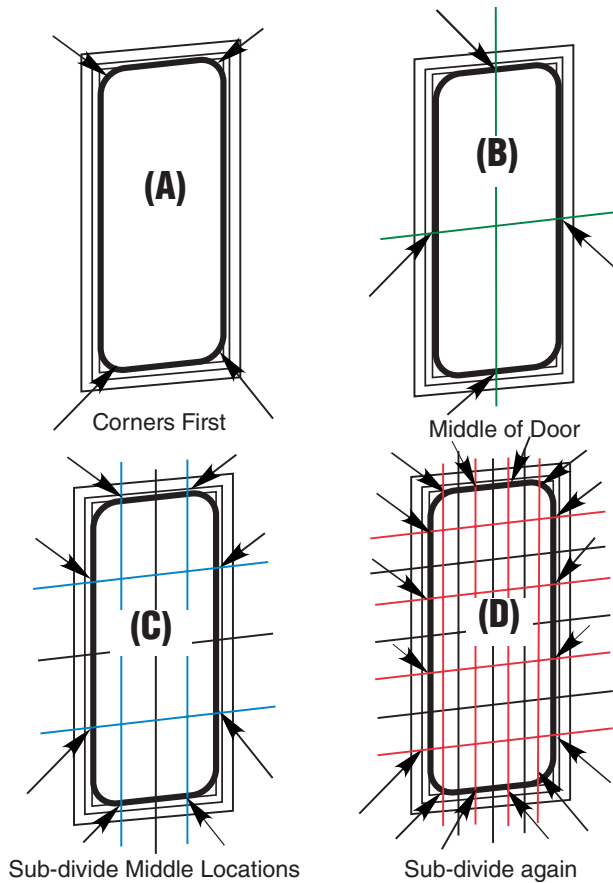
Remove Door Gasket

Work from the corners to the centers of each side, top and bottom. Carefully push the new gasket into the groove at each corner, refer to sequence (A). Then, push the gasket into the channel at the center of the top, bottom and each side, (B). Avoid stretching the gasket.

Sub-divide remaining areas and push the gasket in at those points, (C).

Sub-divide once again and repeat pushing the gasket in until all of the gasket is evenly seated in the groove, (D).

Use a soft cloth or paper towels to dry the gasket before closing door on clean door frame.



Sequence for Installing New Gasket

Restoring Gasket Seal

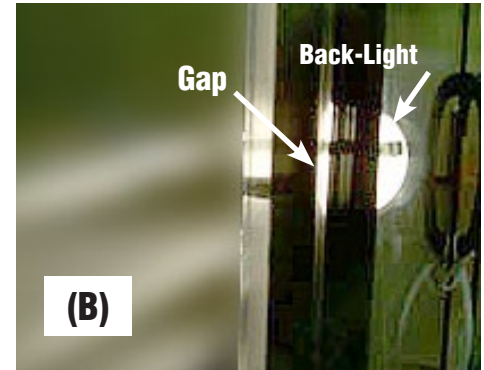
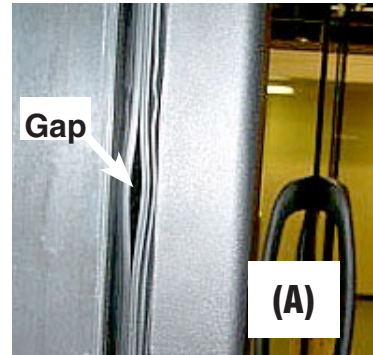
Occasionally, a crimped or damaged gasket can cause gaps in the seal, leading to frost formation on the doors. Use this procedure to close gaps and end frost formation on doors.



Improperly Installed or Damaged Gasket

LOCATE GAPS

Normally, interior ambient lighting may provide enough light to see gaps. In some cases, the only way to see gaps is to provide a back-light as shown (A). Backlight the door mullion and look for places the light shines between the door and gasket, (B).



Back-Lighting Gaps in Gasket

HEAT THE GASKET

Make sure the door is closed. Beginning at the top of the gap, use a heat gun or electric hair dryer (1500-1600 watt) to heat the gasket with a constant up and down motion.

IMPORTANT: If a gap runs the entire length of the door, heat the area 4 in. (100 mm) above and 8 in. (200 mm) below the top-most point where the gap starts and work in 12 in. (300 mm) increments.

If the gasket becomes shiny, remove heat immediately as this is an indication that the gasket is near the melting point.

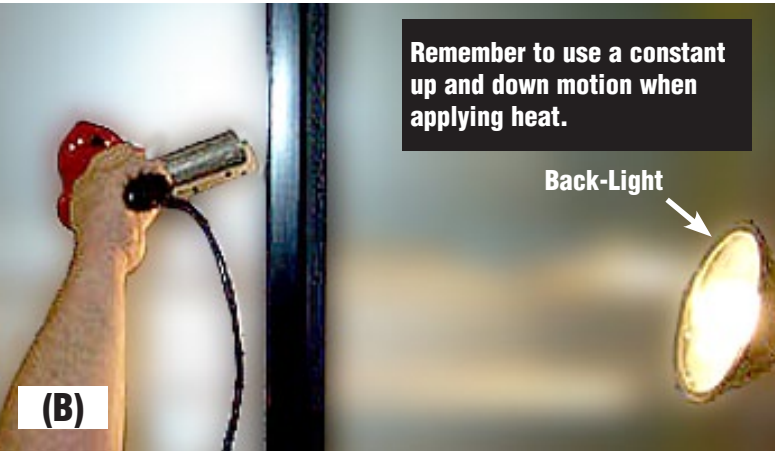
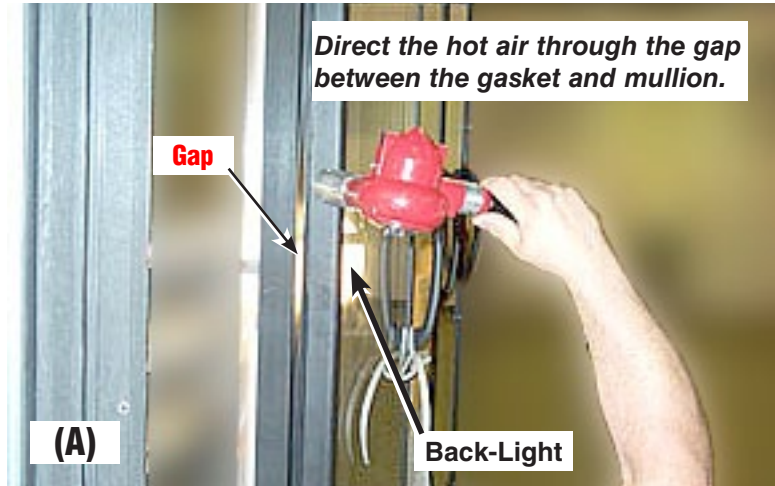
If possible, direct the hot air onto the gasket and also through the gap between the gasket and mullion. This will help to heat both sides of the gasket.

As the gasket softens and becomes pliable, the magnet in the gasket should pull it across the gap. As the gap closes, move heat down to create a zippering effect as shown.

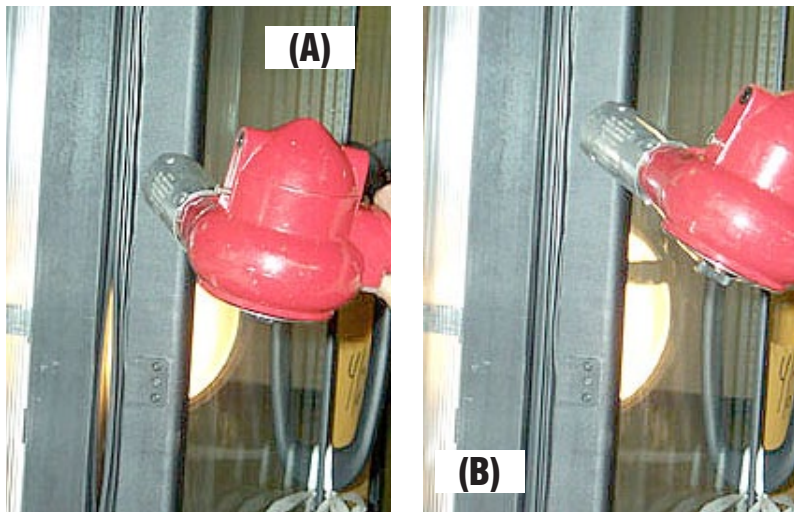
If the gasket is not pulled across the gap by the magnet, reach around the mullion (from the inside) and pull the gasket skirt toward the mullion.

This can also be accomplished by pushing the magnet across the gap from the outside with a pencil or other non-heat conducting material.

On doors where the gap is against an end, top, or bottom mullion, this process can still be done; however, the heat will need to be directed between the lip of the mullion and the edge of the door. It will work in the same fashion but the back-light shining through and showing on the mullion will have to be a guide as to the position of the gasket.



Applying Heat to Gasket



Zipper Effect



Pulling Gasket Into Place With a Pencil

COOL THE GASKET

Once the gap is closed, remove the heat and allow the gasket to cool, undisturbed, for 3 to 5 minutes. As the gasket cools, it will set permanently in this new shape.

Once the gasket is cool to the touch, open and close the door. Verify that the gasket seals. If not, repeat the process. If the gasket rolls it must be replaced.

Use a soft cloth or paper towels, and a mild soap and water solution to thoroughly clean the gasket. Dry the gasket completely with a fresh cloth or paper towels before closing the door on a clean door frame.

Door Handle Replacement



Carefully pull the magnetic gasket away from the glass nearest the handle to expose the mounting screws as shown. Remove the screws and replace the handle. After reinstalling screws, carefully push gasket back into place. If needed, use a mild soap and water solution to lubricate the gasket. Clean and dry the gasket to complete the door handle replacement.

Mounting Screws



Replacing Door Handle

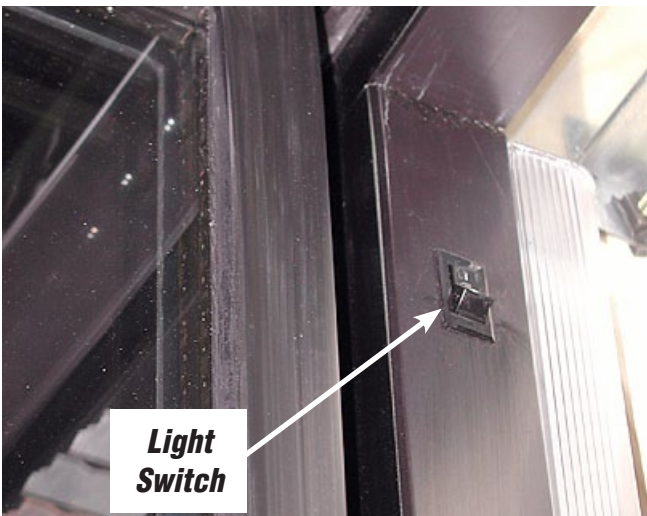
ECOSHINE™ LED FIXTURE

The new EcoShine LED (light emitting diode) lights work well for dimming or on/off operation using an occupancy sensor (optional kits). They can be turned on and off in a cold environment with no warm-up time and no negative impact on lamp life.

Hussmann EcoShine LED light fixtures normally perform for up to 50,000 hours. That is 5.7 years of continuous, 24 hour operation. They are backed by a multi-year materials warranty on the LED light strips and a five-year materials warranty on the power supply.

LED FIXTURE REPLACEMENT

1. Remove product from the cooler and store appropriately.
2. Remove the wire racks from the cooler. Store them out of the way of customers and store personnel.
3. Turn the light switch to *OFF*. The switch is located inside the cooler on the door mullion.
4. Lock out and tag out the circuit breaker for the lighting circuit of the cooler where the LED fixtures are installed.



Refer to manufacturer's documentation for LED fixtures other than Hussmann's EcoShine™ brand.

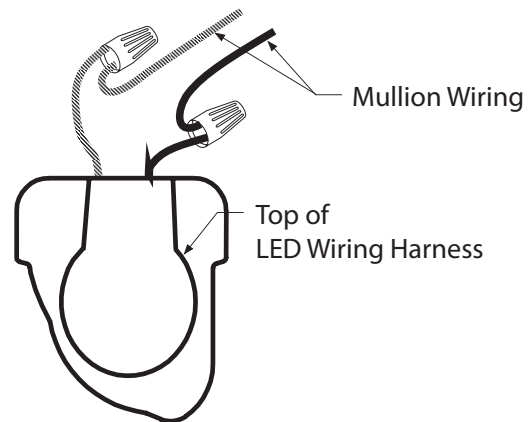
WARNING

— LOCK OUT / TAG OUT —

To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

5. Disconnect fixture wiring at wire nuts. Tag cooler wiring with color of fixture wire color connected. LED lighting is polarity sensitive.

LED light fixtures are polarity sensitive. The power supply positive wire must be electrically connected to the red wires of the LED fixture. The power supply negative wire must be connected electrically to the black wires. See Wiring Diagrams beginning on page 19.



Disconnect Wiring
(Center Fixture Shown, End Fixture Similar)

6. Remove fixture:

- A. Refer to Figure 1 below. With one hand, insert a flat blade screwdriver between the channel light fixture and the mounting clip.
- B. With free hand, grip the LED fixture as shown in Figure 2.
 - Push the screwdriver away from the light fixture making sure the screwdriver does not hit or damage the polycarbonate lens.
 - Twist the light fixture in the opposite direction until it pops off the mounting clip.
- C. Continue to support the fixture while repeating the process for all remaining clips.

7. If removing both end LED light fixtures, mark the back of each LED fixture to indicate from which side the fixture was removed. Inverting an end light fixture will result in very low light output inside the cooler.

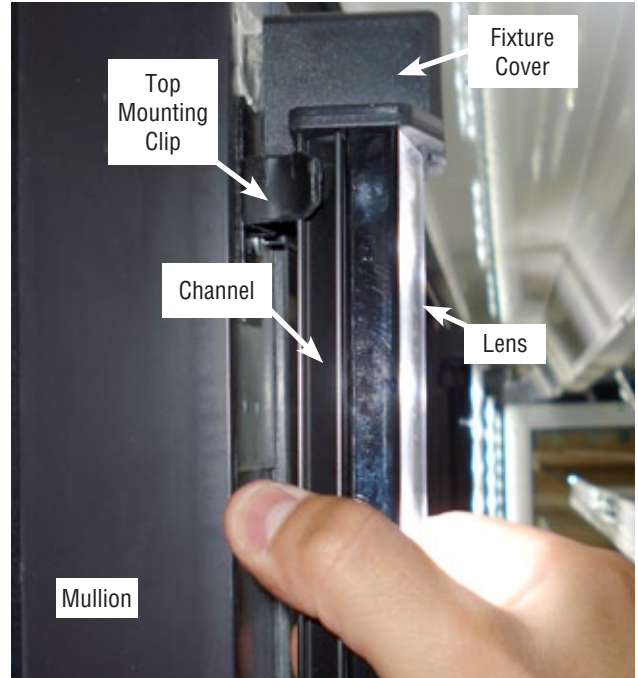


Figure 2. Remove Fixture
(Center Fixture Shown, End Fixture Similar)

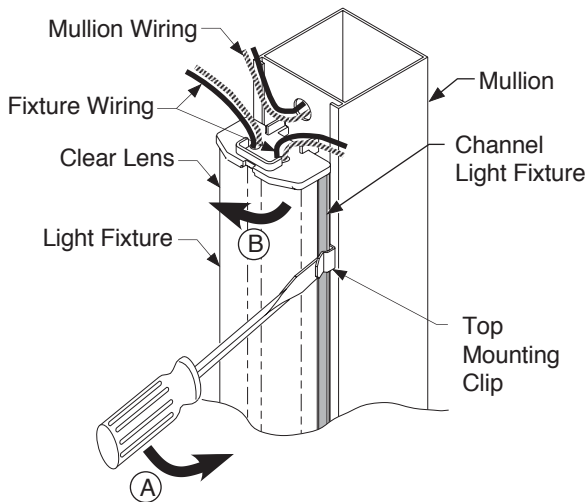


Figure 1. Remove LED Fixture
(Center Fixture Shown, End Fixture Similar)

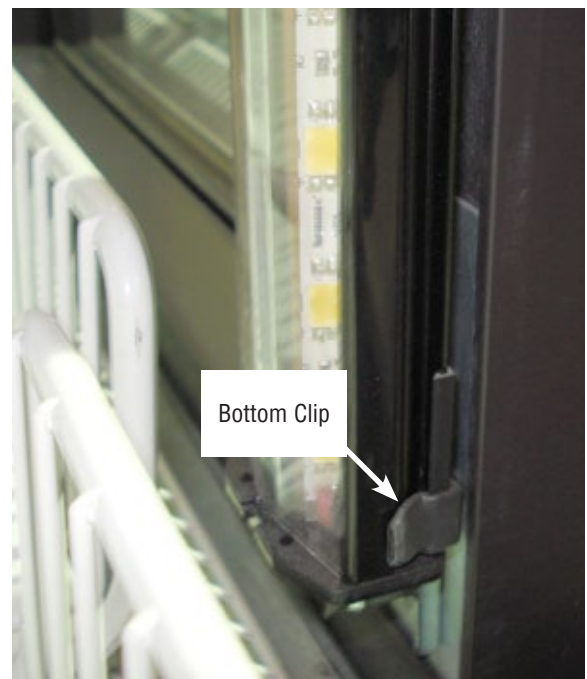


Figure 3. Bottom Clip

8. Reassemble in the reverse order of disassembly. Make sure that LED light fixture is on bottom support plate, as shown in Figure 4.

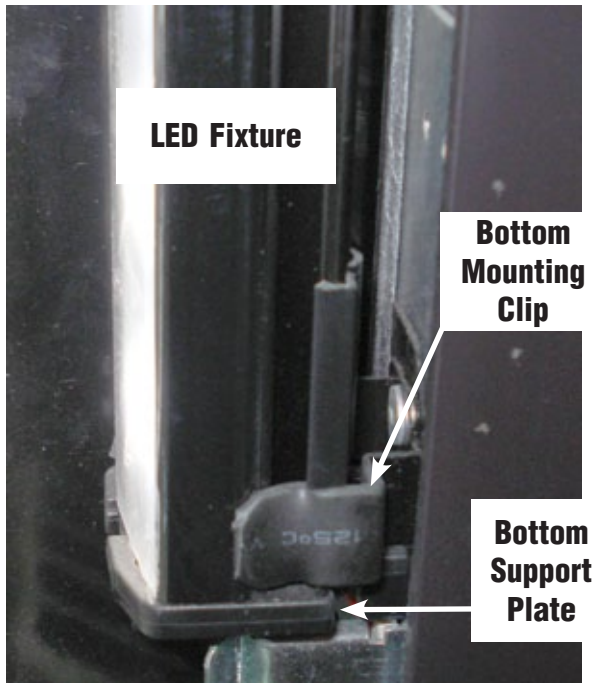


Figure 4. Bottom Support Plate and Clip
(End Fixture Shown, Center Fixture Similar)

REMOVE PROTECTIVE FILM

Each EcoShine LED fixture is shipped with a protective film over the lens, as shown in Figure 6. Remove and recycle the film.

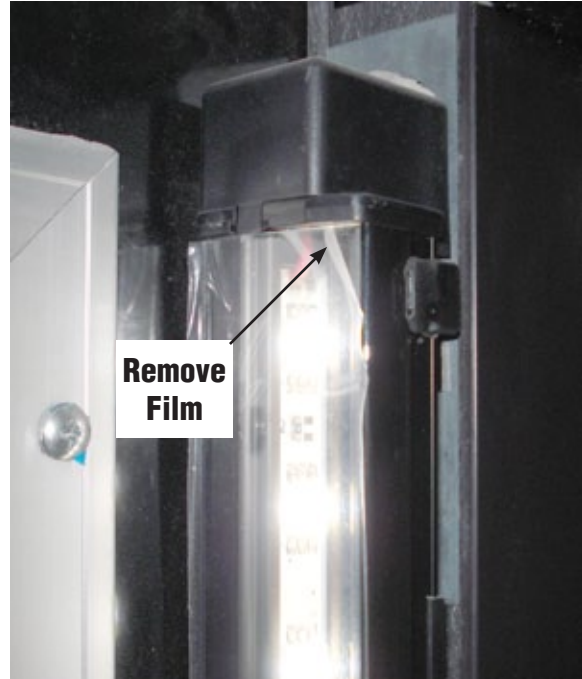


Figure 6. Remove Protective Film



Figure 5. Interior View of Fixtures

LED POWER SUPPLY REPLACEMENT

Power supplies are located in the raceway below the door frame as shown in Figure 7. To access the raceway, remove the bumper, then remove the #8 hex head screws that hold on the front painted panel.

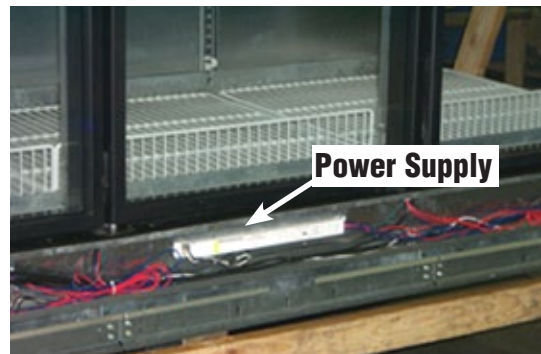
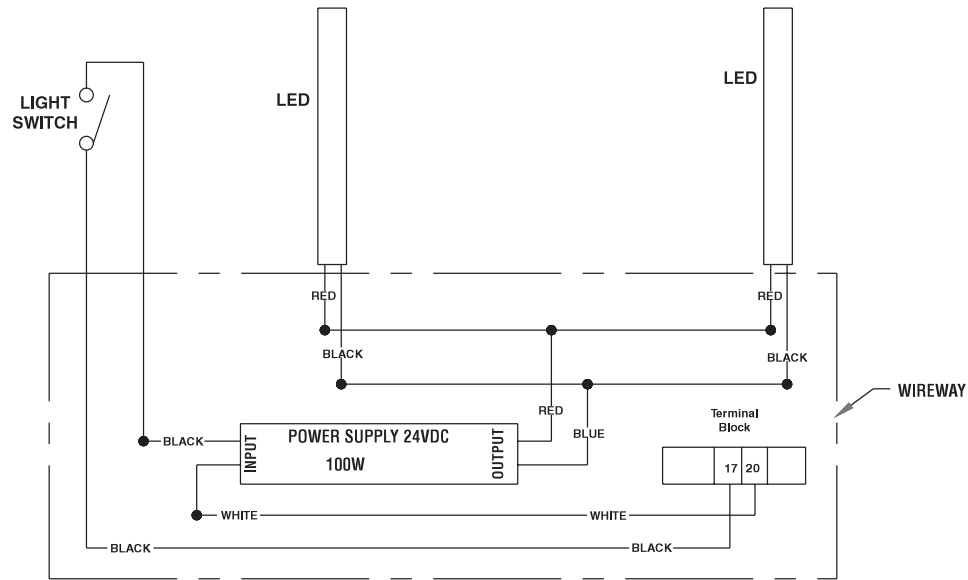


Figure 7. Power Supply Location

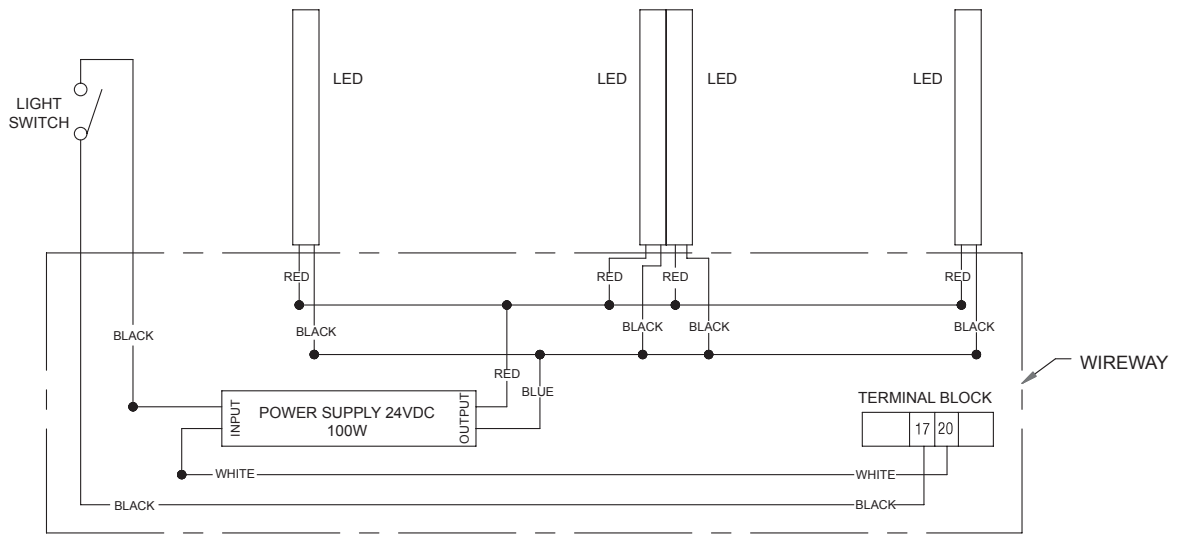
WIRING DIAGRAMS for LED LAMPS

Wiring diagrams are shown below for the 1-Door and 2 Door systems with 60 in. or 67 in. doors and EcoShine or EcoShine Energy Plus LEDs.

Wiring diagrams for other sizes are on the following pages.

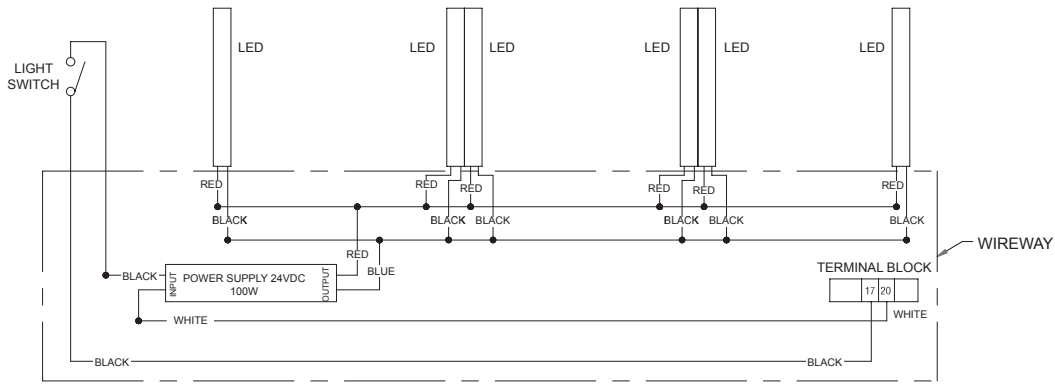


1 DOOR LED LIGHT WIRING DIAGRAM

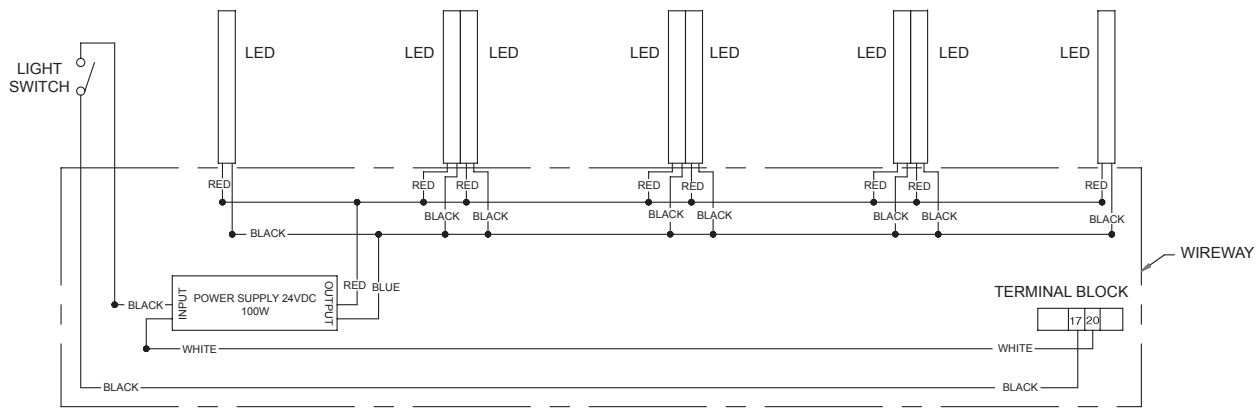


2 DOOR LED LIGHT WIRING DIAGRAM

Wiring Diagrams are shown below for the 3-door and 4-door systems with 60 in. or 67 in. doors with EcoShine or EcoShine Energy Plus LEDs.

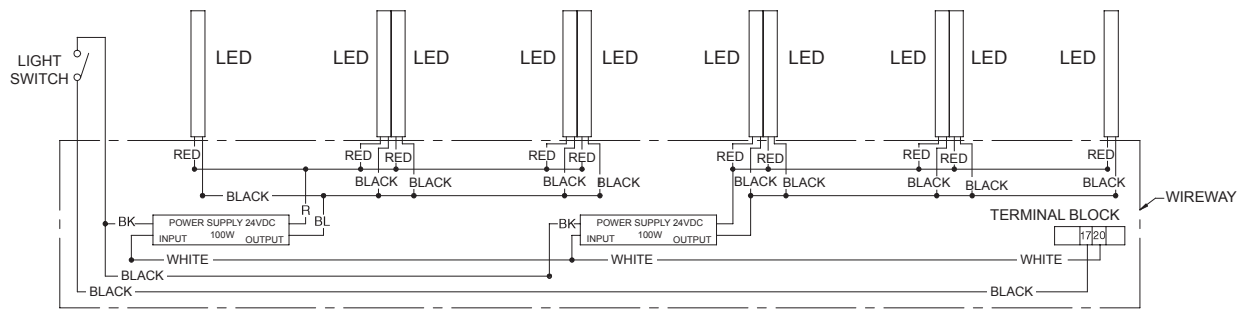


3 DOOR LED LIGHT WIRING DIAGRAM



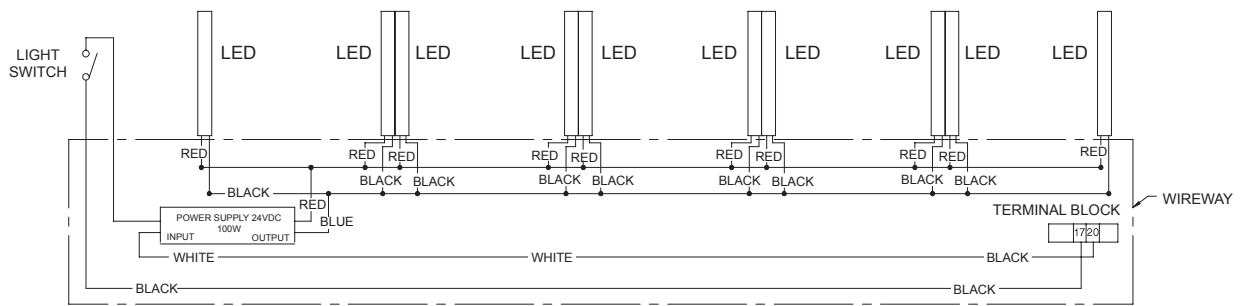
4 DOOR LED LIGHT WIRING DIAGRAM

Wiring Diagrams are shown below for the 5-door system with 60 in. or 67 in. doors with EcoShine LEDs.



5 DOOR LED LIGHT WIRING DIAGRAM ECOSHINE

Wiring Diagrams are shown below for the 5-door system with 60 in. or 67 in. doors with EcoShine Energy Plus LEDs.



5 DOOR LED LIGHT WIRING DIAGRAM ECOSHINE II

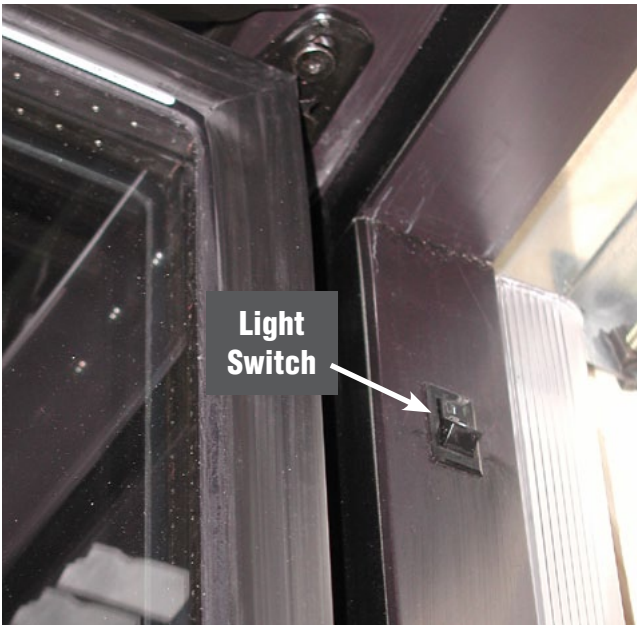
WARNING

Always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

Lamp (Center Mullion) Replacement

Note: No additional parts need to be removed to change out the lamps

1. Turn off lights at switch.



Turn Lights Off

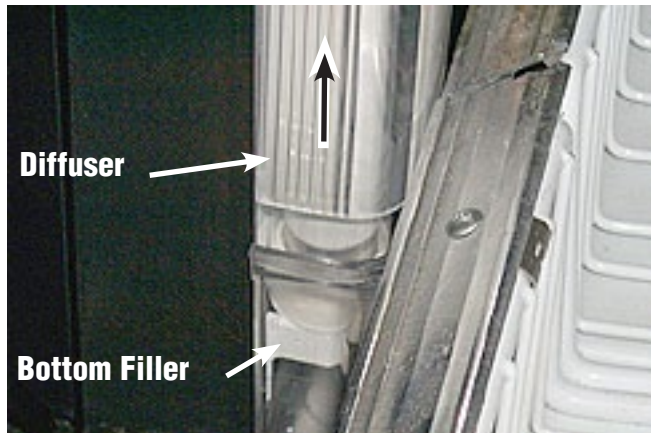
Door systems manufactured with Innovator or Innovator II doors have an anti-arc ballast. When re-starting lamps, turn power off then on.

2. Disengage the diffuser clips from the mullion by squeezing the diffuser cover at the clips. Two hands may be required.



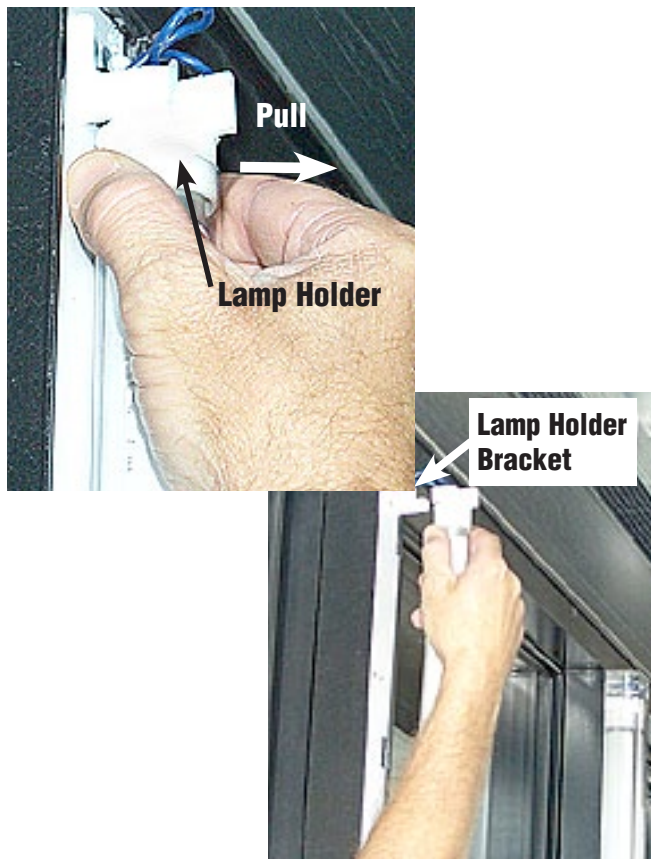
Disengage Diffuser Clips

3. Pull the Diffuser slightly upward and out of the bottom filler. The bottom filler need not be removed.



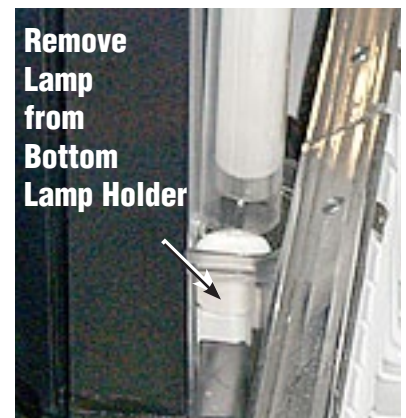
Remove Diffuser from Center Mullion Lamp

4. Pull the top lamp holder out of the lamp holder bracket as shown below.



Remove Lamp Holder from Bracket

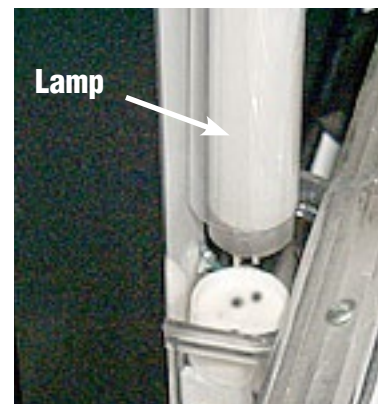
5. Next, remove the lamp holder from the lamp and pull the lamp out of the bottom lamp-holder.



Remove Lamp Holder from Bracket

6. Remove the tube guard from old lamp and place it on the new lamp.

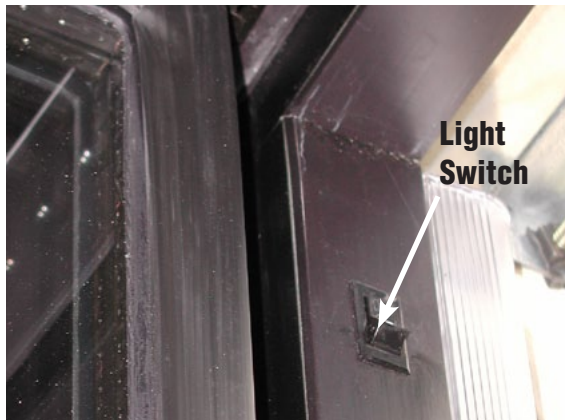
7. Install the new lamp in reverse order. Ensure lamp pins line up with lamp holder holes as shown, and that lamp holder is fully engaged in lamp holder bracket.



Align Lamp Pins with Lamp Holder

Lamp (End Mullion) Replacement

1. Turn off lights at switch.



Turn Lights Off

a flat blade screwdriver. Pull the diffuser slightly upward and out of the bottom filler. The bottom filler does not have to be removed to replace the lamps.

3. Pull the top lamp holder out of the lamp holder bracket.



Remove Diffuser from End Mullion Lamp

WARNING

Always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

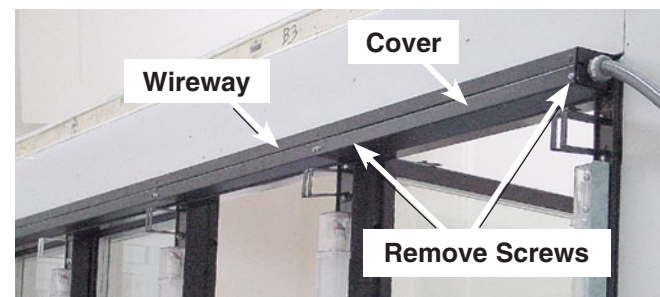
4. Next, pull the lamp holder off the lamp and pull the lamp out of the bottom lamp holder.

5. Remove the tube guard from old lamp and place it on the new lamp.

6. Replace lamp by reversing the procedure. Ensure lamp pins line up with lamp holder holes, and that lamp holder is fully engaged in lamp holder bracket.

Ballast Replacement

Ballasts are located in the wireway above the door frame inside the cooler. Remove the screws at the front, then lift the cover off the wireway. Replacement ballast must have the same rating. Replace cover before restoring power. Note: *Wireway cover screws cannot be longer than $\frac{3}{8}$ in. (100 mm). Longer screws may damage wiring.*



Ballast Location

Frame Heater Replacement

Always turn off power to the unit before working on any electrical components. The old wireway covers must be removed to access the door frame heaters. Begin by inserting a putty knife into the groove between the wireway cover and fiberglass frame, about an inch (25 mm) away from joints in the frame as shown in (A). Carefully begin to pry off the cover.

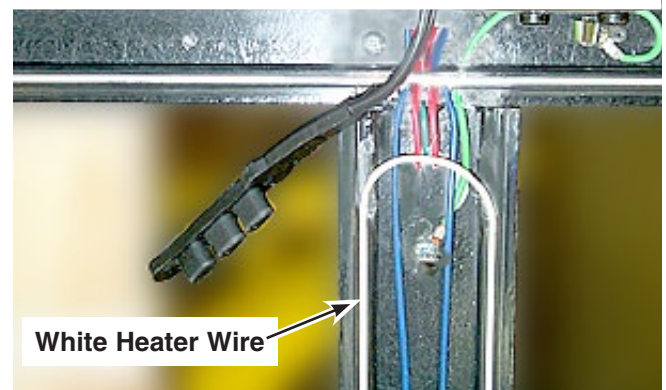
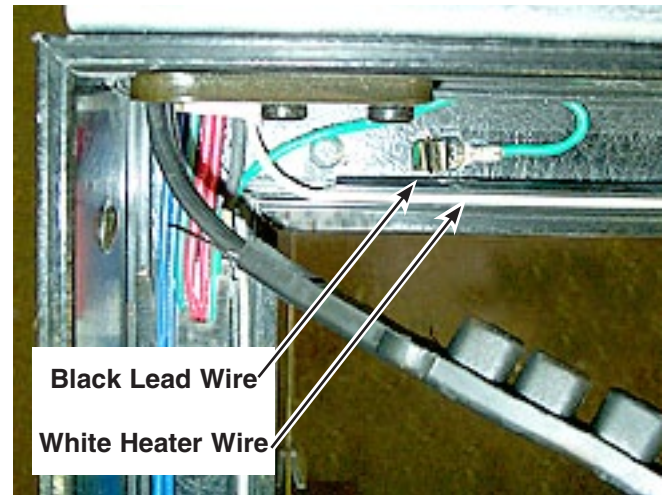


As shown in (B), use a second putty knife or flat head screwdriver to hold up the cover. Pry the remainder of the section up, using putty knife only, until the entire cover is off and the frame heater inside the door frame is exposed.



Remove Wireway Cover

Door frame heaters may now be replaced. During installation, the white portion of the heater should not come in contact with itself. The heater should be installed so that only one white portion of the wire enters the wireway. The other portion entering the wireway will be the black lead wire.

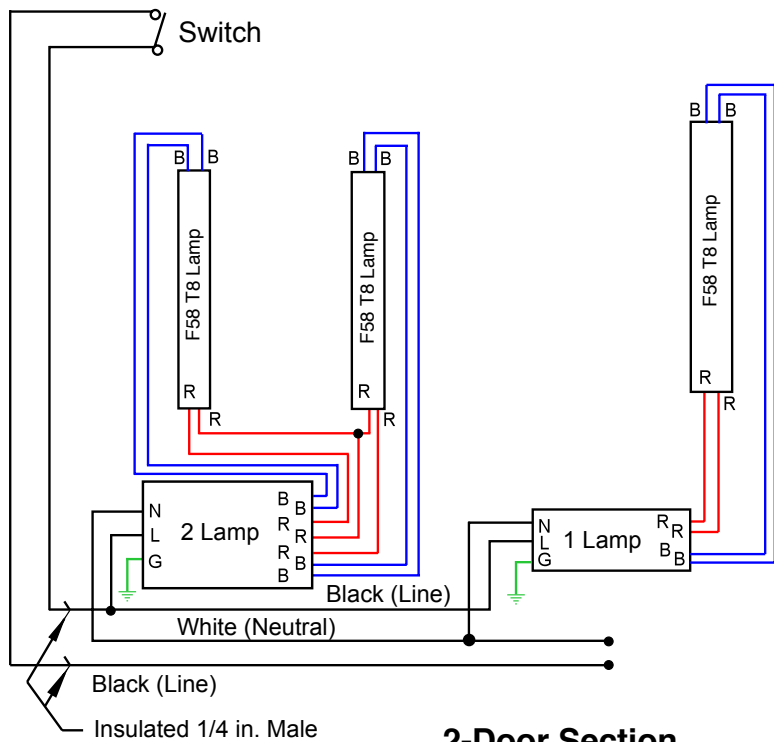


Remove and Replace Frame Heater

Once the heater wire is connected, check resistance (ohm reading) before replacing wireway covers. This will ensure that heater wire was not broken during installation.

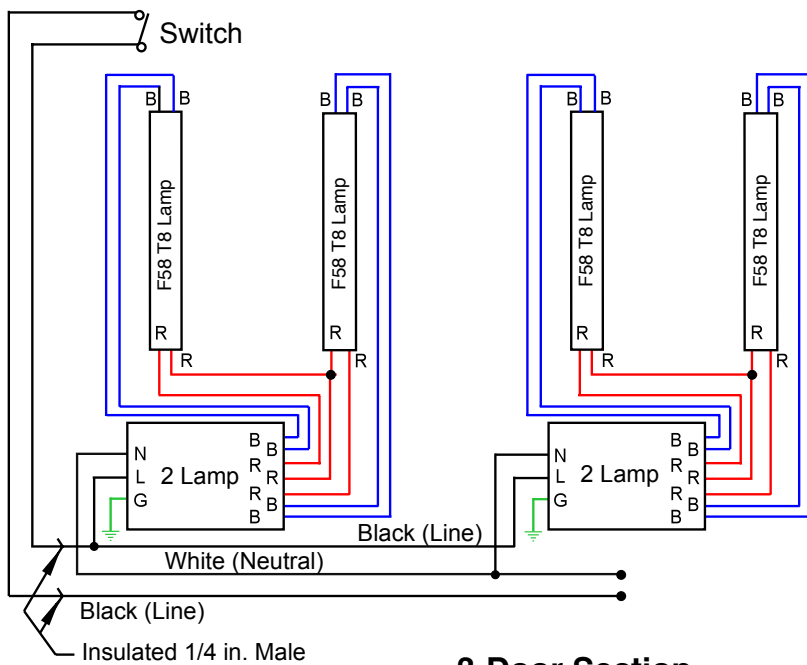
After covers are reinstalled, turn power on and verify that heaters are working properly.

120V Electronic Ballast Wiring Diagrams



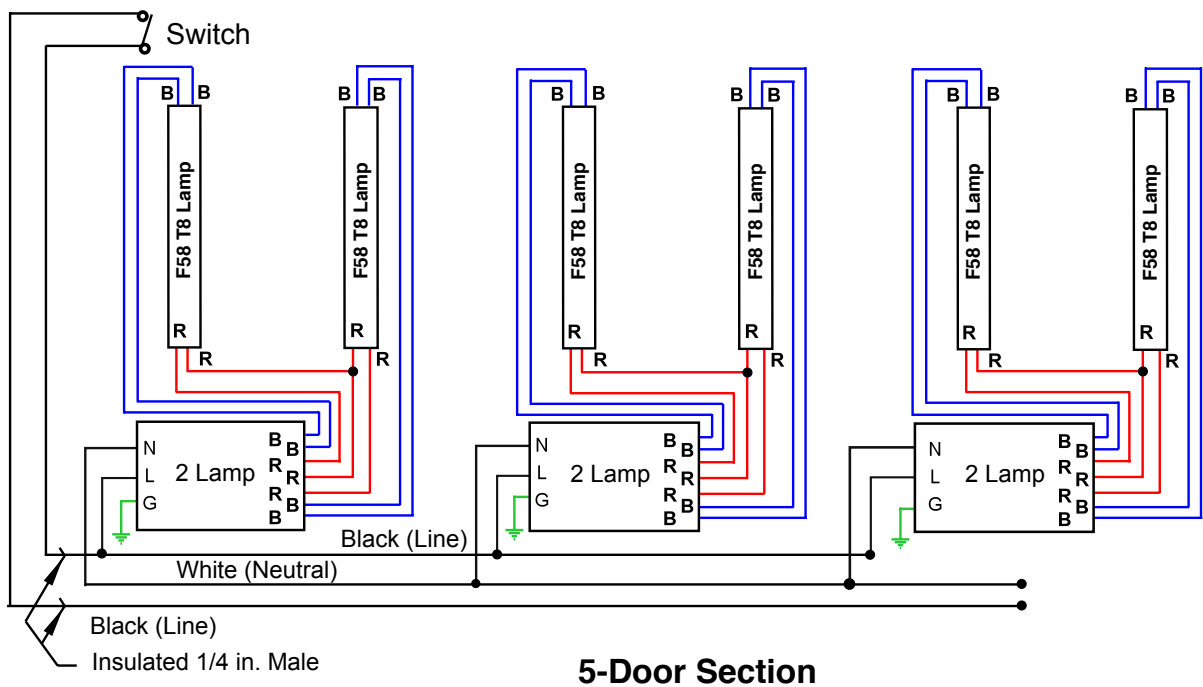
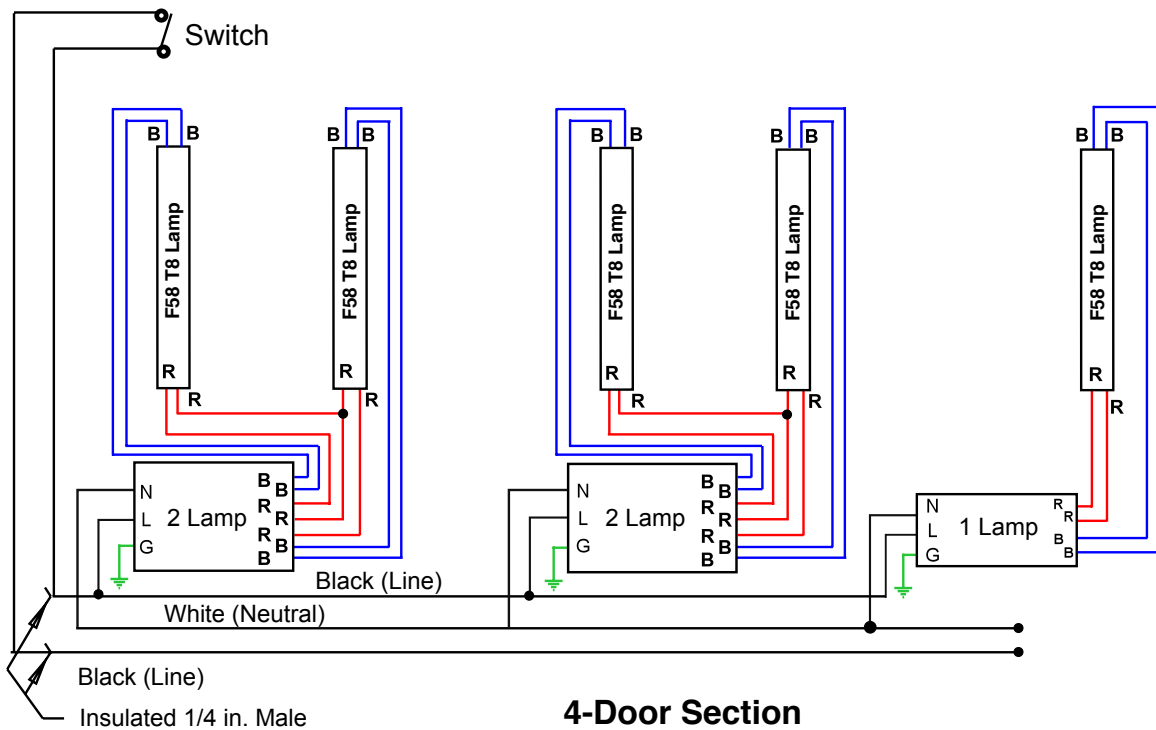
2-Door Section

Two lamp wiring has a red wire from each lamp spliced together and returning to the ballast. Two blue wires and one red wire go to the ballast as a group from each lamp. Note that one lamp goes to top 3 pins, second lamp goes to bottom 3 pins, with a common connection between.

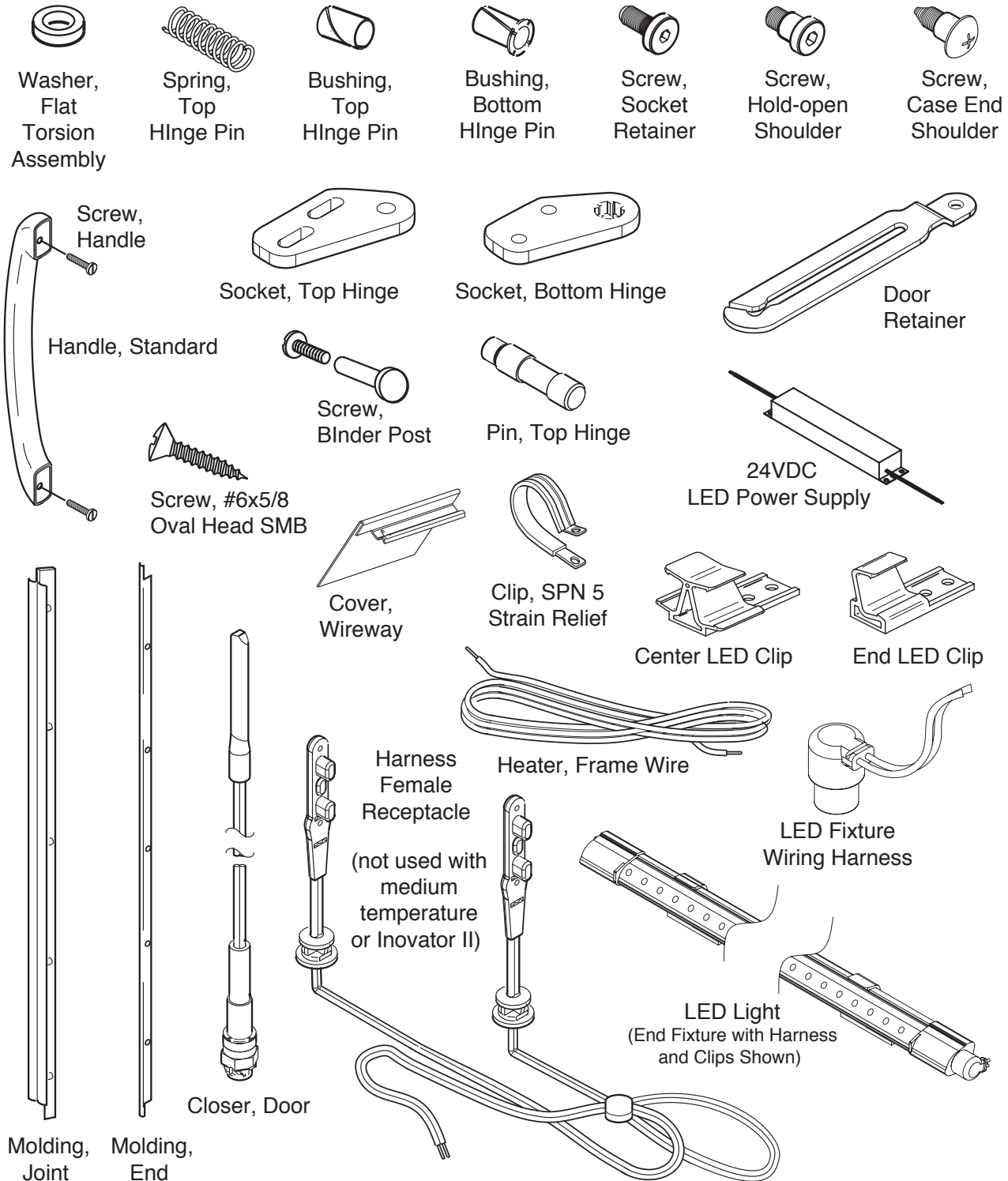


3-Door Section

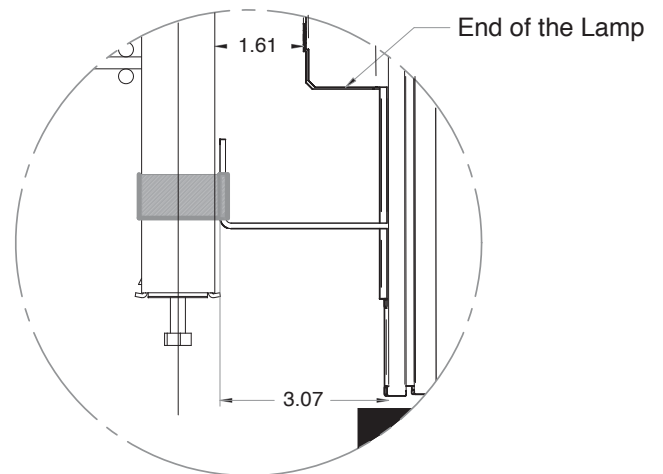
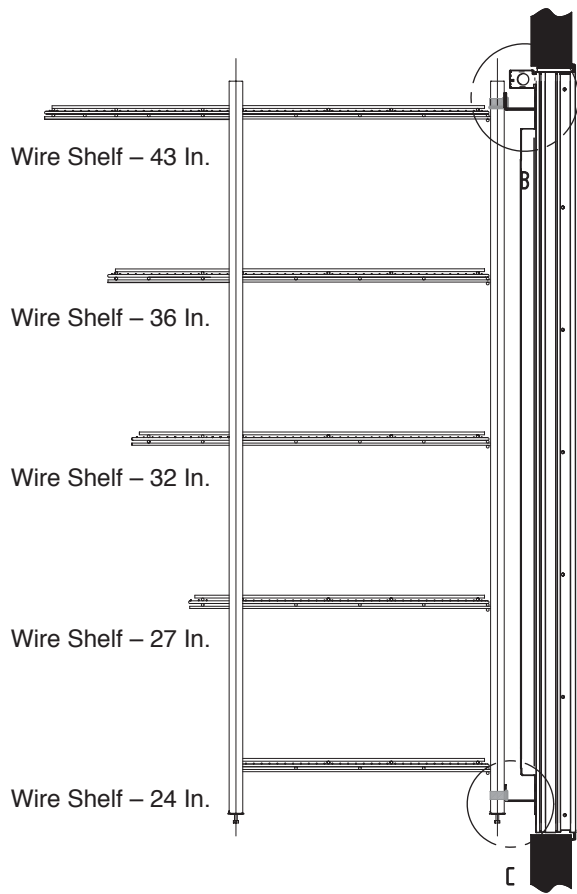
120V Electronic Ballast Wiring Diagrams (Continued)



Two lamp wiring has a red wire from each lamp spliced together and returning to the ballast. Two blue wires and one red wire go to the ballast as a group from each lamp. Note that one lamp goes to top 3 pins, second lamp goes to bottom 3 pins, with a common connection between.



**Innovator, Innovator II and Innovator III
Door and Frame Part Identification Chart**



DETAIL B

DETAIL C

