

# Installation and Service



## Infinity 090 Door (210Z Elegant Door)

99-22358-S001  
Rev. B, 2022

The Value of Style

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# Safety and Warnings

## FOR YOUR SAFETY

Read and observe all **CAUTIONS** and **WARNINGS** shown throughout these instructions.

While performing installations described; gloves, safety glasses or goggles should be worn.



### Prepare Electrical Wiring

**Risk of fire or electric shock.** Install this kit only in luminaires that have the construction features shown in the photographs and/or drawings. Luminaires, wiring, or other electrical parts may be damaged when drilling for installation hardware. Check for enclosed wiring and components.

Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electrical components.

To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

Remove and dispose of existing ballasts per any local or Federal guidelines.



### BEFORE YOU BEGIN

**INSTALLATION OF THIS ASSEMBLY REQUIRES A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF ELECTRICAL SYSTEMS AND THE HAZARDS INVOLVED.** Read instructions completely and carefully.



**WARNING:**  
**TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY, OBSERVE THE FOLLOWING:**

1. Use this unit in the manner intended by the manufacturer.
2. Turn power off before removing existing lighting system and follow appropriate lock out/tag out safety procedures



For use inside a commercial refrigeration case with packaged foods only.

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## Infinity 090 (210Z Elegant) Door Installation and Service

### Preliminary Considerations for Door Servicing

#### Tools Required

#2 Phillips-head screwdriver	Flat-head screwdriver
Needle-nose pliers	Rubber or plastic mallet
7/16" & 1/2" hand wrench	5/32" hex key
Wire stripper and cutter	Soldering iron
Heat gun	Razor knife

#### Tips

Replacement of wire harness is recommended whenever required. Splice wires only if necessary, using proper materials such as electrical tape, wire nuts, flux core solder and heat shrink.

Apply liquid soap to rail plastic covers and gaskets upon installation, to facilitate insertion into mounting grooves.

Keep doors clean for product efficiency. This can also help reduce energy consumption and potential health hazards.

Whenever binding gasket or plastic parts, utilize food grade silicone.

Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks. Do not use battery-powered screwguns on door hardware or fasteners.

If there is any doubt about the work to be performed, consult with a certified technician or Anthony representative.

Preventative maintenance is recommended to ensure product longevity.

### Old Door Assembly Removal

1. Release tension on the TorqueMaster with a flat-head screwdriver. Turn the TorqueMaster front facing screw clockwise, until the door does not automatically close from an open position.



*Release Torquemaster Tension*

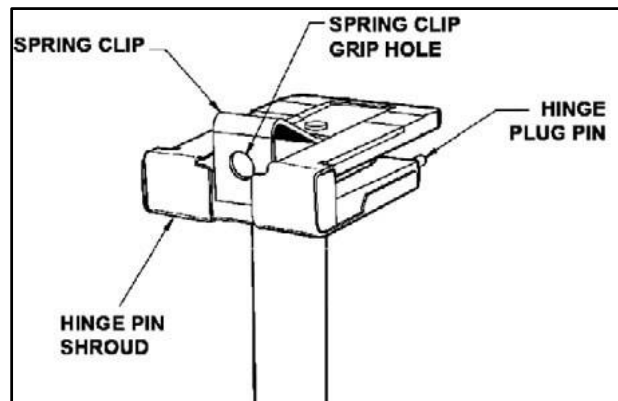


2. Open the door to access the hold open device, then loosen and remove the hold-open detent bolt using a 7/16" hand wrench.



*Remove Hold Open Bolt*

3. Retract the door to a near-closed position.
4. Remove the hinge pin plug from the frame by inserting the top-half of needle-nose pliers into the spring clip grip hole and the bottom half beneath the hinge pin shroud.



*Disengage Hinge Pin*

5. Compress the pliers to clamp down on the hinge pin spring clip, then simultaneously pull the hinge pin away from the frame and pull the door top out.



*Disengage Door*

6. Lift the door out of the TorqueMaster.

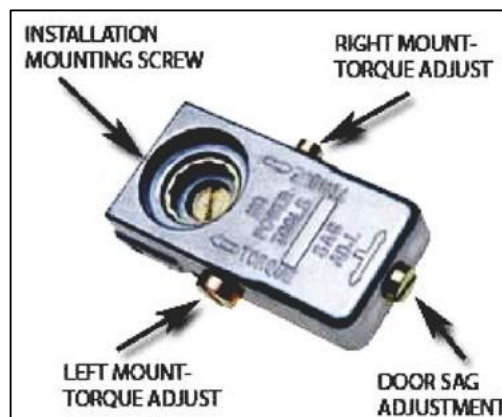


*Withdraw from Frame*

7. Secure or lean the door on its side against a stable surface.

### Torquemaster and Sag Adjustment

The TorqueMaster regulates the door alignment and the door closing tension.



*Remove Torque Rod*

1. Use a flathead screwdriver to adjust the torque rod tension, by turning the outside screw on the TorqueMaster.
  - Turn counter-clockwise to increase tension.
  - Turn clockwise to decrease the tension.
2. Adjust the door sag to square the door in the frame by turning the screw that is marked SAG ADJ. (sag adjustment), on the end of the TorqueMaster, until the door is aligned square in opening.
  - Turn counter-clockwise to raise handle side of door.
  - Turn clockwise to lower the handle side of door.

## New Door Assembly Installation

1. Hold the door on each side, with the handle facing forward. Lift the door and align the torque rod to insert into the TorqueMaster™ socket at the base of the frame.



*Insert Torque Rod into Torquemaster*

2. Engage the door with the hinge pin inserted into the Gib (hinge pin plug) receptacle at the top of the frame. Push the door into the frame until the hinge pin snaps into place.



*Connect Hinge Pin*

3. Insert the hold-open bolt through the elongated hold-open slot.





4. Insert the washer and the hold-open bolt into the frame mounting hole and tighten the bolt, use a 7/16" open-ended hand wrench.



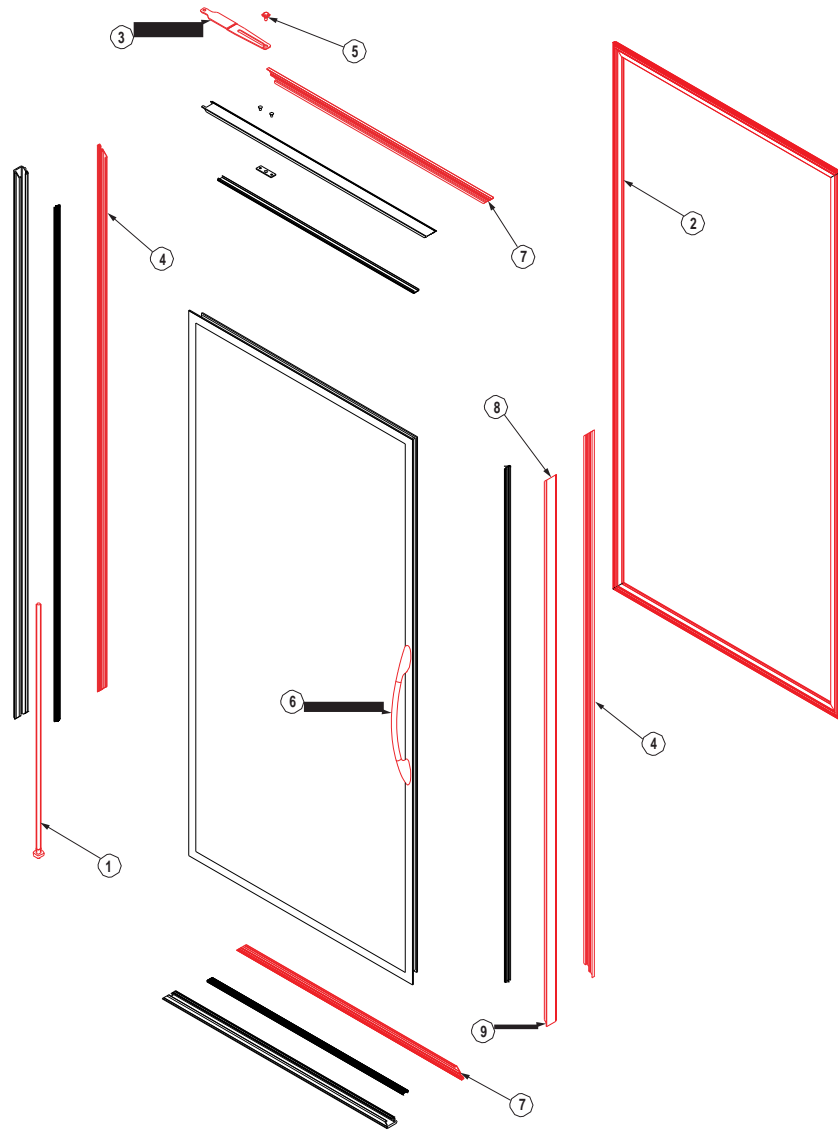
*Connect Hold Open*

5. Set the door tension swing and correct the door alignment by adjusting the TorqueMaster. (See "TorqueMaster and SAG Adjustment". Refer to TorqueMaster Assembly figure.

**NOTE: Exercise caution when handling the door.**

**NOTE: DO NOT use power tools when adjusting the TorqueMaster.**

**NOTE: DO NOT over tighten the hold-open bolt. Verify that the hold-open does not bind while sliding along the hold-open bolt. Adjust as necessary.**



*Infinity 090 (210Z Elegant Door)*

*Infinity 090 (210Z Elegant Door) Replaceable Parts*

Item #	Part #	Description
1	02-10308-0000	Torque Rod Assembly
2	02-21889-2000	Gasket & Magnet Assembly, ACII, Custom Size
3	02-14649-0001	Hold Open Fork Assembly
4	20-19492-000X	Door Rail Cover Assembly, 210Z, Height
5	40-12665-9002	6-32 x 3/16 Screw PPH, Zinc
6	02-17272-0001	Arch Door Handle Assembly
7	20-19492-000X	Door Rail Cover Assembly, 210Z, Width
8	11-19890-0000	Full Length Handle, 210Z Door
9	20-18044-3001	Full Length Handle Cap, Gray
10	20-21542-0000	210Z Cylinder Lock Bezel (Optional - Not Shown)

## Door Part Removal & Replacement

The following door parts may be removed/replaced:

- Door Gasket
- Door Rail Plastic Cover
- Arch Handle
- Cylinder Lock
- Torque Rod
- Torquemaster
- Hold Open
- Door Heater Wire
- Hinge Pin

### Removing and Replacing the Door Gasket

1. Begin removing the door gasket by lifting one corner of the gasket out of the groove.



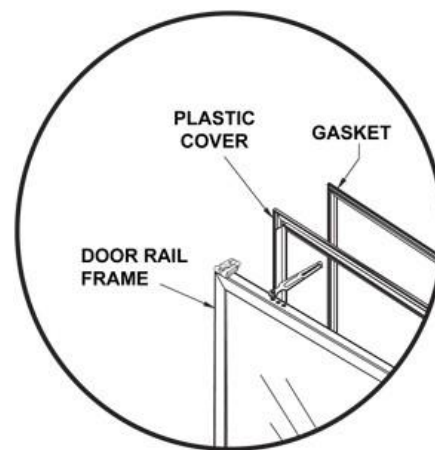
2. Carefully pull the gasket out of the groove in the plastic rail covers.



**NOTE:** The gasket is composed of soft materials with welded miter joints. Use extra care when manually extracting the gasket from the rail grooves to prevent damaging it as well as the plastic rail.

3. Align the two corners of the replacement gasket onto the top mitered corners of the plastic cover, with the gasket arrow facing the door rail and cover.

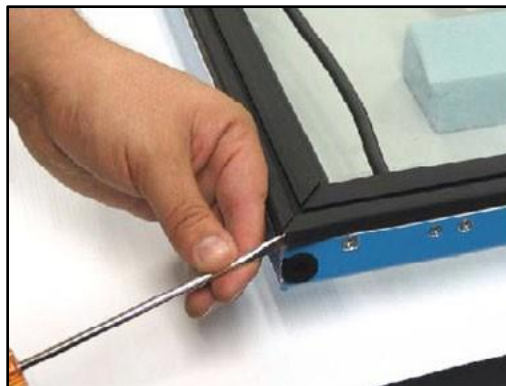
4. Press the gasket arrow into the groove in the center of the plastic cover corners until the edges of the gasket arrow catch and the arrow is initially inserted into the groove of the plastic cover.
5. Align the bottom two gasket corners with the bottom mitered corners of the plastic covers, aligning the gasket arrow with the groove in the plastic cover and press the corners into the groove until the arrow is fully inserted.
6. Press the gasket firmly against the top plastic cover, sliding from side to side and applying full pressure against the gasket, forcing the gasket arrow into the of the groove in the plastic top cover.



7. Continue pressing the gasket arrow into the grooves of the remaining plastic covers, around the entire door rail perimeter (if necessary, a plastic or rubber mallet can be used to facilitate the arrow into the groove by applying a swift stroke onto the gasket- DO NOT damage the gasket or the glass).
8. Confirm that the entire gasket arrow has been completely inserted into the groove of all four plastic rail covers.

### Removing and Replacing the Door Rail Plastic Cover

1. Insert the end of a slot head screwdriver in between two plastic cover ends at the corner miter.



2. Carefully twist the screwdriver to loosen the corner of the plastic cover lip from the door rail.
3. Continue to pry the plastic cover from the door rail until the entire end of the plastic rail is disengaged.



4. Pull the plastic cover up and out of door rail grooves until the entire plastic cover is removed from the door rail.



5. Repeat Step 2 through Step 4 to loosen and remove the three remaining plastic covers.
6. To install the new replacement plastic covers, begin by aligning the replacement plastic cover evenly onto the door rail.
7. Insert the outer edge of the plastic cover into the outside groove of one of the door rails.





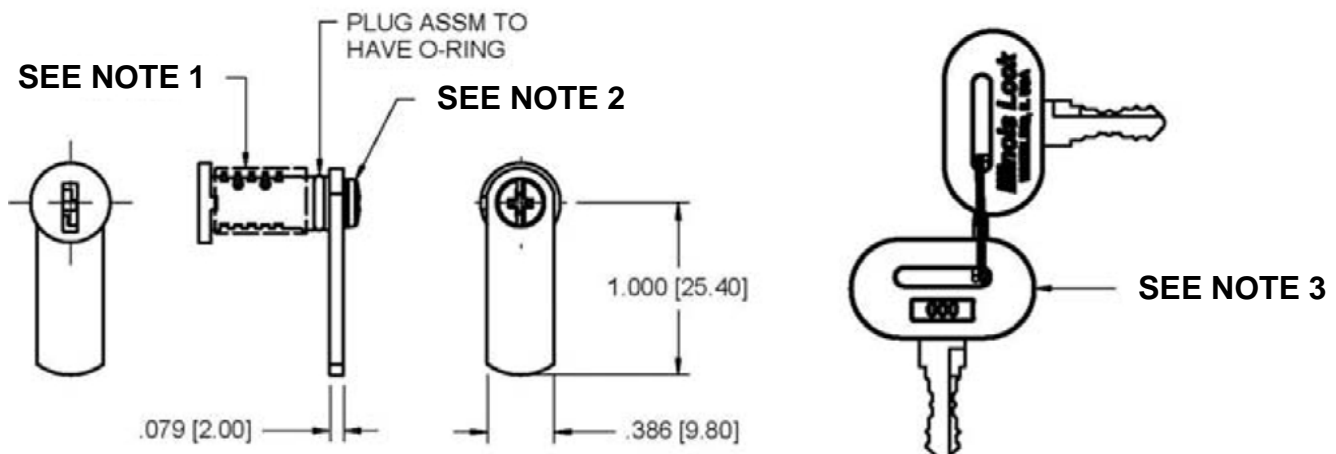
8. Push the plastic cover down and inward, toward from the center of the door.
9. Slide along the entire length of the plastic cover while firmly applying pressure against it. Continue applying pressure down along the length of the entire door rail, inserting both the outside lip and the inside lip into the door rail grooves simultaneously.

**NOTE:** Carefully tap the plastic cover using a plastic or rubber mallet with deliberate strokes, outward and away from the glass, may help seat the lips of the plastic cover into the grooves of the door rails.



10. Check the entire plastic cover and confirm that both the inside and outside lips are fully inserted into the door rail grooves.
11. Repeat this procedure, aligning each mitered corner, with the remaining plastic covers until all four plastic covers are properly installed onto door rails.
12. Confirm that each plastic cover is fully installed and the mitered corners properly aligned.

### Cylinder Lock Repair and Replacement



**NOTE 1:** Tumblers must be taped using 3M tape only. One side must be folded for easy removal.

**NOTE 2: Plug assembly supplied with 1-inch straight cam and cam screw assembled as shown.**

**NOTE 3: Plug assembly supplied with two nickel plated brass, rung, overmolded keys (Illinois Lock Std) bulk packed.**

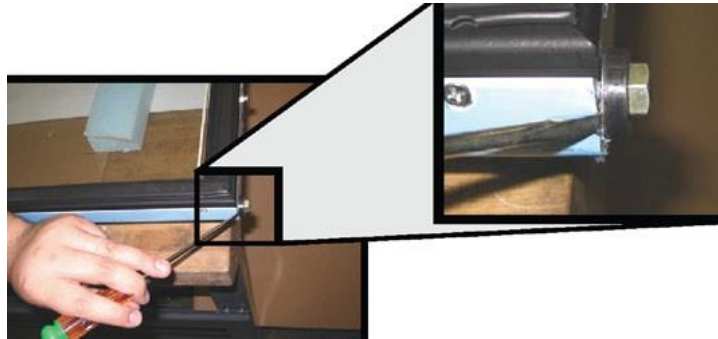
1. Remove gasket from door rail containing the lock (leaving the gasket on the remaining door rail assembly for easy reassembly).
2. Remove plastic cover from the door rail containing the lock assembly to expose access to the lock mount.
3. Insert a large phillips-head screwdriver into the lock access in the back of the door rail.

**NOTE: Once the lock screw has been removed, the screw washers and lock latch will come loose. Be certain that these components are secure prior to the removal of the lock screw, or they may become lost if dropped inside of the door rail.**

4. Turn the lock screw counter-clockwise to loosen the screw.
5. Carefully remove the bezel from the front, the screw, lock washers and lock strike from the back of the lock assembly.
6. If necessary, replace the strike.
7. Remove the lock assembly out from the lock housing and through the front of the door rail.
8. Replace lock assembly into housing inside rail.
9. Replace the strike washer, strike, lock washer and screw to the rear of the lock assembly and assemble in the correct order. Be certain that the strike is fully and correctly seated onto the end of the cylinder.
10. Turn lock screw clockwise to catch the threads and tighten the screw completely. **DO NOT OVER-TIGHTEN.**
11. Test lock and confirm that it works properly.
12. Replace the plastic cover and gasket (refer to plastic cover and gasket replacement instructions).
13. Snap the bezel cover on the front of the tag around the lock (if it applies).

## Removing and Replacing the Torque Rod

1. Carefully place a flathead screwdriver between the door rail and the washer beneath the torque rod.



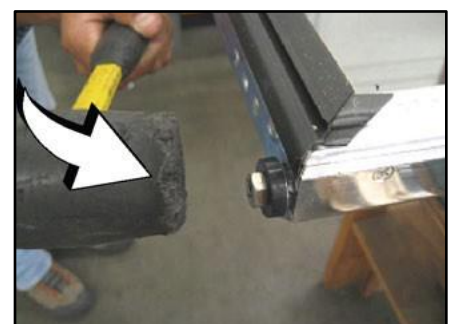
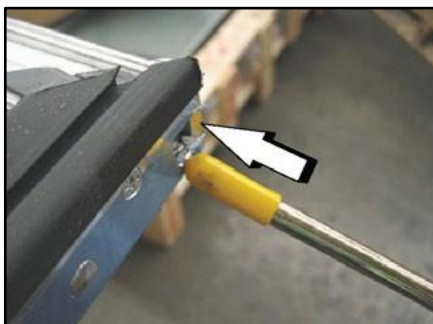
2. Dislodge the torque rod from its mount by pushing on the torque rod or tap it loose using a plastic or rubber mallet.

**NOTE: DO NOT use a steel-headed hammer.**



**NOTE: Use caution when striking any tool with another tool. DO NOT use excess force when striking the screwdriver and potentially damaging the door.**

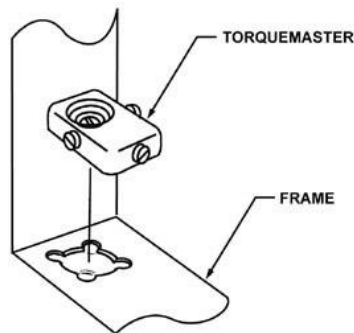
3. Continue to carefully tap the torque rod, if necessary, until the torque rod and rod end disengage.
4. Carefully pull the torque rod assembly completely out the door rail.
5. Reverse the process to re-install the torque rod assembly into the door rail.



- Insert torque rod into the bottom of the door until it is fully seated.
- If required, tap the torque rod assembly into the door rail using a plastic or rubber mallet, until the torque rod is fully seated into the door rail socket.

### Removing and Replacing the Torquemaster

1. Using a large slot-head or flat-head screwdriver, loosen the installation mounting screw located in the center of the torque rod mounting socket of the Torquemaster.



2. Remove the Torquemaster from the frame mount.
3. Replace the Torquemaster to the mount located on the frame.
  - If necessary, remove the plug cap located on the lower frame near the corner. Be certain to remove the plug cap that correlates with the side of the frame in which the door is to be installed.



4. Place the Torquemaster on the newly opened mounting pocket in the frame, with the hollowed end of the Torquemaster towards the frame.

5. Align the mounting flanges on the bottom of the Torquemaster with the divots or slots in the corners of the mounting hole. Be certain the Torquemaster is fully seated onto the frame.



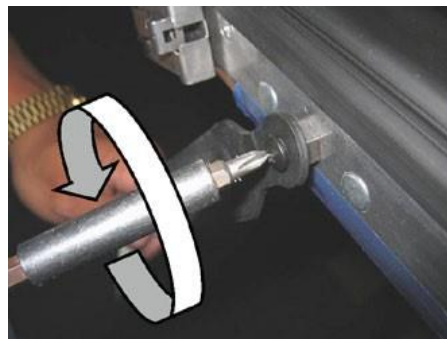
6. Turn the mounting set-screw clockwise to engage the mounting mechanism underneath the frame lining, then confirm that the Torquemaster is securely mounted.

**NOTE: To adjust the Torquemaster settings, refer to the Torquemaster and Door Sag adjustment procedures.**

## Removing and Replacing the Hold-Open Assembly

### Hold-Open Removal

1. Remove screws from the hold-open standoffs, which are located on the door rail and frame.



2. Remove the hold open and standoffs and discard them.



3. When replacing the hold-open arm, reverse Step 1 by inserting the screw through the mounting hole in the arm and tightening it into the frame mounting hole using the #2 phillips head screwdriver.



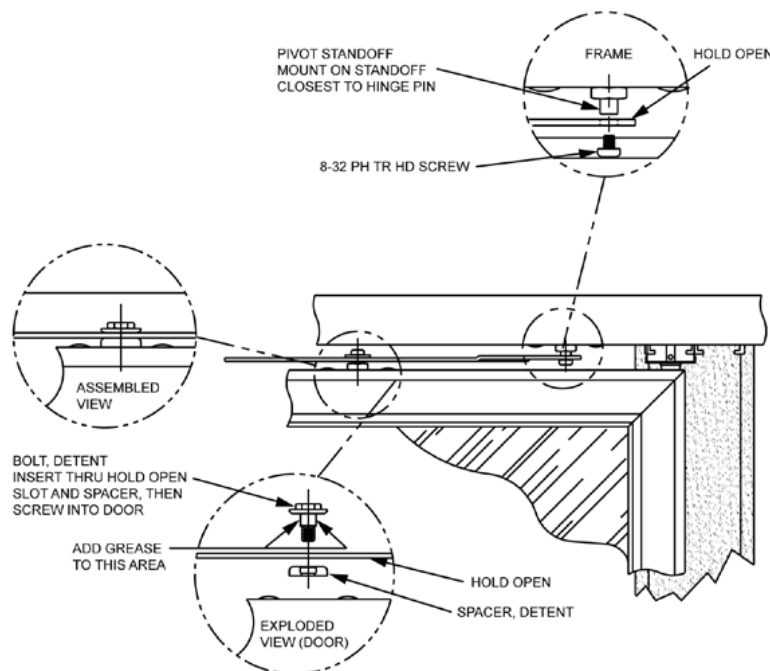
### Hold-Open Replacement

1. Insert the pivot standoff into door. Add Loctite #271 to threads. Torque to 100 in/lb.
2. Place the pivot hole of the new hold open over the pivot standoff that is closest to the hinge pin.
3. Retain with a new truss head screw and torque to 16 in/lb (approximately #2 clutch setting on a professional screw gun).
4. Remove the vinyl cap from the detent bolt.
5. Insert the bolt up thru the hold open slot and then thru the detent spacer (flat side against frame).
6. Add loctite #271 to threads. Use a 7/16 hex wrench and torque into frame to 100 in/lb.
7. Add small amount of grease to detent surface.
8. Insure the truss head screw is seated on the end of the standoff and not the hold open.

## Hold-Open Assembly Geometry

The Infinity 090 Door utilizes reverse geometry for the Hold-Open assembly mounting configuration.

- **REVERSE GEOMETRY:** The fork pivot hole, along with the pivot standoff and pivot screw are mounted up, into the frame header rail. Conversely, the Hold-Open fork slot, the Detent Standoff and the Detent Washer are mounted down into the top rail of the door frame.

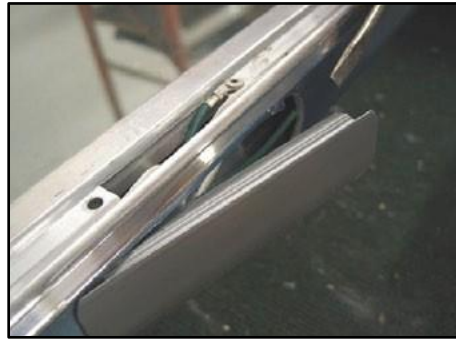


The same installation specifications are applicable to reverse geometry mounting procedures. Refer to this section as well as the Hold-Open removal and replacement sections for basic installation procedures and mounting specifications of the Hold-Open assembly.

## Door Heater Wire Replacement

1. Remove door assembly from the frame (refer to door removal instructions).
2. Remove door gasket (refer to door gasket removal section for gasket removal procedure).
3. Remove plastic cover from all door rails (refer to plastic cover removal section for the removal procedure).

- Using a small, flat-head screwdriver, remove the access cover from the frame, to access the wiring (as with the plastic frame cover).



**NOTE:** Use caution, when using a metal or edged tool to remove the heater wire, to avoid damaging the wire or wire shielding.

**NOTE:** The wiring configuration differs per model and individual facility requirements. Make the necessary adjustments that may be required to complete this procedure.

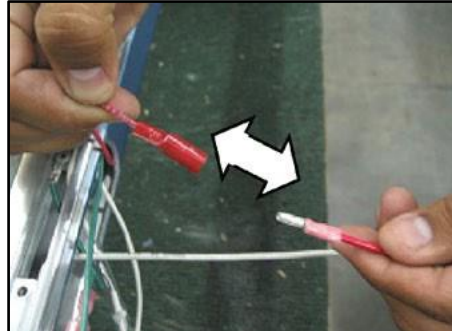
- Locate the mounting plate (if applicable) and two mounting screws for the cord and wire harness mounts, on the outside of the adjacent door rail.
- Using a phillips-head screwdriver, loosen and remove each screw.
- Carefully pull out and remove strain relief harness, as well as the loop terminal for the ground (green) wire.



- Remove the wire terminals from the door rails.

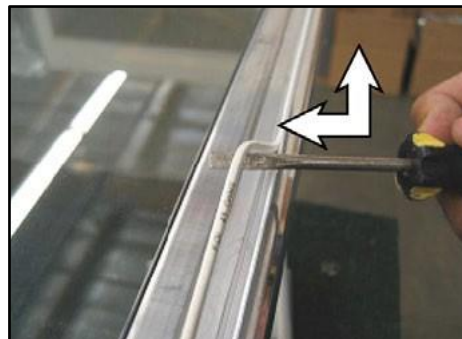
**NOTE:** Two terminals adjoin the ends of the heater wire with the hot and neutral wires from the power cord. Two different methods can be used to disconnect the heater wire from the power cord.

9. Open the wire terminals and remove the terminated wire ends.

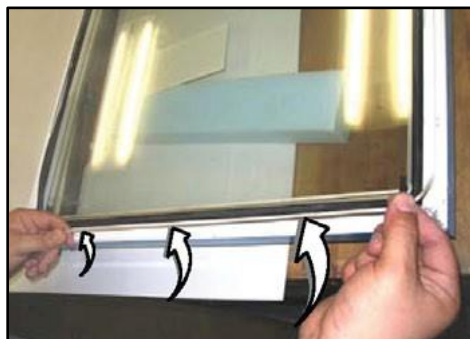


10. Locate the heater wire in the grooves of all four door rails. The heater wire is usually shielded with a woven fiber-glass sleeve.

11. Using a flathead screwdriver, pull the heater wire out from door rails.



12. Manually pull out and remove the remaining heater wire.



13. Install the terminated wire ends from the replacement heater wire, then close the wire terminals.



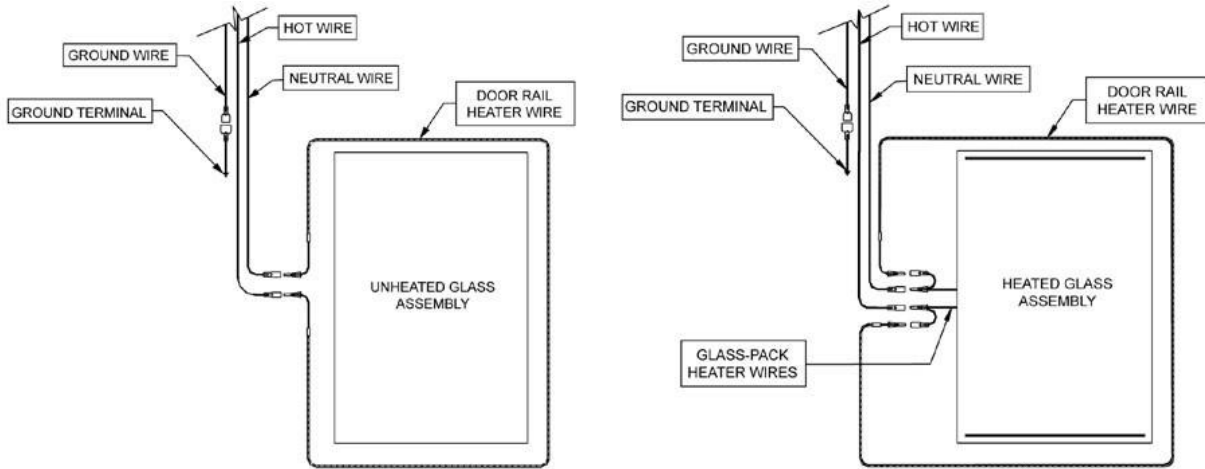
**NOTE: If the replacement heater wire does not have terminated ends, then splice the wires together using wire nuts or solder and heat shrink.**

#### Splicing wire ends with solder and shrink tubing

1. Cut the (black and white) power wires, after the terminals
2. Strip a minimum of 1/2" of insulation from each wire, exposing the end of the each cut wire.
3. Strip a minimum of 1/2" of insulation from each end of the heater wire.
4. Insert one, two inch heat-shrink tube (not supplied) over each end of heater wire.
5. Slide each tube down, away from the wire ends
6. Join the exposed end of each stripped wire, from the power cord, with each end of the stripped heater wire.
7. Twist the wire ends together and solder the adjoined wire ends using a soldering iron, flux and solder.
8. Slide each heat-shrink tube back up the heater wire and over the soldered wire joints.
9. Using a heat gun, apply a steady flow of heated air onto each shrink tube, covering the soldered wire joints, to shrink the tubing and insulate the joints.
10. Insert the entire replacement heater wire into the groove inside the door rails and arrange the wire assembly to the same configuration that it had prior to disassembly.
11. Carefully re-install the wire assembly into the door rail and the power cord into strain relief by inserting the wire into the groove located along all four door rails by using a blunt tool or instrument, such as a screwdriver handle, in order to facilitate the insertion. Be certain to match the original wire installation configuration.



12. Replace plastic covers and gasket to the door.

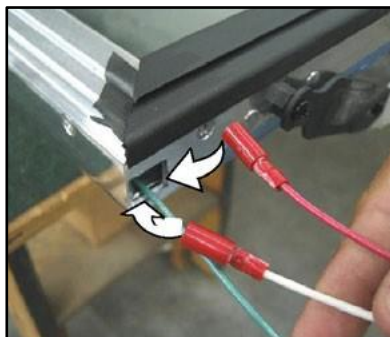


### Removing and Replacing the Hinge Pin

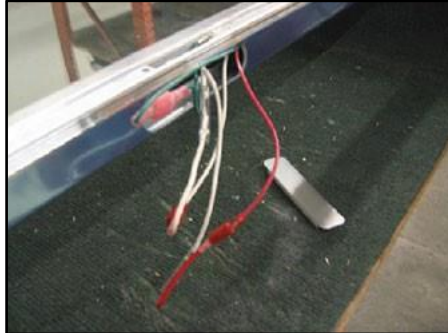
1. With the access cover removed, pull the hinge pin wires out and separate all three wires (Hot, Neutral and Ground) from the door wire harness by carefully pulling the terminations apart.
2. Using a flat-head screwdriver, pry the hinge pin loose from the mount in the top door frame rail.
3. Pull the hinge pin out of the door frame until the pin and the wires are completely removed.



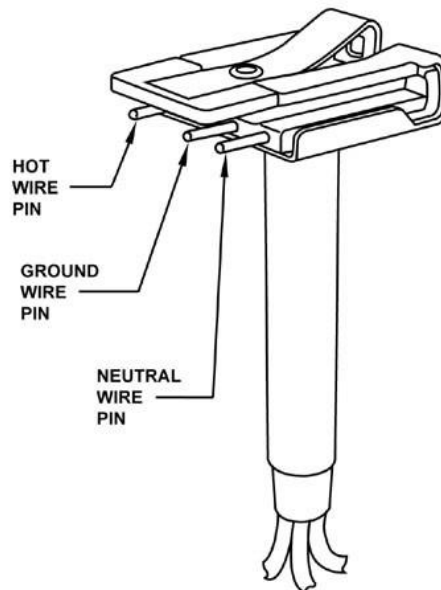
4. Upon replacing the hinge pin, insert all three wires into the hinge pin hole in the door rail.

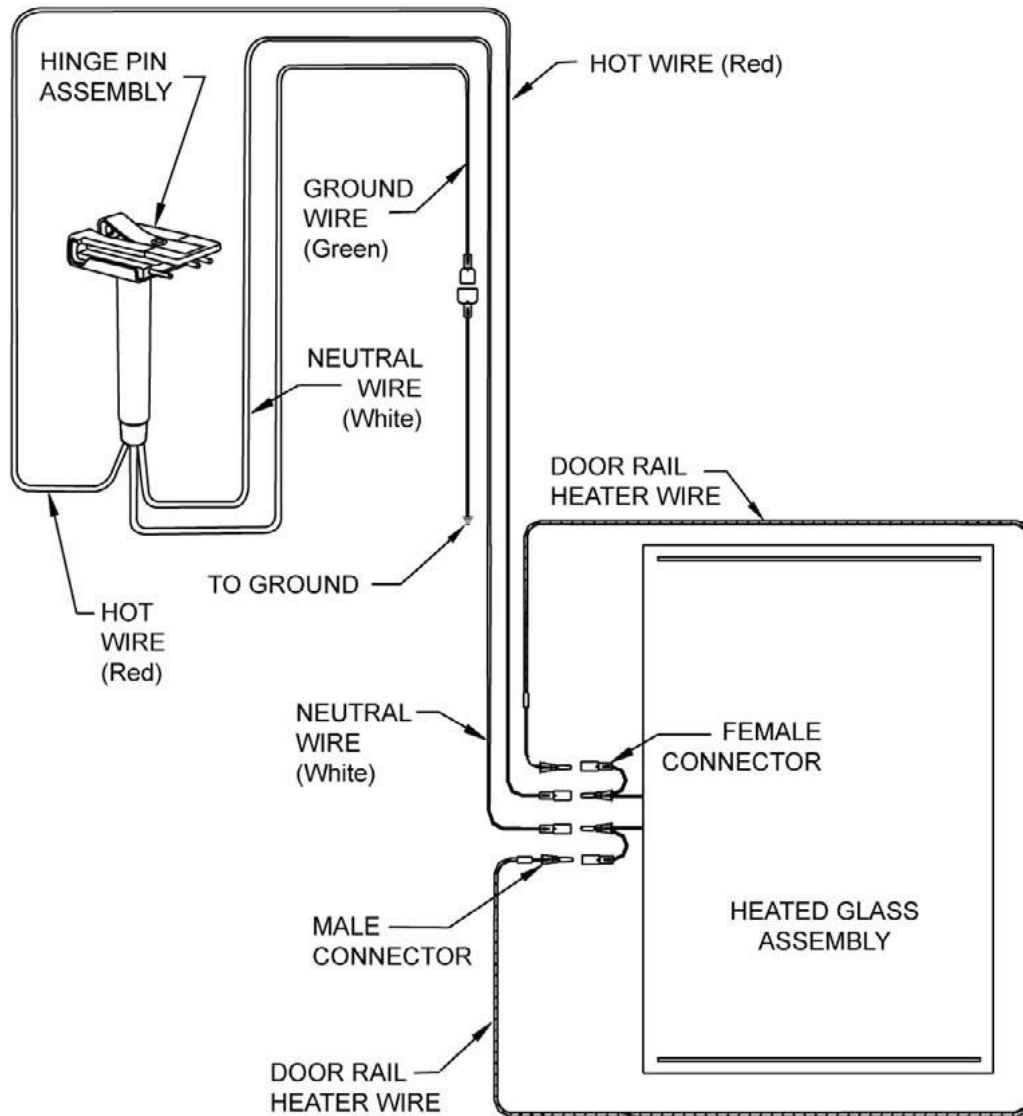


5. Thread the wires through the rail to the access opening.



6. Connect the hinge pin wires to the terminated door wires.
7. Insert the remainder of the hinge pin into the frame mounting hole until the hinge pin is fully seated.
8. Harness wires together using a tie-wrap and insert the harness into the door rail and install the access cover.





9. Reassemble door by following the aforementioned reassembly instructions per Infinity 090 Door Assembly Installation.

## Appendix A – Preventative Maintenance Guidelines

### Introduction

This guideline provides information required to perform recommended and required preventative maintenance to the Anthony doors and frame.

### Routine Preventative Maintenance

The following provides information needed to safely perform regular periodical preventive maintenance. Regular preventative inspections will maximize the longevity of your Anthony products. These simple tasks will go a long way in ensuring optimal performance. Depending on maintenance being performed you may need to shut down the door or kill all power to the doors. Refer to your specific door model Installation Manual on how to disengage power. The use frequency of doors will vary from location to location, and the frequency in routine for preventative maintenance will vary for everyone depending on the amount of traffic.

For Anthony products used in harsh or extreme ambient conditions, it is recommended that these inspection intervals be performed on a more regular basis. When issues are found please refer to your specific model's installation and service manual for detailed information on how to replace and re-order needed parts or contact your Anthony representative.

### Periodical Inspection Recommendations

Action	Store Conditions	Description
Preventative Inspection	Normal Conditions	Once each quarter (every 3 months)
	<u>Harsh Conditions</u>	Once a month (every 30 days)
Cleaning	All Conditions	Once a month (every 30 days)
<p><i>Note: These are recommendations based on historical data of other Anthony door products and can vary depending on location, store conditions, store traffic, and other unknown variables.</i></p>		

## Recommendations

Here is an outline of standard recommend Preventative Inspection criteria:

- **Freezer/Cooler Temp & Defrost Settings –**

- Regularly inspect and ensure that ambient conditions are correct\*
- Ensure HVAC vents do not blow directly on doors
- Avoid direct evaporator air impingement on the cooler/freezer door. This can be achieved by ensuring shelves are always fully stocked.
- The cooler/Freezer must be regularly inspected for air leaks this can affect the temperature
- Visually inspect box penetrations and adjoining surfaces: the use of a flashlight is helpful

*\*Refer to the values that pertain to your specific Door Model for Operating Condition values that are required for optimal door performance.*

- **Frame & Door –** Regularly ensure to check for wear/tear on frame and door this can include:

- Ensuring that warning labels and product identification labels are all intact
- Ensure all Bezels are intact and not damaged
- Ensure that Vents are clean and allow maximum Airflow
- Ensure all plastic backs are secured and undamaged
- Handles are secured to the door
- Ensure the door is opening to the angle of 87°
- Rails are intact, not broken, and securely in place

- **Door/Frame Hinging Pin & Receptacle Area –** Regularly ensure to check for wear/tear all hinging parts include:

- Inspect that the Hinge Pin is properly connected with the frame receptacle, **DO NOT** remove the factory installed dielectric grease from the Hinge Pin assembly to ensure the proper function
- Inspect that the Hinge Pin and receptacle are rust/corrosion free, and there is an adequate amount of Dielectric Grease present
- If when replacing or servicing Door and it is removed from the Hinge Pin receptacle, ensure to re-apply dielectric grease before installation of the door
- Anthony recommends applying a minimum of three (3) grams per door Hinge Pin receptacle of its High-performance Dielectric Grease (Refer to the specific door model's installation manual for more detailed instructions on how to apply)
  - Anthony P/N: **98-25497-0001** (approximately 100 grams, sufficient for up to 30 door receptacles).
  - Anthony P/N: **98-25497-0002** (approximately 3 gram packet, sufficient for up to 1 door receptacle).
- Replace any broken or damaged Hinge Pin and ensure to apply an adequate amount of Dielectric Grease
- Visually and mechanically Inspect Hold-Open Arm, Screw, and Spacer for wear/tear/damage and that Screw is secure

**TorqueMaster™** – To check the TorqueMaster™ is functioning correctly open each door and ensure that the tension makes the door close smoothly and gently on its own. If the door closes either too slowly or rapidly the issue can be fixed by adjusting that Torque Master™ refer to the “Torque Master™ and Sag Adjustment” section for details. If after adjusting the issue is still present the next step is to replace the Torque Master™, refer to the specific door model's installation manual for detailed instructions on replacing.

**Gaskets** – When inspecting gaskets ensure that they are sealing properly along the entire perimeter of the door. Also, ensure that the gasket is properly inserted into the door plastic groove. Inspect and ensure gaskets are free of cracks, tears, deformities, and hardening



## Cleaning Routine

List of Items that should be cleaned during monthly cleaning routine:

- **General Cleaning** – Regularly clean by wiping down the frame, door rails, bezels, and gaskets by checking for food debris, dust, and other foreign objects that may prevent the door from closing correctly. Use non-abrasive cleaning apparatus (i.e., microfiber cloth) when wiping down frame and door rails.
- **Cleaning Inside Door Glass\***: To clean door glass on the inside of the door. We recommend the following cleaners:
  - Windex<sup>®</sup> Original
  - Windex<sup>®</sup> Vinegar
  - Fantastik<sup>®</sup>
  - Formula 409<sup>®</sup>
  - MicroClean Professional APC<sup>®</sup>

### NOTICE



*Note – Any cleaner used or listed here MUST be Ammonia Free. Only use cleaners on glass portion of the door. Using harsh chemicals on PVC or ABS plastic portions of door may damage material.*

## Troubleshooting

PROBLEM / ISSUE	PROBABLE CAUSES / FIXES	FINAL REMEDY
Condensation on Door Glass, Door Rail, or Frame	Fan to Door Proximity too small	Install air deflector
	Evaporator fans blowing cold air directly onto glass/frames	
	Shelves not fully stocked	Stock merchandise
	Door/gasket seal malfunction	See "Insulation or Air Leaks"
	Store conditions (temperature and relative humidity) outside required parameters	Adjust HVAC / Dehumidifier settings to meet required parameters
	Cooler/freezer temperature set too low	Adjust cooler/freezer temperature to design specified setting
Condensation in between Glass	Seal compromised cause loss of gas or vacuum (check by cleaning the glass on merchandise and customer sides)	Replace door
Rust/Corrosion on Hinge Pin	Excessive moisture from ambient/store conditions	Add Dielectric Grease to Hinge Pin Receptacle Replace Hinge Pin/ add adequate amount of Dielectric Grease
Ice buildup inside	Air infiltration Box/frame not sealed according to Anthony instructions	See "Insulation or Air Leaks"
Door not closing or sealing	Check gasket to ensure proper installation	Replace gasket
	Check the gasket for damage	
	Check Hold-Open	Replace Hold-Open
	Check TorqueMaster torque (plumb)	Replace TorqueMaster2
	Check TorqueMaster sag	
	Check Frame/Door is square	
	Check Plastic covers on rails	Replace Plastic Covers
	Check Plastic covers on frame mullions	
No Power to Frame	Check Power Supply	Adjust energy controller to Full-On
	Check energy/humidity controller	Replace Power Supply
	Check hinge pin connections	Replace Energy/Humidity Controller
	Check glass wire connections	Replace Hinge Pin
	Check hinge pin wiring	Replace wiring
Low Voltage	Check main voltage	Adjust energy controller to Full-On Replace Frame heater wires
	Check humidity controller	
	Check the Amp draws to the heater wires in the frame	
Door/Gasket Seal - Malfunction	Check gasket	Replace gasket
	Check door mount	Replace hinge pin
	Check Door is square and level	Replace TorqueMaster
Frame not Square or Plumb	Frame not properly shimmed	Use correct Shim to level frame Use rubber mallet to adjust frame plumb within 1/16"
	The frame should be square to within 1/16"	
	The frame should be plumb within 1/16"	
Insulation or Air Leaks	Frame must be properly shimmed, level, and plumb	Seal gaps with approved NSF-approved Food Grade Silicone Sealant per Quick Installation Requirements Guide.
	Ensure encapsulated blue board insulation is present (Thermal Frame with Low Temp and NT High Humidity applications only)	
	Use RTV-108 NSF Approved Silicone Caulk to fill the perimeter of the frame on the refrigeration side (inside the case) and at all frame joints as required so there are no air gaps.	
	Use RTV-108 NSF Approved Silicone Caulk to fill the perimeter of the frame on the refrigeration side (outside the case) and at all frame joints as required so there are no air gaps.	
	Ensure Gap between frame and refrigeration does not exceed 1/8", gaps larger than 1/8" will require additional shimming to reduce gap size before sealing	
	Ensure all electrical conduits are properly sealed to prevent moisture and air from migrating into the box, use RTV-108 NSF Approved Silicone Caulking if necessary	

PROBLEM / ISSUE	PROBABLE CAUSES / FIXES	FINAL REMEDY
Glass condensation	No Power	Check power supply Check humidity controller Check Hinge Pin connections Check glass wire connections Check Hinge Pin wiring
	Low voltage	Check main voltage Check humidity controller
Door/Frame Rail Condensation	No Power	Check power supply Check humidity controller Check hinge pin connections Check door wire connections Check frame wire connections
	Low voltage	Check main voltage Check humidity controller hinge pin
	Door seal malfunction	Check gasket Check door mount wiring
Door saw-toothed	Door or frame not square	Square door to 1/16" Adjust TorqueMaster sag Replace worn hinge pin socket Facility or case not level Frame not properly shimmed Hold-open binding/damaged
Lamp inoperative	Power switch OFF	Turn power switch ON
	Lamp burned-out	Replace lamp
	Lamp failure	Check socket mounting Check socket/lamp connection Check ground wire connection
	Incorrect lamp	Replace with correct lamp
	Ballast failure	Check wire connections Replace ballast
	Incorrect ballast	Replace ballast
	Incorrect wiring	Check ground wire connection Reconfigure wiring Replace wiring
Lamp intermittent or dimming	Incorrect voltage	Match lamp voltage to circuit Match ballast to circuit voltage
	Lamp cover failure	Check cover installation Check mullion lens installation Replace lamp cover
	Defective wiring	Check & replace wiring
	Defective LED Fixture	Replace LED Fixture

## Revision History

REV	ORIGINATOR	DESCRIPTION OF CHANGE	DATE
A	Pedro Almaguer	Initial Release	10/01/2015
B	E. Chavez / K. Holst	Added Appendix A. See ECN 18491	06/30/2022