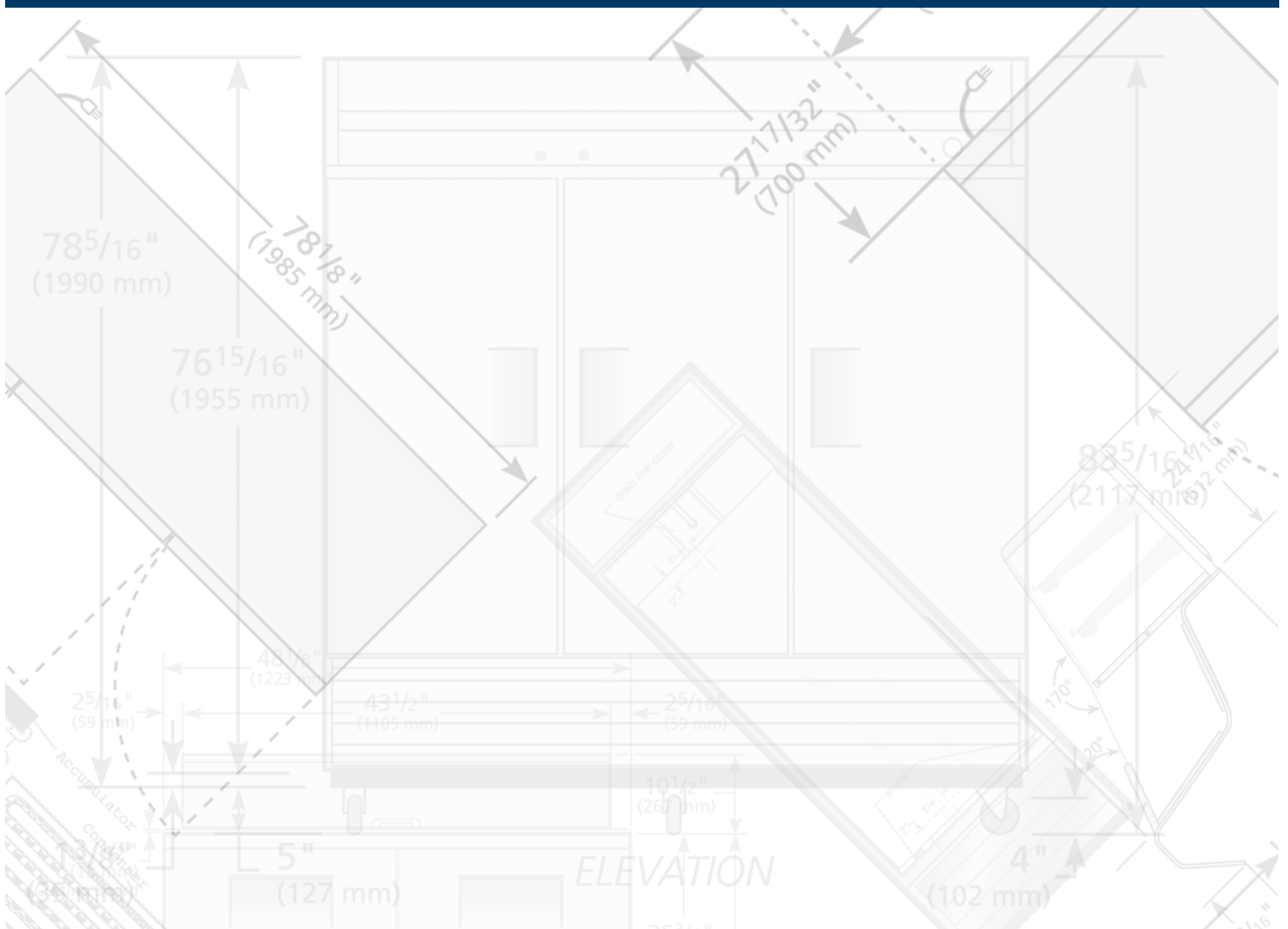


LIGHTING



NOTES

LIGHTING



Lamps, IDL Door Cords

LED LIGHTING REPLACEMENT

INSTALLATION INSTRUCTIONS

Tools Required

- Standard Screwdriver
- Cordless Drill with Phillips Bit

STEP 1 - Open door and remove door gasket. (See image 1).

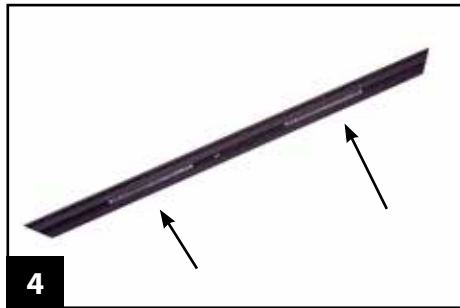
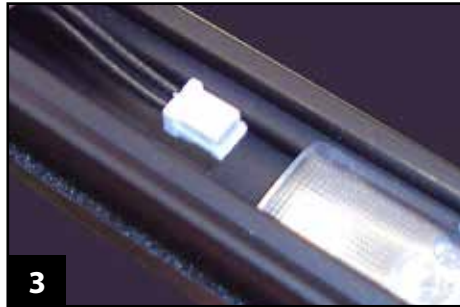
STEP 2 - Use a standard screwdriver and pry out the clear light cover on each side of door. (See image 2).

STEP 3 - Unplug LED light cord before removing door channel gasket. (See image 3).

STEP 4 - Back out Phillips screws anchoring door channel gasket in position. (See image 4).

STEP 5 - Unplug the desired light from channel. Then back out Phillips screws anchoring the light in channel. (See images 5 and 6).

STEP 6 - Slide existing light out of channel and replace with new light. Reassemble door using these directions in reverse order.



LED LIGHTING REPLACEMENT

INSTALLATION INSTRUCTIONS



LED Module: TRUE Part Number 938357



This mounting hole is designed for a #6 screw.



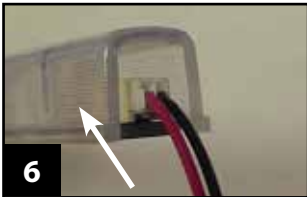
Input Lead connects to the door cord.



Jumper lead for connecting LED modules together.



The units can be connected from either end. Do not exceed 6 total units per string.



Ensure the cable plug is fully seated in the connector housing as shown.

True Part Number

942247	6" Input Lead
938360	12" Input Lead
940104	3" Jumper Lead
939710	6" Jumper Lead
938358	12" Jumper Lead
938359	36" Jumper Lead

10VDC Output – Max 3A 115V AC- Input



Power Supply: TRUE Part Number 938361. Do not use any other Power Supply to power the units.

STEP 1 - Remove the door gasket.

STEP 2 - Remove the gasket base.

STEP 3 - Remove the light shield (see Image 8).



STEP 4 - Remove the shipping screw in LED Module.

STEP 5 - Slide Module out (see Image 9).



ELECTROMAGNETIC RAPID START, INSTANT START ELECTRONIC, AND PREHEAT FLUORESCENT LIGHT CIRCUITS

INSTALLATION INSTRUCTIONS

WARNING:

A qualified service technician must be used to preform these tests using extreme care because of the risk of electrocution if tests are not preformed correctly.

There are different types of lighting systems being used in True cabinets, so there will be different types of troubleshooting techniques that need to be used. The one common aspect in all of the lighting circuits is that the bulbs being used must be the same as the bulbs that were originally installed in the cabinet.

To test ballast determine which lighting system you are working on and follow steps below.

Electromagnetic rapid start fluorescent light circuit –

There are three different voltage tests.

- Incoming or ballast supply voltage- Test at black and white wires going to ballast. You should read approximately 118 volts.
- Filament voltage- Tested between red to red wires or blue to blue wires. Depending on which ballast you have you should get a reading between 2 and 5 volts with the bulbs out. Please call technical service with the ballast number to get the correct voltage reading.

- High voltage- Test between either red wire and either blue wire. Again depending on which ballast you are checking the voltage can range between 205 and 310 volts with the bulbs out. Please call technical service with the ballast number for the correct voltage reading.

Instant start electronic fluorescent light circuit - (Note: A high impedance meter is required for testing this ballast.) There are two different voltages to test.

- Incoming or ballast supply voltage - Test at the black and white wires going to the ballast. You should read approximately 118 volts.
- High voltage - Test between the red wires and anyone of the blue wires with the bulbs out. You should read approximately 600 volts (+ or - 10%).

Preheat fluorescent light circuit – Test voltage between pins on each end of the lamp.

- You should get approximately 118 volts from one pin on one end to one pin on the other. You can also check for continuity between the other pins on either end to the starter base. (To do this test make sure there is no voltage to the circuit and remove the starter from the base.) If both are ok change the bulb first and then change the starter.

FOR ANY INFORMATION OR HELP DIAGNOSING BALLAST PROBLEMS PLEASE CALL.

TRUE MANUFACTURING TECHNICAL SERVICE

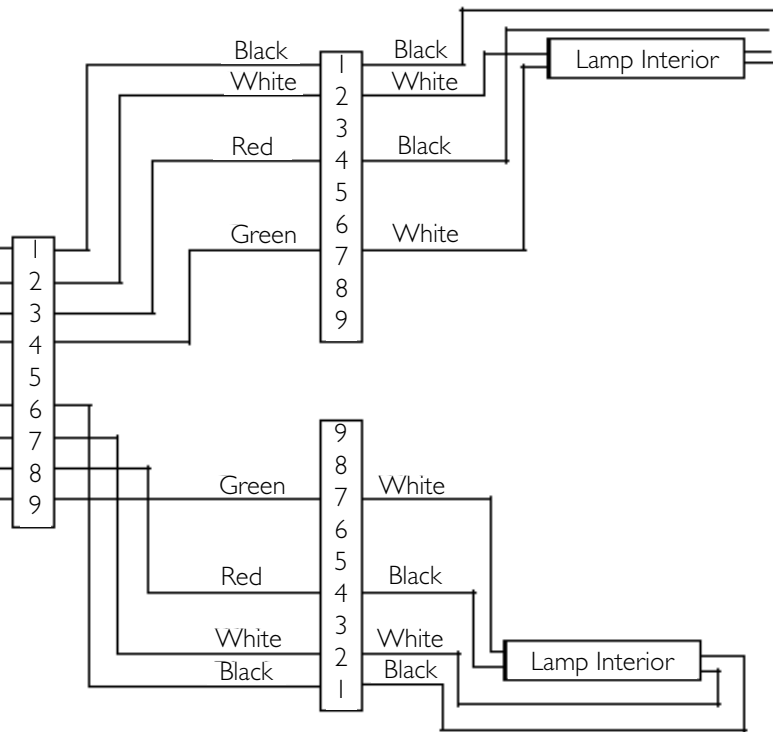
1-800-325-6152

GDM & T-SERIES COOLERS IDL CONNECTOR

INSTALLATION INSTRUCTIONS

2 Door IDL Cooler Wiring and Y cord on 3 door cabinet

- Blue #1 on R.S. or 24K Ballast
- Yellow #1 on R.S. or Red on 24K ballast
- Blue #2 on R.S. or Blue #1 on 24K ballast
- Yellow #2 on R.S. or Red on 24K ballast
- Red #1 on R.S. or Blue #2 on 24K ballast
- Yellow #2 on R.S. or Red on 24K ballast
- Red #2 on R.S. or Blue #2 on 24K ballast
- Yellow #1 on R.S. or Red on 24K ballast

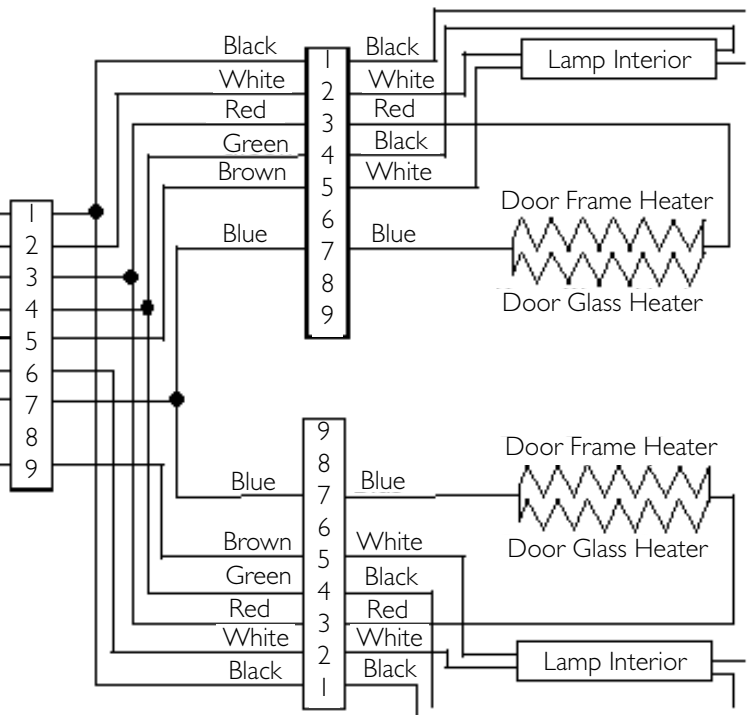


- Pin 1 - Pigtail black to door black (upper lamp holder)
- Pin 2 - Pigtail white to door white (lower lamp holder)
- Pin 3 - Pigtail red to door red (heaters)
- Pin 4 - Pigtail green to door black (upper lamp holder)
- Pin 5 - Pigtail brown to door white (lower lamp holder)
- Pin 7 - Pigtail blue to door blue (heaters)

- '1 '4 '7 Female plug for door cord.
- '2 '5 '8
- '3 +6 '9

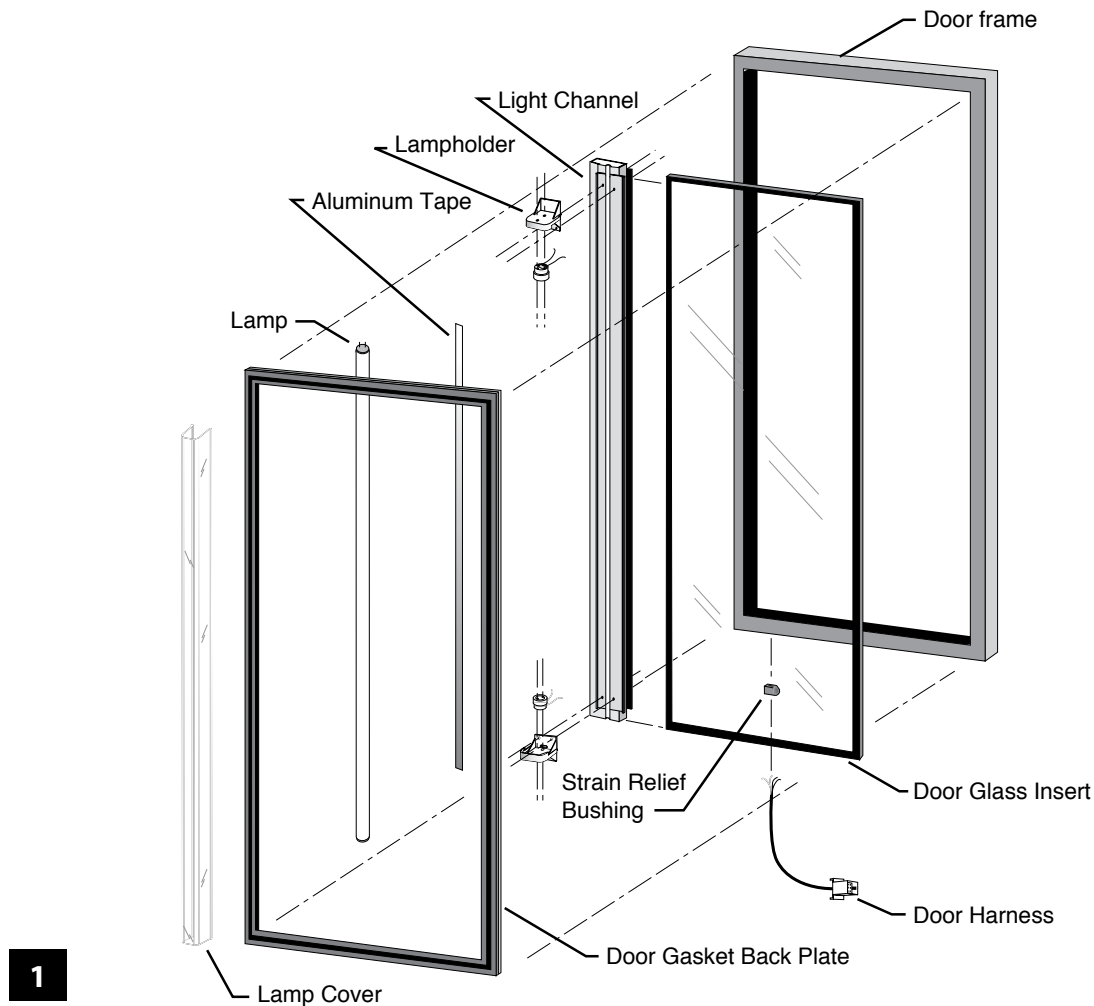
2 Door IDL Freezer Wiring and Y cord on 3 door cabinet

- Yellow on VHO or Red on 24K ballast
- Blue #1 on VHO or 24K ballast
- Black from Org/Blk in harness
- Yellow on VHO or Red on 24K ballast
- Blue #2 on VHO or Blue #1 from 24K ballast
- Red #2 on VHO or Blue #2 on 24K ballast
- White from neutral bundle
- Red #2 on VHO or Blue #2 on 24K ballast



IDL LAMP REPLACEMENT

INSTALLATION INSTRUCTIONS



STEP 1 - Unplug the cooler.

STEP 2 - Remove lamp cover by squeezing it in the center; twist and pull outward.

STEP 3 - The lamp can then be removed by pushing it up and then out. This will release the lamp from the lower lamp holder. At this point the lamp can be totally removed.

STEP 4 - Install the new lamp by placing the lamp terminals in the upper lamp holder first.

STEP 5 - Push up on the bulb to recess the upper holder.

STEP 6 - With the upward pressure applied, line up the terminal on the lower end of the bulb with the lamp holder. Once aligned the lamp will snap into place.

STEP 7 - Pull on bulb to make sure it is seated properly.

STEP 8 - Replace lamp cover by squeezing and snapping into retainer on lamp assembly.

STEP 9 - Plug in the cabinet.

STEP 10 - If lamp does not illuminate another problem may exist.

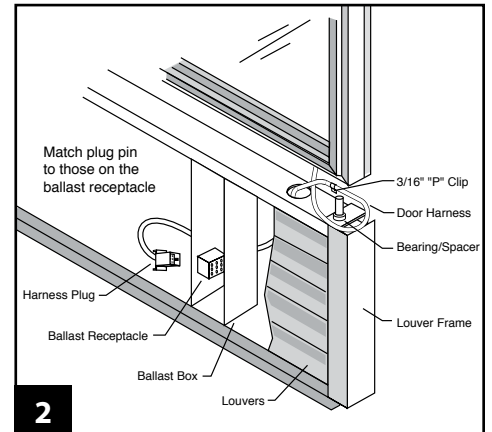
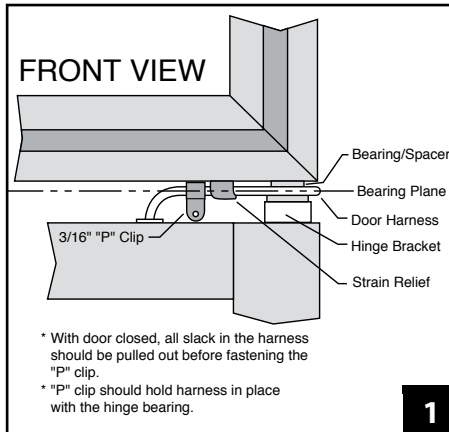
IDL DOOR-WIRE HARNESS REPLACEMENT

INSTALLATION INSTRUCTIONS

Tools Required

- Phillips Head Screwdriver
- Drill
- 39/64" Drill Bit or Cone Bit to make 5/8" hole.
- Wire Strippers
- Silicone

STEP 1 - Unplug the cooler. Remove the louvered grill, and the "P" clip holding the door cord to the cabinet. (See illustration 1).



STEP 2 - Remove the lamp shield, and the lamp from the door. Then remove the door gasket from the lower half of the door and fold it over the top of the door. (See image 3).

STEP 3 - Remove the Phillips screws holding the lower black plastic gasket base in place. (See image 4).

STEP 4 - Remove the lower lamp holder from the filler piece. (See image 5).

STEP 5 - Using a channel locks or pliers grab and pull down on the plastic strain relief bushing in the underside of the doorframe. Remove the two halves of the bushing from the cord. Cut the Molex connector off of the end of the cord. This should allow you to push the wires up into the doorframe from the under side of the door. The reason for this will be that you are going to be pulling the old door cord through the doorframe from the inside. (See image 6).

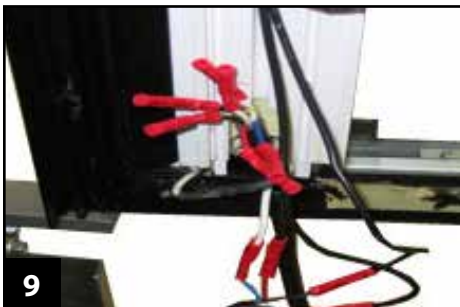


STEP 6 - Reach inside the corner of the door and pull the wires from the old door cord through from the inside. You may have to remove some of the foam insulation in this area. A straight bladed screwdriver will work fine to accomplish this. Using a piece of solder with a small hook at the end of it will also assist you in pulling out all wires. (See image 7).

NOTE: Should you not be able to pull all the wire through you may have to then move the glass to change out the door cord. See *Glass Insert Instructions* on how to perform this procedure.



STEP 7 - Using a 3/16" drill bit or a Cone type bit, in large the hole that the strain relief bushing fits into.



STEP 8 - Feed the wires from the new door cord in through the door so that you can connect all the wires. (See image 9).

STEP 9 - Connect all the wires accordingly. Gently pull the wire bundle down from under the door. This should aide in tucking the wires into place. You may need assistance with this.

STEP 10 - Install the new strain relief bushing around the wires and secure it into the underside of the door frame. A small needle nose vise grips may aide in this installation.



STEP 11 - Place some silicone in the opening around the wires where you might have removed some of the foam insulation. (See image 10).

STEP 12 - Reinstall the lower black gasket backing plate.



STEP 13 - Reinstall the lower lamp holder. (See image 11).

STEP 14 - Reinstall the gasket.

STEP 15 - Secure the "P" clip (see illustration 1) back in place and plug in the Molex connection into the ballast box.

STEP 16 - Plug the cabinet back in and check the operation of the light. If the light is working fine, you should reset the time clock (freezers only) and then place the lower louvered grill back on the front of the cabinet. If not, check all the electrical connections and for voltage at the lamp holders

IF TECHNICAL ASSISTANCE IS NEEDED, PLEASE FEEL FREE TO CONTACT US AT 800-325-6152.

TBB LIGHT RECEPTACLE AND DOOR CORD REPLACEMENT

INSTALLATION INSTRUCTIONS

Tools Required

- Phillips Head Screwdriver
- Drill
- 39/64" Drill Bit or Cone Bit to make 5/8" hole.
- Wire Strippers
- Yellow Wire Nuts
- 1/4" Nut Driver or Socket
- Silicone

STEP 1 - Unplug cabinet from outlet.

STEP 2 - Pull the cabinet forward, so you can gain better access to the ballast located behind the condensing unit.

STEP 3 - Remove the louvered grill over the condensing unit in the lower left hand corner.

STEP 4 - Remove the two screws that hold the condensing unit to the cabinet as well as the 1/4" hex head screw that is on left side lower rail of the cabinet. This will allow you to pull the condensing unit forward.



NOTE: Be careful when pulling the condensing unit forward not to bend any of the refrigeration lines. (See image 2).

STEP 5 - With the condensing unit pulled forward, you should be able to see the ballast mounted on the right side wall as well as the clear plastic hoses that the wires run through for the receptacles. (See image 3). The hoses are down near the base of the cabinet. Do not disconnect any of the wires. (See image 4).

STEP 6 - You may need to remove the door from the cabinet to gain easier access to the receptacle on the rail of the cabinet. To do this, be sure that the door cord is removed from the cabinet. Remove the lower bolts on the bottom hinge and the door will then come off. Set the door to the side where it will not get broken. (See image 5).

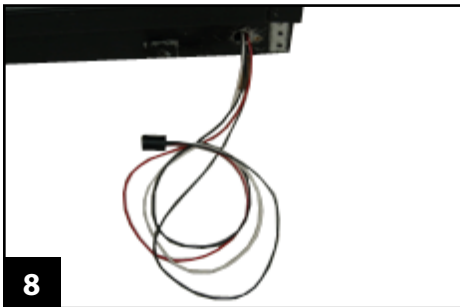
STEP 7 - Now you can remove the receptacle. To do this pry the receptacle out of the lower rail. (See images 6-7).





STEP 8 - Cut the receptacle from the wires and attach the leads from the new receptacle. You are going to use the existing wires to pull through new wires. Before doing this you should cut off the two green wires, they are not needed.

NOTE: If for some reason you can not do this. You can use a fish tape and feed the tape in from the backside of the cabinet coming forward. Then attach your wires from the front and pull them through to the back of the cabinet. (See images 8-9).



STEP 9 - Attach the corresponding wires from the receptacle to the ballast. (See image 10).

STEP 10 - You should now be able to plug in the male plug from the door and check the operation of the light. If the light is working fine you can now slide the condensing unit back in place, being sure to support the refrigeration lines, secure the condensing unit and place louvered grill back in place.



SHOULD YOU HAVE TO REPLACE THE MALE DOOR CORD, PLEASE FOLLOW THESE ADDITIONAL STEPS.

STEP 1 - If you have not done so, please remove the door from the cabinet. This will make it easier to replace the door cord.

STEP 2 - Remove the gasket from the lower rack and drape it over the top of the door.

STEP 3 - Remove the Phillips screws holding the lamp holder in the lamp holder base.

STEP 4 - Remove the lower black plastic gasket base by removing the Phillips screws in the base. (See image 4).



STEP 5 - Using a channel locks or pliers grab and pull down on the plastic strain relief bushing in the underside of the doorframe. Remove the two halves of the bushing from the cord. Cut the Molex connector off of the end of the cord. This should allow you to push the wires up into the doorframe from the under side of the door. The reason for this will be that you are going to be pulling the old door cord through the doorframe from the inside. (See image 5).

STEP 6 - Reach inside the corner of the door and pull wires from the old door cord through from the inside. You may have to remove some of the foam insulation in this area. A straight bladed screwdriver will work fine to accomplish this. Using a piece of solder with a small hook at the end of it will also assist you in pulling out all the wires.

NOTE: Should you not be able to pull all the wires through you may have to then move the glass to change out the door cord. See Glass Insert Instructions on how to perform this procedure.



STEP 7 - Using a 39/64" drill bit or a Cone type bit, enlarge the hole that the strain relief bushing fits into.

STEP 8 - Feed the wires from the new door cord in through the door so that you can connect all the wires.

STEP 9 - Connect all the wires accordingly. Gently pull the wire bundle down from under the door. This should aide in tucking the wires into place. You may need to assist in this.

STEP 10 - Install the new strain relief bushing around the wires and secure it into the underside of the door frame. A small needle nose vise grips may aide in this installation.

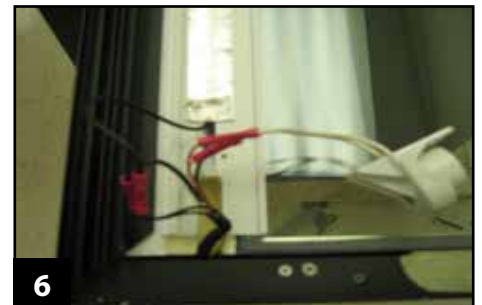
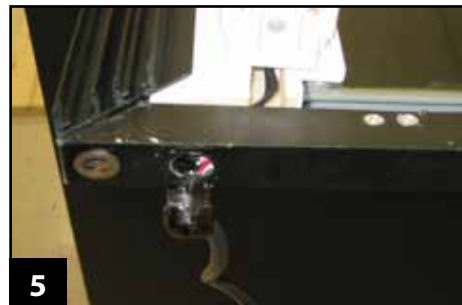
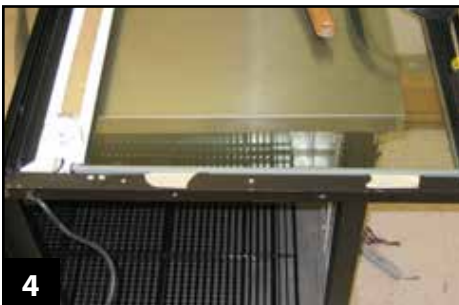
STEP 11 - Place some silicone in the opening around the wires where you might have removed some of the foam insulation.

STEP 12 - Reinstall the lower black gasket backing plate from Step 4.

STEP 13 - Reinstall the lower lamp holder from Step 3.

STEP 14 - Reinstall the gasket from Step 2.

STEP 15 - Install the lamp and lamp shield on the door. Plug the door into the receptacle to be sure that the light does in fact work correctly. If it does reinstall the door back on the cabinet. If the light does not work check the lamp holders for voltage and proceed from there.



IF TECHNICAL ASSISTANCE IS NEEDED, PLEASE FEEL FREE TO CONTACT US AT 800-325-6152.

