Everchill®

BY FURRION

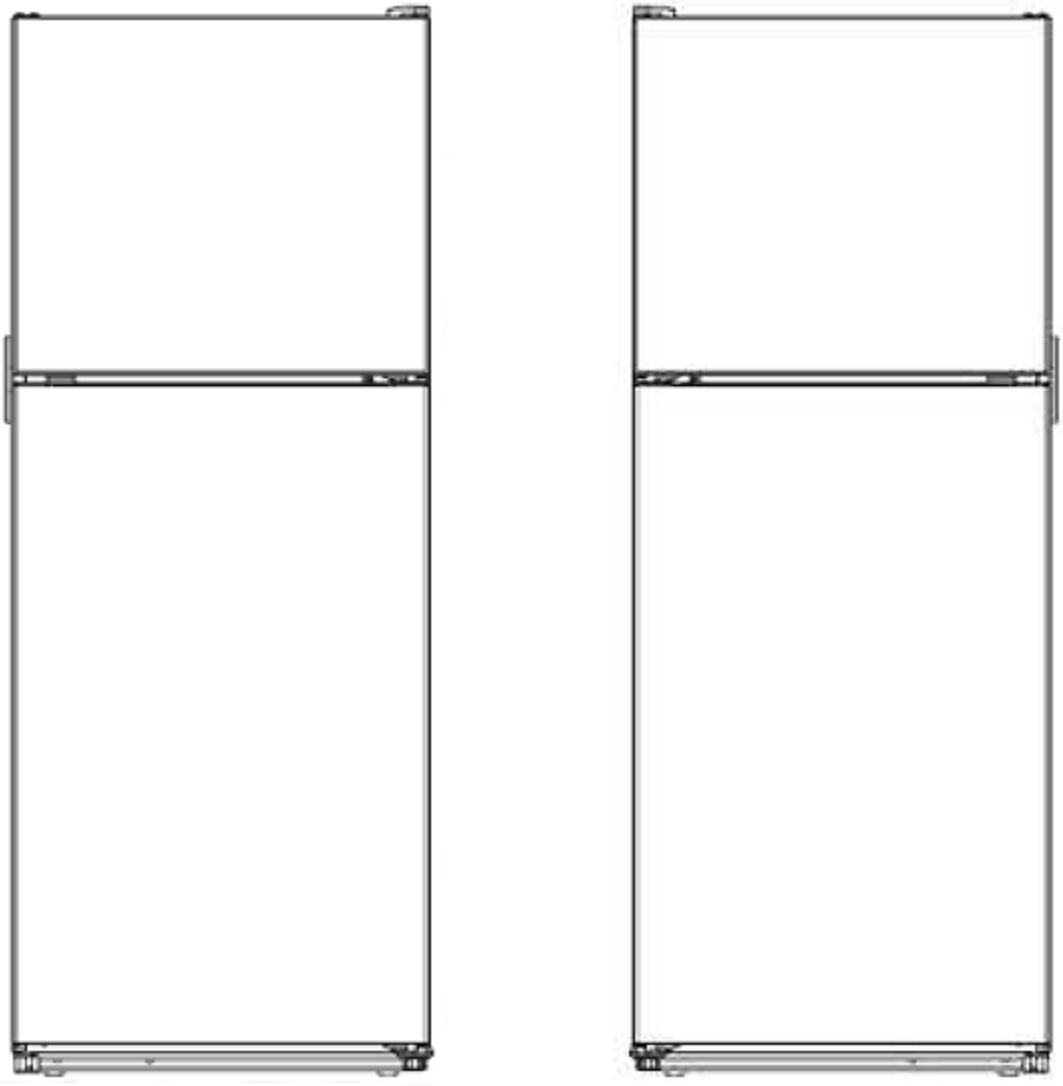
10.7 CU. FT. 12V REFRIGERATOR, BLACK GLASS DOORS

MODEL (LIPPERT PN)

SRD-360WTG-E (LHH-2022302076)

SRD-360WTG-E (RHH-2022302077)

TROUBLESHOOTING AND SERVICE MANUAL



* Picture shown here is for reference only.

This manual contains the product's basic information, safety, maintenance, replaceable parts, fault diagnosis and basic troubleshooting procedures.

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Introduction

This document provides an overview on replaceable parts for Furrion® Everchill 10.7 cu. ft. 12V Refrigerator, Black Glass Doors, as well as basic troubleshooting and service information.

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ. For more detailed operation, including general safety instructions, warnings and cautions, see Instruction Manual at: https://support.lci1.com/documents/ccd-0009698 or scan this QR code.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

⚠WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury if not performed safely and within the parameters set forth in this manual.

⚠WARNING

Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

⚠CAUTION

The "CAUTION" symbol above is a sign that a safety risk is involved and may cause personal injury and/or product or property damage if not safely adhered to and within the parameters set forth in this manual.

⚠CAUTION

Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.

Important Safety Instructions

⚠CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your refrigerator.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your refrigerator.

Precautions/Warnings

1. Do not use your refrigerator near water.
2. Clean only with a damp cloth.
3. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
4. Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
5. Refer all servicing to qualified service personnel. Servicing is required when your refrigerator has been damaged in any way, such as liquid has been spilled or objects have fallen into your refrigerator, your refrigerator has been exposed to rain or moisture, does not operate normally, or has been dropped.
6. To reduce the risk of fire or electric shock, do not expose your refrigerator to rain, moisture, dripping, or splashing, and no objects filled with liquids should be placed on top of it.
7. Your refrigerator is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of your refrigerator by a person responsible for their safety.
8. Children should be supervised to ensure that they do not play with your refrigerator.

Electric Shock Hazard

Failure to follow these instructions can result in electric shock, fire, or death.

1. Keep ventilation openings, in both your refrigerator and the built-in structure, clear of obstruction.
2. Do not touch the interior of your refrigerator with wet hands. This could result in frostbite.
3. Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
4. Do not damage the refrigerant circuit.
5. Do not damage the refrigerant tubing when handling, moving, or using your refrigerator.
6. DANGER-Never allow children to play with, operate, or crawl inside your refrigerator.
   Risk of child entrapment. Before you throw away your old refrigerator:
   - What?!
7. Do not use electrical appliances inside the food storage compartments of the appliance unless they are of the type recommended by the manufacturer.
8. To avoid a hazard due to instability of the appliance, it must be fixed in accordance with the instructions.
9. Make sure the power source is disconnected on your refrigerator before carrying out user maintenance on it.
10. If a component part is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.
11. Follow local regulations regarding disposal of your refrigerator due to flammable refrigerant and gas. All refrigeration products contain refrigerants, which under the guidelines of federal law must be removed before disposal. It is the consumer's responsibility to comply with federal and local regulations when disposing of this product.
12. Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
13. This appliance is intended to be used in the recreational vehicle.
14. Disposal of your old appliance: By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information, please contact your local city office, your household waste disposal service or the shop where you purchased the product.
15. If the SUPPLY CORD is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
16. There is a power switch for the refrigerator. Before any maintenance, please disconnect the switch.

Power Source Requirement

This appliance is Class III appliances, it must only be supplied at safety extra low voltage.
It should have a circuit breaker for full disconnection from the appliance and power supply mains.
Before using, the appliance should be disconnected from main power supply, and conduct wiring connections by reference to the wiring diagram.
Do not connect the unit to AC power supply.

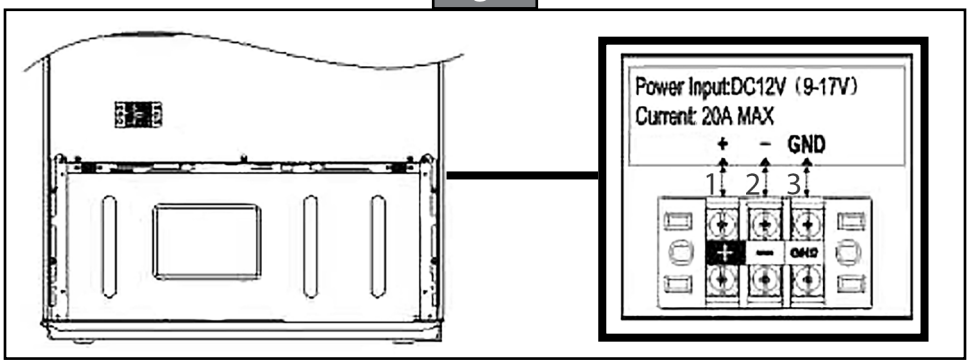
1. In order for normal use, the connection must be reliable. Besides the power source roper connection, the wire of the unit and outer wire must meet the following requirement:

Wire Size	The Max Length (Feet)
14 AWG	3' 3"
13 AWG	8'
12 AWG	13'
10 AWG	20'
8 AWG	33'
6 AWG	50'
Remarks	14 AWG wire is not recommended. 13 AWG wire or larger is recommended.
	This DC unit is not equipment with a power source. Please purchase a power source from an authorized dealer.

2. When using an adapter or converter AC to DC, No DC power supply is recommended.
3. It is recommended that only authorized or qualified professionals perform repair services on unit.

Wire Connection Diagram

Fig. 1



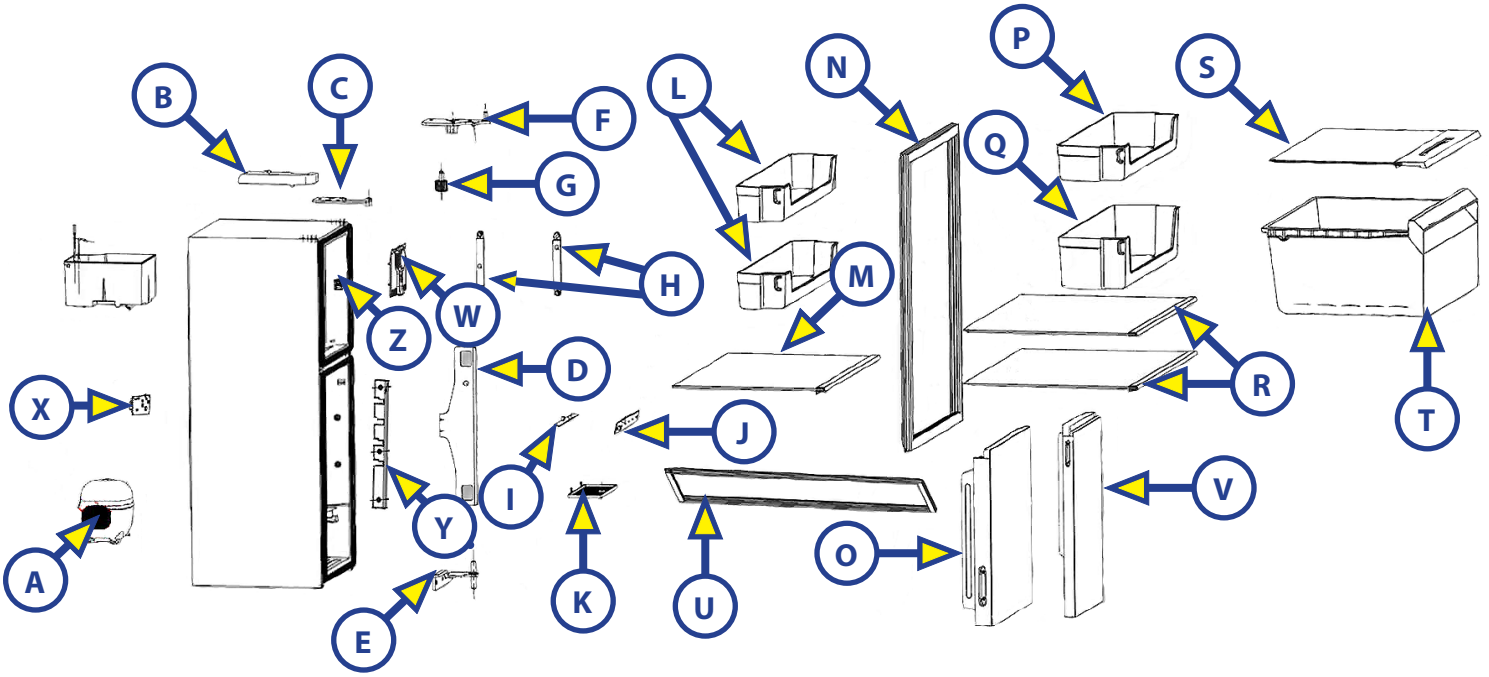
1. Connect 1 terminal with Positive pole of 12V DC (Fig. 1).
2. Connect 2 terminal with Negative pole of 12V DC (Fig. 1).
3. If the unit is installed in an RV, the 3 GND terminal should be connected directly to the RV chassis (Fig. 1).

Maintenance and cleaning

⚠ When cleaning, Do not stretch your hands into the bottom of the refrigerator, since you might be scratched by sharp metal corners.

- Clear off the dusts accumulated on the rear panel and side plates of the refrigerator often.
- After using detergent, be sure to rinse it with clean water, and then wipe it dry.
- Do not use bristle brush, steel wire brush, detergent, soap powder, alkaline detergent, benzene, gasoline, acid, hot water and other corrosive or soluble items to cleanse the cabinet surface, door gasket, plastic decorative parts, etc., so as to avoid damage.
- Carefully wipe dry the door gasket, clean the groove. After the cleaning, fix the four corners of the door gasket first, and then embed it segment by segment into the door groove.
- Take care of the frozen foods in the event of an extended non-running of the refrigerating appliance (such as interruption of power supply or failure of the refrigerating system).
- Try to open the refrigerator door as least as possible, this way food can safely and freshly be kept for hours even in hot summer.

Replaceable Parts List



Callout	Part #	Description	Model
A	2023011258	Compressor Control Board	All
B	2023011730	Right Hinge Cover	All
	2023011731	Left Hinge Cover	All
C	2023011732	Right Upper Hinge	All
	2023011733	Left Upper Hinge	All
D	2023011734	Lock Holder	All
E	2023011735	Middle Hinge	All
F	2023011736	Right Lower Hinge Assembly	All
	2023011737	Left Lower Hinge Assembly	All
G	2023011738	Adjustment Leg	All
H	2023011739	Lock Cover	All
I	2023011740	LED Board	All
J	2023011741	Temperature Control Panel	All
K	2023011742	LED Lamp Cover	All
L	2023011743	Freezer Compartment Door Rack	All
M	2023011744	Freezer Compartment Glass Shelf	All
N	2023011745	Freezer Compartment Door Gasket, RHH	All
O		Upper Freezer Door, RHH	
N	2023011746	Freezer Compartment Door Gasket, LHH	All
O		Upper Freezer Door, LHH	
P	2023011747	Upper Door Rack for Fridge Compartment	All
Q	2023011748	Lower Door Rack for Fridge Compartment	All
R	2023011744	Fridge Compartment Glass Shelf	All
S	2023011751	Crisper Glass Cover	All
T	2023011752	Crisper	All

Callout	Part #	Description	Model
U	2023011753	Fridge Compartment Door Gasket	All
V		Lower Refer Door	
U	2023011754	Fridge Compartment Door Gasket	All
V		Lower Refer Door	
W	2023011749	Freezer Fan Assembly	All
X	2022455281	PCB Control Board	All
Y	2023011253	Fridge Shelf Retainer	All
Z	2023011256	Freezer Shelf Retainer	All

Troubleshooting

What Is Happening?	Why?	What Should Be Done?
Refrigerator is not turning on	Power source connected is OK?	Refer to the wiring diagram, check the power wiring connection.
	Are breakers and fuses broken?	Opening the door and checking whether the lamp is lit.
	No electricity or fuse trip?	Check fuse
Abnormal noise	Is refrigerator stable?	Adjusting refrigerator's leveling feet.
	Does refrigerator contact the wall?	Move off the wall.
Poor refrigerating efficiency	Do you put hot food or too much food?	Putting food into refrigerator when hot food becomes cool.
	Do you open the door frequently?	Checking and closing the door.
	Is the door gasket sticking or damaged?	Clean or replace the door gasket.
	Direct sunlight or near a furnace or stove?	Removing the refrigerator from the heat source.
	Is it well-ventilated?	Emptying the distance to maintain good ventilation.
	Temperature setting in too high?	Setting to the appropriate temperature.
Peculiar smell in refrigerator	Any spoiled food?	Throwing away spoiled food.
	Do you need to clean refrigerator?	Cleaning refrigerator.
	Have you packed food of strong odors?	Pack foods with a strong odor in an air-tight container.
Refrigerator not cooling	Are indicator lights “2” and “3” on? Is the ‘Power Off' function activated?	Press the corresponding key to exit the ‘Power Off' function.

What Is Happening?	Why?	What Should Be Done?
The light is not working	Is the light damaged	Replace the LED light.
	The door has been open too long	The control system has disable the lights due to the door being kept open too long, close and reopen the door to reactivate the lights.
Compressor fault;	Does the battery have sufficient voltage?	Check if the battery power ever falls below 9V, it may lead to the compressor undervoltage protection, charge or replace the battery if necessary.
		If the battery level is high (above 11V), or the battery with sufficient power has been replaced, wait for 5 minutes to observe whether it can return to normal; if not, please contact the customer service personnel for service.

NOTE: If the above descriptions are inapplicable to troubleshooting, do not disassemble and repair it yourself. Repairs carried out by inexperienced persons may cause injury or serious malfunctioning.

This product should be serviced by an authorized service technician and only genuine spare parts should be used.

Fault Display

Fault display shows as following under Fault mode:

S/N	Item Information	Error Type
1	Indicator light “1” keeps flashing	Refrigerator sensor fault
2	Indicator light “2” keeps flashing	Ambient temp. sensor fault
3	Indicator light “3” keeps flashing	Freezer defrosting sensor fault
4	Indicator light “4” keeps flashing	Undervoltage alarm
5	Indicator light “5” keeps flashing	Overvoltage
6	Indicator light “1” and “3” keeps flashing	Fan failure

NOTE: When the refrigerator indicator lights are flashing in the above manner, please contact for maintenance

Specifications

Total Volume	10.7 Cu.Ft.
Refrigerant	R600a
Amount	1.52oz.
Rated Voltage	DC 12V
Rated Current	15A
LED Lamp Power	1.0W
Defrost Power	120W
Net Weight	130 lbs.

Negative and chassis ground are not tied together.
Fuse size: 15 amp
Wire size: 10g

Resources Required: Tools used: Philip screwdriver, standard screwdriver, needle nose pliers, Digital volt/ohm meter, piece of 10g wire to use as a jumper.

NOTE: When checking voltage anytime in the guide, checks should be made with the refrigerator off (no load) and refrigerator on (load) to rule out a false surface charge. Voltage could be affected by the converter charging the batteries and will need to be considered.

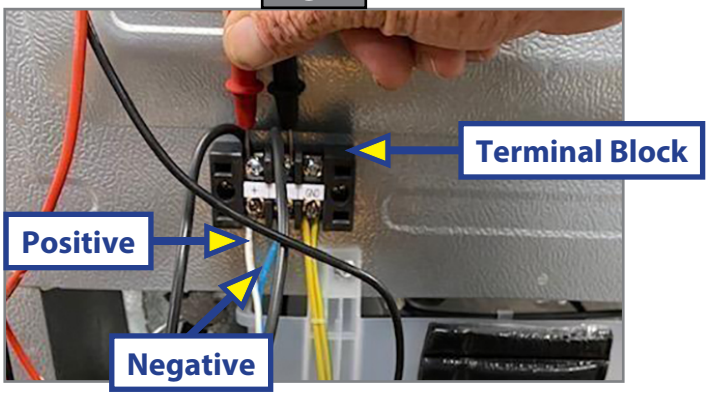
⚠ CAUTION

Before replacing any component ensure power is disconnected.

If your refrigerator will not turn on

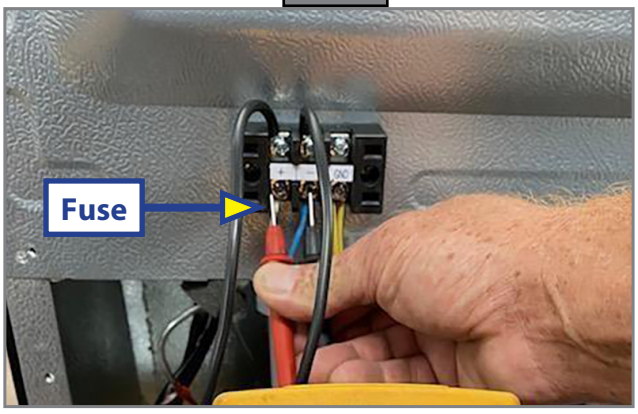
What is the voltage? (12.5- 13.6) at the top of the terminal block. White is positive and blue is negative, yellow with green trace is chassis ground (Fig. 2).

Fig. 2



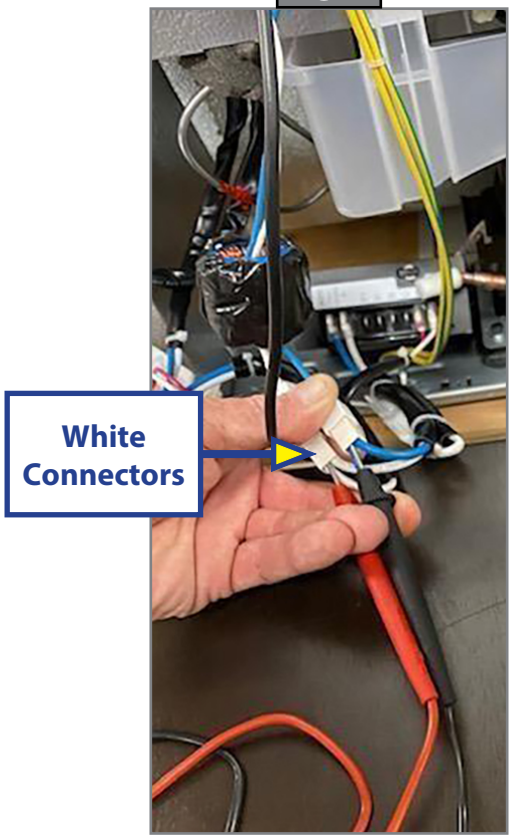
If there is no voltage at the terminal block, check fuse in power center (Fig. 3). Should be labeled Refrigerator and it should be the only thing on that circuit.
If you have proper voltage at the top of the terminal block and the refrigerator still does not power on continue to check for voltage at the bottom of the terminal block. Voltage should be (12.5-13.6). If there is no power check to ensure the screw terminals are securely tightened.
Stripped/loose terminals or improperly stripped insulation may cause inconsistent readings.

Fig. 3



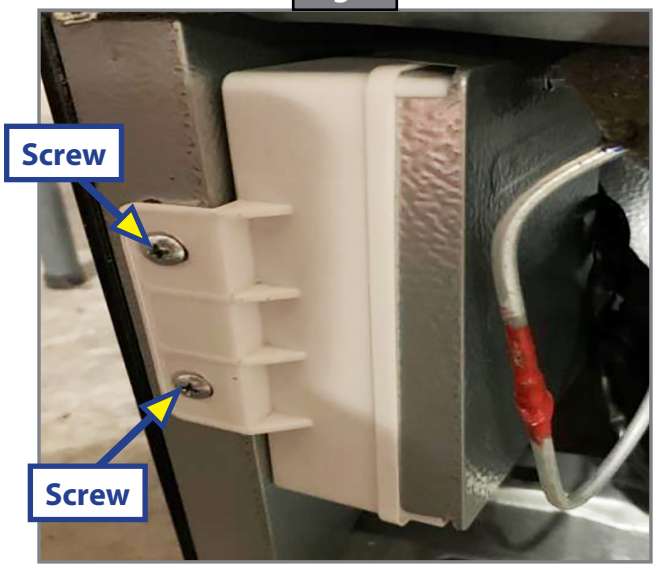
To continue checking the harness you will need to remove four screws securing the protective grill. If you have proper voltage continue to check the power harness by checking the two white connectors to ensure they are securely plugged in and there is proper voltage at both sides of the connectors (Fig. 4). (12.5-13.6) If not disconnect and reconnect to ensure they are properly connected.

Fig. 4



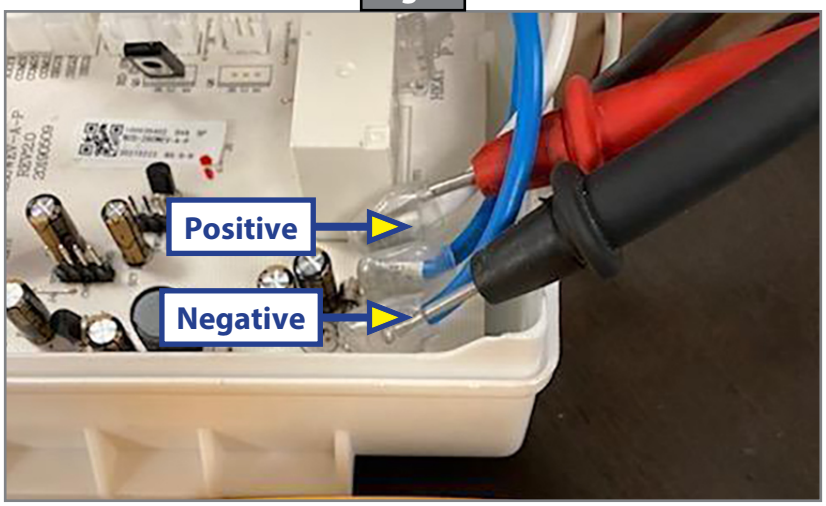
If there is proper voltage at the connectors and still no power you will need to remove the main circuit board enclosure by removing the two screws (Fig. 5).

Fig. 5



Once the enclosure is removed you will check for voltage at the white positive and blue negative wires on the circuit board (Fig. 6).

Fig. 6

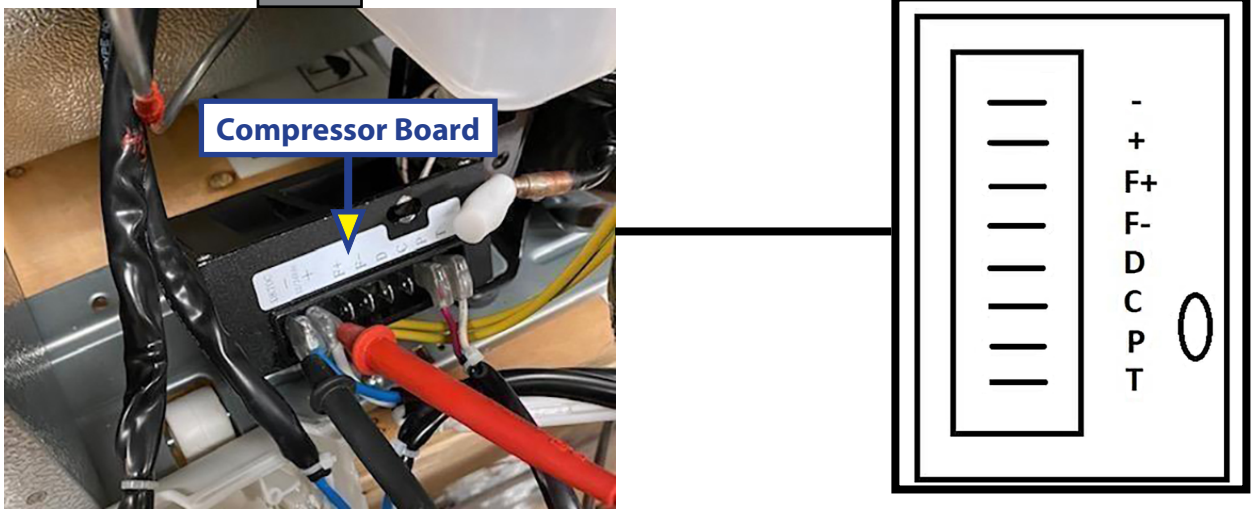


If there is proper voltage(12.5-13.6) and the refrigerator still doesn't power on, the main circuit board will need replaced.

Refrigerator has power but is not cooling

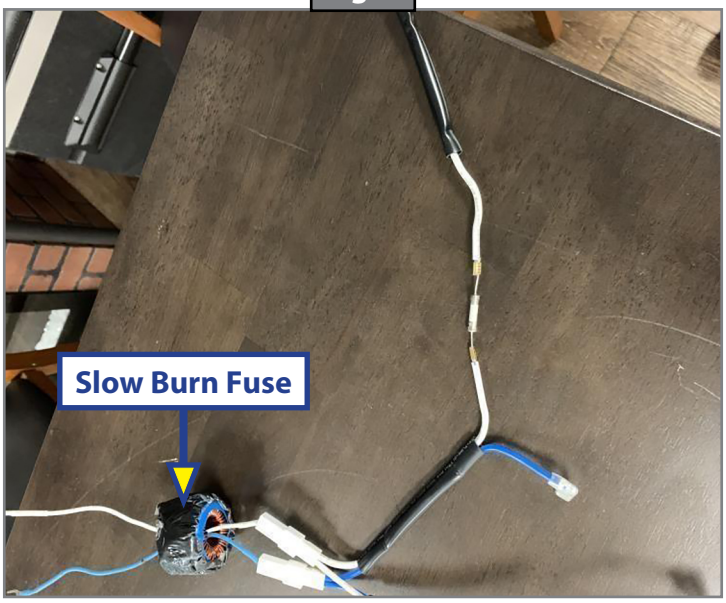
Check to see if there is good voltage (12.5-13.6.) at the compressor board (Fig. 7). You will check it at the positive white wire and negative blue wire (Fig. 8).

Fig. 7



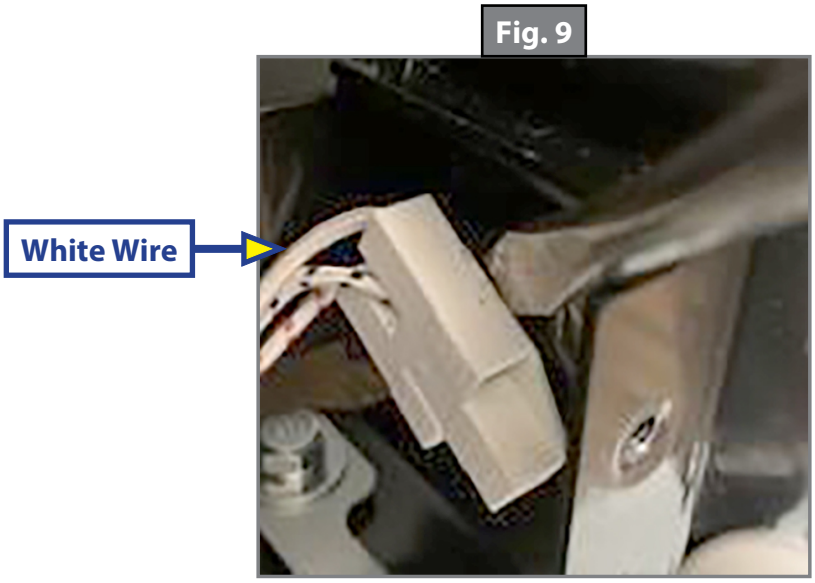
If the voltage is not correct check voltage on both sides of the slow burn fuse in the choke coil power harness. It is in the white wire that is connected to the positive terminal on the compressor board (Fig. 8). Voltage should be the same on both sides.

Fig. 8



If there is proper voltage, remove the lower white wire (Fig. 9) on the compressor board which is the T terminal and use a piece of 10g wire and jump the T-terminal to the negative terminal on the terminal block. If the compressor comes on replace the main circuit board. If it does not cycle on replace the compressor board by removing the single attaching screw and pivoting the board away from the compressor exposing the white 3pin connector. Use a flat blade screwdriver and gently pry it off the compressor.

Fig. 9



Compressor is running but unit is not getting cold

Check the current draw when the compressor is running (Fig. 10). It should be drawing 4 to 6 amps at 12.5-13.6 volts This can be checked on the incoming positive or negative wire.

Fig. 10

If it is lower check for any signs of an oily substance on the copper lines which could indicate a possible refrigerant leak.

Freezer is getting cold but the refrigerator compartment is warm

Check the operation of the freezer fan by removing the two screw covers and screws (Fig. 11) from the fan assembly.

Fig. 11

Gently pull the fan assembly towards you until you can see if the black plug is connected (Fig. 12).

Fig. 12

If it is plugged in, check for voltage at the red and black wires (Fig. 13). You should have 12-12.5volts. If voltage is present and fan is not working replace fan assembly. If voltage is not present then replace main circuit board.

Freezer is freezing up

Check to ensure the door seals are sealing properly (Fig. 13). Put a flashlight in the compartments and look for any light around the seals. If light is seen, you can try and adjust the door. The seals can also be replaced if the adjustment did not solve the issue.

Fig. 13

Check that the freezer fan is operational. Adjust the temperature knob in the freezer to the cold setting to allow more air flow into the refrigerator.

Water leaking in refrigerator compartment

Check to see if the drain tube and or the wind channel drip tray is blocked. You will need to remove the single Phillips screw holding it in place (Fig. 14).

Fig. 14

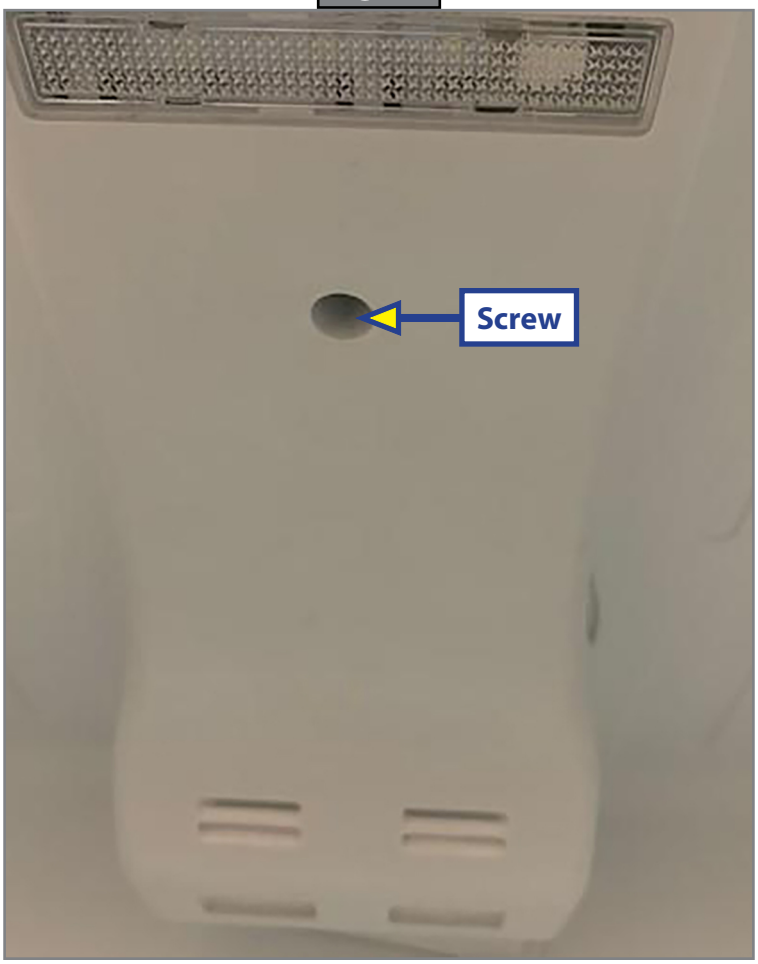


Fig. 15

Fig. 16

You can check the drain tube (Fig. 15) for blockage by running a length of 10g wire to try and unclog the tube (Fig. 16). If it is iced up let it sit for 24 hours unplugged to thaw out.

Refrigerator is cold but the light does not function

Check the operation of the door switch (Fig. 17). When the door is open the light (Fig. 18) should come on. If light does not come on replace led light by removing the temperature control assembly(wind channel) to access the light.

Fig. 17

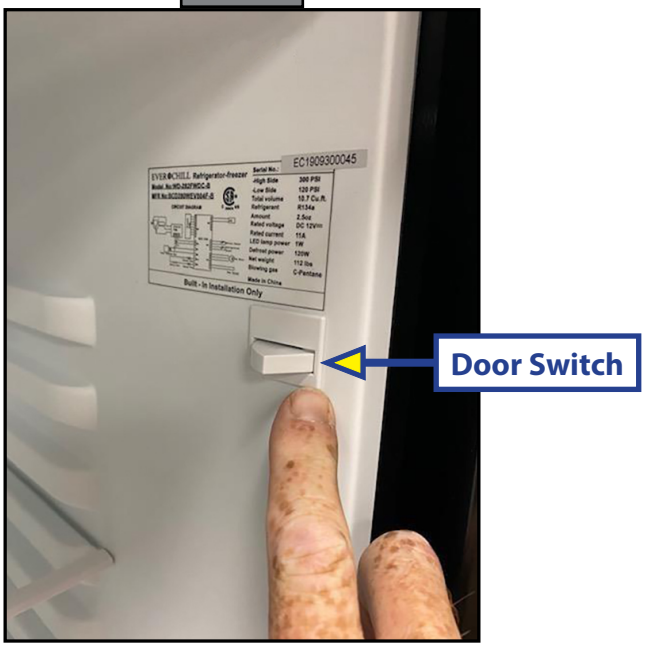


Fig. 18

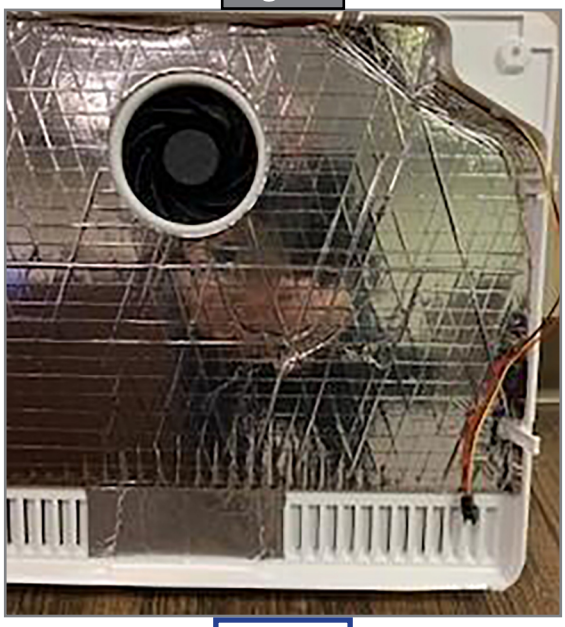
Fan is making noise

Remove fan assembly from freezer compartment and check the routing of the wires. Reinstall wires in clips under the foil insulation. Fig. 19 is the incorrect installation. Fig. 20 is the correct installation .

Fig. 19

Incorrect

Fig. 20



Correct

Flashing lights on the temp control panel indicate the following

Temp Control 1 & 2 (Fig. 21) indicate the refrigerator temp sensor in the wind channel is not reading correctly or is not plugged in. Check CN2 on main circuit board (Fig. 22). If it is plugged in replace refrigerator temp sensor in the wind channel assembly.

Fig. 21

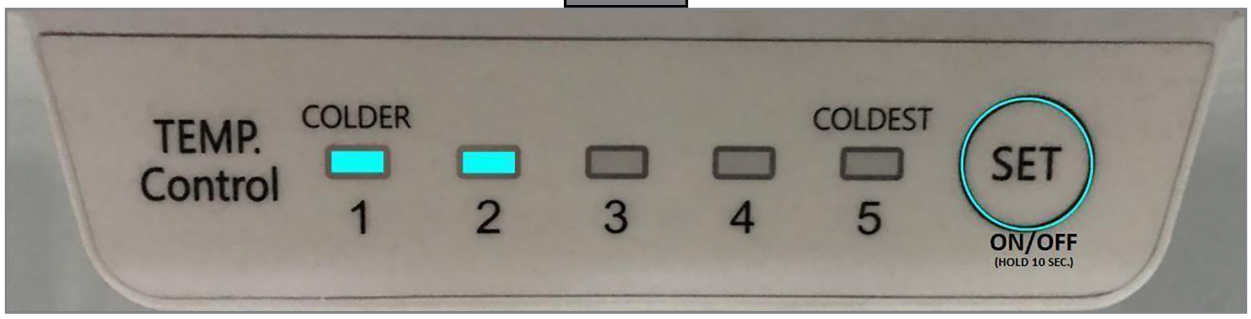
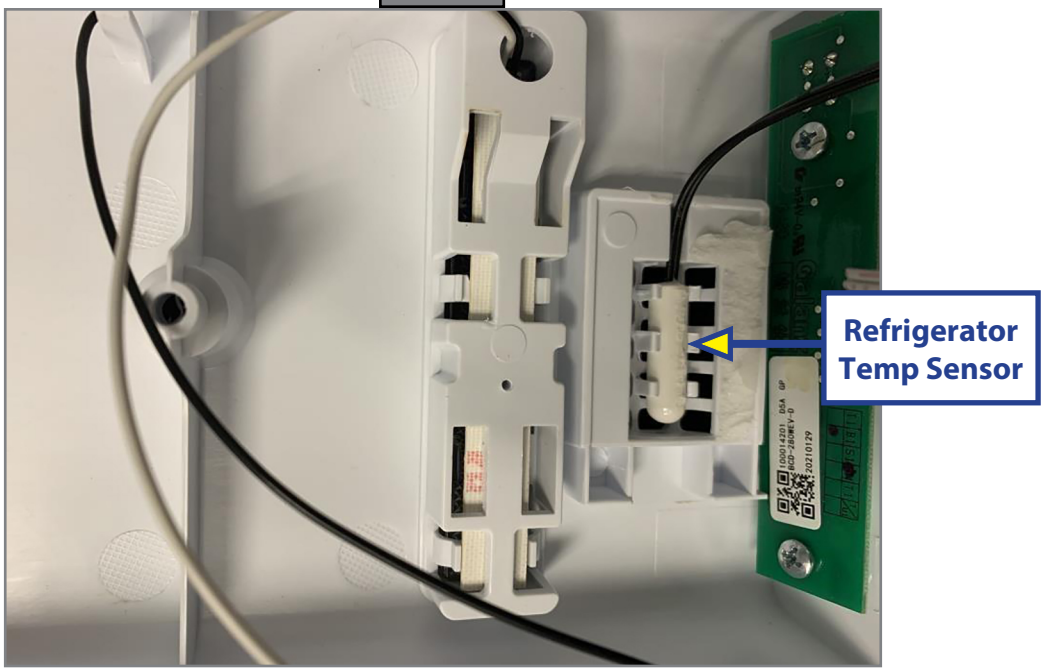


Fig. 22



Temp Control 2 & 3 i (Fig. 23) indicates defrost temp sensor is not reading correctly or is unplugged (Fig. 24).

Fig. 23

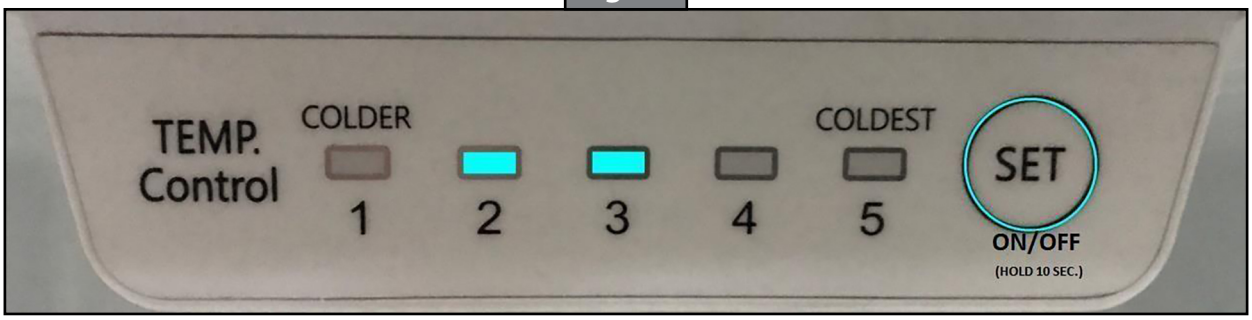
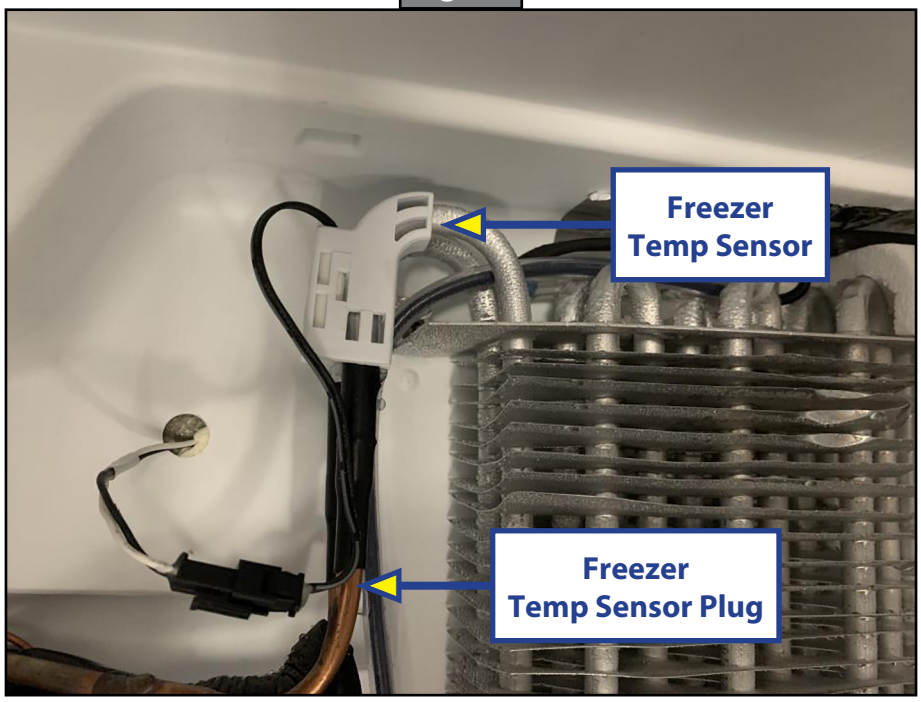


Fig. 24



Temp Control 3 & 4 (Fig. 25) indicates freezer fan fault, check fan for power.
Check red and black for 12 volts (Fig. 26).

Fig. 25

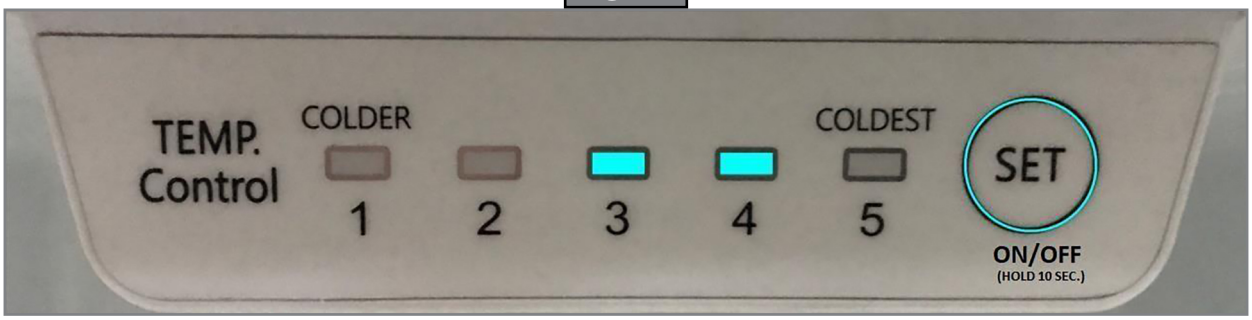
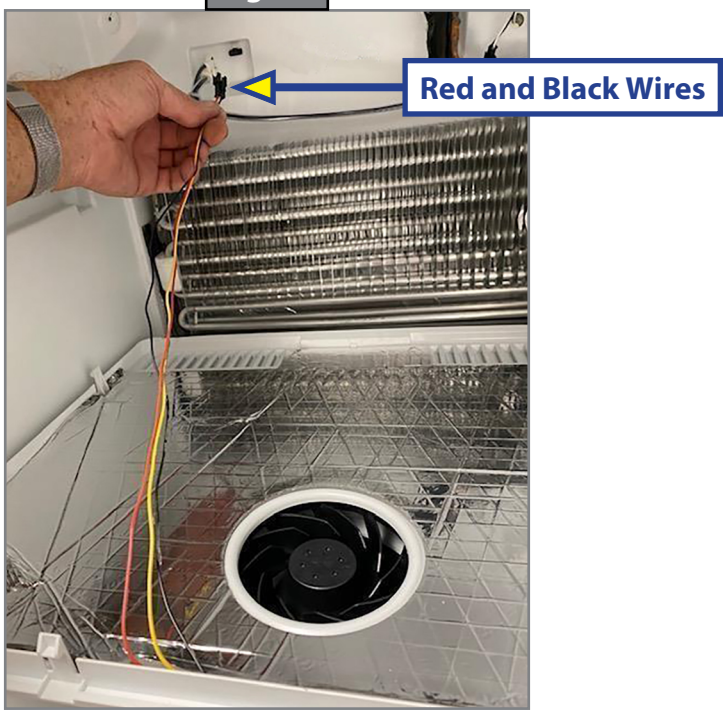
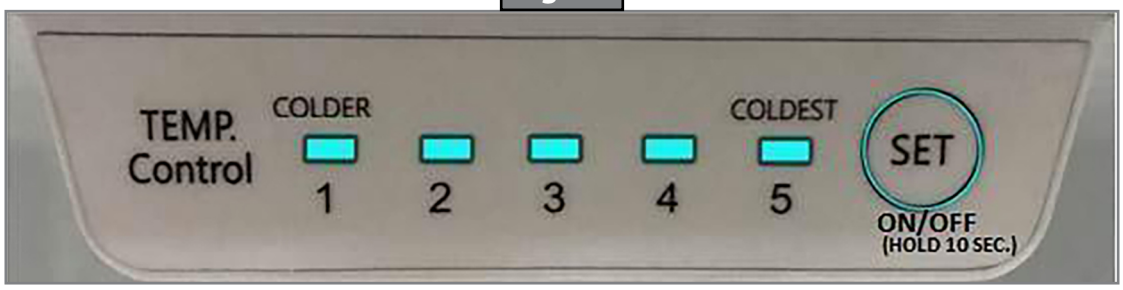


Fig. 26



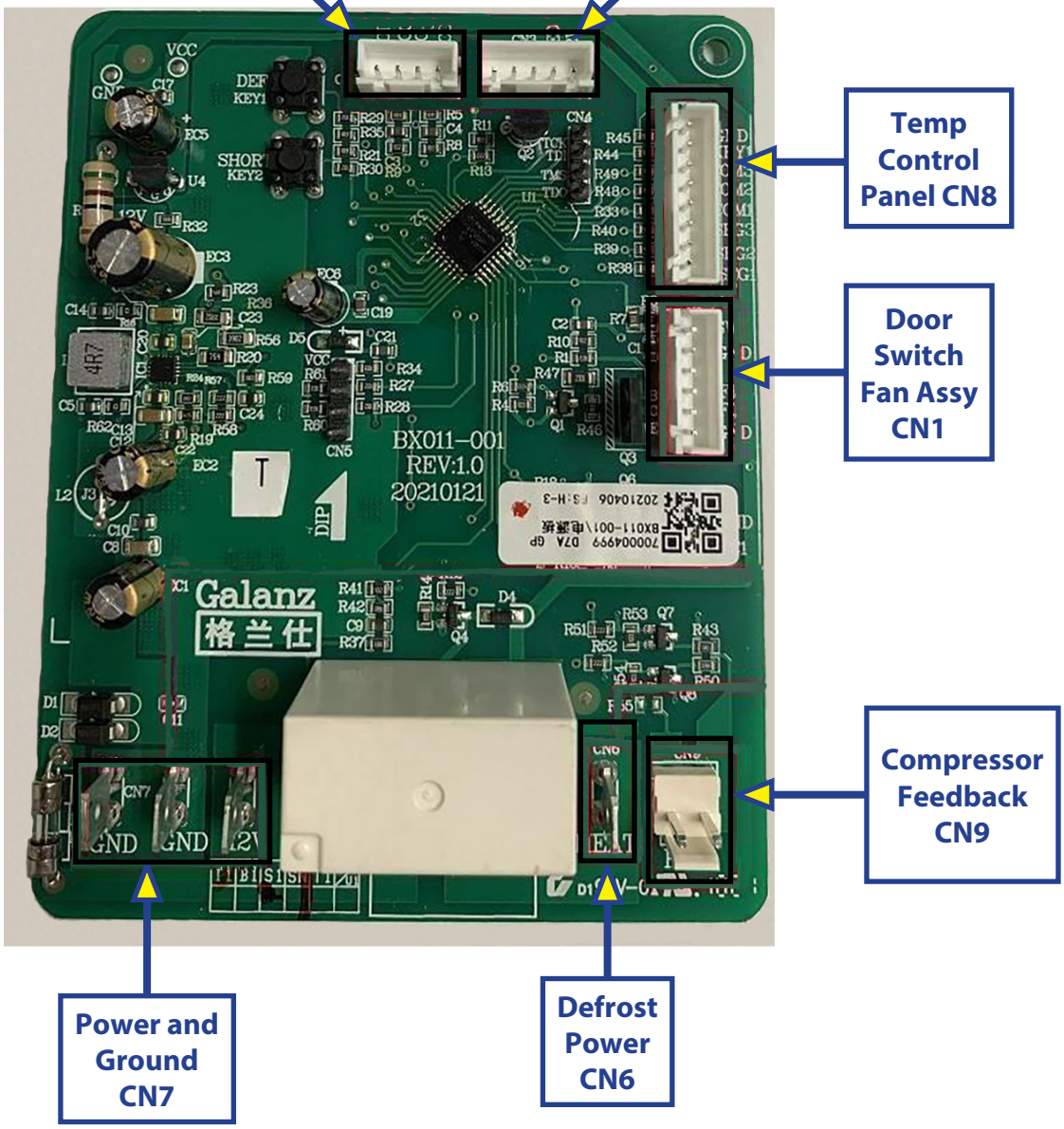
If all lights are flashing on the Temp Control (Fig. 27) it indicates under/over voltage has occurred. Remove fuse from power center and let it set for 10 minutes and then reinstall fuse and check for flashing lights.

Fig. 27



Main circuit board layout

Fig. 28



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